TOWN OF TUSAYAN

at the entrance to Grand Canyon National Park

AGENDA

TUSAYAN TOWN COUNCIL SPECIAL MEETING

PURSUANT TO A.R.S. § 38-431.02 & §38-431 .03
Wednesday, November 18, 2020 at 3:00 p.m.
TUSAYAN TOWN HALL BUILDING
845 Mustang Drive, Tusayan Arizona

Pursuant to A.A.S. § 38-431 .02, notice is hereby given to the members of the Tusayan Town Council and to the public that the Tusayan Town Council will hold a meeting open to the public on Wednesday, November 18, 2020, at the Tusayan Town Hall Building. If authorized by a majority vote of the Tusayan Town Council, an executive session may be held immediately after the vote and will not be open to the public. The Council may vote to go into executive session pursuant to A.R.S. § 38-431.03. A.3 for legal advice concerning any matter on the agenda, including those items set forth in the consent and regular agenda sections. The Town Council may change, in its discussion, the order in which any agenda Items are discussed during the meeting.

Persons with a disability may request a reasonable accommodation by contacting the Town Manager at (928) 638-9909 as soon as possible.

Join Zoom Meeting
https://us02web.zoom.us/j/85603261503?pwd=cmQvMmFvdTUvK0VLSUpNNU9uV0lkUT09

Meeting ID: 856 0326 1503
Passcode: 043000
One tap mobile
+12532158782,,85603261503# US (Tacoma)
+13462487799,,85603261503# US (Houston)

As a reminder, If you are carrying a cell phone, electronic pager, computer, two-way radio, or other sound devices, we ask that you silence It to minimize disruption of today's meeting.

TOWN COUNCIL SPECIAL MEETING AGENDA

1. CALL TO ORDER AND PLEDGE OF ALLEGIANCE

2. MOMENT OF SILENCE

3. ROLL CALL ***One or two Council Members may attend by telephone***

MAYOR CRAIG SANDERSON
VICE MAYOR BRADY HARRIS
COUNCILMEMBER ROBB BALDOSKY
COUNCILMEMBER AL MONTOYA
COUNCILMEMBER BECKY WIRTH

4. CALL TO THE PUBLIC FOR ITEMS NOT ON THE AGENDA

Members of the public may address the Council on items not on the printed agenda. The Council may not discuss, consider or act upon any matter raised during public comment. Members of the audience who wish to speak to the Council on an Item listed as Public Hearing should complete a Request to Speak Card and turn it into the Town Clerk. Comments will be limited to three minutes per person.

5. CEREMONIAL AND/OR INFORMATIONAL MATTERS

6. CONSENT AGENDA

Items on the consent agenda are routine in nature and will be acted on with one motion and one vote. Members of the council or staff may ask the mayor to remove any item from the consent agenda to be discussed and acted upon separately.

7. ACTION ITEMS

A. Consideration, discussion, and possible action regarding Resolution 2020-19, a canvass of votes at the November 03, 2020, general election. (10 min)

B. Consideration, discussion, and possible action regarding maintenance to-do list. (15 min)

C. Consideration, discussion and possible action regarding drive through holiday party. (10 min)

D. Consideration, discussions, and possible action regarding authorization of staff to open a savings account. (5 min)

8. WORK SESSION

A. Informational and work group session working with Hyro-Resources Inc. (30 min)

9. EXECUTIVE SESSION

If authorized by a majority vote of the Town Council, an executive session may be held immediately after the vote and will not be open to the public. The Town Council may vote to go into executive session.

A. Pursuant to A.R.S. § 38-431.03 A.3., A.4 and A. 7 to receive legal advice and provide instructions to staff regarding Water System Study review and purchase. (30 min)

B. Pursuant to A.R.S. § 38-431.03 A.3.and A.4 One Arizona Opioid Settlement Memorandum of Understanding (10 min)

10. REPORTS

A. Town Manager Report.

B. Council Members Report.

a. Thanksgiving Turkey Give Away. (5 min)

C. Mayor Report.

11. MOTION TO ADJOURN

CERTIFICATION OF POSTING OF NOTICE

The undersigned hereby certifies that a copy of the foregoing notice was duly posted at the Town Hall, General Store in Tusayan, Arizona and Town Website on this ____ day of _____, 2020 at _____ am/pm in accordance with the statement filed by the Tusayan Town Council.

_____
Signature of person posting the agenda

Town Council Special Meeting **8. A.**

Meeting Date: 11/18/2020

Submitted By: Charlie Hendrix, Town Manager

Department: Town Manager

SUBJECT:

Informational and work group session working with Hyro-Resources Inc. (30 min)

Attachments

Hydro Resources Study 2020

Hydro presentation

Town of Tusayan

HYDRO-RESOURCES INC.
VALUATION STUDY

Draft | September 2020

HYDRO-RESOURCES INC. VALUATION STUDY

Draft | September 2020

This document is released for the purpose of information exchange review and planning only under the authority of Richard A. Humpherys, September 16, 2020, State of Arizona, PE License No. 36578.

Contents

Appendices

Tables

Figures

Abbreviations

ACC	Arizona Corporation Commission
ac-ft	acre-feet
ADD	average day demand
ADEQ	Arizona Department of Environmental Quality
ADOT	Arizona Department of Transportation
ADWR	Arizona Department of Water Resources
AFY	acre-feet per year
Airport	Grand Canyon National Park Airport
Anasazi	Anasazi Water Co., LLC
Carollo	Carollo Engineers, Inc.
CC&N	Certificate of Convenience and Necessity
CCTV	closed circuit television
CPI	Consumer Price Index
ENR	Engineering News-Record
ft	foot/feet
ft/sec	feet per second
gpm	gallons per minute
hp	horsepower
Hydro	Hydro Resources, Inc.
in	inch/inches
LF	linear feet
M	million
MG	million gallons
RCN	Replacement Cost New
RCNLD	Replacement Cost New Less Depreciation
RFP	Red Feather Properties Limited Partnership
ROE	return on equity
Squire	Squire Motor Inns, Inc.
Town	Town of Tusayan
TWDA	Tusayan Water Development Association, Inc.
VFD	variable frequency drive
Willdan Report	Tusayan Municipal Water Study prepared by Willdan Engineering

Section 1

INTRODUCTION

The Town of Tusayan (Town) is located just south of the Grand Canyon National Park and has a population of approximately 570 residents. Water is supplied to Town residents through three private water systems. The Town was asked if it was interested in purchasing one of these water systems, the Hydro Resources, Inc. (Hydro) system. The Town asked Carollo Engineers, Inc. (Carollo) to complete an assessment of the Hydro water system to determine the condition of the infrastructure, estimate the utility's value, and identify improvements needed to operate the water system consistent with typical municipal standards.

Hydro serves a large portion of the Town of Tusayan and the Grand Canyon National Park Airport. The customer base includes several hotels and restaurants. While several single-family residential homes and an RV park are located within the Town, most residential housing is in the form of apartments, mobile homes, and townhouses that the businesses provide for their employees.

The scope of this study includes the following:

- Conduct an initial workshop with Town staff and collect data required to gain an understanding of the assets currently owned by Hydro.
- Complete a site survey to identify and assess the condition and capacity of the above ground assets and complete a desk top evaluation of buried assets.
- Estimate the utility asset value using the asset method and market (comparative sales) method.
- Perform an engineering and financial analysis to evaluate the engineering and financial viability of acquiring Hydro.
- Prepare a project report delineating the study findings.
- Review the findings of the study with Town staff.

This report is divided into the following sections:

- Section 1 discusses the project purpose, methods used, and data collected.
- Section 2 covers the Hydro Asset inventory and condition assessment of Hydro's potable water system.
- Section 3 includes the condition assessment of Hydro's water system.
- Section 4 includes estimates of the Hydro water utility value using the asset, market, and revenue approaches.
- Section 5 includes an engineering evaluation of the Hydro water system.
- Section 6 includes conclusions and recommendations associated with the study.

1.1 Information Used for this Study

The following information was received from Hydro to assist in completing the evaluation:

- Tusayan Municipal Water Study, April, 2011.
- Arizona Corporation Commission (ACC) filing reports from 2014 - 2019 that include asset inventories.
- Map showing the Hydro and Squire water mains, wells, and storage tanks.
- Record drawings of various construction projects.
- Fire hydrant map.
- Design drawings for water main extensions across the highway.
- Various water main drawings.
- Closed-circuit television (CCTV) video of the Hydro well casing.
- Receipts for various improvements to the Hydro system infrastructure.
- Water Lease agreement between Hydro and Squire Motor Inns, Inc. (Squire).
- Transfer agreement between Hydro and Anasazi water companies.
- ADEQ field inspection reports.
- Water hauling costs.
- Emergency potable water reserve plan.
- Water rates approved by the ACC.
- Record drawings of some Hydro facilities (not all facilities were available).
- Water quality records for the wells for the past three years.

Section 2
WATER SYSTEM INVENTORY

2.1 History and Background

Water service to the Town is provided by three privately-owned utilities.

Prior to August 2013, the Tusayan Water Development Association, Inc. (TWDA), a private non-profit corporation, held a Certificate of Convenience and Necessity (CC&N) issued by the ACC which allowed it to provide water service to the Town. TWDA did not own any water facilities and purchased water from the Hydro and Anasazi Water Co., LLC (Anasazi) to supply water to customers. In August 2013, Anasazi entered into a Transfer Agreement with Hydro, Red Feather Properties Limited Partnership (RFP) and TWDA under which it transferred certain physical assets, property and other miscellaneous equipment, as well as all of its customers (except the RFP Campus property), to Hydro. Following the agreement, TWDA dissolved and terminated its association. Hydro now owns the CC&N covering the same service area.

Anasazi, now known as RFP, owns a well, a storage tank and a hauled water booster station that provides water service to the Red Feather Inn, which is its sole customer. Anasazi is owned by the Thurston Trust.

The Squire Water Facilities include a well, a storage tank and a distribution facility (Squire Distribution System) connecting its well, tank and service buildings. The Squire Distribution System is openly connected to the Hydro system. The Squire system is owned by Halvorson Siebold.

The Hydro system serves approximately 80 customers in the Town. The customer base includes several hotels and restaurants, and residential customers that service these travel industries. Hydro owns a well, a storage tank and the portion of the distribution system that is not owned by other parties. Appendix A includes a map from the Tusayan Municipal Water Study prepared by Willdan Engineering in 2011 (Willdan Report) that identifies the pipe ownership of the water systems serving Tusayan. The Hydro system is also owned by Halvorson Siebold.

Hydro is interconnected with the Squire distribution system, which provides water to the Grand Canyon Squire Inn. The Hydro and Squire system storage tanks are located adjacent to each other, are hydraulically connected, and are served by the same ten-inch pipeline. Hydro and Squire entered into a Water System Agreement (2000 Agreement), under which Squire provides its excess potable water to Hydro. According to the agreement, the water sales to Hydro shall not exceed 12.5 million gallons on an annual basis.

Hydro supplies water to the Grand Canyon National Park Airport (Airport) water system, which is owned by the Arizona Department of Transportation (ADOT). The Airport water system is a separate water system, downstream of the Hydro system. The Airport owns one underground and two above ground storage tanks that receive water from Hydro during off-peak times. The Airport system must rely on water stored in its tanks for extended periods during peak demands. The Airport system pumps water to airport customers and can pump water from the storage tanks back into the Hydro system in case of an emergency, although the ability to move water back to the Hydro system is limited by the 4-inch connecting pipe.

2.2 Water System Inventory

The Hydro Water system is shown in Figure 1. The well associated with the Hydro system is shown in Figure 2 while the associated storage tank is shown in Figure 3.

The water system inventory for this evaluation was developed based on the inventory in the 2018 Annual Report to the ACC, the Willdan Report and other data provided by Hydro. In the event of discrepancies between data in the ACC and Willdan Report, the ACC reports took precedence because they were more current.

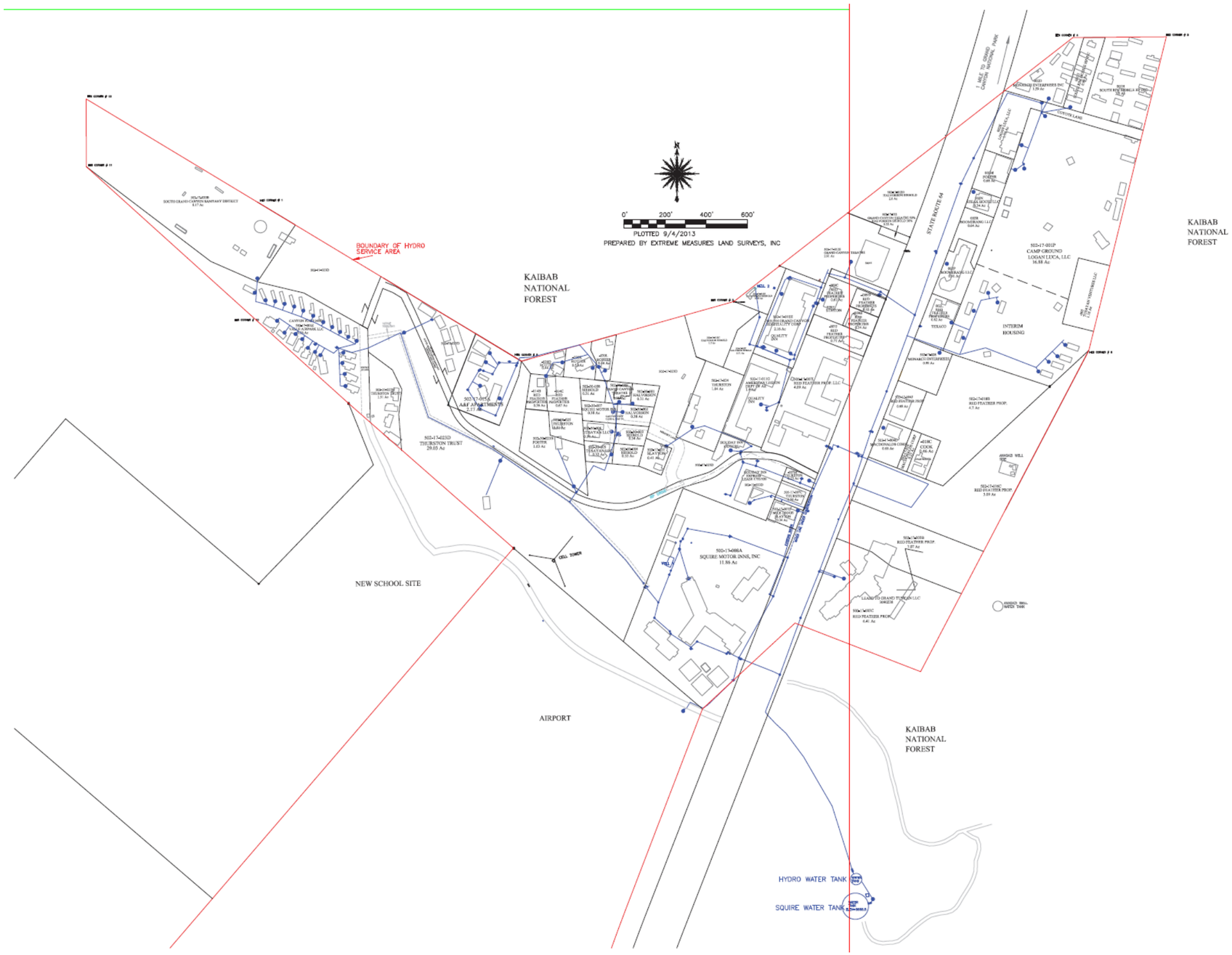


Figure 1 Hydro Resources Inc. Pipe Layout

Figure 2 Hydro-Resources, Inc. Well - Tusayan #2

Figure 3 Hydro-Resources, Inc. Storage tank

2.2.1 Well

Hydro owns one potable well, Tusayan #2, which was drilled in 1994 and is located on property owned by Squire. Hydro pays $1500/month to lease the land from Squire. The well is equipped with a steel casing, which has a depth of 2306 feet (ft) and a diameter of 13 inches (in) per the ACC 2018 Report. Tusayan #2 has a sodium hypochlorite disinfection system to provide chlorination. The site is equipped with three Quantrol filters (Serial No. 234358) designed to remove small particles in the well water. The filters are not currently in service. Water quality test reports from Arizona Department of Environmental Quality (ADEQ) show that the water produced by wells is good quality and meets ADEQ requirements. Table 1 includes the well inventory. The 2019 water quality reports for the water system can be found in Appendix B.

Table 1 Hydro Well Information

Well Name	ADWR Number	Year Drilled	Casing Depth (ft)	Casing Diameter (in)	Casing Material	Flow Rate (gpm)	Pump (hp)
Tusayan #2	55-542928	1994	2306	13	Steel	78	75

Abbreviations:
ADWR = Arizona Department of Water Resources; gpm = gallons per minute; hp = horsepower

2.2.2 Storage Reservoir

Hydro owns one above ground, bolted steel storage tank located adjacent to the Squire storage tank. Table 2 includes the details associated with the storage tank.

Table 2 Hydro-Resources, Inc. Tank Information

Tank Name	Install Date	In-Operation	Capacity (MG)	Height (ft)	Diameter (ft)
Hydro Tank	1975	Yes	0.525	32'	53'

Abbreviation:
MG = million gallons

2.3 Pipelines

Information for water mains installed prior to 2010 was obtained from the Willdan report. The ACC 2018 report provided data for the new pipe segments that were installed between 2010 and 2020. The ACC reports listed newer pipe material as PVC. The water main data is documented in Table 3. Appendix C includes a map from the Willdan report identifying the location of each pipe segment.

Table 3 Hydro-Resources, Inc. Water Main Data

Pipe Segment(1)	Length (ft.)	Diameter (in.)	Material
Segment B	1,113	8"	Sch 40 PVC
Segment C	732	8"	C-900 PVC
Segment D	480	8"	Sch 40 PPVC
Segment E	1,351	6"	Sch 40 PPVC
Segment G	3,026	2"	Sch 40 PPVC
Segment H	2,022	6"	Sch 40 PPVC
Segment I	476	8"	Sch 40 PPVC
Segment I	820	8"	Sch 40 PPVC
Segment J	727	8"	C-900 PVC
Segment K	318	8"	C-900 PVC
Segment L	430	4"	C-900 PVC
8" PVC pipe added between 2010 and 2020	1,438	8"	PVC

Note:
(1) The segments references are taken from a previous study completed by Willdan Engineering in April 27, 2011 titled "Tusayan Municipal Water Study" and are shown in Appendix C.

The Willdan Report also provided information on the hydrant, valve, and meter data. The ACC 2018 report provided data for the new meters that were installed after 2011. Table 4 presents the hydrant, valve, and meter information for the system.

Table 4 Hydro-Resources, Inc. Hydrant, Valve and Meter Data

Item (Installation Year)	Quantity/Size
Hydrant (1993)	3 ea
Hydrant (1997)	1 ea
Hydrant (1984)	2 ea
Hydrant (After 2011)	16 ea
Valve 8" (1975)	3 ea
Valve 8" (1986)	2 ea
Valve 8" (1992)	1 ea
Valve 8" (1994)	3 ea
Valve 8" (1996)	2 ea
Valve 8" (1997)	3 ea
Valve 8" (1999)	1 ea
Valve 6" (1984)	7 ea
Valve 6" (1986)	1 ea
Valve 6" (1993)	4 ea
Valve 6" (2000)	1 ea
Valve 6" (2001)	1 ea
Valve 4" (1993)	1 ea
Valve 4" (1997)	1 ea
Valve 4" (2001)	2 ea
Valve 2" (1984)	1 ea
Meters (after 2011)	81 ea
4" Meter Vault	2ea

2.4 Pipe Sleeves

Hydro owns two pipe-ready sleeves constructed under Highway 64 and Long Jim Loop by ADOT which, with some additional construction and pipe extension, would allow the Hydro distribution system to form more complete loops. Table 5 presents the sleeve inventory information.

Table 5 Hydro-Resources, Inc. Sleeve Data

Item	Quantity/Size	Installation Date
Sleeves	3	2018

Section 3

WATER SYSTEM CONDITION EVALUATION

Site visits were conducted to determine the condition of the well and storage tank. Each facility was assigned a condition score for the process, electrical, structural, and civil portions of the asset, and these scores were then used to determine an overall condition score for the asset. Table 6 provides the scoring system used to evaluate these facilities.

Table 7 lists the expected useful life of water infrastructure asset types that was used in calculating depreciation.

Table 6 Water Infrastructure Condition Scoring System

Condition Score	Portion of the Facility Needing Replacement
1	0-10%
2	11-30%
3	31-60%
4	60-75%
5	76-100%

Table 7 Expected Useful Life of Water Infrastructure Assets

Facility	Useful Life (years)
Wells	50
Storage Tanks	40
Pipelines	50
Meter Vault	50
Hydrants and Valves	50

Appendix D contains inspection forms and photographs from the site inspections. The following tables present the condition rankings and remaining useful life of the water assets. The condition assessment was used to determine if the asset needed to be depreciated at a faster rate than the linear depreciation associated with the useful life of that type of asset. Sites that received condition scores of 3, 4, or 5 may have the remaining useful life reduced to better represent the current condition of the asset. To a large extent, the condition of the assets is consistent with the linearly depreciated value of the asset.

Hydro provided documentation of the rehabilitation work performed for Tusayan #2. A new variable frequency drive (VFD) was installed for the well in 2014. Motor and pump related equipment was replaced in January of 2020 after Hydro experienced two incidents of water quality problems in 2019. The potential cause of the sediment and turbidity with rusty color was

identified as rusting of the well equipment due to age. Table 8 includes the condition scores for different components of Tusayan #2.

Table 8 Tusayan #2 Condition Assessment

Item	Quantity/Size	Date	Overall Rank	Useful Life (Years)	Age (years)	Remaining Useful Life (Years)
Site Work	1 lot	1994	4	40	26	14
Fencing	200 LF	1994	4	30	26	4
Electrical Shed	1 ea	1994	4	40	26	14
Electrical Service/Gear	1 lot	1994	3	25	26	0
Step Up Transformer	1 ea	1994	3	25	26	0
VFD	1 ea	2014	3	15	6	9
Motor Control Center	1 ea	1994	4	25	26	0
Well Drilling	3,000 LF	1994	4	50	26	24
Surface Casing	25 LF	1994	4	50	26	24
Well Casing	2,306 LF	1994	4	50	26	24
Well Pump and Motor	1 ea	2020	1	20	0	20
Column Pipe	2,600 LF	1994	4	40	26	14
Pump Shed	1 ea	1994	4	25	26	0
Discharge Piping	1 lot	1994	4	40	26	14
Chlorinator	1 ea	2006	4	25	14	11
Filters	3 ea	2020	1	20	0	20

Abbreviation:
LF = linear feet

Table 9 includes the condition scores for the tank. The tank floor has undergone rehabilitation in recent years. However, there is evidence of leaking along the tank seams, which is not uncommon in older bolted steel tanks.

Table 9 Water Storage Tank Condition Assessment

Site	Install Date	Capacity (MG)	Overall Condition Rank	Useful Life (years)	Age (years)	Remaining Useful Life
Site 2	1975	0.525	5	40	45	0

Section 4

ENGINEERING EVALUATION

4.1 Water Demands

Water demands are used in calculations to determine if water delivery infrastructure is adequately sized. Hydro provided the customer meter readings and billing rates for the years 2017, 2018, and 2019 in the ACC reports. The water demand data calculated based on this information is summarized in Table 10.

Table 10 Monthly Water Demand Data from Meter Readings for the Year 2019

Month	Water Used (gallons)
Jan	2,880,096
Feb	2,208,954
Mar	2,989,858
Apr	3,600,207
May	3,578,900
Jun	3,457,163
Jul	3,833,588
Aug	3,753,502
Sep	2,861,041
Oct	3,264,519
Nov	2,824,519
Dec	2,260,818
Total	**37,513,165**

The customer meter reading data provided by Hydro did not include water delivered to the Airport and water purchased from other systems. This information is important in correctly estimating the water production requirements for Hydro. For the purpose of this analysis, the 'Water delivered to other systems' and 'Water purchased from other systems' data reported to the ACC in 2018 was used as an approximation. Table 11 presents the water demand data reported in the ACC 2018 report.

Table 11 Monthly Water Demand Data Reported on the ACC 2018 Report

Month	Water Withdrawn (ac-ft)[1]	Water Sold (ac-ft)[2]	Water Delivered (sold) to Other Systems (ac-ft)[3]	Water Received (Purchased) from Other Systems (ac-ft)[4]
Jan	6.850	6.181	0.417	0.000
Feb	6.227	5.589	0.418	0.000
Mar	7.559	6.839	0.416	0.000
Apr	8.314	7.551	0.628	0.018
May	8.917	8.013	0.629	0.034
Jun	9.708	8.794	0.839	0.027
Jul	9.708	8.823	0.618	0.015
Aug	10.571	9.272	0.82	0.013
Sep	8.397	7.629	0.618	0.014
Oct	8.243	7.487	0.327	0.000
Nov	7.633	6.914	0.317	0.000
Dec	6.993	6.311	0.737	0.000
Total	**99.120**	**89.403**	**6.784**	**0.121**

Notes:
(1) Water withdrawn - Total acre-feet of water withdrawn from pumped sources.
(2) Water sold- Total acre-feet from customer meters, and other sales such as construction water.
(3) Water delivered (sold) to other systems - Total acre-feet of water delivered to other systems.
(4) Water received (purchased) from other systems - Total acre-feet of water purchased/received from other systems.
Abbreviation:
ac-ft = acre-feet

4.2 Water System Capacity Evaluations

4.2.1 Water Production

The following minimum performance criteria are typically applied to municipal water systems for water supply. The following water supply criteria has been used to evaluate the Hydro system:

1. The water supply sources should exceed the maximum daily demand plus a redundancy factor that accounts for uncertainties in water demand. For the Town, a 20 percent factor for demand uncertainty was used.
2. Wells should not be expected to run 100 percent of the time during peak demand days in the summer. For the Town, a down time of 10 percent was used.
3. Water systems should have more than one water source so that water can still be provided if one of the sources is out of service for any reason.

Hydro owns one of the three wells that operate in the Town. Table 12 lists the wells currently serving the Town water systems. The Tusayan #2 well provided a flow rate of up to 63 gpm before being rehabilitated in early 2020. After rehabilitation, the well has been reported to provide up to 78 gpm.

Table 12 Well Pumping Capacity

Water System	Well Name	ADWR #	Maximum Pumping Flow Rate (gpm)
Hydro	Tusayan #2	55-542928	78
Squire	Squire #1	55-560179	60
Anasazi(2)	Red Feather Well	55-523284	15

Note:
(1) The Tusayan #2 well has a VFD that allows the well to operate at lower flow rates. The Squire well may be equipped with a VFD soon.
(2) The Anasazi well pumps to a water system that operates at a lower hydraulic gradeline than the Hydro system, and the Anasazi water system is not connected to the to the Hydro system so it is not considered to be a potential supply to the Hydro system.

Table 13 presents an evaluation of the well pumping capacity relative to the annual water demands of the Hydro System. The total annual demand of the other water systems is not known. At a flow rate of 63 gpm, the Tusayan #2 well is not capable of supplying all of its customer's demands. At a flow rate of 78 gpm the well would have to operate 97 percent of the time throughout the year to supply Hydro customer demands. Consequently, this well cannot function as a stand-alone water source, even at the higher flow rate.

Table 13 Well Capacity Analysis based on Annual Water Demand

Well	Tank ID	ADWR #	Flow Rate (gpm)	Maximum Annual Water Production (gallons)(1)	
				Only Hydro In-Service	Hydro and Squire In-Service
Hydro	Tusayan #2	55-542928	78	40,996,800	40,996,800
Squire	Squire #1	55-560179	60	-	31,536,000
Maximum Annual Water Production Capacity Less 10%				36,897,120	65,279,520
Hydro Annual Water Supply Requirement				39,763,166	39,763,166
Surplus/(Deficit) Available for Redundancy and to Supply the Squire and Anasazi Water Systems				**(2,866,046)**	**25,516,354**

Notes:
(1) Maximum annual water production needs to consider some down time for maintenance and repairs.
(2) Fully utilizing water production on an annual basis requires enough storage for seasonal demand and supply variations.
(3) The total water demand includes the data from customer meter readings from 2019, and water purchased or delivered to other systems based on information from the ACC 2018 report.
(4) Water at the Tusayan #2 and Squire #1 wells is chlorinated. Organics in the groundwater are minimal, so water can be stored for extended periods without degradation in water quality.
(5) The surplus shown with the Squire well operating would also need to supply Squire customers.

Daily water production capacity for the Tusayan #2 and Squire #1 wells was compared with the maximum daily demand requirement for the Hydro system. Table 14 presents the results of this evaluation. The maximum daily demands during the summer are estimated to be approximately 99 gpm. Consequently, the Hydro well is not capable of supplying Hydro demands for a maximum demand day in the summer or a series of maximum demand days. The Hydro system needs to rely on storage or the Squire well to fully provide water to the Hydro water system customers, in addition to the Squire customers.

Table 14 Well Capacity Analysis based on Flow Rate

Facility	Tank ID	ADWR #	Total Flow Rate (gpm)	
			Tusayan #2 Well Only in Service	Tusayan #2 and Squire #1 Wells in Service
Hydro	Tusayan #2	55-542928	78	78
Squire	Squire #1	55-560179	-	60
Total Water Production			**78**	**138**
Maximum Day Demand for Hydro Customers Only			99	99
Max Day Demand + 20% margin for Hydro Customers Only			119	119
Surplus/(Deficit)			**(41)**	**19**

Note:
(1) Maximum Day Demand = 1.61 * Average Day Demand (ADD).

The following alternatives have been considered as potential additional water supplies that could provide water supply redundancy:

1. The Squire #1 well and distribution system are interconnected to the Hydro system and the Squire well has been used along with the Tusayan #2 well to supply the two combined systems. This well could continue to be used to provide a level of redundancy to the Hydro system.
2. The Anasazi well produces approximately 15 gpm for the Anasazi water system that serves one customer. The Anasazi well reportedly does not supply all the water needs of the Anasazi water distribution system, so water is occasionally hauled from a well in Valle and stored in the Anasazi storage tank. The Anasazi water system could benefit from being interconnected to the Hydro system but could not provide a meaningful water supply to the Hydro System because the Anasazi water system operates at a lower hydraulic gradeline.
3. The Airport water system is currently completely reliant upon the Hydro and Squire water systems. In the past, a facility gathered rainwater from the runway and tarmac, and then treated this water for the airport water customers, providing approximately 12 million gallons per year. An underground storage facility and three ground storage tanks provided water storage in between rainstorms. The reason that the treatment facility has been abandoned is not known, but at this point a new treatment facility would most likely be required to meet drinking water standards. A new treatment facility could be constructed to replace the facility that has been abandoned. Any water not needed at the airport could be delivered to the Squire system. Note that treated surface runoff water will likely contain organics, which could reduce the ability of this water system to store water seasonally.
4. Water could be hauled from Valle, located 23 miles to the south of the Town. The Town may be able to acquire an existing well for its use, or purchase water from one or more well owners located in the Town. In this part of Arizona, it is common to have water haulers who deliver water in trucks. The cost to haul the water would be approximately $45/1,000 gallons.
5. Construct a new well. The Coconino aquifer that underlies Tusayan, which is located approximately 2,500 – 3,000 feet below ground, could provide additional groundwater.

Anecdotal information associated with past attempts to drill a well is that there has been a very high level of opposition from environmental groups who oppose drilling close to the Grand Canyon. Consequently, drilling another well may not be practical given this opposition.

6. The Town may be able to get water from the National Park Service, whose water system is approximately six miles north of the Town. Tusayan has received water from the National Park Service in the past. The National Park Service obtains its water from sources north of the Grand Canyon. This option should be explored to obtain additional water supply reliability. In exploring this option, the Town should evaluate the amount of water that may be available long-term, considering any future increases in water demand that the National Park Service may be planning.

4.2.2 Storage Capacity

Water storage criteria often varies based on the unique needs of each individual water system. Reasonable storage requirements for Tusayan are presented below:

1. Fire flow: Sufficient storage should be provided to fight the largest fire that could occur in the Town. A hotel may have a fire flow requirement up to 3,500 gpm for four hours and a residential fire flow requirement is typically 1,500 gpm for two hours. These two simultaneous events would require a fire flow storage volume of 1.02 million (M) gallons. The Town is surrounded by forests, so forest fires could present a major fire risk to the Town. The assumption in this study is that the Town's water system is not equipped to protect against a major forest fire.
2. Diurnal or equalizing storage: This storage is for daily peak hour flows and is typically 25 percent of the maximum day demand.
3. Emergency: Emergency or operational storage does not have a standard criterion and is unique to each water system. In the case of Tusayan, operational storage should be the amount of storage needed to supply summer demands for a period of time in the event that a well is out of service, or water demands exceed the maximum daily demand at the peak of the summer. Due to the low flows produced by the two wells, water storage in Tusayan should be greater than the emergency storage for other communities. Although somewhat arbitrary, the emergency storage should be enough to supply maximum daily demands for half of a month where demands are close to the maximum daily demand. This approach would provide time to repair a well, if needed.

Hydro owns one storage tank and benefits from the Squire tank that is co-located with the Hydro tank. Both storage tanks are located on Forest Service lands. Two million gallons of storage in the Squire tank is leased to Hydro. The two airport tanks provide a benefit to the Hydro system because water can be stored in the airport system for an extended period during peak demand times. Consequently, well water pumped during peak demand periods does not necessarily need to be delivered to the airport. Table 15 presents the storage volume of the tanks currently operating in the Town.

Table 15 Storage Tank Volumes

Facility	Ownership	Material	Quantity	Storage Volume (gallons)	Total Storage Volume (gallons)
Hydro	Owned	Steel Bolted	1	525,000	525,000
Squire	2 MG Leased to Hydro	Steel Welded	1	3,000,000	3,000,000
Airport	NA	(Above Ground)	2	1,400,000	2,800,000
Anasazi	NA	Welded Steel	1	400,000	400,000

Table 16 presents results of the storage capacity analysis. This analysis shows that the Hydro system by itself does not have sufficient storage capacity. The combined storage volumes of the Hydro, Squire, and airport systems are required to provide sufficient storage.

Table 16 Storage Tank Capacity

Facility	Total Available Storage Volume (MG)		
	Only Hydro In-Service	Hydro and Squire In-Service	Hydro, Airport, and Squire In-Service
Hydro	0.525	0.525	0.525
Squire[1]	-	2.0	2.0
Airport	-	-	2.8
Anasazi[4]	-	-	-
Total Storage Volume	**0.525**	**2.525**	**5.325**
Equalizing Storage Requirement	0.04	0.04	0.04
Emergency Storage Requirement	2.0	2.0	2.0
Fire Storage Requirement	1.02	1.02	1.02
Total Storage Requirement for Hydro Only	**3.06**	**3.06**	**3.06**
Surplus/(Deficit)	**(2.53)**	**(0.724)**	**1.434**

Notes:
(1) The Squire tank volume is 3 MG but only 2 MG can be used by Hydro.
(2) Hydro maximum daily demand is 142, 560 gallons/day. Water demand for the other utilities is not known.
(3) Fire flow is 1500 gpm for 2 hours for one residential fire and 3,500 gpm for 4 hours for one commercial fire.
(4) The Anasazi storage tank is at a lower elevation than the Hydro storage reservoir and therefore is not a potential storage for the Hydro system.

4.2.3 Pipelines

The following criteria is common for municipal water systems:

1. Pipes should be sized so that the maximum water velocity does not exceed 5 feet per second (ft/sec) for peak hour demands and 10 ft/sec for fire flow demands.
2. Water distribution pipes should be looped to increase the ability to provide fire flows and service continuity if a main is out of service.

The water system is comprised primarily of eight -inch water mains, with some smaller four and six-inch mains. A ten-inch water main supplies the Hydro and Squire storage tanks. Applying a

hydraulic model is typically used to evaluate fire flows and connectivity in a water distribution system. A hydraulic model was not developed as part of this scope, so the water system was evaluated by inspection.

Eight-inch water mains supplying hydrants are typically required to provide fire flows. Since the water system is comprised primarily of eight-inch mains, the water distribution mains appear to be appropriately sized where an eight-inch main exists.

Figure 1 illustrates the degree of looping in the water system. Most of the Town lies along Highway 64, with a portion of the Town located to the west in the direction of Long Jim Canyon. Opportunities to loop water mains are more limited than in a typical water distribution system, but looping has been added in several locations. The looping that does exist is dependent on Hydro mains, Squire mains, and privately owned mains.

There are plans to add looping across the highway on the north end of the town. There are also plans to add a loop along the south side of the Town from the pipeline to the storage tanks, along the south side of the Squire hotel, connecting to the Hydro mains west of the Squire hotel. Sleeves have been placed under the highway to facilitate these improvements. A third connecting pipe along RP Dr would complete looping for the Hydro system. When completed, these mains will provide additional looping and significantly increase the reliability of the system. The cost of these improvements should be considered in the Hydro purchase decision.

4.2.4 Fire Flows

The ability to provide fire flows is a function of the pipeline, pumping, and storage components of the water distribution system. The Hydro system has fire hydrants that serve portions of the town. The Squire and Anasazi water systems also have fire hydrants. The wastewater authority operates a reclaimed water system that provides irrigation water to various areas of the Town. The system is equipped with multiple fire hydrants throughout the Town. Individual hotel and restaurant customers have also paid to have private pipelines and hydrants installed around their business.

The Tusayan fire department conducts hydrant fire flow tests. Results of these tests are included in Appendix E. The hydrant tests results vary by hydrant between 300 gpm and 3,800 gpm. Most hydrants provide more than 1,000 gpm.

The Squire system has one fire flow diesel engine driven pump station located at the Squire storage tank. This pump station was previously owned by Hydro. This pump can provide up to 2,500 gpm, which is close to the capacity of the ten-inch water main leading from the tank flowing at 10 ft/sec, although head losses at that velocity are significant. A parallel twelve-inch diameter water main to the tanks would significantly improve fire flow capabilities. Higher fire flows may be possible if fire flows come from multiple hydrants including hydrants from both the potable and reclaimed water systems.

The pumping capacity of the Tusayan #2 and Squire #1 wells is not sufficient to contribute substantially to the water system fire flow capabilities. The Hydro system itself does not provide a standalone fire flow capability.

4.2.5 Integrating the Hydro System with other Water Systems

Integrating the Hydro system with other water systems in the Town is one way to increase the level of water supply reliability and storage. The following issues would need to be considered when evaluating the potential for the Hydro water system to be merged with the other water systems in the Town.

1. The Airport tanks are approximately two feet higher than the Squire and Hydro tanks. Therefore, these two water systems can operate at a similar hydraulic gradeline and the Airport and Hydro systems could be combined and function together. However, the Airport system has two 250 gpm pumps and two 1,250 gpm pumps that are used to pressurize the airport system. These pumps can be used to move water from the Airport system back to the Hydro system, providing an additional level of reliability in an emergency. Greater reliability and firefighting capability would be provided by increasing the connecting pipe diameter between the two systems to 12 inches.
2. The Anasazi tank is eight feet shorter and is approximately fifteen feet lower in elevation. The Anasazi system operates at a lower hydraulic gradeline so water cannot be moved from the Anasazi system to the Hydro system by gravity. Therefore, although the Hydro system can provide water supplies that increase redundancy and reliability in the Anasazi system, the Anasazi system cannot provide similar benefits to the Hydro System.

4.2.6 Water Utility Operating Considerations

If the Town chooses to become a water utility owner then the following items may become important to address:

1. The Hydro water system depends upon a number of private mains to provide the existing looping. If the Town chooses to acquire the Hydro system, they should consider purchasing these private water mains to provide a uniform approach to maintaining the water system so that the Hydro system continues to have a reliable system of looped water mains.
2. If the Town enters the water system business, it will need to obtain an operator with the required operator licenses, make arrangements for water quality sampling and testing, and set up a business office to perform monthly meter reading and billing functions.
3. Public utilities typically have a higher level of redundancy to increase the reliability of the water systems. Publicly owned utilities have a higher level of accountability to the local voting public, and the public often has high expectations for reliability. The estimate value does not include the cost to increase the capacity of the water system where deficiencies are noted in this report.
4. A public utility is expected to meet safety standards consistently, and failure to do so would lead to negative publicity that is damaging to confidence in the utility.

Section 5

UTILITY VALUATION

5.1 Asset Value Approach

The asset cost approach was used to estimate the Replacement Cost New (RCN) of Hydro's assets and the Replacement Cost New Less Depreciation (RCNLD) using linear depreciation over the asset's useful life. Linear depreciation was based on the estimated useful life of the assets. Unit costs were derived from Carollo's unit cost database or the Willdan report (for the well and tanks) and adjusted using the Engineering News-Record (ENR) Adjustment Factor. Unit costs were developed for the wells, pipes, appurtenances, and miscellaneous items. Pipe sleeve costs were provided by Hydro.

5.1.1 Water Infrastructure Valuation

This section summarizes the valuation of the Hydro water system. The following tables present the cost valuation of the different assets.

Table 17 presents the Tusayan #2 well evaluation. Table 18 presents the storage tank evaluation. Table 19 presents the water pipe valuation. Pipelines were not physically inspected. Consequently, the value of the pipe was decreased linearly based on pipe age. Table 20 presents the hydrant valuation. Table 21 presents the valve valuation, while Table 22 presents the meter valuation and Table 23 presents the sleeves valuation.

Table 17 Tusayan #2 Well Valuation

Item	Date	Quantity/ Size	Unit Cost ($)	Construction Cost ($)	Replacement Cost New ($)	Overall Condition Rank	Useful Life (years)	Age (years)	Remaining Useful Years	Adjustment Factor	Replacement Cost New Less Depreciation ($)
Site Work	1994	1 lot	20,000	20,000	25,337	4	40	26	14	35%	8,868
Fencing	1994	200 LF	20	4,000	5,067	4	30	26	4	13%	676
Electrical Shed	1994	1 ea	15,000	15,000	19,003	4	40	26	14	35%	6,651
Electrical Service/Gear	1994	1 lot	55,000	55,000	69,678	3	25	26	0	5%	3,484
Step Up Transformer	1994	1 ea	15,000	15,000	19,003	3	25	26	0	5%	950
VFD	2014	1 ea	36,525	36,525	42,039	3	15	6	9	60%	25,224
Motor Control Center	1994	1 ea	25,000	25,000	31,672	4	25	26	0	5%	1,584
Well Drilling	1994	3,000 LF	240	720,000	912,144	4	50	26	24	48%	437,829
Surface Casing	1994	25 LF	75	1,875	2,375	4	50	26	24	48%	1,140
Well Casing	1994	2,306 LF	25	57,650	73,035	4	50	26	24	48%	35,057
Well Pump and Motor	2020	1 ea	123,812	123,812	124,290	1	20	0	20	100%	124,290
Column Pipe	1994	2,600 LF	10	26,000	32,939	4	40	26	14	35%	11,528
Pump Shed	1994	1 ea	10,000	10,000	12,669	4	25	26	0	5%	633
Discharge Piping	1994	1 lot	25,000	25,000	31,672	4	40	26	14	35%	11,085
Chlorinator	2006	1 ea	3,500	3,500	4,434	4	25	14	11	44%	1,951
Filters	2020	3 ea	1,000	3,000	3,000	1	20	0	20	100%	3,000
					1,408,357						**673,950**

Notes:
(1) Depreciation is estimated by straight line depreciation based on the useful life, with a 5% residual value for assets that are past the expected useful life but are still in service.
(2) Remaining useful life is estimated by subtracting the age of the asset from the expected useful life. The remaining useful life were not further reduced depending on the asset's condition.

Table 18 Storage Tank Valuation

Install Year	Capacity (MG)	Construction Method	Construction Cost ($)	Replacement Cost New ($)	Overall Condition Rank	Useful Life (years)	Age (years)	Remaining Useful Life (Years)	Adjustment Factor (%)	Replacement Cost New Less Depreciation ($)
1975	0.525	Bolted Steel	550,000	696,776	4	40	45	0	5%	34,839

Notes:
(1) Depreciation is estimated by straight line depreciation based on the useful life, with a 5% residual value for assets that are past the expected useful life but are still in service.

Table 19 Water Main Valuation

Pipe Segment[(1)]	Install Year	Diameter (in)	Material	Length (ft)	Unit Cost ($)	Construction Cost ($)	Replacement Cost New ($)	Age (Years)	Remaining Useful Life (Years)	Adjustment Factor	Replacement Cost New Less Depreciation ($)
Segment B	1986	8	Sch 40 PVC	1,113	71	79,023	79,182	34	16	32%	25,338
Segment C	1997	8	C 900 PVC	732	60	43,965	44,173	23	27	54%	23,854
Segment D	1986	8	Sch 40 PVC	480	71	34,080	34,149	34	16	32%	10,928
Segment E	1992	6	Sch 40 PVC	1,351	61	82,411	82,577	28	22	44%	36,334
Segment G	1984	2	Sch 40 PVC	3,026	10	30,260	38,335	36	14	28%	10,734
Segment H	1984	6	Sch 40 PVC	2,022	61	123,342	123,591	36	14	28%	34,605
Segment I	1984	8	Sch 40 PVC	476	71	33,796	33,864	36	14	28%	9,482
Segment I	1984	8	Sch 40 PVC	820	71	58,220	58,337	36	14	28%	16,334
Segment J	2000	8	C 900 PVC	727	60	43,665	43,872	20	30	60%	26,323
Segment K	1984	8	C 900 PVC	318	60	19,100	19,190	36	14	28%	5,373
Segment L	2000	4	C 900 PVC	430	64	27,371	27,501	20	30	60%	16,501
8" PVC pipe added between 2010 and 2020	2015	8	PVC	1,438	71	102,098	102,304	5	45	90%	92,073
Totals				**12,933**			**584,772**				**215,806**

Notes:
(1) The segments references are taken from the Willdan Report.
(2) Depreciation is estimated by straight line depreciation based on the useful life.

Table 20 Fire Hydrant Valuation

Hydrant Name	Install Year	Quantity	Unit Cost ($)	Construction Cost ($)	Replacement Cost New ($)	Age (Years)	Remaining Useful Life (Years)	Adjustment Factor	Replacement Cost New Less Depreciation ($)
Hydrant (1993)	1993	3	5,578	16,734	16,814	27	33	46%	7,734
Hydrant (1997)	1997	1	5,578	5,578	5,605	23	27	54%	3,026
Hydrant (1984)	1975	2	5,578	11,156	11,209	45	5	10%	1,121
Hydrant (after 2011)	2015	16	5,578	89,251	89,674	5	45	90%	80,707
Meter Vault	1994	2	25,000	$50,000	50,000	26	24	48%	24,000
			Total		**173,302**				**116,588**

Note:
(1) Depreciation is estimated by straight line depreciation based on the useful life.

Table 21 Valve Valuation

Valve/ Meter Name	Install Year	Quantity	Unit Cost ($)	Construction Cost ($)	Replacement Cost New ($)	Adjustment Factor	Replacement Cost New Less Depreciation ($)
Valve 8" (1975)	1975	3	2,054	6,163	6,193	10%	619
Valve 8" (1986)	1986	2	2,054	4,109	4,128	32%	1,321
Valve 8" (1992)	1992	1	2,054	2,054	2,064	44%	908
Valve 8" (1994)	1994	3	2,054	6,163	6,193	48%	2,972
Valve 8" (1996)	1996	2	2,054	4,109	4,128	52%	2,147
Valve 8" (1997)	1997	3	2,054	6,163	6,193	54%	3,344
Valve 8" (1999)	1999	1	2,054	2,054	2,064	58%	1,197
Valve 6" (1984)	1984	7	1,623	11,358	11,412	28%	3,195
Valve 6" (1986)	1986	1	1,623	1,623	1,630	32%	522
Valve 6" (1993)	1993	4	1,623	6,490	6,521	46%	3,000
Valve 6" (2000)	2000	1	1,623	1,623	1,630	60%	978
Valve 6" (2001)	2001	1	1,623	1,623	1,630	62%	1,011
Valve 4" (1993)	1993	1	1,272	1,272	1,278	46%	588
Valve 4" (1997)	1997	1	1,272	1,272	1,278	54%	690
Valve 4" (2001)	2001	2	1,272	2,544	2,556	62%	1,585
Valve 2" (1984)	1984	1	839	839	843	28%	236
			Total		**59,743**		**24,314**

Note:
(1) Depreciation is estimated by straight line depreciation based on the useful life.

Table 22 Customer Meter Valuation

Meter Name	Install Year	Quantity	Unit Cost ($)	Construction Cost ($)	Replacement Cost New ($)	Adjustment Factor	Replacement Cost New Less Depreciation ($)
Meter (after 2011)	2015	81	300	24,300	24,300	50%	12,150
			Total		**24,300**		**12,150**

Note:
(1) Depreciation is estimated by straight line depreciation based on the useful life of the asset.

Table 23 Sleeve Valuation

Asset Name	Quantity/Size	Construction Cost ($)	Replacement Cost New ($)	Installation Date	Age	Remaining Useful Years	Adjustment Factor	Replacement Cost New Less Depreciation ($)
Sleeves	3	$21,528	22,011	2018	2	48	96%	21,131
		Total	**22,011**					**21,131**

Note:
(1) Depreciation is estimated by straight line depreciation based on the useful life of the asset.

5.1.2 Asset Valuation Summary

A summary of the Hydro system asset value is presented in Table 24. Based on this evaluation, the Tusayan #2 well is the most valuable system asset.

Table 24 Water Assets Cost Evaluation Summary

Asset Type	Replacement Cost New ($)	Replacement Cost New Less Depreciation ($)
Wells	$1,408,000	$674,000
Tanks	$697,000	$35,000
Pipes and Mains	$585,000	$216,000
Hydrants	$123,000	$117,000
Valves	$60,000	$24,000
Meters	$24,000	$12,000
Sleeves (for future road crossings)	$22,000	$21,000
Total	**$2,919,000**	**$1,099,000**

5.2 Market Valuation

Several water systems have been purchased in the State of Arizona in the last decade. Depending on the availability of information, the estimated value of the different water systems can be adjusted to account for system characteristics that result in differences in the perceived value. Table 25 lists the eight water provider purchases used in this analysis. The price of each purchase has been adjusted for inflation.

Table 25 Market Survey of Similar Water System Acquisitions

Purchaser	Acquired System	Purchase Date[1]	Purchase Price[2]	Inflated Price[3]
City of Peoria[4]	New River Utility Company	Aug-16	$10,000,000	$10,908,000
EPCOR	Willow Valley Water Company (Global Water)	Aug-16	$2,494,834	$2,722,000
City of Buckeye	Valencia Water Company (Global Water)	Jul-15	$55,000,000	$60,819,000
Town of Queen Creek	H_2O Water Inc.	Sep-13	$34,000,000	$37,937,000
City of Avondale	Rigby Water Company	May-11	$2,560,000	$2,940,000
Town of Queen Creek	Queen Creek Water Company	Mar-08	$36,896,000	$43,402,000
City of Avondale	Wilhoit Water Company	Sep-09[5]	$350,000	$418,000
Town of Queen Creek	Diversified Utilities, Inc.	Expected 2020	$10,000,000	$10,000,000

Notes:
(1) Date of ACC decision of best-known timeframe.
(2) Shown in nominal dollars, not adjusted for inflation.
(3) Inflated based on Phoenix-Mesa-Scottsdale Consumer Price Index (CPI) February 2019.
(4) Purchased all of the stock of New River in October 2015 and has been operating New River since the stock purchase.
(5) Docket dated 2009, application submitted July 2003.

One method used to compare acquisitions is to determine the average selling price per account. This calculation can provide a metric for assessing a purchaser's willingness to pay for a system, as well as the estimated price a seller may be expecting. Table 26 shows this calculation. The cost per account ranged from $1,700 to $9,000 with an average price of $5,000. These estimates need to be viewed in conjunction with other relevant information such as system attributes, size of system and system condition. Tusayan is unique because water customers are primarily businesses or residences owned by businesses. Consequently, the Hydro meter count may be lower than water systems of a similar size.

Table 26 Market Survey of Similar Water Acquisitions – Cost per Account

Acquired System	Inflated Price(1)	Number of Accounts(2)	Cost per Account
New River Utility Company	$10,908,000	2,882	$3,800
Willow Valley Water Company (Global Water)	$2,722,000	1,620	$1,700
Valencia Water Company (Global Water)(3)	$60,819,000	7,000	$8,700
H_2O Water Inc.	$37,937,000	9,637	$3,900
Rigby Water Company	$2,940,000	326	$9,000
Queen Creek Water Company	$43,402,000	9,224	$4,700
Wilhoit Water Company	$418,000	143	$2,900
Diversified Utilities, Inc.	$10,000,000	1587	$6,300
Average - Cost per Account			$5,100
Minimum - Cost per Account			$1,700
Maximum - Cost per Account			$9,000

Notes:
(1) Shown in 2019 dollars, adjusted for inflation. Inflation based on Phoenix-Mesa-Scottsdale CPI-U.
(2) Number of accounts specified in ACC eDocket filing.
(3) The Valencia Water Company has been shown to be significantly over-priced based on asset condition and debt obligations for water main extensions.

When considering a market approach to valuation, a prospective purchaser should be mindful of the attributes of those systems to use as the basis for comparison. Knowledge of the system attributes and other drivers, such as political and economic motivation is imperative to understanding the reason(s) behind a purchase price. The majority of this information is not publicly available, but attempts have been made to collect as much information as possible. Table 27 presents that data collected. In comparison with other water utilities, the Hydro water system will have a perceived lower value because it does not have enough water supply capacity, storage capacity, or its own complete set of mains to operate as an independent water supply system.

Table 27 Market Survey of Water System Assets

Acquired System	Water Production (AFY)[1]	Wells[2]	Storage Volume (MG)[3]	Other Notable System Assets[4]
New River Utility Company	6,295	5	3	2 pressure tanks; 8 booster pumps; 3 gas chlorination systems; 4 arsenic treatment filters.
Willow Valley Water Company (Global Water)	2,848	10	0.5	12 booster pump stations.
Valencia Water Company (Global Water)	2,775	18	6.5	5 separate systems:[1] Town of Buckeye Division,[4] Greater Buckeye Division, several booster stations, pressure tanks, water mains.
H_2O Water Inc.	12,163	5	13.3	6 inactive wells; booster pumps; water mains; service lines; water meters; fire hydrants.
Rigby Water Company	132	3	0.16	8.2 miles of water mains; 21 gate valves; 2 blow offs; 354 service lines and meters; 8 fire hydrants; 3 pressure tanks; 6 booster pumps.
Queen Creek Water Company	19,116	11	4.3	Booster pumps; water mains; service lines; water meters; fire hydrants.
Wilhoit Water Company	NA	2	0.04	1 pneumatic tank; 1 booster pump; 1 compressor.
Diversified Utilities, Inc.	6,590	4	1.22	2 wells in service, 1 not-equipped well, 3 storage tanks, 3 pump stations

Notes:
(1) As reported in the ACC filings. Volumes shown in acre-feet per year (AFY).
(2) Denotes active wells.
(3) Combined volume of all storage tanks. Volumes shown in million gallons.
(4) Transmission and distribution system piping not typically noted. Detailed information not provided in fillings.
Abbreviation:
AFY = acre-feet per year

5.2.1 Market Valuation Summary

Based on this market analysis and considering the amount of water produced and the number of customers, the value of the Hydro water system could be somewhere between $500,000 and $2.0M.

5.3 Income Valuation

The "Income Approach" valuation method uses the potential earnings of a utility, estimated into the future and discounted back to "today," to approximate a present value of the system. The following section presents the valuation of the Hydro water system using the "Income approach" methodology.

The income approach to valuation estimates the value of the potential cash flows in the form of pre-tax earnings of the physical assets of the system, rather than the costs of construction or of replacing the system. This method assumes that a prospective buyer will be willing to purchase the system at a price that is commensurate with the present purchase price of the future earnings stream for the system assets.

The analysis of the Hydro system using the income approach relied on reports from the Arizona Corporation Commission. Annual reports were obtained for years ending December 31 of the years 2015, 2016, 2017, and 2018 from the ACC. Copies of the ACC Reports are included in Appendix F.

Table 28 summarizes the income and expense statements provided in Hydro's annual reports. These records show after tax profits each year.

Table 28 Balance Sheets Summary

Revenue/Expense Category	2015[1]	2016[1]	2017[1]	2018[1]
Operating Revenue	$765,050	$614,584	$579,849	$592,763
Operating Expenses[2]	($502,816)	($566,340)	($584,355)	($539,233)
Other Income (Expense)	$23,885	$31,278	$33,905	$31,519
Net Income/(Loss)	**$286,119**	**$79,522**	**$29,399**	**$85,049**

Notes:
(1) Annual Reports filed with Arizona Corporation Commission (ACC) for years ending December 31.
(2) Includes depreciation and taxes

Hydro has earned between $29,000 and $286,000, generally indicating customer rates are sufficient to cover annual operating expenses.

Hydro operates with no debt. However, as the system ages, a reinvestment of dollars for repair and replacement capital is required to maintain the integrity and level of service of the system. Therefore, rates should be high enough to fund annual repair and replacement costs to maintain the system.

5.3.1 Return on Equity Income

Hydro is generating positive cash flows through its ongoing operations. As a result of the operating profits, a surrogate approach has been used for the purpose of this valuation. Potential income was estimated based on a return on equity (ROE). Private water utilities in Arizona are allowed to generate a net income based on the amount of equity that they hold in their system. Based on a review of other ACC rate cases, ROE was approved roughly between 9 and 12 percent. For this study, a ROE of 10 percent was assumed. Annual incomes were estimated for Hydro by multiplying the projected asset equity in each year by the 10 percent ROE, and then discounting future years using a 5 percent discount rate. This methodology yields an income value of $1,409,646 for the water system.

Annual equity was estimated based on the asset list, system reproduction cost, and depreciation as discussed in Section 3. Detail of the projected ROE income calculation is included in Appendix G.

5.4 Costs to Obtain a Stand-Alone Municipal Standard Water System

If the Town acquired the Hydro system, the Town would want to operate the water system with a level of autonomy to help achieve the Town's goals for owning and operating a water utility. The Hydro system currently does not operate independently as a stand-alone water distribution system, but shares infrastructure with the Squire system and may benefit from the storage in the Airport system. For perspective, the additional water infrastructure needed to upgrade the Hydro system to a stand-alone municipal water system that provides water supply, storage, and a looped water distribution system have been identified and are presented below.

1. Construct or acquire a second well to satisfy the water supply performance criteria. Assuming that approval for a second well could be obtained by overcoming political opposition, identifying and acquiring a site, permitting, designing, and constructing a second well would cost approximately $2,500,000.
2. Construct 2.5 MG of storage capacity to replace the current bolted steel tank that is at the end of its useful life and to replace the 2 MG of storage capacity that is leased from the Squire system. The cost of this storage capacity would be approximately $3,500,000.
3. Construct a pipeline from the storage tanks to the water distribution system that is capable of providing a fire flow of 3,500 gpm. This pipeline would have a minimum diameter of twelve inches, and a length of 1,600 feet. if the tank was co-located with the existing tanks. This pipeline would cost approximately $450,000.
4. Construct the planned pipeline from the east side of Highway 64, around the south side of the Squire hotel to the Hydro pipeline to the west of the hotel. This pipeline would be eight inches in diameter and approximately 1,200 feet. long. The pipeline would cost approximately $250,000.
5. Construct the planned looping pipeline on the north side of Town from the east side of Highway 64, across the highway at the roundabout, and south to the Hydro pipeline just south of the IMAX theater. This pipeline would be eight inches in diameter and approximately 1,200 feet. long. The pipeline would cost approximately $250,000.
6. Construct an eight-inch pipeline along RP Drive from where a private pipeline crosses RP Drive near the Holiday Inn Express west to where the Hydro pipeline runs across the Road. The pipeline diameter would be eight inches and the length would be approximately 1,000 ft. for a cost of $200,000.

5.5 Valuation Summary

The value of a utility is influenced by the value of its assets, the value of the revenue from the utility bills, and the price that others have paid for similar utility assets. Therefore, the asset value, return on investment, and market price should all be considered in establishing the value of the Hydro system. Table 29 shows the summary of the Hydro system valuations using the methods discussed in the previous sections.

Table 29 Valuation Summary

Method and System	Valuation ($)
Cost Approach – Water System	1,099,000
Market Approach – Water System	500,000 – 2,000,000
Revenue Approach	1,409,646

These valuation methods are not additive. They should be considered together in the aggregate based on factors that are specific to this utility. An appropriate acquisition evaluation must consider many factors to determine a price that reflects what a willing buyer would pay for the system. A buyer must also consider the expected capital required to bring the system up to municipal standards and repair or replace aging infrastructure.

5.6 Costs to Upgrade to a Stand-Alone Municipal Water System

Although operating two separate but connected water utilities has served the goals of the current Hydro and Squire owners, the Town may have different goals and objectives for owning and operating a water utility, so the cost of upgrading the Hydro system to a stand-alone water utility is important. The cost to upgrade the Hydro water system to a stand-alone water system that meets a municipal standard is presented in Table 30.

A more economical approach to providing a potable water supply for Tusayan would be to have a single combined water system for Tusayan that uses the combined assets of the separate Tusayan water systems.

Table 30 Infrastructure Improvements for the Hydro System to Operate as a Stand-Alone Water System with a Municipal Standard

Infrastructure Item	Planning Level Project Cost ($)
Additional well	$2,500,000
2.5 MG of storage capacity	$3,500,000
Twelve-inch water main, 1,600 ft. long from the distribution system to a storage tank	$450,000
Eight-inch, 1,200 ft. looping main on the south of the Squire Hotel	$250,000
Eight-inch, 1,200 ft. looping main starting on the east side of Highway 64, crossing Highway 64, and running south to the IMAX Theater	$250,000
Eight-inch, 1,000 ft. looping main along RP Drive between a current Hydro pipe and a privately owned pipe.	$200,000
Total	**$7,150,000**

Section 6

CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

1. The Hydro water system condition is typical for a system of similar age and assets. Specifically:
   a. The Tusayan #2 well was recently rehabilitated and is expected to be serviceable for a number of years. Hydro does not own the land where the well is located.
   b. The storage tank is at the end of its useful life and has some rust and leakage issues. However, the tank has also undergone some recent rehabilitation to the floor and could remain serviceable until a new storage solution is constructed.
   c. The water distribution mains, hydrants, and valves are in an appropriate condition for the age of the infrastructure.
2. The Hydro water system is not a complete, standalone water system because it does not have adequate infrastructure capacity in the following areas:
   a. The Tusayan #2 well cannot supply maximum day demands and must rely on the Squire #1 well to supply a portion of the maximum daily demands. The land where the Tusayan #2 well is located is not owned by Hydro.
   b. The Hydro system must rely on the Squire storage tank to meet storage needs.
   c. The Hydro system must rely on some of the water mains in the Squire water system as well as multiple private water mains to complete the looping that would improve the ability to supply fire flows.
   d. In the event of a fire, the Hydro system must rely on the Squire system for fire flow pumping capacity.
   e. The pipeline between the storage tanks and the distribution system is owned by the Squire system. The Hydro system relies on the storage in the Airport system to meet summer demands due to the limited combined well capacity of the Hydro and Squire systems.
3. The water system has an estimated value of $1,099,000 based on the depreciated value of the infrastructure. The water system has a value of $1,409,646 based on the revenue valuation method. The water system has a value range of $500,000 - $2,000,000 based on the market analysis method. The actual value of the water system will be set by a willing seller and a willing buyer, so the intent of these cost estimates is to provide an approximate valuation range for guidance. The value of the Hydro system is adversely affected by the reality that the system is not a standalone water system, and this reality is not reflected in these utility valuation estimates.
4. The cost of upgrading the Hydro water system to a stand-alone utility that meets municipal standards is $7,150,000 in addition to the purchase price of the utility.

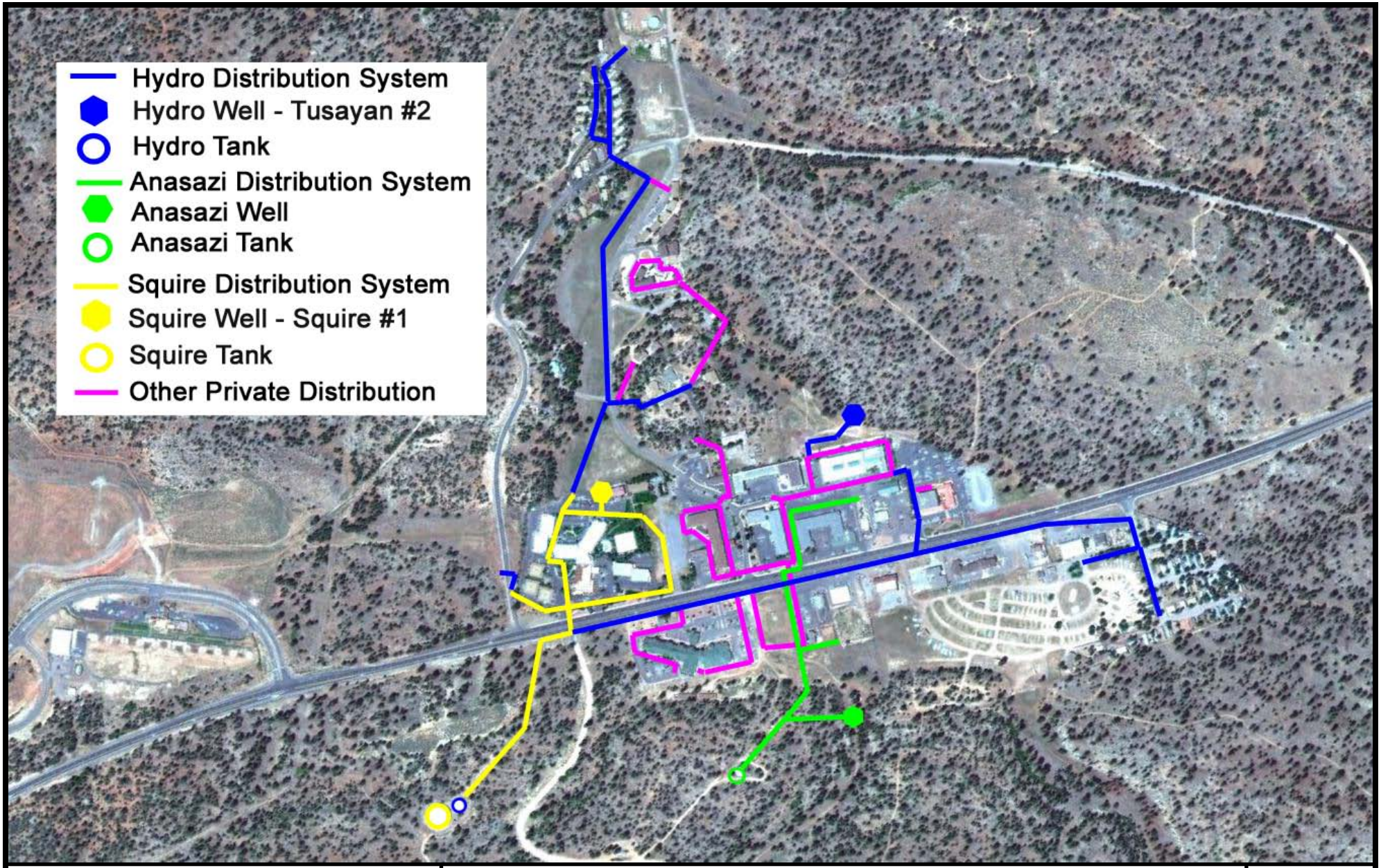
6.2 Recommendations

1. Acquisition of the Hydro Resources, Inc. Water Company by the Town of Tusayan is an option available to the Town but is not recommended in its current form because the Hydro water system is not a stand-alone water system that can be managed independently. The Town has four separate water systems (Hydro, Squire, Anasazi, Airport) that have evolved and developed over time in response to the specific needs and goals of each water system owner. The needs and goals of a public water utility are often different from the needs and goals of private utility owners. Expected levels of water supply reliability and redundancy are often higher for public water systems than for private water systems. If the Town acquires a water system, the Town would want to operate it and be able to control the destiny of the water system, which would provide the opportunity to benefit water customers with a quality, reliable water supply. In owning a water utility, the Town also takes on responsibilities and the risks inherent in successful water delivery, so the Town needs to have enough control and authority to manage those risks.
2. The estimated cost of constructing the infrastructure needed to make the Hydro water system an independent water utility is approximately $7,150,000 and is one option available if the Town chooses to acquire the Hydro system. These infrastructure improvements could be phased over time beginning first with an increased water supply, followed by a new storage tank with a water main to the storage tanks, and then the water mains for looping.
3. The scope of this study includes only an evaluation of the Hydro system for potential acquisition, and the Town has not expressed any interest in acquiring the other water utilities. However, to understand the value of the Hydro system, a cursory understanding of the other interconnected and inter-related water systems has been obtained in this study. It is highly likely that the cost of owning and operating a single, combined water system would be less expensive than constructing the infrastructure needed to operate the Hydro system as a stand-alone water utility. A combined utility containing the assets of all four water systems provides the following benefits:
    a. The combined well water supplies appears to be adequate for current needs, although an additional water supply should be pursued to improve long term water supply reliability. An additional water supply would be difficult for any of the water utilities to do independently.
    b. The combined storage of the water systems appears to be adequate for current storage needs, although the Hydro storage tank will need to be replaced and perhaps increased in size to maintain water storage reliability.
    c. The combined water distribution system provides more interconnectivity and looping than any water system provides individually. A larger water main to the Hydro and Squire storage tanks and a larger main connecting the Hydro and Airport system would improve the ability to move water through a combined distribution system. The need for the three water mains recommended for a Hydro stand-alone system could be re-evaluated in the context of a combined water system.
    d. Water supply reliability for the Anasazi water system would be increased.
    e. Water utility assets have a finite life (see Table 7) and will need to be repaired or replaced over time. The economies of scale provided by a combined utility will make it easier to sustainably fund water infrastructure maintenance and replacement to manage water system assets over the long term.

4. If the Town chooses to acquire the Hydro system, then the functions of a water utility will need to be added to the Town's organization to provide water customer billing, customer service, water utility management, regulatory compliance, and water utility asset management.

Appendix A

PIPE OWNERSHIP OF THE WATER SYSTEMS SERVING TUSAYAN



ARICOR Water Solutions

Distribution Systems Serving Tusayan

Review and Evaluation of Water Systems Serving Town of Tusayan, Arizona

FIGURE: 2

DATE: 04-21-11

Appendix B

WATER QUALITY REPORT

ADEQ Arizona Department of Environmental Quality

Consumer Confidence Report for Calendar Year 2019

Public Water System ID Number	Public Water System Name	
AZ04-03-312	Hydro Resources Tusayan	
Contact Name and Title	**Phone Number**	**E-mail Address**
John W. Rueter President, Certified Operator	928-522-4405	john@jwrueter.com
We want our valued customers to be informed about their water quality. If you would like to learn more about public participation or to attend any of our regularly scheduled meetings, please contact ___ John Rueter at Hydro Resources Inc for additional opportunity and meeting dates and times.		

Drinking Water Sources

The sources of drinking water (both tap and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals, and in some cases, radioactive material, and can pickup substances resulting from the presence of animals or from human activity.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Our water source(s):	*Groundwater, two wells in Tusayan.*

Drinking Water Contaminants

Microbial Contaminants: Such as viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife

Inorganic Contaminants: Such as salts and metals that can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming

Pesticides and Herbicides: Such as agriculture, urban storm water runoff, and residential uses that may come from a variety of sources

Organic Chemical Contaminants: Such as synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and also may come from gas stations, urban storm water runoff, and septic systems.

Radioactive Contaminants: That can be naturally occurring or be the result of oil and gas production and mining activities.

Vulnerable Population

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. Some people may be more vulnerable to contaminants in drinking water than the general population.

Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV-AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers.

For more information about contaminants and potential health effects, or to receive a copy of the U.S. Environmental Protection Agency (EPA) and the U.S. Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and microbiological contaminants call the EPA *Safe Drinking Water Hotline* at 1-800-426-4791.

Source Water Assessment

Hydro Resources Tusayan's source water assessment was deemed low risk by ADEQ.

Definitions

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water

Level 1 Assessment: A study of the water system to identify potential problems and determine (if possible) why total coliform bacteria was present

Level 2 Assessment: A very detailed study of the water system to identify potential problems and determine (if possible) why an *E. coli* MCL violation has occurred and/or why total coliform bacteria was present

Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment, or other requirements

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water

Maximum Contaminant Level Goal MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health

Maximum Residual Disinfectant Level (MRDL): The level of disinfectant added for water treatment that may not be exceeded at the consumer's tap

Maximum Residual Disinfectant Level Goal (MRDLG): The level of disinfectant added for treatment at which no known or anticipated adverse effect on health of persons would occur

Minimum Reporting Limit (MRL): The smallest measured concentration of a substance that can be reliably measured by a given analytical method

Millirems per year (MREM): A measure of radiation absorbed by the body

Not Applicable (NA): Sampling was not completed by regulation or was not required

Not Detected (ND or <): Not detectable at reporting limit

Nephelometric Turbidity Units (NTU): A measure of water clarity

Million fibers per liter (MFL)

Picocuries per liter (pCi/L): Measure of the radioactivity in water

ppm: Parts per million or Milligrams per liter (mg/L)

ppb: Parts per billion or Micrograms per liter (µg/L)

ppt: Parts per trillion or Nanograms per liter (ng/L)

ppq: Parts per quadrillion or Picograms per liter (pg/L)

ppm x 1000 = ppb

ppb x 1000 = ppt

ppt x 1000 = ppq

Lead Informational Statement:

Lead, in drinking water, is primarily from materials and components associated with service lines and home plumbing. If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Hydro Resources Tusayan is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at www.epa.gov/safewater/lead.

Water Quality Data – Regulated

Microbiological (RTCR)	TT Violation Y or N	Number of Positive Samples	Positive Sample(s) Month & Year	MCL	MCLG	Likely Source of Contamination	
E. Coli	N	None		0	0	Human and animal fecal waste	
Fecal Indicator (From GWR source) (coliphage, enterococci and/or E. coli)	N	None		0	0	Human and animal fecal waste	
Disinfectants	**MCL Violation Y or N**	**Running Annual Average (RAA)**	**Range of All Samples (Low-High)**	**MRDL**	**MRDLG**	**Sample Month & Year**	**Likely Source of Contamination**
Chlorine/Chloramine (ppm)	N	0.4	0.4-0.5	4	0	Jan-Dec 2019	Water additive used to control microbes
Chlorine dioxide (ppb) if treated with CLO2	N/A			800	0		Water additive used to control microbes
Disinfection By-Products	**MCL Violation Y or N**	**Running Annual Average (RAA) OR Highest Level Detected**	**Range of All Samples (Low-High)**	**MCL**	**MCLG**	**Sample Month & Year**	**Likely Source of Contamination**
Haloacetic Acids (HAA5) (ppb)	N	2.15	<0.001-2.18	60	N/A	Aug 2019	Byproduct of drinking water disinfection
Total Trihalomethanes (TTHM) (ppb)	N	18.8	<0.001- 18.8	80	N/A	Aug 2019	Byproduct of drinking water disinfection
Bromate (ppb) if treated with Ozone	N/A			10	0		Byproduct of drinking water disinfection
Chlorite (ppm) if treated with CLO2	N/A			1	0.8		Byproduct of drinking water disinfection
Lead & Copper	**MCL Violation Y or N**	**90th Percentile**	**Number of Samples Exceeds AL**	**AL**	**ALG**	**Sample Month & Year**	**Likely Source of Contamination**
Copper (ppm)	N	.138	0	1.3	1.3	July 2019	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb)	N	2.28	2.28	15	0	July 2019	Corrosion of household plumbing systems; erosion of natural deposits

Radionuclides	MCL Violation Y or N	Running Annual Average (RAA) OR Highest Level Detected	Range of All Samples (Low-High)	MCL	MCLG	Sample Month & Year	Likely Source of Contamination
Beta/Photon Emitters (mrem/yr.)	N	2.36	2.13-2.60	4	0	March 2019	Decay of natural and man-made deposits
Alpha Emitters (pCi/L) (This is Gross Alpha 4000)	N	3.38	2.71-3.38	15	0	March 2019	Erosion of natural deposits
Combined Radium-226 & -228 (pCi/L)	N	.602	0.121-0.602	5	0	March 2019	Erosion of natural deposits
Uranium (ug/L)	N	ND	N/A	30	0	March 2019	Erosion of natural deposits

Inorganic Chemicals (IOC)	MNCL Violation Y or N	Running Annual Average (RAA) OR Highest Level Detected	Range of All Samples (Low-High)	MCL	MCLG	Sample Month & Year	Likely Source of Contamination
Antimony (ppb)	N	ND		6	6	Dec 2013	Discharge from petroleum refineries; fire retardants; ceramics, electronics and solder
Arsenic[1] (ppb)	N	1.6	1.4-.1.8	10	0	Dec 2013	Erosion of natural deposits, runoff from orchards, runoff from glass and electronics production wastes
Asbestos (MFL)	N	ND		7	7	Dec 2013	Decay of asbestos cement water mains; Erosion of natural deposits
Barium (ppm)	N	.35	.28-.43	2	2	Dec 2013	Discharge of drilling wastes; discharge from metal refineries; Erosion of natural deposits
Beryllium (ppb)	N	ND		4	4	Dec 2013	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries
Cadmium (ppb)	N	ND		5	5	Dec 2013	Corrosion of galvanized pipes; natural deposits; metal refineries; runoff from waste batteries and paints

Inorganic Chemicals (IOC)	MNCL Violation Y or N	Running Annual Average (RAA) OR Highest Level Detected	Range of All Samples (Low-High)	MCL	MCLG	Sample Month & Year	Likely Source of Contamination
Chromium (ppb)	N	1.1	1.1	100	100	Dec 2013	Discharge from steel and pulp mills; Erosion of natural deposits
Cyanide (ppb)	N	ND		200	200	Dec 2013	Discharge from steel/metal factories; Discharge from plastic and fertilizer factories
Fluoride (ppm)	N	.11	.091-.120	4	4	Dec 2013	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Mercury (ppb)	N	ND		2	2	Dec 2013	Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills and cropland.
Nitrate[2] (ppm)	N	1.3	1.1-1.5	10	10	Aug 2019	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrite (ppm)	N	<.05	<.05	1	1	Dec 2013	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium (ppb)	N	ND		50	50	Dec 2013	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Sodium (ppm)	N	12.4	6.7-18	N/A	N/A		Erosion of natural deposits
Thallium (ppb)	N	ND		2	0.5	Dec 2013	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories

Notes:

(1) Arsenic is a mineral known to cause cancer in humans at high concentration and is linked to other health effects, such as skin damage and circulatory problems. If arsenic is less than or equal to the MCL, your drinking water meets EPA's standards. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water, and continues to research the health effects of low levels of arsenic.

(2) Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause "blue baby syndrome." Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, and detected nitrate levels are above 5 ppm, you should ask advice from your health care provider.

Synthetic Organic Chemicals (SOC)	MCL Violation Y or N	Running Annual Average (RAA) OR Highest Level Detected	Range of All Samples (Low-High)	MCL	MCLG	Sample Month & Year	Likely Source of Contamination
2,4-D (ppb)	N	ND		70	70	Aug 2019	Runoff from herbicide used on row crops
2,4,5-TP (a.k.a. Silvex) (ppb)	N	ND		50	50	Aug 2019	Residue of banned herbicide
Acrylamide	N	ND		TT	0	Aug 2019	Added to water during sewage / wastewater treatment
Alachlor (ppb)	N	ND		2	0	Aug 2019	Runoff from herbicide used on row crops
Atrazine (ppb)	N	ND		3	3	Aug 2019	Runoff from herbicide used on row crops
Benzo (a) pyrene (PAH) (ppt)	N	ND		200	0	Aug 2019	Leaching from linings of water storage tanks and distribution lines
Carbofuran (ppb)	N	ND		40	40	Aug 2019	Leaching of soil fumigant used on rice and alfalfa
Chlordane (ppb)	N	ND		2	0	Aug 2019	Residue of banned termiticide
Dalapon (ppb)	N	ND		200	200	Aug 2019	Runoff from herbicide used on rights of way
Di (2-ethylhexyl) adipate (ppb)	N	ND		400	400	Aug 2019	Discharge from chemical factories
Di (2-ethylhexyl) phthalate (ppb)	N	ND		6	0	Aug 2019	Discharge from rubber and chemical factories
Dibromochloropropane (ppt)	N	ND		200	0	Aug 2019	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards
Dinoseb (ppb)	N	ND		7	7	Aug 2019	Runoff from herbicide used on soybeans and vegetables
Diquat (ppb)				20	20	Aug 19	Runoff from herbicide use
Dioxin [a.k.a. 2,3,7,8-TCDD] (ppq)	N	ND		30	0	Aug 2019	Emissions from waste incineration and other combustion; discharge from chemical factories
Endothall (ppb)	N	ND		100	100	Aug 2019	Runoff from herbicide use
Endrin (ppb)	N	ND		2	2	Aug 2019	Residue of banned insecticide

Synthetic Organic Chemicals (SOC)	MCL Violation Y or N	Running Annual Average (RAA) OR Highest Level Detected	Range of All Samples (Low-High)	MCL	MCLG	Sample Month & Year	Likely Source of Contamination
Epichlorohydrin	N	ND		TT	0	Aug 2019	Discharge from industrial chemical factories; an impurity of some water treatment chemicals
Ethylene dibromide (ppt)	N	ND		50	0	Aug 2019	Discharge from petroleum refineries
Glyphosate (ppb)	N	ND		700	700	Aug 2019	Runoff from herbicide use
Heptachlor (ppt)	N	ND		400	0	Aug 2019	Residue of banned termiticide
Heptachlor epoxide (ppt)	N	ND		200	0	Aug 2019	Breakdown of heptachlor
Hexachlorobenzene (ppb)	N	ND		1	0	Aug 2019	Discharge from metal refineries and agricultural chemical factories
Hexachlorocyclo pentadiene (ppb)	N	ND		50	50	Aug 2019	Discharge from chemical factories
Lindane (ppt)	N	ND		200	200	Aug 2019	Runoff/leaching from insecticide used on cattle, lumber, gardens
Methoxychlor (ppb)	N	ND		40	40	Aug 2019	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa,
Oxamyl (a.k.a. Vydate) (ppb)	N	ND		200	200	Aug 2019	Runoff/leaching from insecticide used on apples, potatoes and tomatoes
PCBs [Polychlorinated biphenyls] (ppt)	N	ND		500	0	Aug 2019	Runoff from landfills; discharge of waste chemicals
Pentachlorophenol (ppb)	N	ND		1	0	Aug 2019	Discharge from wood preserving factories
Picloram (ppb)	N	ND		500	500	Aug 2019	Herbicide runoff
Simazine (ppb)	N	ND		4	4	Aug 2019	Herbicide runoff
Toxaphene (ppb)	N	ND		3	0	Aug 2019	Runoff/leaching from insecticide used on cotton and cattle

Volatile Organic Chemicals (VOC)	MCL Violation Y or N	Running Annual Average (RAA) OR Highest Level Detected	Range of All Samples (Low-High)	MCL	MCLG	Sample Month & Year	Likely Source of Contamination
Benzene (ppb)	N	ND		5	0	Aug 2019	Discharge from factories; leaching from gas storage tanks and landfills
Carbon tetrachloride (ppb)	N	ND		5	0	Aug 2019	Discharge from chemical plants and other industrial activities
Chlorobenzene (ppb)	N	ND		100	100	Aug 2019	Discharge from chemical and agricultural chemical factories
o-Dichlorobenzene (ppb)	N	ND		600	600	Aug 2019	Discharge from industrial chemical factories
p-Dichlorobenzene (ppb)	N	ND		75	75	Aug 2019	Discharge from industrial chemical factories
1,2-Dichloroethane (ppb)	N	ND		5	0	Aug 2019	Discharge from industrial chemical factories
1,1-Dichloroethylene (ppb)	N	ND		7	7	Aug 2019	Discharge from industrial chemical factories
cis-1,2-Dichloroethylene (ppb)	N	ND		70	70	Aug 2019	Discharge from industrial chemical factories
trans-1,2-Dichloroethylene (ppb)	N	ND		100	100	Aug 2019	Discharge from industrial chemical factories
Dichloromethane (ppb)	N	ND		5	0	Aug 2019	Discharge from pharmaceutical and chemical factories
1,2-Dichloropropane (ppb)	N	ND		5	0	Aug 2019	Discharge from industrial chemical factories
Ethylbenzene (ppb)	N	ND		700	700	Aug 2019	Discharge from petroleum refineries
Styrene (ppb)	N	ND		100	100	Aug 2019	Discharge from rubber and plastic factories; leaching from landfills
Tetrachloroethylene (ppb)	N	ND		5	0	Aug 2019	Discharge from factories and dry cleaners
1,2,4-Trichlorobenzene (ppb)	N	ND		70	70	Aug 2019	Discharge from textile-finishing factories
1,1,1-Trichloroethane (ppb)	N	ND		200	200	Aug 2019	Discharge from metal degreasing sites and other factories
1,1,2-Trichloroethane (ppb)	N	ND		5	3	Aug 2019	Discharge from industrial chemical factories

Volatile Organic Chemicals (VOC)	MCL Violation Y or N	Running Annual Average (RAA) OR Highest Level Detected	Range of All Samples (Low-High)	MCL	MCLG	Sample Month & Year	Likely Source of Contamination
Trichloroethylene (ppb)	N	ND		5	0	Aug 2019	Discharge from metal degreasing sites and other factories
Toluene (ppm)	N	ND		1	1	Aug 2019	Discharge from petroleum factories
Vinyl Chloride (ppb)	N	ND		2	0	Aug 2019	Leaching from PVC piping; discharge from chemical factories
Xylenes (ppm)	N	0.0012	ND- 0.0012	10	10	Aug 2019	Discharge from petroleum or chemical factories

Violation Summary (for MCL, MRDL, AL, TT, or Monitoring & Reporting Requirement)

Violation Type	Explanation, Health Effects	Time Period	Corrective Actions
Monitoring	Only one of two required samples taken	March 2019	Sampled required two samples in April 2019, compliance achieved
Reporting Failure	Failure to transmit and report, compliance Disinfection Byproducts results properly	4th qtr 2019 1st qtr 2019 3rd qtr 2018	Resubmitted reports, compliance achieved

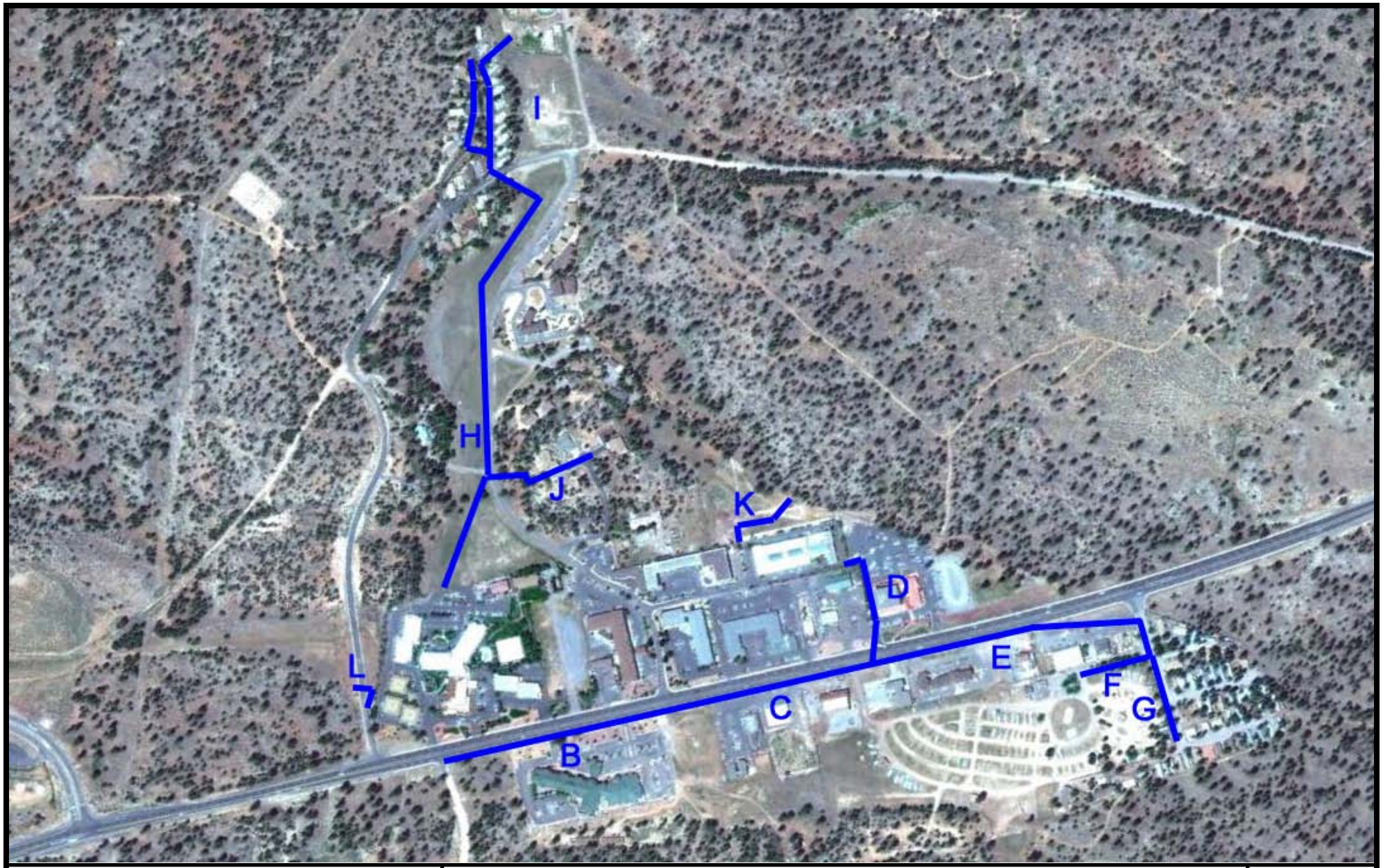
Please share this information with other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

In November and December 2019 Hydro Resources experienced two incidents consisting of water quality problems with sediment and turbidity with a rusty color in the water from one well. Both times Hydro Resources staff responded immediately, shut down the well and flushed the system in the affected area. The system was then supplied by our alternate well and existing storage while diagnosing the problem.

Samples were taken in the system and at customers affected. All samples tested negative for E-Coli or Fecal Coliform. Downhole well equipment was replaced with new piping, seal and pump. The existing equipment was older and showing signs of rust. The downhole well equipment replacement solved the problem. Sample results showed no sign of harmful bacteria in the water. We continue to monitor closely.

Appendix C

LOCATIONS OF HYDRO PIPE SEGMENTS



ARICOR Water Solutions

Hydro-Resources, Inc. – Distribution Segments

Review and Evaluation of Water Systems Serving Town of Tusayan, Arizona

FIGURE: 3

DATE: 04-21-11

Appendix D

INSPECTION FORMS AND PHOTOGRAPHS FROM SITE INSPECTIONS

TUSAYAN #2 WELL

SITE CONDITION – WELLS GENERAL

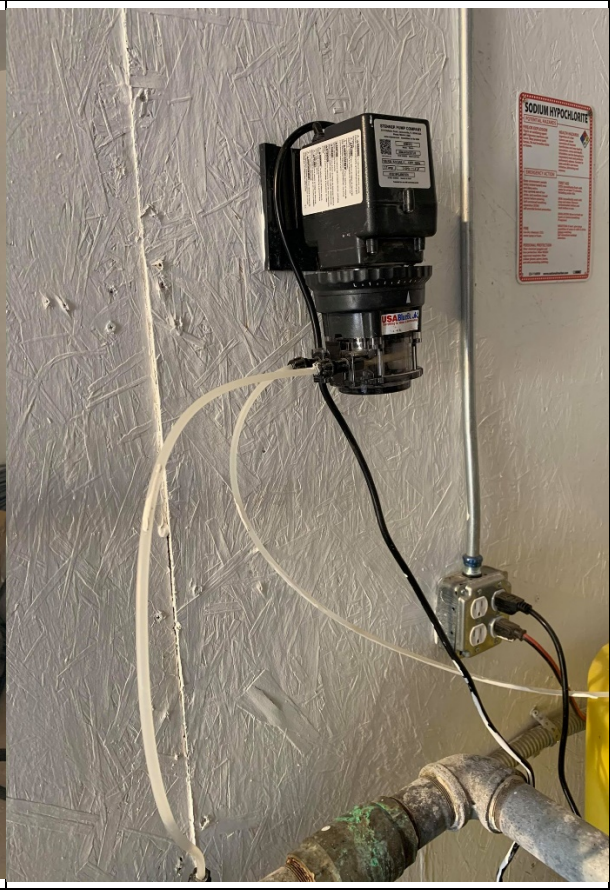
Address:	Tusayan #2	**Updated/Rehabilitated Year:**	2020
Flow Rate:	78gpm	**Code Violations Observed? (yes/no)**	No
Installation Year:	1994	**Safety Standards Met? (yes/no)**	NA
Horsepower:	N/A	**Operational? (yes/no)**	Yes

CONDITION		CONDITION JUSTIFICATION, SAFETY ISSUES, CODE VIOLATIONS, IMPROVEMENTS MADE
Legend:	***1 = 0-10%***	***2 = 11-30%*** ***3 = 31-60%*** ***4 = 61-75%*** ***5 = 76-100%***
Overall Condition:	3	
Mechanical Overall:	1	The pump, motor, power cables and tubing were replaced with new in Jan 2020.
Structural Overall:	4	Not been rehabilitated since it was constructed in 1994.
Civil Overall:	4	Not been rehabilitated since it was constructed in 1994.
Electrical Overall:	3	A new VFD was installed in 2014, the other equipment has not been replaced/updated since 1994

PHOTOS

PHOTOS

PHOTOS



SITE 1 TANKS

SITE CONDITION – STORAGE (TANKS) GENERAL

Address:	Hydro Tank	**Updated/Rehabilitated Year:**	N/A
Capacity:	0.525 MG	**Code Violations Observed? (yes/no)**	No
Installation Year:	1975	**Safety Standards Met? (yes/no)**	Yes
Number of Tanks:	1		
Operational? (yes/no)	Yes		

CONDITION		CONDITION JUSTIFICATION, SAFETY ISSUES, CODE VIOLATIONS, IMPROVEMENTS MADE			
Legend:	***1 = 0-10%***	***2 = 11-30%***	***3 = 31-60%***	***4 = 61-75%***	***5 = 76-100%***
Overall Condition:	4	Tank is operational, has some small leakages. The base of the tank was repaired with grouting.			

PHOTOS

PHOTOS

Appendix E

FIRE HYDRANT MAP AND HYDRANT TEST RESULTS

TOWN OF TUSAYAN

FIRE HYDRANT LOCATIONS

Legend

- Potable Water Fire Hydrants
- Reclaimed Water Fire Hydrants
- Buildings
- Tusayan Town Boundary

PRELIMINARY MAP
FOR REVIEW ONLY

0 150 300 600
Feet

1 inch = 300 feet

WILLDAN Engineering | extending your reach

January 22, 2019

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community

Appendix F

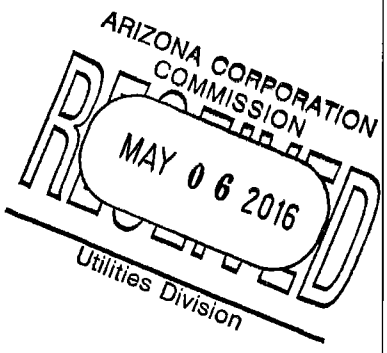
ARIZONA CORPORATION COMMISSION REPORTS

ARIZONA CORPORATION COMMISSION
UTILITIES DIVISION

ANNUAL REPORT MAILING LABEL – MAKE CHANGES AS NECESSARY

W-20770A

Hydro-Resources, Inc.
PO Box 3246
549 Camper Village
Grand Canyon, AZ 86023



☐ **Please click here if pre-printed Company name on this form is not your current Company name or dba name is not included.**

Please list current Company name including dba here:

_____

ANNUAL REPORT
Water

FOR YEAR ENDING

12	31	2015

FOR COMMISSION USE

ANN 04	15

5-6-16

COMPANY INFORMATION

Company Name (Business Name) Hydro- Resources Inc

Mailing Address PO Box 3246
(Street)

Grand Canyon (City) | Arizona (State) | 86023 (Zip)

928-638-8205 (Telephone No. (Include Area Code)) | 928-638-3427 (Fax No. (Include Area Code)) | 928-522-4405 (Cell No. (Include Area Code))

Email Address john@jwrueter.com

Local Office Mailing Address PO Box 3246
(Street)

Grand Canyon (City) | Arizona (State) | 86023 (Zip)

928-638-8205
Local Customer Service Phone No. (Include Area Code) (1-800 or other long distance Customer Service Phone No.)

Email Address john@jwrueter.com Website address

MANAGEMENT INFORMATION

☐ **Regulatory Contact:**

☒ **Management Contact:** John Rueter (Name) | President (Title)

549 Camper Village Lane (Street) | Tusayan (City) | Arizona (State) | 86023 (Zip)

928-638-8205 (Telephone No. (Include Area Code)) | 928-638-3393 (Fax No. (Include Area Code)) | 928-522-4405 (Cell No. (Include Area Code))

Email Address john@jwrueter.com

On Site Manager: John Rueter
(Name)

549 Camper Village Lane (Street) | Tusayan (City) | Arizona (State) | 86023 (Zip)

928-638-8205 (Telephone No. (Include Area Code)) | (Fax No. (Include Area Code)) | 928-522-4405 (Cell No. (Include Area Code))

Email Address john@jwrueter.com

Statutory Agent: Mangum, Wall, Stoops and Warden PLLC
(Name)

100 N Elden St. | Flagstaff | Arizona | 85001
(Street) | (City) | (State) | (Zip)

928-779-6951
Telephone No. (Include Area Code) | Fax No. (Include Area Code | Cell No. (Include Area Code)

Attorney: Rodney Ott, Steven Hirsch at Quarles Brady LLP
(Name)

2 North Central | Phoenix | Arizona | 85004
(Street) | (City) | (State) | (Zip)

602-229-5263
Telephone No. (Include Area Code) | Fax No. (Include Area Code) | Cell No. (Include Area Code)

Email Address Rodney.Ott@quarles.com ,Steven.Hirsch@quarles.com

OWNERSHIP INFORMATION

Check the following box that applies to your company:

- ☐ **Sole Proprietor (S)**
- ☐ **Partnership (P)**
- ☐ **Bankruptcy (B)**
- ☐ **Receivership (R)**
- ☐ **Other** (Describe)_____
- ☐ **C Corporation (C) (Other than Association/Co-op)**
- ☒ **Subchapter S Corporation (Z)**
- ☐ **Association/Co-op (A)**
- ☐ **Limited Liability Company**

COUNTIES SERVED

Check the box below for the county/ies in which you are certificated to provide service:

- ☐ **APACHE**
- ☐ **COCHISE**
- ☒ **COCONINO**
- ☐ **GILA**
- ☐ **GRAHAM**
- ☐ **GREENLEE**
- ☐ **LA PAZ**
- ☐ **MARICOPA**
- ☐ **MOHAVE**
- ☐ **NAVAJO**
- ☐ **PIMA**
- ☐ **PINAL**
- ☐ **SANTA CRUZ**
- ☐ **YAVAPAI**
- ☐ **YUMA**
- ☐ **STATEWIDE**

COMPANY NAME Hydro-Resources, Inc.

UTILITY PLANT IN SERVICE

Acct. No.	DESCRIPTION	Original Cost (OC)	Accumulated Depreciation (AD)	O.C.L.D. (OC less AD)
301	Organization	$ 258,392	258,392	0
302	Franchises	-	-	-
303	Land and Land Rights	136,769	136,769	0
304	Structures and Improvements	22,696	756	21,940
305	Collecting & Impounding Reservoirs	-	-	-
306	Lake, River, Canal Intakes	-	-	-
307	Wells and Springs	791,4898	464726	326,763
308	Infiltration Galleries	-	-	-
309	Raw Water Supply Mains	-	-	-
310	Power Generation Equipment	-	-	-
311	Pumping Equipment	144,879	22,484	122,395
320	Water Treatment Equipment			
320.1	Water Treatment Plants	-	-	-
320.2	Solution Chemical Feeders	-	-	-
320.3	Point-of-Use Treatment Devices	-	-	-
330	Distribution Reservoirs and Standpipes			
330.1	Storage Tanks	64,341	42,496	21,485
330.2	Pressure Tanks	-	-	-
331	Transmission and Distribution Mains	140,052	2,981	137,071
333	Services	149,052	2,981	146,071
334	Meters and Meter Installations	9,493	791	8,702
335	Hydrants	-	-	-
336	Backflow Prevention Devices	-	-	-
339	Other Plant and Misc. Equipment	62,923	17,450	45,473
340	Office Furniture and Equipment	2,017	1,528	489
340.1	Computers & Software	-	-	-
341	Transportation Equipment	34,567	14,913	19,654
342	Stores Equipment	-	-	-
343	Tools, Shop and Garage Equipment	11,569	2,083	9,486
344	Laboratory Equipment	-	-	-
345	Power Operated Equipment	58,037	19,458	38,579
346	Communication Equipment	2,074	207	1,867
347	Miscellaneous Equipment	7,836	784	7,052
348	Other Tangible Plant	-	-	-
	TOTALS	1,756,133	985,818	770,315

*This amount goes on the Balance Sheet Acct. No. 108

COMPANY NAME Hydro-Resources, Inc.

WATER UTILITY CALCULATION OF DEPRECIATION EXPENSE FOR CURRENT YEAR

Acct. No.	DESCRIPTION	Original Cost(1)	Depreciation Percentage (2)	Depreciation Expense (1 x 2)
301	Organization	258,392	0.00	-
302	Franchises	-	0.00	-
303	Land and Land Rights	136,769	0.00	-
304	Structures and Improvements	22,696	3.33%	756
305	Collecting & Impounding Reservoirs	-	2.50%	-
306	Lake, River, Canal Intakes	-	2.50%	-
307	Wells and Springs	336,022	3.33%	11,190
308	Infiltration Galleries	-	6.67%	-
309	Raw Water Supply Mains	-	2.00%	-
310	Power Generation Equipment	-	5.00%	-
311	Pumping Equipment	139,880	12.50%	17,485
320	Water Treatment Equipment			
320.1	Water Treatment Plants	-	3.33%	-
320.2	Solution Chemical Feeders	-	2.22%	-
320.3	Point-of-Use Treatment Devices	-	2.22%	-
330	Distribution Reservoirs and Standpipes			
330.1	Storage Tanks		2.22%	
330.2	Pressure Tanks	-	5.00%	-
331	Transmission and Distribution Mains	149,052	2.00%	2,981
333	Services	-	3.33%	-
334	Meters and Meter Installations	9,493	8.33%	791
335	Hydrants	-	2.00%	-
336	Backflow Prevention Devices	-	6.67%	-
339	Other Plant and Misc. Equipment	48,723	6.67%	3,250
340	Office Furniture and Equipment	2,017	6.67%	35
340.1	Computers & Software	-	20.00%	-
341	Transportation Equipment	34,567	20.00%	4,913
342	Stores Equipment	-	4.00%	-
343	Tools, Shop and Garage Equipment	11,569	5.00%	499
344	Laboratory Equipment	-	10.00%	-
345	Power Operated Equipment	58,037	5.00%	2,031
346	Communication Equipment	2,074	10.00%	207
347	Miscellaneous Equipment	7,836	10.00%	784
348	Other Tangible Plant	-	5.00%	
	SUBTOTAL			
	LESS CIAC Amortization			
	TOTALS *			44,922

*This amount goes on the Comparative Statement of Income and Expense Acct. No. 403

COMPANY NAME Hydro-Resources, Inc.

WATER UTILITY BALANCE SHEET

Acct No.	ASSETS	BALANCE AT BEGINNING OF YEAR	BALANCE AT END OF YEAR
	CURRENT AND ACCRUED ASSETS		
131	Cash	$ 13,692	$ 148,105
134	Working Funds	0	0
135	Temporary Cash Investments	70,027	60,055
141	Customer Accounts Receivable	69,339	82,882
146	Notes/Receivables from Associated Companies	0	0
151	Plant Material and Supplies	0	0
162	Prepayments	7,219	6,507
174	Miscellaneous Current and Accrued Assets	0	0
	TOTAL CURRENT AND ACCRUED ASSETS	$ 160,277	$ 297,549
	FIXED ASSETS		
101	Utility Plant in Service	$ 1,157,919	$ 1,756,133
103	Property Held for Future Use	0	0
105	Construction Work in Progress	0	0
108	Accumulated Depreciation – Utility Plant	(800,853)	985,818
121	Non-Utility Property	0	0
122	Accumulated Depreciation – Non Utility	0	0
	TOTAL FIXED ASSETS	$ 357,066	$ 770,315
	TOTAL ASSETS	$ 517,343	$ 1,067,864

NOTE: The Assets on this page should be equal to **Total Liabilities and Capital** on the following page.

COMPANY NAME Hydro-Resources, Inc.

WATER UTILITY BALANCE SHEET (CONTINUED)

Acct. No.	LIABILITIES	BALANCE AT BEGINNING OF YEAR	BALANCE AT END OF YEAR
	CURRENT LIABILITES		
231	Accounts Payable	$ 40,596	$ 76,484
232	Notes Payable (Current Portion)	0	0
234	Notes/Accounts Payable to Associated Companies	0	0
235	Customer Deposits	0	0
236	Accrued Taxes	6,633	5,969
237	Accrued Interest	0	0
241	Miscellaneous Current and Accrued Liabilities	0	6,438
	TOTAL CURRENT LIABILITIES	$ 53,891	$ 88,891
	LONG-TERM DEBT (Over 12 Months)		
224	Long-Term Notes and Bonds	$ 0	$ 0
	DEFERRED CREDITS		
251	Unamortized Premium on Debt	$ 0	$ 0
252	Advances in Aid of Construction	0	0
255	Accumulated Deferred Investment Tax Credits	0	0
271	Contributions in Aid of Construction	0	0
272	Less: Amortization of Contributions	0	0
281	Accumulated Deferred Income Tax	0	0
	TOTAL DEFERRED CREDITS	$ 0	$ 0
	TOTAL LIABILITIES	$ 53,891	$ 88,891
	CAPITAL ACCOUNTS		
201	Common Stock Issued	$ 50,000	$ 50,000
211	Paid in Capital in Excess of Par Value	30,381	30,381
215	Retained Earnings	383,371	898,592
218	Proprietary Capital (Sole Props and Partnerships)	0	0
	TOTAL CAPITAL	$ 463,452	$ 978,973
	TOTAL LIABILITIES AND CAPITAL	$ 517,343	$ 1,067,864

COMPANY NAME Hydro-Resources, Inc.

WATER UTILITY COMPARATIVE STATEMENT OF INCOME AND EXPENSE

Acct. No.	OPERATING REVENUES	PRIOR YEAR	CURRENT YEAR
461	Metered Water Revenue	$ 153,268	$ 765,050
460	Unmetered Water Revenue	0	0
474	Other Water Revenues	0	0
	TOTAL REVENUES	$ 153,268	$ 765,050
	OPERATING EXPENSES		
601	Salaries and Wages	$ 31,376	$ 134,362
610	Purchased Water	2,589	45,778
615	Purchased Power	14,521	56,777
618	Chemicals	0	1,093
620	Repairs and Maintenance	38,026	38,854
621	Office Supplies and Expense	1,187	4,757
630	Outside Services	38,263	54,315
635	Water Testing	1,193	4,490
641	Rents	4,500	30,675
650	Transportation Expenses	4,714	15,440
657	Insurance – General Liability	8,052	30,628
659	Insurance - Health and Life	1,915	9,685
666	Regulatory Commission Expense – Rate Case	0	15,572
675	Miscellaneous Expense	536	4,834
403	Depreciation Expense	14,339	44,922
408	Taxes Other Than Income	3,683	10,134
408.11	Property Taxes	0	0
409	Income Tax	0	0
	TOTAL OPERATING EXPENSES	$ 164,894	$ 502,816
	OPERATING INCOME/(LOSS)	$ -11,626	$ 262,234
	OTHER INCOME/(EXPENSE)		
419	Interest and Dividend Income	$ 18	$ 61
421	Non-Utility Income	7,606	30,748
426	Miscellaneous Non-Utility Expenses		(6,924)
427	Interest Expense	0	0
	TOTAL OTHER INCOME/(EXPENSE)	$ 7,624	$ 23,885
	NET INCOME/(LOSS)	$ -4,002	$ 286,119

COMPANY NAME Hydro-Resources, Inc.

SUPPLEMENTAL FINANCIAL DATA

Long-Term Debt

	LOAN #1	LOAN #2	LOAN #3	LOAN #4
Date Issued				
Source of Loan				
ACC Decision No.				
Reason for Loan				
Dollar Amount Issued	$	$	$	$
Amount Outstanding	$	$	$	$
Date of Maturity				
Interest Rate	%	%	%	%
Current Year Interest	$	$	$	$
Current Year Principle	$	$	$	$

Meter Deposit Balance at Test Year End $ 0.00

Meter Deposits Refunded During the Test Year $ 0.00

COMPANY NAME	Hydro-Resources, Inc.		
Name of System:	Hydro Resources Tusayan	ADEQ Public Water System Number:	03-312

WATER UTILITY PLANT DESCRIPTION

WELLS

ADWR ID Number*	Pump Horsepower	Pump Yield (gpm)	Casing Depth (Feet)	Casing Diameter (Inches)	Meter Size (inches)	Year Drilled
55-54298	75	60	2306	13	2	1994

* Arizona Department of Water Resources Identification Number

OTHER WATER SOURCES

Name or Description	Capacity (gpm)	Gallons Purchased or Obtained (in thousands)
Squire Well #1	60	3,174

BOOSTER PUMPS		FIRE HYDRANTS	
Horsepower	Quantity	Quantity Standard	Quantity Other
300 (Fire Pump)	2500 gpm	22	

STORAGE TANKS		PRESSURE TANKS	
Capacity	Quantity	Capacity	Quantity
525,000	1	NA	
3 Million (leased)	1		

Note: If you are filing for more than one system, please provide separate sheets for each system.

COMPANY NAME	Hydro-Resources, Inc.		
Name of System:	Hydro Resources Tusayan	ADEQ Public Water System Number:	03-312

WATER UTILITY PLANT DESCRIPTION (CONTINUED)

MAINS

Size (in inches)	Material	Length (in feet)
2	PVC	3,026
3		
4	PVC	430
5		
6	PVC	3,373
8	PVC	6,104
10		
12		

CUSTOMER METERS

Size (in inches)	Quantity
5/8 X ¾	38
3/4	24
1	9
1 1/2	-
2	20
Comp. 3	6
Turbo 3	
Comp. 4	1
Turbo 4	
Comp. 6	
Turbo 6	

For the following three items, list the utility owned assets in each category for each system.

TREATMENT EQUIPMENT:

Sodium Hypochlorite Chemical Feed Pumps

STRUCTURES:

Wellhouse, fences, retaining wall, control sheds, at Well #2

Fire Pump with shed and fence

Valve shed at tank storage area

OTHER:

Improved access road to Well #2

Improved cinder pad at tank storage area

Note: If you are filing for more than one system, please provide separate sheets for each system.

COMPANY NAME: Hydro-Resources, Inc.	
Name of System: Hydro Resources Tusayan	ADEQ Public Water System Number: 03-312

WATER USE DATA SHEET BY MONTH FOR CALENDAR YEAR 2015

MONTH	NUMBER OF CUSTOMERS	GALLONS SOLD (Thousands)	GALLONS PUMPED (Thousands)	GALLONS PURCHASED (Thousands)
JANUARY	100	2,129	2,546	-
FEBRUARY	100	1,893	2,718	-
MARCH	98	2,479	2,481	-
APRIL	100	2,717	2,474	248
MAY	100	2,633	2,010	625
JUNE	100	2793	2,652	529
JULY	100	3,776	3,129	650
AUGUST	100	2,891	2,418	589
SEPTEMBER	100	2,478	2,666	346
OCTOBER	100	2,073	2,429	-
NOVEMBER		2,597	2,812	-
DECEMBER		2,755	2,890	-
	TOTALS →	31,214	31,225	2,987

What is the level of arsenic for each well on your system? <.0030 mg/l
(If more than one well, please list each separately.)

If system has fire hydrants, what is the fire flow requirement? 1,500 GPM for 2 hrs

If system has chlorination treatment, does this treatment system chlorinate continuously?
(x) Yes ( ) No

Is the Water Utility located in an ADWR Active Management Area (AMA)?
( ) Yes (x) No

Does the Company have an ADWR Gallons Per Capita Per Day (GPCPD) requirement?
( ) Yes (x) No

If yes, provide the GPCPD amount:_____

Note: If you are filing for more than one system, please provide separate data sheets for each system.

COMPANY NAME: Hydro-Resources, Inc.	
Name of System: Hydro-Resources Tusayan	ADEQ Public Water System Number: 03-312

UTILITY SHUTOFFS / DISCONNECTS

MONTH		Termination without Notice R14-2-410.B	Termination with Notice R14-2-410.C	OTHER
JANUARY		0	0	0
FEBRUARY		0	0	0
MARCH		0	0	0
APRIL		0	0	0
MAY		0	0	0
JUNE		0	0	0
JULY		0	0	0
AUGUST		0	0	0
SEPTEMBER		0	0	0
OCTOBER		0	0	0
NOVEMBER		0	0	0
DECEMBER		0	0	0
TOTALS →		0	0	0

OTHER (description):

PROPERTY TAXES

Amount of actual property taxes paid during Calendar Year 2014 was: $ 0

Attach to this annual report proof (e.g. property tax bills stamped "paid in full" or copies of cancelled checks for property tax payments) of any and all property taxes paid during the calendar year.

If no property taxes paid, explain why. waiting for assessment by Arizona Department of Revenue.

VERIFICATION
AND
SWORN STATEMENT
Taxes

ARIZONA CORPORATION COMMISSION
RECEIVED
MAY 06 2016
Utilities Division

VERIFICATION

STATE OF Arizona

I, THE UNDERSIGNED

OF THE

COUNTY OF (COUNTY NAME): Coconino
NAME (OWNER OR OFFICIAL) TITLE: John W. Rueter President
COMPANY NAME: Hydro-Resources, Inc.

DO SAY THAT THIS ANNUAL UTILITY PROPERTY TAX AND SALES TAX REPORT TO THE ARIZONA CORPORATION COMMISSION

FOR THE YEAR ENDING

MONTH	DAY	YEAR
12	31	2015

HAS BEEN PREPARED UNDER MY DIRECTION, FROM THE ORIGINAL BOOKS, PAPERS AND RECORDS OF SAID UTILITY; THAT I HAVE CAREFULLY EXAMINED THE SAME, AND DECLARE THE SAME TO BE A COMPLETE AND CORRECT STATEMENT OF BUSINESS AND AFFAIRS OF SAID UTILITY FOR THE PERIOD COVERED BY THIS REPORT IN RESPECT TO EACH AND EVERY MATTER AND THING SET FORTH, TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF.

SWORN STATEMENT

I HEREBY ATTEST THAT ALL PROPERTY TAXES FOR SAID COMPANY ARE CURRENT AND PAID IN FULL.

I HEREBY ATTEST THAT ALL SALES TAXES FOR SAID COMPANY ARE CURRENT AND PAID IN FULL.

John W. Rueter
SIGNATURE OF OWNER OR OFFICIAL

928-522-4405
TELEPHONE NUMBER

SUBSCRIBED AND SWORN TO BEFORE ME

A NOTARY PUBLIC IN AND FOR THE COUNTY OF Coconino

THIS 28th **DAY OF** April **20** 16

(SEAL)

MY COMMISSION EXPIRES June 10, 2019.

SIGNATURE OF NOTARY PUBLIC

MARIA CLARISSA CALONGE
Notary Public - Arizona
Coconino County
My Comm. Expires Jun 10, 2019

VERIFICATION AND SWORN STATEMENT

Intrastate Revenues Only

ARIZONA CORPORATION COMMISSION
RECEIVED
MAY 06 2016
Utilities Division

VERIFICATION

STATE OF Arizona

I, THE UNDERSIGNED

OF THE

COUNTY OF (COUNTY NAME)	Coconino
NAME (OWNER OR OFFICIAL) TITLE	John W. Rueter President
COMPANY NAME	Hydro-Resources, Inc.

DO SAY THAT THIS ANNUAL UTILITY REPORT TO THE ARIZONA CORPORATION COMMISSION

FOR THE YEAR ENDING

MONTH	DAY	YEAR
12	31	2015

HAS BEEN PREPARED UNDER MY DIRECTION, FROM THE ORIGINAL BOOKS, PAPERS AND RECORDS OF SAID UTILITY; THAT I HAVE CAREFULLY EXAMINED THE SAME, AND DECLARE THE SAME TO BE A COMPLETE AND CORRECT STATEMENT OF BUSINESS AND AFFAIRS OF SAID UTILITY FOR THE PERIOD COVERED BY THIS REPORT IN RESPECT TO EACH AND EVERY MATTER AND THING SET FORTH, TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF.

SWORN STATEMENT

IN ACCORDANCE WITH THE REQUIREMENT OF TITLE 40, ARTICLE 8, SECTION 40-401, ARIZONA REVISED STATUTES, IT IS HEREIN REPORTED THAT THE GROSS OPERATING REVENUE OF SAID UTILITY DERIVED FROM ARIZONA INTRASTATE UTILITY OPERATIONS DURING CALENDAR YEAR 2014 WAS:

Arizona Intrastate Gross Operating Revenues Only ($)
833,140

(THE AMOUNT IN BOX ABOVE INCLUDES $ 68,090 IN SALES TAXES BILLED, OR COLLECTED)

**REVENUE REPORTED ON THIS PAGE MUST INCLUDE SALES TAXES BILLED OR COLLECTED. IF FOR ANY OTHER REASON, THE REVENUE REPORTED ABOVE DOES NOT AGREE WITH TOTAL OPERATING REVENUES ELSEWHERE REPORTED, ATTACH THOSE STATEMENTS THAT RECONCILE THE DIFFERENCE. (EXPLAIN IN DETAIL)

John W. Rueter
SIGNATURE OF OWNER OR OFFICIAL

928-522-4405
TELEPHONE NUMBER

SUBSCRIBED AND SWORN TO BEFORE ME

A NOTARY PUBLIC IN AND FOR THE COUNTY OF

COUNTY NAME	Coconino	
MONTH	April	20 16

THIS 28th DAY OF

(SEAL)

MY COMMISSION EXPIRES June 10, 2019

SIGNATURE OF NOTARY PUBLIC

MARIA CLARISSA CALONGE
Notary Public - Arizona
Coconino County
My Comm. Expires Jun 10, 2019

VERIFICATION
AND
SWORN STATEMENT
RESIDENTIAL REVENUE
Intrastate Revenues Only

ARIZONA CORPORATION COMMISSION
RECEIVED
MAY 06 2016
Utilities Division

VERIFICATION

STATE OF ARIZONA

I, THE UNDERSIGNED

OF THE

COUNTY OF (COUNTY NAME): Coconino	
NAME (OWNER OR OFFICIAL): John W. Rueter	TITLE: President
COMPANY NAME: Hydro-Resources, Inc.	

DO SAY THAT THIS ANNUAL UTILITY REPORT TO THE ARIZONA CORPORATION COMMISSION

FOR THE YEAR ENDING

MONTH	DAY	YEAR
12	31	2015

HAS BEEN PREPARED UNDER MY DIRECTION, FROM THE ORIGINAL BOOKS, PAPERS AND RECORDS OF SAID UTILITY; THAT I HAVE CAREFULLY EXAMINED THE SAME, AND DECLARE THE SAME TO BE A COMPLETE AND CORRECT STATEMENT OF BUSINESS AND AFFAIRS OF SAID UTILITY FOR THE PERIOD COVERED BY THIS REPORT IN RESPECT TO EACH AND EVERY MATTER AND THING SET FORTH, TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF.

SWORN STATEMENT

IN ACCORDANCE WITH THE REQUIREMENTS OF TITLE 40, ARTICLE 8, SECTION 40-401.01, ARIZONA REVISED STATUTES, IT IS HEREIN REPORTED THAT THE GROSS OPERATING REVENUE OF SAID UTILITY DERIVED FROM ARIZONA INTRASTATE UTILITY OPERATIONS RECEIVED FROM RESIDENTIAL CUSTOMERS DURING CALENDAR YEAR 2014 WAS:

ARIZONA INTRASTATE GROSS OPERATING REVENUES
$ 157,020

THE AMOUNT IN BOX AT LEFT INCLUDES $ 12,937 IN SALES TAXES BILLED, OR COLLECTED)

***RESIDENTIAL REVENUE REPORTED ON THIS PAGE MUST INCLUDE SALES TAXES BILLED.**

John W. Rueter
SIGNATURE OF OWNER OR OFFICIAL

928-522-4405
TELEPHONE NUMBER

SUBSCRIBED AND SWORN TO BEFORE ME

A NOTARY PUBLIC IN AND FOR THE COUNTY OF

THIS 28th **DAY OF**

NOTARY PUBLIC NAME	
COUNTY NAME: Coconino	
MONTH: April	,20 16

(SEAL)

MY COMMISSION EXPIRES June 10, 2019

SIGNATURE OF NOTARY PUBLIC

MARIA CLARISSA CALONGE
Notary Public - Arizona
Coconino County
My Comm. Expires Jun 10, 2019

ANNUAL REPORT

Of

Company Name: HYDRO-RESOURCES INC

Mailing Address: PO BOX 100

Docket No.:
For the Year Ended: 12/31/16

RECEIVED

APR 21 2017

ARIZONA CORP COMMISSION
UTILITIES DIVISION - DIRECTOR'S OFFICE

WATER UTILITY

To

Arizona Corporation Commission

Due on April 15th

Email: rdelafuente@azcc.gov, mail or deliver the completed Annual Report to:
Arizona Corporation Commission
Compliance Section - Utilities Division
1200 West Washington Street
Phoenix, Arizona 85007

Application Type: Original Filing
Application Date: 2016

ARIZONA CORPORATION COMMISSION
WATER UTILITIY ANNUAL REPORT
0

A Class [C] Utility

1. For the Calendar Year Ended: 12/31/16

2. Address: PO BOX 3246 549 CAMPER VILLAGE LANE
City: GRAND CANYON State: ARIZONA Zip Code: 86023

3. Telephone Number: 928-638-8205

4. Date of Original Organzation of Utility:

5. Person to whom correspondence should be addressed concerning this report:
Name: JOHN RUETER
Telephone No. : 928-522-4405
Address: PO BOX 3246
City: GRAND CANYON State: ARIZONA Zip Code: 86023
Email: JOHN@JWRUETER.COM

6. On-Site Manager:
Name: JOHN RUETER
Telephone No. : 928-522-4405
Address: PO BOX 3246
City: GRAND CANYON State: AZ Zip Code: 86023
Email: JOHN@JWRUETER.COM

7. Ownership: SUBCHAPTER S CORPORATION

8. Counties Served: COCONINO

Annual Report
Utility Plant in Service (Water)
12/31/16

Utility Plant in Service (Water)					
Account No.	Description	Original Cost	Accumulated Depreciation	OCLD (OC less AD)	
301	Organization	258392	258392	Ø	$0
302	Franchises				0
303	Land and Land Rights	136769	136769	Ø	0
304	Structures and Improvements	22696	1512	21184	0
305	Collecting & Improving Reservoirs				0
306	Lake, River, Canal Intakes				0
307	Wells and Springs	824201	477005	347196	0
308	Infiltration Galleries				0
309	Supply Mains				0
310	Power Generation Equipment				0
311	Pumping Equipment	154054	41116	112938	0
320	Water Treatment Equipment				
320.1	Water Treatment Plants				0
320.2	Solution Chemical Feeders				0
320.3	Point-of-Use Treatment Devices				0
330	Distribution Reservoirs and Standpipes				
330.1	Storage Tanks	64341	43924	20417	0
330.2	Pressure Tanks				0
331	Transmission and Distribution Mains	155554	6092	149462	0
333	Services				0
334	Meters and Meter Installations	16284	2147	14137	0
335	Hydrants				0
336	Backflow Prevention Devices				0
339	Other Plant and Misc. Equipment	62923	20700	42223	0
340	Office Furniture and Equipment	2017	1663	354	0
340.1	Computer & Software				0
341	Transportation Equipment	34567	21826	12741	0
342	Stores Equipment				0
343	Tools, Shop and Garage Equipment	23994	3283	20711	0
344	Laboratory Equipment				0
345	Power Operated Equipment	58037	22360	35677	0
346	Communication Equipment	2074	414	1660	0
347	Miscellaneous Equipment	7836	1568	6268	0
348	Other Tangible Plant				0
	Totals	1823739	1038771	784968	$0

Instructions: Fill out the Grey Cells with the relevent information. Input 0 or none if there is nothing recorded in that account or there is no applicable information to report.

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Annual Report

Depreciation Expense for the Current Year (Water)

12/31/16

Depreciation Expense for the Current Year (Water)								
Account No.	Description	Original Cost	Current Year Additions	Adjusted Original Cost	Fully Depreciated/Non-depreciable Plant	Depreciable Plant	Depreciation Percentages	Depreciation Expense
301	Organization	258392		258392	258392	$0	0	$0
302	Franchises	0		0		0		0
303	Land and Land Rights	136769		136769	136769	0	0	0
304	Structures and Improvements	22696		22696		22696	3.33	756
305	Collecting & Improving Reservoirs	0		0		0		0
306	Lake, River, Canal Intakes	0		0		0		0
307	Wells and Springs	336022	32712	368734		368734	3.33	12279
308	Infiltration Galleries	0		0		0		0
309	Supply Mains	0		0		0		0
310	Power Generation Equipment	0		0		0		0
311	Pumping Equipment	139880	9175	149055		149055	12.50	18632
320	Water Treatment Equipment	0		0		0		0
320.1	Water Treatment Plants	0		0		0		0
320.2	Solution Chemical Feeders	0		0		0		0
320.3	Point-of-Use Treatment Devices	0		0		0		0
330	Distribution Reservoirs and Standpipes	0		0		0		0
330.1	Storage Tanks	64341		64341		64341	2.22	1428
330.2	Pressure Tanks	0		0		0		0
331	Transmission and Distribution Mains	149052	6502	155554		155554	2.00	3111
333	Services	0		0		0		0
334	Meters and Meter Installations	9493	6791	16284		16284	8.33	1356
335	Hydrants	0		0		0		0
336	Backflow Prevention Devices	0		0		0		0
339	Other Plant and Misc. Equipment	48723		48723		48723	6.67	3250
340	Office Furniture and Equipment	2017		2017		2017	6.67	135
340.1	Computer & Software	0		0		0		0
341	Transportation Equipment	34567		34567		34567	20.00	6913
342	Stores Equipment	0		0		0		0
343	Tools, Shop and Garage Equipment	11569	12425	23994		23994	5.00	1200
344	Laboratory Equipment	0		0		0		0
345	Power Operated Equipment	58037		58037		58037	5.00	2902
346	Communication Equipment	2074		2074		2074	10.00	207
347	Miscellaneous Equipment	7836		7836		7836	10.00	784
348	Other Tangible Plant	0		0		0		0
	Subtotal	$0	$0	$0	$0	$0		$0

Contribution(s) in Aid of Construction (Gross)

Less: Non Amortizable Contribution(s)

Fully Amortized Contribution(s)

Amortizable Contribution(s) $0

Times: Proposed Amortization Rate

Amortization of CIAC

Less: **Amortization of CIAC**

DEPRECIATION EXPENSE 52953

Instructions: Fill out the Grey Cells with the relevent information. Input 0 or none if there is nothing recorded in that account or there is no applicable information to report.

0
Annual Report
Balance Sheet Assets
12/31/16

Balance Sheet Assets				
	Assets		Balance at Beginning of Year (2016)	Balance at End of Year (2016)
Account No.	**Current and Accrued Assets**			
131	Cash		148105	77785
134	Working Funds		-	-
135	Temporary Cash Investments		60055	55051
141	Customer Accounts Receivable		82882	53349
146	Notes Receivable from Associated Companies			
151	Plant Material and Supplies			
162	Prepayments		6507	7816
174	Miscellaneous Current and Accrued Assets			
	Total Current and Accrued Assets		297549	194001
Account No.	**Fixed Assets**			
101	Utility Plant in Service*		1756133	1823739
103	Property Held for Future Use			
105	Construction Work in Progress			
108	Accumulated Depreciation (enter as negative)*		(985818)	(1038771)
121	Non-Utility Property			
122	Accumulated Depreciation - Non Utility			
	Total Fixed Assets		770315	784968
	Total Assets		1067864	978969

Instructions: Fill out the Grey Cells with the relevent information. Input 0 or none if there is nothing recorded in that account or there is no applicable information to report.

*Note these items feed automatically from AR3 UPIS Page 3

0

Annual Report

Balance Sheet Liabilities and Owners Equity

Balance Sheet Liabilities and Owners Equity				
	Liabilities		Balance at Beginning of Year (2016)	Balance at End of Year (2016)
Account No.	**Current Liabilities**			
231	Accounts Payable		76484	19187
232	Notes Payable (Current Portion)			
234	Notes Payable to Associated Companies			
235	Customer Deposits			
236	Accrued Taxes		5969	3549
237	Accrued Interest			
242	Miscellaneous Current and Accrued Liabilities		6438	3674
	Total Current Liabilities		88891	26410
	Long Term Debt			
224	Long Term Debt (Notes and Bonds)		—	—
	Deferred Credits			
251	Unamortized Premium on Debt			
252	Advances in Aid of Construction			
255	Accumulated Deferred Investment Tax Credits			
271	Contributions in Aid of Construction			
272	Less: Amortization of Contributions			
281	Accumulated Deferred Income Tax			
	Total Deferred Credits		—	
	Total Liabilites		88891	26410
	Capital Accounts			
201	Common Stock Issued		50000	50000
211	Other Paid-In Capital		30381	30381
215	Retained Earnings		898592	872178
218	Proprietary Capital (Sole Props and Partnerships)		—	
	Total Capital		978973	952559
	Total Liabilities and Capital		1,067,864	978969

Instructions: Fill out the Grey Cells with the relevent information. Input 0 or none if there is nothing recorded in that account or there is no applicable information to report.

Note: Total liabilities and Capital must match total assets for the beginning and end of the year!

Annual Report
Water Comparative Income Statement
12/31/16

Water Comparative Income Statement			
Account No.	Calendar Year	Current Year 01/01/2016 - 12/31/2016	Last Year 01/01/2015 - 12/31/2015
	Operating Revenue		
461	Metered Water Revenue	614584	765050
460	Unmetered Water Revenue		
462	Fire Protection Revenue		
469	Guaranteed Revenues (Surcharges)		
471	Miscellaneous Service Revenues		
474	Other Water Revenue		
	Total Revenues	614584	765050
	Operating Expenses		
601	Salaries and Wages	86789	134362
604	Employee Pensions and Benefits	1740	
610	Purchased Water	52526	45778
615	Purchased Power	57679	56777
618	Chemicals	1625	1093
620	Materials and Supplies		
620.1	Repairs and Maintenance	109414	38854
620.2	Office Supplies and Expense	7097	4757
630	Contractual Services		
631	Contractual Services -Engineering		
632	Contractual Services - Accounting	30673	19725
633	Contractual Services - Legal	52910	15573
634	Contractual Services - Management Fees		
635	Contractual Services - Water Testing		
636	Contractual Services - Other	34715	19517
635	Water Testing	1195	4490
640	Rents	18000	30675
641	Rental of Building/Real Property		
642	Rental of Equipment	1793	
650	Transportation Expenses	8351	15440
657	Insurance - General Liability	29438	30628
657.1	Insurance - Health and Life	8067	9685
665	Regulatory Commission Expense - Rate		15572
675	Miscellaneous Expense	4688	4834
403	Depreciation Expense (From Schedule AR4)	52953	44922
408	Taxes Other Than Income	6687	10134
408.11	Property Taxes		
409	Income Taxes		
	Total Operating Expenses	566340	502816
	Operating Income / (Loss)	48244	
	Other Income / (Expense)		
419	Interest and Dividend Income	69	61
421	Non-Utility Income	31209	30748
426	Miscellaneous Non-Utility (Expense)		(6924)
427	Interest (Expense)		
	Total Other Income / (Expense)	31278	23885
	Net Income / (Loss)	79522	286119

Instructions: Fill out the Grey Cells with the relevent information. Input 0 or none if there is nothing recorded in that account or there is no applicable information to report.

Annual Report
Supplemental Financial Data (Long-Term Debt)
12/31/16

Supplemental Financial Data (Long-Term Debt)				
	Loan #1	Loan #2	Loan #3	Loan #4
Date Issued				
Source of Loan				
ACC Decision No.				
Reason for Loan				
Dollar Amt. Issued				
Amount Outstanding				
Date of Maturity				
Interest Rate				
Current Year Interest				
Current Year Principal				

Meter Deposit Balance at Test Year End:	

Meter Deposits Refunded During the Test Year:	

List all bonds, notes, loans, and other types of indebtedness in which the proceeds were used in the provision of public utility service. Indebtedness incurred for personal uses by the owner of the utility should not be listed. Input 0 or none if there is nothing to report for that cell.

Annual Report
Water Utility Plant Description
12/31/16

Water Utility Plant Description

Name of the System: HYDRO-RESOURCES INC

ADEQ Public Water System Number: 03-312

WELLS

ADWR ID No *	Pump Horsepower	Pump Yield (gpm)	Casing Depth (feet)	Casing Diameter (inches)	Pump Motor Type **	Meter Size (inches)	Year Drilled	Arsenic Level (mg/L)
55-54298	75	60	2306	13	SUBMERSIBLE	2	1994	<.30 mgl

OTHER WATER SOURCES

Name or Description	Capacity (gpm)	Gallons Purchased or Obtained (in thousands)
SQUIRE WELL #1	60	3,646

BOOSTER PUMPS

Horsepower	GPM	Quantity
250 (FIRE PUMP)	2500	1

FIRE HYDRANTS

Type	Quantity
Standard ***	22
Other	

STORAGE TANKS

Capacity	Material	Quantity
525,000	STEEL BOLTED	1
3 MILLION (LEASED	STEEL WELDED	1

PRESSURE/BLADDER TANKS

Capacity	Quantity
	0

Instructions: Fill out the Grey Cells with the relevent information. Input 0 or none if there is nothing recorded in that account or there is no applicable information to report. Copy and paste this sheet as many times as is necessary.

* Arizona Department of Water Resources ("ADWR") well identification number. For example 55-XXXXXX.

** Pump motor type, turbine or submersible.

*** A standard fire hydrant has two 2.5 inch hose connection nozzles with 7.5 threads per inch, and one 4.5 inch pumper connection nozzle with 4 threads per inch.

Annual Report
Water Utility Plant Description (Continued)
12/31/16

Water Utility Plant Description (Continued)

MAINS

Sizes (inches)	Material	Length (feet)
2	PVC	3,026
3		
4	PVC	430
5		
6	PVC	3,373
8	PVC	6,104
10		
12		

CUSTOMER METERS

Size (inches)	Quantity
5/8 X 3/4	38
3/4	24
1	9
1 1/2	
Compound 2	2
Turbine 2	
Compound 3	6
Turbine 3	
Compound 4	
Turbine 5	
Compound 6	
Turbine 6	
6+	

For the following three items, list the utility owned assets in each category for each system.

TREATMENT EQUIPMENT:	4 SODIUM HYPOCHLORITE CHEMICAL FEED PUMPS
STRUCTURES:	WELLHOUSE FENCES, RETAINING WALL, CONTROL SHEDS AT TUSAYAN #2
OTHER:	IMPROVED ACCESS ROAD TO WELL #2 IMPROVED CIDER PAD AT TANK STORAGE AREA

Instructions: Fill out the Grey Cells with the relevent information. Input 0 or none if there is nothing recorded in that account or there is no applicable information to report. Copy and paste this sheet as many times as is necessary.

Annual Report
Water Use Data Sheet
12/31/16

Water Use Data Sheet					
Name of the System:	HYDRO-RESOURCES INC				
ADEQ Public Water System Number:	03-312				
Month	Number of Customers	Gallons Sold (thousands)[1]	Gallons Pumped (thousands)[2]	Gallons Purchased (thousands)[3]	Estimated Gallons Authorized Use (thousands)[4]
January	100	1,599	3,043	0	359
February	100	1,337	2,338	0	303
March	100	2,323	2,319	0	301
April	100	2,215	2,499	996	350
May	100	2,660	3,043	737	432
June	100	2,587	2,848	458	344
July	100	2,560	2,821	700	342
August	100	2,288	2,499	428	316
September	100	2,183	2,823	325	942
October	100	3,083	2,694	0	382
November	100	1,698	2,715	0	383
December	100	1,607	2,821	0	342
	Totals	3,1116	32,466	3,643	4,746

If the system has fire hydrants, what is the fire flow requirements? 1500 GPM for 2 hrs.

Does the system have chlorination treatment? YES

Is the Water Utility located in an ADWR Active Management Area (AMA)? NO
If yes, which AMA?

Does the Company have an ADWR Gallons Per Capita Per Day (GCPCPD) requirement? NO
If yes, provide the GPCPD amount:

If applicable, in the space below please provide a description for all un-metered water use along with amounts:

8% loss per month-2,597,000 divided by12
73,000- fire department use
670,000- waterline leak and break
34,000- misc flushing
150,000-tank cleaning
1,400,000 - gain in tank storage Jan 1- Dec 31st.

Instructions: Fill out the Grey Cells with the relevent information. Input 0 or none if there is nothing recorded in that account or there is no applicable information to report.

1 Gallons sold - Total gallons from customer meters.
2 Gallons pumped - Total gallons from pumped sources.
3 Gallons purchased - Total gallons purchased from other sources.
4 Estimated gallons authorized use - Total estimated gallons from authorized metered or unmetered use. Authorized use such as flushing (mains, services and hydrants) draining/cleaning tanks, process, construction, fire fighting, etc.

Annual Report
Utility Shutoffs / Disconnects
12/31/16

ADEQ System No. :	03-312

Utility Shutoffs / Disconnects			
Month	Termination without Notice R14-2-410.B	Termination with Notice R14-2-410.C	Other
January	0	0	0
February	0	0	0
March	0	0	0
April	0	0	0
May	0	0	0
June	0	0	0
July	0	0	0
August	0	0	0
September	0	0	0
October	0	0	0
November	0	0	0
December	0	0	0
Total	**0**	**0**	**0**

Other (description):

Instructions: Fill out the Grey Cells with the relevent information. Input 0 or none if there is nothing recorded in that account or there is no applicable information to report.

Annual Report
Property Taxes
12/31/16

Property Taxes	
Amount of actual property taxes paid during Calendar Year 2016 was	NONE

If no property taxes paid, explain why.

ALL VALUATION OF ARRAS CENTRALLY VALUED ASSET. TAXES WILL BE DUE IN 2017. NO PROPERTY OWNED - LEASE UNIT.

Instructions: Fill out the Grey Cells with the relevent information. Input 0 or none if there is nothing recorded in that account or there is no applicable information to report.

Annual Report
Verification and Statement (Taxes)
12/31/16

RECEIVED

Verification and Statement (Taxes)

APR 21 2017

ARIZONA CORP COMMISSION
UTILITIES DIVISION – DIRECTOR'S OFFICE

Verification: State of ARIZONA ARIZONA (state name) I, the undersigned of the

County of (county name): COCONINO COCONINO
Name (owner or official) title: JOHN W. RUETER PRESIDENT CEO
Company name: HYDRO-RESOURCES INC

DO SAY THAT THIS ANNUAL UTILITY PROPERTY TAX AND SALES TAX REPORT TO THE ARIZONA CORPORATION COMMISSION.

FOR THE YEAR ENDING: 12/31/16

HAS BEEN PREPARED UNDER MY DIRECTION, FROM THE ORIGINAL BOOKS, PAPERS AND RECORDS OF SAID UTILITY; THAT I HAVE CAREFULLY EXAMINED THE SAME, AND DECLARE THE SAME TO BE A COMPLETE AND CORRECT STATEMENT OF BUSINESS AND AFFAIRS OF SAID UTILITY FOR THE PERIOD COVERED BY THIS REPORT IN RESPECT TO EACH AND EVERY MATTER AND THING SET FORTH, TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF.

Sworn Statement: I HEREBY ATTEST THAT ALL PROPERTY TAXES FOR SAID COMPANY ARE CURRENT AND PAID IN FULL.

I HEREBY ATTEST THAT ALL SALES TAXES FOR SAID COMPANY ARE CURRENT AND PAID IN FULL.

Christopher Brainard
Notary Public - Arizona
Maricopa County
My Commission Expires
August 29, 2018

John W. Rueter
signature of owner/official

928-522-4405
telephone no.

SUBSCRIBED AND SWORN TO BEFORE ME A NOTARY PUBLIC IN AND FOR THE COUNTY Maricopa (county name)

THIS 21st DAY OF APRIL 2017 (month) and (year)

MY COMMISSION EXPIRES Aug 29 2018 (date)

(signature of notary public)

RECEIVED
APR 21 2017
ARIZONA CORP COMMISSION
UTILITIES DIVISION – DIRECTOR'S OFFICE

Verification and Statement

Verification:

State of ARIZONA (state name) I, the undersigned of the

County of (county name): COCONINO

Name (owner or official) title: JOHN W. RUETER

Company name: HYDRO-RESOURCES INC

DO SAY THAT THIS ANNUAL UTILITY PROPERTY TAX AND SALES TAX REPORT TO THE ARIZONA CORPORATION COMMISSION.

FOR THE YEAR ENDING: 12/31/16

HAS BEEN PREPARED UNDER MY DIRECTION, FROM THE ORIGINAL BOOKS, PAPERS AND RECORDS OF SAID UTILITY; THAT I HAVE CAREFULLY EXAMINED THE SAME, AND DECLARE THE SAME TO BE A COMPLETE AND CORRECT STATEMENT OF BUSINESS AND AFFAIRS OF SAID UTILITY FOR THE PERIOD COVERED BY THIS REPORT IN RESPECT TO EACH AND EVERY MATTER AND THING SET FORTH, TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF.

Sworn Statement: IN ACCORDANCE WITH THE REQUIREMENTS OF TITLE 40, ARTICLE 8, SECTION 40-401, ARIZONA REVISED STATUTES, IT IS HEREIN REPORTED THAT THE GROSS OPERATING REVENUE OF SAID UTILITY DERIVED FROM ARIZONA INTRASTATE UTILITY OPERATIONS DURING THE CALENDAR YEAR WAS:

Arizona Intrastate Gross Operating Revenues Only ($)

$614,584

(The amount in the box above includes

$57,667 in sales taxes billed or collected)

Christopher Brainard
Notary Public - Arizona
Maricopa County
My Commission Expires
August 29, 2018

John W Rueter

signature of owner/official

928-522-4405

telephone no.

SUBSCRIBED AND SWORN TO BEFORE ME A NOTARY PUBLIC IN AND FOR THE COUNTY ~~COCONINO~~ Maricopa (county name)

THIS 21st DAY OF APRIL 2017 (month) and (year)

MY COMMISSION EXPIRES Aug 29, 2018 (date)

(signature of notary public)

Verification and Statement (Residential Revenue)

Verification:

State of ARIZONA (state name) I, the undersigned of the

RECEIVED
APR 21 2017
ARIZONA CORP COMMISSION
UTILITIES DIVISION - DIRECTOR'S OFFICE

County of (county name): COCONINO
Name (owner or official) title: JOHN W. RUETER PRESIDENT/CEO
Company name: HYDRO-RESOURCES INC

DO SAY THAT THIS ANNUAL UTILITY PROPERTY TAX AND SALES TAX REPORT TO THE ARIZONA CORPORATION COMMISSION.

FOR THE YEAR ENDING: 12/31/16

HAS BEEN PREPARED UNDER MY DIRECTION, FROM THE ORIGINAL BOOKS, PAPERS AND RECORDS OF SAID UTILITY; THAT I HAVE CAREFULLY EXAMINED THE SAME, AND DECLARE THE SAME TO BE A COMPLETE AND CORRECT STATEMENT OF BUSINESS AND AFFAIRS OF SAID UTILITY FOR THE PERIOD COVERED BY THIS REPORT IN RESPECT TO EACH AND EVERY MATTER AND THING SET FORTH, TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF.

Sworn Statement: IN ACCORDANCE WITH THE REQUIREMENTS OF TITLE 40, ARTICLE 8, SECTION 40-401, ARIZONA REVISED STATUTES, IT IS HEREIN REPORTED THAT THE GROSS OPERATING REVENUE OF SAID UTILITY DERIVED FROM ARIZONA INTRASTATE UTILITY OPERATIONS RECEIVED FROM RESIDENTIAL CUSTOMERS DURING THE CALENDAR YEAR WAS:

Arizona Intrastate Gross Operating Revenues Only ($)
144546
(The amount in the box above includes
12865 in sales taxes
billed or collected)

Christopher Brainard
Notary Public - Arizona
Maricopa County
My Commission Expires
August 29, 2018

signature of owner/official

928-522-4405
telephone no.

SUBSCRIBED AND SWORN TO BEFORE ME A NOTARY PUBLIC IN AND FOR THE COUNTY Maricopa ~~COCONINO~~ (county name)

THIS 21st DAY OF APRIL 2017 (month) and (year)

MY COMMISSION EXPIRES Aug 29, 2018 (date)

(signature of notary public)

ANNUAL REPORT

Of

Company Name:	Hydro-Resources, Inc.
Mailing Address:	PO Box 3246 549 Camper Village Grand Canyon AZ 86023
Docket No.:	W-20770A
For the Year Ended:	12/31/17

RECEIVED
APR 16 2018
ARIZONA CORP COMMISSION
UTILITIES DIVISION – DIRECTOR'S OFFICE

WATER UTILITY

To

Arizona Corporation Commission

Due on April 15th

Email: rdelafuente@azcc.gov, mail or deliver the completed Annual Report to:
Arizona Corporation Commission
Compliance Section - Utilities Division
1200 West Washington Street
Phoenix, Arizona 85007

Application Type:	Original Filing
Application Date:	4/16/2018

4-17-18

ARIZONA CORPORATION COMMISSION
WATER UTILITIY ANNUAL REPORT
Hydro-Resources, Inc.
A Class [D] Utility

1. For the Calendar Year Ended: 12/31/17

2. Address: PO BOX 3246
City: GRAND CANYON State: ARIZONA Zip Code: 86023

3. Telephone Number: 928-522-4405

4. Date of Original Organization of Utility: 7/8/2016

5. Person to whom correspondence should be addressed concerning this report:
Name: JOHN RUETER
Telephone No. : 928-522-4405
Address: PO BOX 3246
City: GRAND CANYON State: ARIZONA Zip Code: 86023
Email: john@jwrueter.com

6. On-Site Manager:
Name: JOHN RUETER
Telephone No. : 928-522-4405
Address: PO BOX 3246
City: GRAND CANYON State: ARIZONA Zip Code: 86023
Email: john@jwrueter.com

7. Ownership: "S" Corporation

8. Counties Served: COCONINO

Hydro-Resources, Inc.
Annual Report
Utility Plant in Service (Water)
12/31/17

Utility Plant in Service (Water)							
Account No.	Description	Beginning Year Original Cost	Current Year Additions	Current Year Retirements	Adjusted Original Cost	Accumulated Depreciation	OCLD (OC less AD)
301	Organization	$258,392			$258,392	$258,392	$0
302	Franchises				0		0
303	Land and Land Rights	136,769	638		137,407	136,769	638
304	Structures and Improvements	22,696			22,696	2,268	20,428
305	Collecting & Improving Reservoirs				0		0
306	Lake, River, Canal Intakes				0		0
307	Wells and Springs	824,201	4,914		829,115	504,533	324,582
308	Infiltration Galleries				0		0
309	Supply Mains				0		0
310	Power Generation Equipment				0		0
311	Pumping Equipment	154,054	1,376		155,430	60,459	94,971
320	Water Treatment Equipment				0		0
320.1	Water Treatment Plants				0		0
320.2	Solution Chemical Feeders				0		0
320.3	Point-of-Use Treatment Devices				0		0
330	Distribution Reservoirs and Standpipes				0		0
330.1	Storage Tanks	64,341			64,341	45,352	18,989
330.2	Pressure Tanks				0		0
331	Transmission and Distribution Mains	155,554			155,554	9,203	146,351
333	Services				0		0
334	Meters and Meter Installations	16,284	14,622		30,906	4,112	26,794
335	Hydrants				0		0
336	Backflow Prevention Devices				0		0
339	Other Plant and Misc. Equipment	62,923			62,923	24,897	38,026
340	Office Furniture and Equipment	2,017	1,004		3,021	1,831	1,190
340.1	Computer & Software				0		0
341	Transportation Equipment	34,567			34,567	28,739	5,828
342	Stores Equipment				0		0
343	Tools, Shop and Garage Equipment	23,994	8,650		32,644	4,699	27,945
344	Laboratory Equipment				0		0
345	Power Operated Equipment	58,037			58,037	25,262	32,775
346	Communication Equipment	2,074			2,074	621	1,453
347	Miscellaneous Equipment	7,836			7,836	2,352	5,484
348	Other Tangible Plant				0		0
	Totals	**$1,823,739**	**$31,204**	**$0**	**$1,854,943**	**$1,109,489**	**$745,454**

Instructions: Fill out the Grey Cells with the relevent information. Input 0 or none if there is nothing recorded in that account or there is no applicable information to report.

Hydro-Resources, Inc.
Annual Report
Depreciation Expense for the Current Year (Water)
12/31/17

Depreciation Expense for the Current Year (Water)								
Account No.	Description	Beginning Year Original Cost	Current Year Additions	Current Year Retirements	Adjusted Original Cost	Fully Depreciated/Non-depreciable Plant	Depreciation Percentages	Depreciation Expense
301	Organization	$258,392	$0	$0	$258,392	$258,392	0.00%	$0
302	Franchises	0	0	0	0			0
303	Land and Land Rights	136,769	638	0	137,407		0.00%	0
304	Structures and Improvements	22,696	0	0	22,696		3.33%	756
305	Collecting & Improving Reservoirs	0	0	0	0			0
306	Lake, River, Canal Intakes	0	0	0	0			0
307	Wells and Springs	824,201	4,914	0	829,115		3.33%	27,528
308	Infiltration Galleries	0	0	0	0			0
309	Supply Mains	0	0	0	0			0
310	Power Generation Equipment	0	0	0	0			0
311	Pumping Equipment	154,054	1,376	0	155,430		12.50%	19,343
320	Water Treatment Equipment	0	0	0	0			0
320.1	Water Treatment Plants	0	0	0	0			0
320.2	Solution Chemical Feeders	0	0	0	0			0
320.3	Point-of-Use Treatment Devices	0	0	0	0			0
330	Distribution Reservoirs and Standpipes	0	0	0	0			0
330.1	Storage Tanks	64,341	0	0	64,341		2.22%	1,428
330.2	Pressure Tanks	0	0	0	0			0
331	Transmission and Distribution Mains	155,554	0	0	155,554		2.00%	3,111
333	Services	0	0	0	0			0
334	Meters and Meter Installations	16,284	14,622	0	30,906		8.33%	1,965
335	Hydrants	0	0	0	0			0
336	Backflow Prevention Devices	0	0	0	0			0
339	Other Plant and Misc. Equipment	62,923	0	0	62,923		6.67%	4,197
340	Office Furniture and Equipment	2,017	1,004	0	3,021		6.67%	168
340.1	Computer & Software	0	0	0	0			0
341	Transportation Equipment	34,567	0	0	34,567		20.00%	6,913
342	Stores Equipment	0	0	0	0			0
343	Tools, Shop and Garage Equipment	23,994	8,650	0	32,644		5.00%	1,416
344	Laboratory Equipment	0	0	0	0			0
345	Power Operated Equipment	58,037	0	0	58,037		5.00%	2,902
346	Communication Equipment	2,074	0	0	2,074		10.00%	207
347	Miscellaneous Equipment	7,836	0	0	7,836		10.00%	784
348	Other Tangible Plant	0	0	0	0			0
	Subtotal	$1,823,739	$31,204	$0	$1,854,943	$258,392		$70,718

Contribution(s) in Aid of Construction (Gross)	
Less: Non Amortizable Contribution(s)	
Fully Amortized Contribution(s)	
Amortizable Contribution(s)	**$0**
Times: Proposed Amortization Rate	4.43%
Amortization of CIAC	$0

Less: Amortization of CIAC	$0
DEPRECIATION EXPENSE	**$70,718**

Instructions: Fill out the Grey Cells with the relevent information. Input 0 or none if there is nothing recorded in that account or there is no applicable information to report.

Hydro-Resources, Inc.
Annual Report
Balance Sheet Assets
12/31/17

Balance Sheet Assets				
	Assets		Balance at Beginning of Year (2017)	Balance at End of Year (2017)
Account No.	**Current and Accrued Assets**			
131	Cash		$77,785	$89,606
134	Working Funds			
135	Temporary Cash Investments		55,051	110,009
141	Customer Accounts Receivable		53,349	49,291
146	Notes Receivable from Associated Companies			
151	Plant Material and Supplies			
162	Prepayments		7,816	6,894
174	Miscellaneous Current and Accrued Assets			
	Total Current and Accrued Assets		**$194,001**	**$255,800**
Account No.	**Fixed Assets**			
101	Utility Plant in Service*		$1,823,739	$1,854,943
103	Property Held for Future Use			
105	Construction Work in Progress			
108	Accumulated Depreciation **(enter as negative)***		(1,038,771)	(1,109,489)
121	Non-Utility Property			
122	Accumulated Depreciation - Non Utility			
	Total Fixed Assets		**$784,968**	**$745,454**
	Total Assets		**$978,969**	**$1,001,254**

Instructions: Fill out the Grey Cells with the relevent information. Input 0 or none if there is nothing recorded in that account or there is no applicable information to report.

*Note these items feed automatically from AR3 UPIS Page 3

Hydro-Resources, Inc.
Annual Report
Balance Sheet Liabilities and Owners Equity

Balance Sheet Liabilities and Owners Equity				
	Liabilities		Balance at Beginning of Year (2017)	Balance at End of Year (2017)
Account No.	**Current Liabilities**			
231	Accounts Payable		$19,187	$33,939
232	Notes Payable (Current Portion)			
234	Notes Payable to Associated Companies			
235	Customer Deposits			
236	Accrued Taxes		3,549	5,967
237	Accrued Interest			
242	Miscellaneous Current and Accrued Liabilities		3,674	1,389
	Total Current Liabilities		**$26,410**	**$41,295**
	Long Term Debt			
224	Long Term Debt (Notes and Bonds)			
	Deferred Credits			
251	Unamortized Premium on Debt			
252	Advances in Aid of Construction			
255	Accumulated Deferred Investment Tax Credits			
271	Contributions in Aid of Construction			
272	Less: Amortization of Contributions			
281	Accumulated Deferred Income Tax			
	Total Deferred Credits		**$0**	**$0**
	Total Liabilites		**$26,410**	**$41,295**
	Capital Accounts			
201	Common Stock Issued		$50,000	$50,000
211	Other Paid-In Capital		30,381	30,081
215	Retained Earnings		872,178	879,878
218	Proprietary Capital (Sole Props and Partnerships)			
	Total Capital		**$952,559**	**$959,959**
	Total Liabilities and Capital		**$978,969**	**$1,001,254**

Instructions: Fill out the Grey Cells with the relevent information. Input 0 or none if there is nothing recorded in that account or there is no applicable information to report.

Note: Total liabilities and Capital must match total assets for the beginning and end of the year!

Hydro-Resources, Inc.
Annual Report
Water Comparative Income Statement
12/31/17

Water Comparative Income Statement			
Account No.	Calendar Year	Current Year 01/01/2017 - 12/31/2017	Last Year 01/01/2016 - 12/31/2016
	Operating Revenue		
461	Metered Water Revenue	$579,849	$614,584
460	Unmetered Water Revenue		
462	Fire Protection Revenue		
469	Guaranteed Revenues (Surcharges)		
471	Miscellaneous Service Revenues		
474	Other Water Revenue		
	Total Revenues	**$579,849**	**$614,584**
	Operating Expenses		
601	Salaries and Wages	$100,375	$86,789
604	Employee Pensions and Benefits	1,740	1,740
610	Purchased Water	43,545	52,526
615	Purchased Power	57,365	57,679
618	Chemicals		1,625
620	Materials and Supplies		
620.1	Repairs and Maintenance	39,414	109,414
620.2	Office Supplies and Expense	7,304	7,097
630	Contractual Services		
631	Contractual Services -Engineering		
632	Contractual Services - Accounting	25,400	30,673
633	Contractual Services - Legal	51,525	52,910
634	Contractual Services - Management Fees	31,358	
635	Contractual Services - Water Testing	4,710	34,715
636	Contractual Services - Other	18,747	1,195
640	Rents		
641	Rental of Building/Real Property	24,825	18,000
642	Rental of Equipment	2,829	1,793
650	Transportation Expenses	10,778	8,351
657	Insurance - General Liability	28,081	29,438
657.1	Insurance - Health and Life	6,146	8,067
665	Regulatory Commission Expense - Rate		
670	Bad Debt Expense		
675	Miscellaneous Expense	6,424	4,688
403	Depreciation Expense (From Schedule AR4)	70,718	52,953
408	Taxes Other Than Income	8,271	6,687
408.11	Property Taxes	44,800	
409	Income Taxes		
427.1	Customer Security Deposit Interest		
	Total Operating Expenses	**$584,355**	**$566,340**
	Operating Income / (Loss)	**($4,506)**	**$48,244**
	Other Income / (Expense)		
419	Interest and Dividend Income	$85	$69
421	Non-Utility Income	33,820	31,209
426	Miscellaneous Non-Utility (Expense)		
427	Interest (Expense)		
	Total Other Income / (Expense)	**$33,905**	**$31,278**
	Net Income / (Loss)	**$29,399**	**$79,522**

Instructions: Fill out the Grey Cells with the relevent information. Input 0 or none if there is nothing recorded in that account or there is no applicable information to report.

Hydro-Resources, Inc.
Annual Report
Supplemental Financial Data (Long-Term Debt)
12/31/17

Supplemental Financial Data (Long-Term Debt)				
	Loan #1	Loan #2	Loan #3	Loan #4
Date Issued	NONE			
Source of Loan				
ACC Decision No.				
Reason for Loan				
Dollar Amt. Issued				
Amount Outstanding				
Date of Maturity				
Interest Rate				
Current Year Interest				
Current Year Principal				

Meter Deposit Balance at Test Year End:	NONE

Meter Deposits Refunded During the Test Year:	

List all bonds, notes, loans, and other types of indebtedness in which the proceeds were used in the provision of public utility service. Indebtedness incurred for personal uses by the owner of the utility should <u>not</u> be listed. Input 0 or none if there is nothing to report for that cell.

Hydro-Resources, Inc.
Annual Report
Water Utility Plant Description
12/31/17

Water Utility Plant Description	
Name of the System:	
ADEQ Public Water System Number:	

WELLS

ADWR ID No *	Pump Horsepower	Pump Yield (gpm)	Casing Depth (feet)	Casing Diameter (inches)	Pump Motor Type **	Meter Size (inches)	Year Drilled	Arsenic Level (mg/L)
55-54298	75	60	2,306	13	UBMERSIBLE	2	1994	0.0018

OTHER WATER SOURCES

Name or Description	Capacity (gpm)	Gallons Purchased or Obtained (in thousands)
SQUIRE WELL #1	58	3,020

BOOSTER PUMPS

Horsepower	GPM	Quantity
250 (FIRE PUMP)	2,500	

FIRE HYDRANTS

Type	Quantity
Standard ***	22
Other	

STORAGE TANKS

Capacity	Material	Quantity
525,000	EL BOLTED	1
3 MIL (LEASED)		1

PRESSURE/BLADDER TANKS

Capacity	Quantity
	0

Instructions: Fill out the Grey Cells with the relevent information. Input 0 or none if there is nothing recorded in that account or there is no applicable information to report. Copy and paste this sheet as many times as is necessary.

* Arizona Department of Water Resources ("ADWR") well identification number. For example 55-XXXXXX.

** Pump motor type, turbine or submersible.

*** A standard fire hydrant has two 2.5 inch hose connection nozzles with 7.5 threads per inch, and one 4.5 inch pumper connection nozzle with 4 threads per inch.

Water Utility Plant Description (Continued)

MAINS

Sizes (inches)	Material	Length (feet)
2.00	PVC	3,026
4.00	PVC	430
6.00	PVC	3,373
8.00	PVC	6,104

CUSTOMER METERS

Size (inches)	Quantity
5/8 X 3/4	36
0.75	24
1	9
1.5	
Compound 2	2
Compound 3	6
Compound 6	1

For the following three items, list the utility owned assets in each category for each system.

TREATMENT EQUIPMENT:	4 SODIUM HYPOCHLORITE CHEMICAL FEED PUMPS

STRUCTURES:	WELLHOUSES, FENCES, RETAING WALL, CONTROL SHEDS AT TUSAYAN #2, FIRE PUMP SHED

OTHER:	IMPROVED ACCESS ROAD TO WELL#2, IMPROVED CINDER PAD AT TANK STORAGE AREA

Instructions: Fill out the Grey Cells with the relevent information. Input 0 or none if there is nothing recorded in that account or there is no applicable information to report. Copy and paste this sheet as many times as is necessary.

Hydro-Resources, Inc.
Annual Report
Water Use Data Sheet
12/31/17

Water Use Data Sheet

Name of the System: 0

ADEQ Public Water System Number: 0

Month	Number of Customers	Gallons Sold (thousands)[1]	Gallons Pumped (thousands)[2]	Gallons Purchased (thousands)[3]	Estimated Gallons Authorized Use (thousands)[4]	Purchased Power Expense[5]	Purchased Power (kWh)[6]
January	100	1,746	1,864	0	2,221	$5,364	1,334
February	100	1,703	2,360	0	2,718	4,127	1,689
March	100	2,358	2,401	0	2,787	4,864	1,459
April	100	2,585	2,699	0	3,087	4,648	1,816
May	100	2,591	2,789	984	2,816	5,029	1,895
June	100	2,918	2,441	415	2,450	4,809	1,778
July	100	2,906	2,546	215	2,548	5,029	1,856
August	100	2,769	2,809	257	2,810	4,809	1,913
September	100	2,407	2,528	296	2,538	5,021	1,844
October	100	2,452	2,727	526	2,784	4,381	1,901
November	100	2,203	2,443	327	2,801	4,690	1,774
December	100	1,881	2,811	0	3,168	4,152	1,918
	Totals	**28,519**	**30,418**	**3,020**	**32,727**	**$56,923**	**21,177**

If the system has fire hydrants, what is the fire flow requirements? 1,500 GPM for 2 hrs.

Does the system have chlorination treatment? YES

Is the Water Utility located in an ADWR Active Management Area (AMA)? NO
If yes, which AMA?

Does the Company have an ADWR Gallons Per Capita Per Day (GCPCPD) requirement? NO
If yes, provide the GPCPD amount:

If applicable, in the space below please provide a description for all un-metered water use along with amounts:

fire depatrment /fire pump-32,900, construction/flushing 37,000, tank cleaning 86,700, process 16,800

Instructions: Fill out the Grey Cells with the relevent information. Input 0 or none if there is nothing recorded in that account or there is no applicable information to report.

1 Gallons sold - Total gallons from customer meters, and other sold gallons such as Construction water.

2 Gallons pumped - Total gallons from pumped sources.

3 Gallons purchased - Total gallons purchased from other sources.

4 Estimated gallons authorized use - Total estimated gallons from authorized metered or unmetered use. Authorized use such as flushing (mains, services and hydrants) draining/cleaning tanks, process, construction, fire fighting, etc.

5 Enter the total purchased power costs for the power meters associated with this system.

6 Enter the total purchased kWh used by the power meters associated with this system.

Hydro-Resources, Inc.
Annual Report
Utility Shutoffs / Disconnects
12/31/17

ADEQ System No. :	0

Utility Shutoffs / Disconnects			
Month	Termination without Notice R14-2-410.B	Termination with Notice R14-2-410.C	Other
January	0	0	0
February	0	0	0
March	0	0	0
April	0	0	0
May	0	0	0
June	0	0	0
July	0	0	0
August	0	0	0
September	0	0	0
October	0	0	0
November	0	0	0
December	0	0	0
Total	**0**	**0**	**0**

Other (description):

Instructions: Fill out the Grey Cells with the relevent information. Input 0 or none if there is nothing recorded in that account or there is no applicable information to report.

Hydro-Resources, Inc.
Annual Report
Property Taxes
12/31/17

Property Taxes	
Amount of actual property taxes paid during Calendar Year 2017 was	$44,800

If no property taxes paid, explain why.

Instructions: Fill out the Grey Cells with the relevent information. Input 0 or none if there is nothing recorded in that account or there is no applicable information to report.

Verification and Sworn Statement (Taxes)

RECEIVED
APR 16 2018
ARIZONA CORP COMMISSION
UTILITIES DIVISION – DIRECTOR'S OFFICE

Verification: State of ARIZONA (state name) I, the undersigned of the

County of (county name): COCONINO
Name (owner or official) title: JOHN W. RUETER PRESIDENT
Company name: Hydro-Resources, Inc.

DO SAY THAT THIS ANNUAL UTILITY PROPERTY TAX AND SALES TAX REPORT TO THE ARIZONA CORPORATION COMMISSION.

FOR THE YEAR ENDING: 12/31/17

HAS BEEN PREPARED UNDER MY DIRECTION, FROM THE ORIGINAL BOOKS, PAPERS AND RECORDS OF SAID UTILITY; THAT I HAVE CAREFULLY EXAMINED THE SAME, AND DECLARE THE SAME TO BE A COMPLETE AND CORRECT STATEMENT OF BUSINESS AND AFFAIRS OF SAID UTILITY FOR THE PERIOD COVERED BY THIS REPORT IN RESPECT TO EACH AND EVERY MATTER AND THING SET FORTH, TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF.

Sworn Statement: I HEREBY ATTEST THAT ALL PROPERTY TAXES FOR SAID COMPANY ARE CURRENT AND PAID IN FULL.

I HEREBY ATTEST THAT ALL SALES TAXES FOR SAID COMPANY ARE CURRENT AND PAID IN FULL.

John W. Rueter
signature of owner/official

928 – 522-4405
telephone no.

SUBSCRIBED AND SWORN TO BEFORE ME A NOTARY PUBLIC IN AND FOR THE COUNTY Coconino (county name)

THIS 15th DAY OF April, 2018 (month) and (year)

MY COMMISSION EXPIRES June 22, 2018 (date)

DEBORAH DUNCAN
Notary Public - State of Arizona
COCONINO COUNTY
My Commission Expires
June 22, 2018

Deborah Duncan
(signature of notary public)

Hydro-Resources, Inc.
Annual Report
Verification and Sworn Statement
12/31/17

RECEIVED
APR 16 2018
ARIZONA CORP COMMISSION
UTILITIES DIVISION – DIRECTOR'S OFFICE

Verification and Sworn Statement

Verification:

State of ARIZONA (state name) I, the undersigned of the

County of (county name): COCONINO

Name (owner or official) title: JOHN W. RUETER

Company name: Hydro-Resources, Inc.

DO SAY THAT THIS ANNUAL UTILITY PROPERTY TAX AND SALES TAX REPORT TO THE ARIZONA CORPORATION COMMISSION.

FOR THE YEAR ENDING: 12/31/17

HAS BEEN PREPARED UNDER MY DIRECTION, FROM THE ORIGINAL BOOKS, PAPERS AND RECORDS OF SAID UTILITY; THAT I HAVE CAREFULLY EXAMINED THE SAME, AND DECLARE THE SAME TO BE A COMPLETE AND CORRECT STATEMENT OF BUSINESS AND AFFAIRS OF SAID UTILITY FOR THE PERIOD COVERED BY THIS REPORT IN RESPECT TO EACH AND EVERY MATTER AND THING SET FORTH, TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF.

Sworn Statement: IN ACCORDANCE WITH THE REQUIREMENTS OF TITLE 40, ARTICLE 8, SECTION 40-401, ARIZONA REVISED STATUTES, IT IS HEREIN REPORTED THAT THE GROSS OPERATING REVENUE OF SAID UTILITY DERIVED FROM ARIZONA INTRASTATE UTILITY OPERATIONS DURING THE CALENDAR YEAR WAS:

Arizona Intrastate Gross Operating Revenues Only ($)

$631,135

(The amount in the box above includes

$51,286 in sales taxes

billed or collected)

John W. Rueter
signature of owner/official

925-522405
telephone no.

SUBSCRIBED AND SWORN TO BEFORE ME A NOTARY PUBLIC IN AND FOR THE COUNTY Coconino (county name)

THIS 15th DAY OF April, 2018 (month) and (year)

DEBORAH DUNCAN
Notary Public - State of Arizona
COCONINO COUNTY
My Commission Expires
June 22, 2018

MY COMMISSION EXPIRES June 22, 2018 (date)

Deborah Duncan

Hydro-Resources, Inc.
Annual Report
Verification and Sworn Statement (Residential Revenue)
12/31/17

Verification and Sworn Statement (Residential Revenue)

RECEIVED
APR 16 2018
ARIZONA CORP COMMISSION
UTILITIES DIVISION – DIRECTOR'S OFFICE

Verification:

State of ARIZONA (state name) I, the undersigned of the

County of (county name): COCONINO
Name (owner or official) title: John W Ruetten PRESIDENT
Company name: Hydro-Resources, Inc.

DO SAY THAT THIS ANNUAL UTILITY PROPERTY TAX AND SALES TAX REPORT TO THE ARIZONA CORPORATION COMMISSION.

FOR THE YEAR ENDING: 12/31/17

HAS BEEN PREPARED UNDER MY DIRECTION, FROM THE ORIGINAL BOOKS, PAPERS AND RECORDS OF SAID UTILITY; THAT I HAVE CAREFULLY EXAMINED THE SAME, AND DECLARE THE SAME TO BE A COMPLETE AND CORRECT STATEMENT OF BUSINESS AND AFFAIRS OF SAID UTILITY FOR THE PERIOD COVERED BY THIS REPORT IN RESPECT TO EACH AND EVERY MATTER AND THING SET FORTH, TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF.

Sworn Statement: IN ACCORDANCE WITH THE REQUIREMENTS OF TITLE 40, ARTICLE 8, SECTION 40-401, ARIZONA REVISED STATUTES, IT IS HEREIN REPORTED THAT THE GROSS OPERATING REVENUE OF SAID UTILITY DERIVED FROM ARIZONA INTRASTATE UTILITY OPERATIONS RECEIVED FROM RESIDENTIAL CUSTOMERS DURING THE CALENDAR YEAR WAS:

Arizona Intrastate Gross Operating Revenues Only ($)
$171,428
(The amount in the box above includes
$14,010 in sales taxes
billed or collected)

John W. Ruetten
signature of owner/official

928-502-4405
telephone no.

SUBSCRIBED AND SWORN TO BEFORE ME A NOTARY PUBLIC IN AND FOR THE COUNTY Coconino (county name)

THIS 15th DAY OF April, 2018 (month) and (year)

DEBORAH DUNCAN
Notary Public - State of Arizona
COCONINO COUNTY
My Commission Expires
June 22, 2018

MY COMMISSION EXPIRES June 22, 2018 (date)

Deborah Duncan
(signature of notary public)

ANNUAL REPORT

Of

Company Name:	Hydro-Resources, Inc.
Mailing Address:	PO Box 3246 549 Camper Village Lane Grand Canyon AZ 86023
Docket No.:	W-20770A
For the Year Ended:	12/31/18

RECEIVED
APR 19 2019
ARIZONA CORP COMMISSION
UTILITIES DIVISION – DIRECTOR'S OFFICE

WATER UTILITY

To

Arizona Corporation Commission

Due on April 15th

Email: rdelafuente@azcc.gov, mail or deliver the completed Annual Report to:
Arizona Corporation Commission
Compliance Section - Utilities Division
1200 West Washington Street
Phoenix, Arizona 85007

Application Type:	Original Filing
Application Date:	4/23/2019

4-23-19

ARIZONA CORPORATION COMMISSION
WATER UTILITIY ANNUAL REPORT
Hydro-Resources, Inc.
A Class [D] Utility

1. For the Calendar Year Ended: 12/31/18

2. Address: PO Box 3246
City: Grand Canyon State: Arizona Zip Code: 86023

3. Telephone Number: 928-522-4405

4. Date of Original Organization of Utility: 7/8/2016

5. Person to whom correspondence should be addressed concerning this report:
Name: John Rueter
Telephone No. : 928-522-4405
Address: PO Box 3246
City: Grand Canyon State: Arizona Zip Code: 86023
Email: john@jwrueter.com

6. On-Site Manager:
Name: John Rueter
Telephone No. : 928-522-4405
Address: PO Box 3246
City: Grand Canyon State: Arizona Zip Code: 86023
Email: john@jwrueter.com

7. Ownership: "S" Corporation

8. Counties Served: Coconino

Hydro-Resources, Inc.
Annual Report
Utility Plant in Service (Water)
12/31/18

Utility Plant in Service (Water)							
Account No.	Description	Beginning Year Original Cost	Current Year Additions	Current Year Retirements	Adjusted Original Cost	Accumulated Depreciation	OCLD (OC less AD)
301	Organization	$258,392	$0	$0	$258,392	$258,392	$0
302	Franchises	0	0	0	0	0	0
303	Land and Land Rights	137,407	0	0	137,407	136,769	638
304	Structures and Improvements	22,696	0	0	22,696	2,268	20,428
305	Collecting & Improving Reservoirs	0	0	0	0	0	0
306	Lake, River, Canal Intakes	0	0	0	0	0	0
307	Wells and Springs	829,115	7,037	0	836,152	504,533	331,619
308	Infiltration Galleries	0	0	0	0	0	0
309	Supply Mains	0	0	0	0	0	0
310	Power Generation Equipment	0	0	0	0	0	0
311	Pumping Equipment	155,430	0	0	155,430	60,459	94,971
320	Water Treatment Equipment	0	0	0	0	0	0
320.1	Water Treatment Plants	0	0	0	0	0	0
320.2	Solution Chemical Feeders	0	0	0	0	0	0
320.3	Point-of-Use Treatment Devices	0	0	0	0	0	0
330	Distribution Reservoirs and Standpipes	0	0	0	0	0	0
330.1	Storage Tanks	64,341	0	0	64,341	45,352	18,989
330.2	Pressure Tanks	0	0	0	0	0	0
331	Transmission and Distribution Mains	155,554	0	0	155,554	9,203	146,351
333	Services	0	0	0	0	0	0
334	Meters and Meter Installations	30,906	16,243	0	47,149	4,112	43,037
335	Hydrants	0	0	0	0	0	0
336	Backflow Prevention Devices	0	0	0	0	0	0
339	Other Plant and Misc. Equipment	62,923	0	0	62,923	24,897	38,026
340	Office Furniture and Equipment	3,021	0	0	3,021	1,831	1,190
340.1	Computer & Software	0	0	0	0	0	0
341	Transportation Equipment	34,567	0	0	34,567	28,739	5,828
342	Stores Equipment	0	0	0	0	0	0
343	Tools, Shop and Garage Equipment	32,644	4,160	0	36,804	4,699	32,105
344	Laboratory Equipment	0	0	0	0	0	0
345	Power Operated Equipment	58,037	0	0	58,037	25,262	32,775
346	Communication Equipment	2,074	0	0	2,074	621	1,453
347	Miscellaneous Equipment	7,836	0	0	7,836	2,352	5,484
348	Other Tangible Plant	0	0	0	0	0	0
	Totals	**$1,854,943**	**$27,440**	**$0**	**$1,882,383**	**$1,109,489**	**$772,894**

Instructions: Fill out the Grey Cells with the relevant information. Input 0 or none if there is nothing recorded in that account or there is no applicable information to report.

Hydro-Resources, Inc.
Annual Report
Depreciation Expense for the Current Year (Water)
12/31/18

Depreciation Expense for the Current Year (Water)								
Account No.	Description	Beginning Year Original Cost	Current Year Additions	Current Year Retirements	Adjusted Original Cost	Fully Depreciated/Non-depreciable Plant	Depreciation Percentages	Depreciation Expense
301	Organization	$258,392	$0	$0	$258,392	$258,392	0.00%	$0
302	Franchises	0	0	0	0	0	0.00%	0
303	Land and Land Rights	137,407	0	0	137,407	0	0.00%	0
304	Structures and Improvements	22,696	0	0	22,696	0	3.33%	756
305	Collecting & Improving Reservoirs	0	0	0	0	0	0.00%	0
306	Lake, River, Canal Intakes	0	0	0	0	0	0.00%	0
307	Wells and Springs	829,115	7,037	0	836,152	0	3.33%	27,727
308	Infiltration Galleries	0	0	0	0	0	0.00%	0
309	Supply Mains	0	0	0	0	0	0.00%	0
310	Power Generation Equipment	0	0	0	0	0	0.00%	0
311	Pumping Equipment	155,430	0	0	155,430	0	12.50%	19,429
320	Water Treatment Equipment	0	0	0	0	0	0.00%	0
320.1	Water Treatment Plants	0	0	0	0	0	0.00%	0
320.2	Solution Chemical Feeders	0	0	0	0	0	0.00%	0
320.3	Point-of-Use Treatment Devices	0	0	0	0	0	0.00%	0
330	Distribution Reservoirs and Standpipes	0	0	0	0	0	0.00%	0
330.1	Storage Tanks	64,341	0	0	64,341	0	2.22%	1,428
330.2	Pressure Tanks	0	0	0	0	0	0.00%	0
331	Transmission and Distribution Mains	155,554	0	0	155,554	0	2.00%	3,111
333	Services	0	0	0	0	0	0.00%	0
334	Meters and Meter Installations	30,906	16,243	0	47,149	0	8.33%	3,251
335	Hydrants	0	0	0	0	0	0.00%	0
336	Backflow Prevention Devices	0	0	0	0	0	0.00%	0
339	Other Plant and Misc. Equipment	62,923	0	0	62,923	0	6.67%	4,197
340	Office Furniture and Equipment	3,021	0	0	3,021	0	6.67%	202
340.1	Computer & Software	0	0	0	0	0	0.00%	0
341	Transportation Equipment	34,567	0	0	34,567	0	20.00%	6,913
342	Stores Equipment	0	0	0	0	0	0.00%	0
343	Tools, Shop and Garage Equipment	32,644	4,160	0	36,804	0	5.00%	1,736
344	Laboratory Equipment	0	0	0	0	0	0.00%	0
345	Power Operated Equipment	58,037	0	0	58,037	0	5.00%	2,902
346	Communication Equipment	2,074	0	0	2,074	0	10.00%	207
347	Miscellaneous Equipment	7,836	0	0	7,836	0	10.00%	784
348	Other Tangible Plant	0	0	0	0	0	0.00%	0
	Subtotal	$1,854,943	$27,440	$0	$1,882,383	$258,392		$72,643

Contribution(s) in Aid of Construction (Gross)	$0
Less: Non Amortizable Contribution(s)	0
Fully Amortized Contribution(s)	0
Amortizable Contribution(s)	$0
Times: Proposed Amortization Rate	4.47%
Amortization of CIAC	$0

Less: Amortization of CIAC	$0
DEPRECIATION EXPENSE	**$72,643**

Instructions: Fill out the Grey Cells with the relevant information. Input 0 or none if there is nothing recorded in that account or there is no applicable information to report.

Hydro-Resources, Inc.
Annual Report
Balance Sheet Assets
12/31/18

Balance Sheet Assets				
	Assets		Balance at Beginning of Year (2018)	Balance at End of Year (2018)
Account No.	**Current and Accrued Assets**			
131	Cash		$89,606	$119,206
134	Working Funds			
135	Temporary Cash Investments		110,009	155,038
141	Customer Accounts Receivable		49,291	50,202
146	Notes Receivable from Associated Companies			
151	Plant Material and Supplies			
162	Prepayments		6,894	7,274
174	Miscellaneous Current and Accrued Assets			
	Total Current and Accrued Assets		**$255,800**	**$331,720**
Account No.	**Fixed Assets**			
101	Utility Plant in Service*		$1,854,943	$1,882,383
103	Property Held for Future Use			
105	Construction Work in Progress			
108	Accumulated Depreciation **(enter as negative)***		(1,109,489)	(1,109,489)
121	Non-Utility Property			
122	Accumulated Depreciation - Non Utility			
	Total Fixed Assets		**$745,454**	**$772,894**
	Total Assets		**$1,001,254**	**$1,104,614**

Instructions: Fill out the Grey Cells with the relevant information. Input 0 or none if there is nothing recorded in that account or there is no applicable information to report.

*Note these items feed automatically from AR3 UPIS Page 3

Hydro-Resources, Inc.
Annual Report
Balance Sheet Liabilities and Owners Equity

Balance Sheet Liabilities and Owners Equity				
	Liabilities		Balance at Beginning of Year (2018)	Balance at End of Year (2018)
Account No.	**Current Liabilities**			
231	Accounts Payable		$33,939	$9,240
232	Notes Payable (Current Portion)			
234	Notes Payable to Associated Companies			
235	Customer Deposits			
236	Accrued Taxes		5,967	5,984
237	Accrued Interest			
242	Miscellaneous Current and Accrued Liabilities		1,389	2,612
	Total Current Liabilities		**$41,295**	**$17,836**
	Long Term Debt			
224	Long Term Debt (Notes and Bonds)			
	Deferred Credits			
251	Unamortized Premium on Debt			
252	Advances in Aid of Construction			
255	Accumulated Deferred Investment Tax Credits			
271	Contributions in Aid of Construction			
272	Less: Amortization of Contributions			
281	Accumulated Deferred Income Tax			
	Total Deferred Credits		**$0**	**$0**
	Total Liabilites		**$41,295**	**$17,836**
	Capital Accounts			
201	Common Stock Issued		$50,000	$50,000
211	Other Paid-In Capital		30,081	30,081
215	Retained Earnings		879,878	1,006,697
218	Proprietary Capital (Sole Props and Partnerships)			
	Total Capital		**$959,959**	**$1,086,778**
	Total Liabilities and Capital		**$1,001,254**	**$1,104,614**

Instructions: Fill out the Grey Cells with the relevant information. Input 0 or none if there is nothing recorded in that account or there is no applicable information to report.

Note: Total liabilities and Capital must match total assets for the beginning and end of the year!

Hydro-Resources, Inc.
Annual Report
Water Comparative Income Statement
12/31/18

Water Comparative Income Statement			
Account No.	Calendar Year	Current Year 01/01/2018 - 12/31/2018	Last Year 01/01/2017 - 12/31/2017
	Operating Revenue		
461	Metered Water Revenue	$592,763	$579,849
460	Unmetered Water Revenue		
462	Fire Protection Revenue		
469	Guaranteed Revenues (Surcharges)		
471	Miscellaneous Service Revenues		
474	Other Water Revenue		
	Total Revenues	**$592,763**	**$579,849**
	Operating Expenses		
601	Salaries and Wages	$115,812	$100,375
604	Employee Pensions and Benefits	1,775	1,740
610	Purchased Water	39,822	43,545
615	Purchased Power	62,021	57,365
618	Chemicals		
620	Materials and Supplies		
620.1	Repairs and Maintenance	45,557	39,414
620.2	Office Supplies and Expense	7,320	7,304
630	Contractual Services		
631	Contractual Services -Engineering		
632	Contractual Services - Accounting	27,650	25,400
633	Contractual Services - Legal	5,678	51,525
634	Contractual Services - Management Fees	29,806	31,358
635	Contractual Services - Water Testing	3,929	4,710
636	Contractual Services - Other	6,159	18,747
640	Rents		
641	Rental of Building/Real Property	18,000	24,825
642	Rental of Equipment	4,250	2,829
650	Transportation Expenses	8,653	10,778
657	Insurance - General Liability	27,546	28,081
657.1	Insurance - Health and Life	6,837	6,146
665	Regulatory Commission Expense - Rate		
670	Bad Debt Expense		
675	Miscellaneous Expense	3,922	6,424
403	Depreciation Expense (From Schedule AR4)	72,643	70,718
408	Taxes Other Than Income	11,690	8,271
408.11	Property Taxes	40,163	44,800
409	Income Taxes		
427.1	Customer Security Deposit Interest		
	Total Operating Expenses	**$539,233**	**$584,355**
	Operating Income / (Loss)	**$53,530**	**($4,506)**
	Other Income / (Expense)		
419	Interest and Dividend Income	$295	$85
421	Non-Utility Income	31,224	33,820
426	Miscellaneous Non-Utility (Expense)		
427	Interest (Expense)		
	Total Other Income / (Expense)	**$31,519**	**$33,905**
	Net Income / (Loss)	**$85,049**	**$29,399**

Instructions: Fill out the Grey Cells with the relevant information. Input 0 or none if there is nothing recorded in that account or there is no applicable information to report.

Hydro-Resources, Inc.
Annual Report
Full time equivalent employees
12/31/18

Full time equivalent employees

	Direct Company	Outside service	Total
President	1.0	0.0	1.0
Vice-president	0.0	0.0	0.0
Manager	0.0	0.0	0.0
Engineering Staff	0.0	0.0	0.0
System Operator(s)	0.0	0.0	0.0
Meter reader	2.0	0.0	2.0
Customer Service	0.0	0.0	0.0
Accounting	0.0	0.0	0.0
Business Office	0.0	0.0	0.0
Rates Department	0.0	0.0	0.0
Administrative Staff	0.0	0.0	0.0
Other	0.0	0.0	0.0
Total	3.0	0.0	3.0

Instructions: Fill out the Grey Cells with the relevant information. Input 0 or none if there is nothing recorded in that account or there is no applicable information to report. A full-time employee is based on 2080 total hours per year. Please calculate partial employees using 2080 hours.

Hydro-Resources, Inc.
Annual Report
Supplemental Financial Data (Long-Term Debt)
12/31/18

Supplemental Financial Data (Long-Term Debt)				
	Loan #1	Loan #2	Loan #3	Loan #4
Date Issued				
Source of Loan				
ACC Decision No.				
Reason for Loan				
Dollar Amt. Issued				
Amount Outstanding				
Date of Maturity				
Interest Rate	0.00%			
Current Year Interest	$0			
Current Year Principal	$0			

Meter Deposit Balance at Test Year End:	$0

Meter Deposits Refunded During the Test Year:	$0

List all bonds, notes, loans, and other types of indebtedness in which the proceeds were used in the provision of public utility service. Indebtedness incurred for personal uses by the owner of the utility should <u>not</u> be listed. Input 0 or none if there is nothing to report for that cell.

Hydro-Resources, Inc.
Annual Report
Well and Water Usage
12/31/18

Well and Water Usage

Name of the System:	HYDRO RESOURCES-TUSAYAN
ADEQ Public Water System Number:	AZ0403312
ADWR PCC Number:	91-000109.0000

Well registry 55# (55-XXXXXX):	Pump Horsepower	Pump Yield (gpm)	Casing Depth (feet)	Casing Diameter (inches)	Pump Motor Type **	Year Drilled	Meter Size (inches)	How measured:	Active
55-54298	75	60	2,306	13	SUBMERSIBLE	1994	2	Metered	Yes

Name of system water delivered to:	ADOT GRAND CANYON AIRPORT
ADWR PCC Number:	91-000088.0000
Source of water delivered to another system	Ground Water

Name of system water received from:	HYDRO RESOURCES-TUSAYAN
ADWR PCC Number:	91-000109.0000
Source of water received	Ground Water
Well registry 55# (55-XXXXXX):	55-523284

Month	Water withdrawn (acre ft)[1]	Water sold (acre ft)[2]	Water delivered (sold) to other systems (acre ft)[3]	Water received (purchased) from other systems (acre ft)[4]	Estimated authorized use (acre ft)[5]	Purchased Power Expense[6]	Purchased Power (kWh)[7]
January	6.850	6.181	0.417	0.000	111,542	$5,206	53,681
February	6.227	5.589	0.418	0.000	111,542	4,807	49,901
March	7.559	6.839	0.416	0.000	111,542	5,305	56,554
April	8.314	7.554	0.628	0.018	111,542	4,719	49,637
May	8.917	8.013	0.629	0.034	136,542	4,637	48,637
June	9.708	8.794	0.839	0.027	124,042	5,543	59,715
July	9.708	8.823	0.618	0.015	111,542	5,185	54,631
August	10.571	9.272	0.820	0.013	231,542	5,113	53,123
September	8.397	7.629	0.618	0.014	111,542	5,602	57,951
October	8.243	7.487	0.327	0.000	111,542	5,140	52,400
November	7.633	6.914	0.317	0.000	111,542	5,433	52,400
December	6.993	6.311	0.737	0.000	111,542	5,330	53,558
Totals	**99.119**	**89.406**	**6.784**	**0.122**	**1,496,000**	**$62,021**	**642,188**

If applicable, in the space below please provide a description for all un-metered water use along with amounts:

Fire Department testing-12,000; Fire Pump operation-262,000; Tank Gain- 330000; Construction/Leak Repair-525,000; Well Startup/Flushing- 14,300; Overflow/Tank maintenance-75,000

Instructions: Fill out the Grey Cells with the relevant information. Input 0 or none if there is nothing recorded in that account or there is no applicable information to report.

1 Water withdrawn - Total acre feet of water withdrawn from pumped sources.
2 Water sold - Total acre feet from customer meters, and other sales such as construction water.
3 Water delivered (sold) to other systems - Total acre feet of water delivered to other systems.
4 Water received (purchased) from other systems - Total acre feet of water purchased/received from other systems.
5 Estimated authorized use - Total estimated acre feet from authorized metered or unmetered use. Authorized uses such as flushing (mains, services and hydrants) draining/cleaning tanks, process, construction, fire fighting, etc. Non-authorized use (real losses) are service line breaks and leaks, water main breaks, meter inaccuracies and theft.
6 Enter the total purchased power costs for the power meters associated with this system.
7 Enter the total purchased kWh used by the power meters associated with this system.

Hydro-Resources, Inc.
Annual Report
Water Utility Plant Description
12/31/18

Water Utility Plant Description	
Name of the System:	Hydro Resources Tusayan
ADEQ Public Water System Number:	03-312
ADWR PCC Number:	91-000109.0000

MAINS		
Sizes (inches)	Material	Length (feet)
2.00	PVC	3,026
4.00	PVC	430
6.00	PVC	3,373
8.00	PVC	6,104

CUSTOMER METERS	
Size (inches)	Quantity
5/8 X 3/4	49
1	4
1.5	3
2	21
Compound 3	4

SERVICE LINES	
Material	Percent of system

BOOSTER PUMPS		
Horsepower	GPM	Quantity
250	2,500	1

FIRE HYDRANTS	
Type	Quantity
Standard *	22
Other	

STORAGE TANKS		
Capacity (gallons)	Material	Quantity
525,000	STEEL BOLTED	1
3,000,000	STEEL WELDED (LEASED)	1

PRESSURE/BLADDER TANKS		
Capacity (gallons)	Material	Quantity
		0

Instructions: Fill out the Grey Cells with the relevant information. Input 0 or none if there is nothing recorded in that account or there is no applicable information to report. Copy and paste this sheet as many times as is necessary.

* A standard fire hydrant has two 2.5 inch hose connection nozzles with 7.5 threads per inch, and one 4.5 inch pumper connection nozzle with 4 threads per inch.

Water Utility Plant Description (Continued)

For the following three items, list the utility owned assets in each category for each system.

TREATMENT EQUIPMENT:	4 SODIUM HYPOCHLORITE CHEMICAL FEED PUMPS

STRUCTURES:	WELLHOUSES, FENCES, RETAINING WALL, CONTROL SHEDS AT TUSAYAN #2, FIRE PUMP SHED

OTHER:	IMPROVED ACCESS ROAD TO WELL#2, IMPROVED CINDER PAD AT TANK STORAGE AREA

Instructions: Fill out the Grey Cells with the relevant information. Input 0 or none if there is nothing recorded in that account or there is no applicable information to report. Copy and paste this sheet as many times as is necessary.

Hydro-Resources, Inc.
Annual Report
Customer and Other Information
12/31/18

Customer and Other Information	
Name of the System:	Hydro Resources Tusayan
ADEQ Public Water System Number:	03-312
ADWR PCC Number:	91-000109.0000

	Number of Customers				
Month	Single-Family	Multi-Family	Commercial	Turf/Irrigation	Other Non-Residential
January	30	3	20	1	1
February	30	3	20	1	1
March	30	3	20	1	1
April	30	3	20	1	1
May	30	3	20	1	1
June	30	3	20	1	1
July	30	3	20	1	1
August	30	3	20	1	1
September	30	3	20	1	1
October	30	3	20	1	1
November	30	3	20	1	1
December	30	3	20	1	1

If the system has fire hydrants, what is the fire flow requirements? 1,500 GPM for 2 hrs.

Does the system have chlorination treatment? Yes

Does the Company have an ADWR Gallons Per Capita Per Day (GCPCPD) requirement? No
If yes, provide the GPCPD amount: NA

Is the Water Utility located in an ADWR Active Management Area (AMA)? No
If yes, which AMA? NA

Instructions: Fill out the Grey Cells with the relevant information. Input 0 or none if there is nothing recorded in that account or there is no applicable information to report. Copy and paste this sheet as many times as is necessary.

				Alabama
				Alaska
	Yes		One	Arizona
All	No	Select Meter Size	Two	Arkansas
Residential	N/A	5/8" x 3/4" Meter	Three	California
Commercial		3/4"Meter		Colorado
Industrial		1" Meter		Connecticut
Bulk		1-1/2" Meter		Delaware
Stand-pipe		2" Meter		Florida
Fire		3" Meter		Georgia
Hydrants		4" Meter		Hawaii
Other		6" Meter		Idaho
N/A		8" Meter		Illinois
		10" Meter		Indiana
		Fire		Iowa
		Hydrant		Kansas
		N/A		Kentucky
				Louisiana
				Maine
				Maryland
				Massachusetts
				Michigan
				Minnesota
Proprietorship				Mississippi
Partnership				Missouri
"C" Corporation				Montana
"S" Corporation				Nebraska
Limited Liability Company ("LLC")				Nevada
Tribal				New Hampshire
Association--Cooperative				New Jersey
				New Mexico
				New York
Original Filing				North Carolina
Original Filing - Rate Case Included				North Dakota
Corrected Filing				Ohio
Corrected Filing - Rate Case Included				Oklahoma
				Oregon
				Pennsylvania
				Rhode Island
NA				South Carolina
Phoenix AMA				South Dakota
Pinal AMA				Tennessee
Prescott AMA				Texas
Santa Cruz AMA				Utah
Tucson AMA				Vermont
				Virginia
				Washington
				West Virginia
				Wisconsin
				Wyoming

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Annual Report
Verification and Sworn Statement (Taxes)
12/31/18

Verification and Sworn Statement (Taxes)

RECEIVED
APR 19 2019
ARIZONA CORP COMMISSION
UTILITIES DIVISION – DIRECTOR'S OFFICE

Verification: State of Arizona (state name) I, the undersigned of the

County of (county name): Coconino
Name (owner or official) title: John W Rueter PRESIDENT
Company name: UTOPIA RESOURCES INC

DO SAY THAT THIS ANNUAL UTILITY PROPERTY TAX AND SALES TAX REPORT TO THE ARIZONA CORPORATION COMMISSION.

FOR THE YEAR ENDING: 12/31/18

HAS BEEN PREPARED UNDER MY DIRECTION, FROM THE ORIGINAL BOOKS, PAPERS AND RECORDS OF SAID UTILITY; THAT I HAVE CAREFULLY EXAMINED THE SAME, AND DECLARE THE SAME TO BE A COMPLETE AND CORRECT STATEMENT OF BUSINESS AND AFFAIRS OF SAID UTILITY FOR THE PERIOD COVERED BY THIS REPORT IN RESPECT TO EACH AND EVERY MATTER AND THING SET FORTH, TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF.

Sworn Statement: I HEREBY ATTEST THAT ALL PROPERTY TAXES FOR SAID COMPANY ARE CURRENT AND PAID IN FULL.

I HEREBY ATTEST THAT ALL SALES TAXES FOR SAID COMPANY ARE CURRENT AND PAID IN FULL.

John W Rueter
signature of owner/official

928-522-9405
telephone no.

SUBSCRIBED AND SWORN TO BEFORE ME A NOTARY PUBLIC IN AND FOR THE COUNTY Coconino (county name)

THIS 18th DAY OF April, 2019 (month) and (year)

MY COMMISSION EXPIRES 10/12/2022 (date)

VICENTA ROBLE MILLIRON
Notary Public - Arizona
Coconino County
Commission # 554784
My Comm. Expires Oct 12, 2022

(signature of notary public)

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Annual Report
Verification and Sworn Statement
12/31/18

RECEIVED
APR 19 2019
ARIZONA CORP COMMISSION
UTILITIES DIVISION – DIRECTOR'S OFFICE

Verification and Sworn Statement

Verification:

State of Arizona (state name), I, the undersigned of the

County of (county name): Coconino

Name (owner or official) title: John W Rueter PRESIDENT

Company name: HYDRO RESOURCES INC

DO SAY THAT THIS ANNUAL UTILITY PROPERTY TAX AND SALES TAX REPORT TO THE ARIZONA CORPORATION COMMISSION.

FOR THE YEAR ENDING: 12/31/18

HAS BEEN PREPARED UNDER MY DIRECTION, FROM THE ORIGINAL BOOKS, PAPERS AND RECORDS OF SAID UTILITY; THAT I HAVE CAREFULLY EXAMINED THE SAME, AND DECLARE THE SAME TO BE A COMPLETE AND CORRECT STATEMENT OF BUSINESS AND AFFAIRS OF SAID UTILITY FOR THE PERIOD COVERED BY THIS REPORT IN RESPECT TO EACH AND EVERY MATTER AND THING SET FORTH, TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF.

Sworn Statement: IN ACCORDANCE WITH THE REQUIREMENTS OF TITLE 40, ARTICLE 8, SECTION 40-401, ARIZONA REVISED STATUTES, IT IS HEREIN REPORTED THAT THE GROSS OPERATING REVENUE OF SAID UTILITY DERIVED FROM ARIZONA INTRASTATE UTILITY OPERATIONS DURING THE CALENDAR YEAR WAS:

Arizona Intrastate Gross Operating Revenues Only ($)

$645,519

(The amount in the box above includes

$52,756 in sales taxes

billed or collected)

John W Rueter
signature of owner/official

928-522-4405
telephone no.

SUBSCRIBED AND SWORN TO BEFORE ME A NOTARY PUBLIC
IN AND FOR THE COUNTY Coconino (county name)

THIS 18th DAY OF April 2019 (month) and (year)

MY COMMISSION EXPIRES 10/12/2022 (date)

VICENTA ROBLE MILLIRON
Notary Public - Arizona
Coconino County
Commission # 554784
My Comm. Expires Oct 12, 2022

Millicon
(signature of notary public)

0

Annual Report
Verification and Sworn Statement (Residential Revenue)
12/31/18

RECEIVED
APR 19 2019
ARIZONA CORP COMMISSION
UTILITIES DIVISION – DIRECTOR'S OFFICE

Verification and Sworn Statement (Residential Revenue)

Verification:

State of Arizona (state name) I, the undersigned of the

County of (county name): Coconino
Name (owner or official) title: John W Rueter PRESIDENT
Company name: H4ORU RESOURCES INC

DO SAY THAT THIS ANNUAL UTILITY PROPERTY TAX AND SALES TAX REPORT TO THE ARIZONA CORPORATION COMMISSION.

FOR THE YEAR ENDING: 12/31/18

HAS BEEN PREPARED UNDER MY DIRECTION, FROM THE ORIGINAL BOOKS, PAPERS AND RECORDS OF SAID UTILITY; THAT I HAVE CAREFULLY EXAMINED THE SAME, AND DECLARE THE SAME TO BE A COMPLETE AND CORRECT STATEMENT OF BUSINESS AND AFFAIRS OF SAID UTILITY FOR THE PERIOD COVERED BY THIS REPORT IN RESPECT TO EACH AND EVERY MATTER AND THING SET FORTH, TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF.

Sworn Statement: IN ACCORDANCE WITH THE REQUIREMENTS OF TITLE 40, ARTICLE 8, SECTION 40-401, ARIZONA REVISED STATUTES, IT IS HEREIN REPORTED THAT THE GROSS OPERATING REVENUE OF SAID UTILITY DERIVED FROM ARIZONA INTRASTATE UTILITY OPERATIONS RECEIVED FROM RESIDENTIAL CUSTOMERS DURING THE CALENDAR YEAR WAS:

Arizona Intrastate Gross Operating Revenues Only ($)
$165,649
(The amount in the box above includes
$13,538 in sales taxes
billed or collected)

John W. Rueter
signature of owner/official

928 – 522 – 4405
telephone no.

SUBSCRIBED AND SWORN TO BEFORE ME A NOTARY PUBLIC
IN AND FOR THE COUNTY COCONINO (county name)

THIS 18th DAY OF APRIL 2019 (month) and (year)

MY COMMISSION EXPIRES 10/12/2022 (date)

VICENTA ROBLE MILLIRON
Notary Public - Arizona
Coconino County
Commission # 554784
My Comm. Expires Oct 12, 2022

(signature of notary public)

WATER, SEWER AND WASTEWATER UTILITY COMPANIES
PROPERTY TAX FORM 82055
TAX YEAR
2020

VERIFICATION

State of ARIZONA

County of COCONINO

I, JOHN W. RUETER, being duly sworn, upon my oath say that I am
Name of principal officer or duly authorized party

the PRESIDENT of HYDRO RESOURCES INC and that
title company

the information contained in this report is complete, true and correct, according to the best of my knowledge, information and belief.

Further, the Taxpayer waives its rights to confidentiality under A.R.S. §§ 42-2001 through 42-2004 with respect to tabs 3, 4, and 5 (sections 3, 4, and 5) of this report, and consents to the disclosure of such information to County Assessors and their personnel by the Arizona Department of Revenue in order to assure that all property is properly assessed and to help protect against double assessments.

John W. Rueter
Signature

Subscribed in my presence and sworn to before me, a Notary Public, in and for said County and State, by John W. Rueter on this the 16th day of APRIL, a.d. 20 19.

My commission expires October 12, 20 22

In Witness Whereof, I have hereunto set my seal of office.

VICENTA ROBLE MILLIRON
Notary Public - Arizona
Coconino County
Commission # 554784
My Comm. Expires Oct 12, 2022

Signature

Appendix G

RETURN ON INVESTMENT INCOME CALCULATIONS

Hydro-Resources, Inc.
Water System Valuation Analysis
Calculation of Projected Return on Equity Income

Hydro-Resources, Inc. Water Company Assets

Asset Type	Asset Description	Replacement Cost New (RCN)	Accumulated Depreciation	RCNLD	Age	Useful Life	Annual Depreciation	Remaining Value 2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Well No. 2	Site Work	25,337	16,469	8,868	26	40	633	8,235	7,601	6,968	6,334	5,701	5,067	4,434	3,801	3,167	2,534	1,900	1,267	633
	Fencing	5,067	4,392	676	26	30	169	507	338	169	-	-	-	-	-	-	-	-	-	-
	Electrical Shed	19,003	12,352	6,651	26	40	475	6,176	5,701	5,226	4,751	4,276	3,801	3,326	2,850	2,375	1,900	1,425	950	475
	Electrical Service/Gear	69,678	66,891	2,787	26	25	2,787	0	-	-	-	-	-	-	-	-	-	-	-	-
	Step Up Transformer	19,003	18,243	760	26	25	760	-	-	-	-	-	-	-	-	-	-	-	-	-
	VFD	42,039	16,816	25,224	6	15	2,803	22,421	19,618	16,816	14,013	11,210	8,408	5,605	2,803	-	-	-	-	-
	Motor Control Center	31,672	30,405	1,267	26	25	1,267	0	-	-	-	-	-	-	-	-	-	-	-	-
	Well Drilling	912,144	474,315	437,829	26	50	18,243	419,586	401,343	383,100	364,857	346,615	328,372	310,129	291,886	273,643	255,400	237,157	218,914	200,672
	Surface Casing	2,375	1,235	1,140	26	50	48	1,093	1,045	998	950	903	855	808	760	713	665	618	570	523
	Well Casing	73,035	37,978	35,057	26	50	1,461	33,596	32,135	30,675	29,214	27,753	26,293	24,832	23,371	21,910	20,450	18,989	17,528	16,068
	Well Pump and Motor	124,290	0	124,290	0	20	6,215	118,076	111,861	105,647	99,432	93,218	87,003	80,789	74,574	68,360	62,145	55,931	49,716	43,502
	Column Pipe	32,939	21,410	11,528	26	40	823	10,705	9,882	9,058	8,235	7,411	6,588	5,764	4,941	4,117	3,294	2,470	1,647	823
	Pump Shed	12,669	12,162	507	26	25	507	0	-	-	-	-	-	-	-	-	-	-	-	-
	Discharge Piping	31,672	20,587	11,085	26	40	792	10,293	9,501	8,710	7,918	7,126	6,334	5,543	4,751	3,959	3,167	2,375	1,584	792
	Chlorinator	4,434	2,483	1,951	14	25	177	1,774	1,596	1,419	1,242	1,064	887	709	532	355	177	-	-	-
	Filters	3,000	0	3,000	0	20	150	2,850	2,700	2,550	2,400	2,250	2,100	1,950	1,800	1,650	1,500	1,350	1,200	1,050
Tanks	Hydro-Resources, Inc	696,776	679,357	17,419	45	40	17,419	0	-	-	-	-	-	-	-	-	-	-	-	-
Pipes and Mains	Segment B	79,182	53,844	25,338	34	50	1,584	23,755	22,171	20,587	19,004	17,420	15,836	14,253	12,669	11,086	9,502	7,918	6,335	4,751
`	Segment C	44,173	20,320	23,854	23	50	883	22,970	22,087	21,203	20,320	19,436	18,553	17,669	16,786	15,902	15,019	14,136	13,252	12,369
	Segment D	34,149	23,221	10,928	34	50	683	10,245	9,562	8,879	8,196	7,513	6,830	6,147	5,464	4,781	4,098	3,415	2,732	2,049
	Segment E	82,577	46,243	36,334	28	50	1,652	34,682	33,031	31,379	29,728	28,076	26,425	24,773	23,122	21,470	19,818	18,167	16,515	14,864
	Segment G	38,335	27,601	10,734	36	50	767	9,967	9,200	8,434	7,667	6,900	6,134	5,367	4,600	3,834	3,067	2,300	1,533	767
	Segment H	123,591	88,985	34,605	36	50	2,472	32,134	29,662	27,190	24,718	22,246	19,774	17,303	14,831	12,359	9,887	7,415	4,944	2,472
	Segment I	33,864	24,382	9,482	36	50	677	8,805	8,127	7,450	6,773	6,096	5,418	4,741	4,064	3,386	2,709	2,032	1,355	677
	Segment I	58,337	42,003	16,334	36	50	1,167	15,168	14,001	12,834	11,667	10,501	9,334	8,167	7,000	5,834	4,667	3,500	2,333	1,167
	Segment J	43,872	17,549	26,323	20	50	877	25,446	24,568	23,691	22,813	21,936	21,058	20,181	19,304	18,426	17,549	16,671	15,794	14,916
	Segment K	19,190	13,817	5,373	36	50	384	4,989	4,606	4,222	3,838	3,454	3,070	2,687	2,303	1,919	1,535	1,151	768	384
	Segment L	27,501	11,000	16,501	20	50	550	15,951	15,400	14,850	14,300	13,750	13,200	12,650	12,100	11,550	11,000	10,450	9,900	9,350
	8" PVC pipe added between 2010 and 2020	102,304	10,230	92,073	5	50	2,046	90,027	87,981	85,935	83,889	81,843	79,797	77,751	75,705	73,659	71,613	69,567	67,520	65,474
Hydrants	Hydrant (1993)	16,814	9,079	7,734	27	50	336	7,398	7,062	6,726	6,389	6,053	5,717	5,380	5,044	4,708	4,372	4,035	3,699	3,363
	Hydrant (1997)	5,605	2,578	3,026	23	50	112	2,914	2,802	2,690	2,578	2,466	2,354	2,242	2,130	2,018	1,906	1,793	1,681	1,569
	Hydrant (1984)	11,209	10,088	1,121	45	50	224	897	673	448	224	-	-	-	-	-	-	-	-	-
	Hydrant (after 2011)	89,674	8,967	80,707	5	50	1,793	78,913	77,120	75,326	73,533	71,739	69,946	68,152	66,359	64,565	62,772	60,978	59,185	57,391
	Meter Vault	50,000	26,000	24,000	26	50	1,000	23,000	22,000	21,000	20,000	19,000	18,000	17,000	16,000	15,000	14,000	13,000	12,000	11,000
Valves	Valve 8" (1975)	6,193	5,573	619	45	50	124	495	372	248	124	-	-	-	-	-	-	-	-	-
	Valve 8" (1986)	4,128	2,807	1,321	34	50	83	1,239	1,156	1,073	991	908	826	743	661	578	495	413	330	248
	Valve 8" (1992)	2,064	1,156	908	28	50	41	867	826	784	743	702	661	619	578	537	495	454	413	372
	Valve 8" (1994)	6,193	3,220	2,972	26	50	124	2,849	2,725	2,601	2,477	2,353	2,229	2,105	1,982	1,858	1,734	1,610	1,486	1,362
	Valve 8" (1996)	4,128	1,982	2,147	24	50	83	2,064	1,982	1,899	1,816	1,734	1,651	1,569	1,486	1,404	1,321	1,239	1,156	1,073
	Valve 8" (1997)	6,193	2,849	3,344	23	50	124	3,220	3,096	2,972	2,849	2,725	2,601	2,477	2,353	2,229	2,105	1,982	1,858	1,734
	Valve 8" (1999)	2,064	867	1,197	21	50	41	1,156	1,115	1,073	1,032	991	950	908	867	826	784	743	702	661
	Valve 6" (1984)	11,412	8,217	3,195	36	50	228	2,967	2,739	2,511	2,282	2,054	1,826	1,598	1,369	1,141	913	685	456	228
	Valve 6" (1986)	1,630	1,109	522	34	50	33	489	456	424	391	359	326	293	261	228	196	163	130	98
	Valve 6" (1993)	6,521	3,521	3,000	27	50	130	2,869	2,739	2,608	2,478	2,348	2,217	2,087	1,956	1,826	1,695	1,565	1,435	1,304
	Valve 6" (2000)	1,630	652	978	20	50	33	946	913	880	848	815	783	750	717	685	652	620	587	554
	Valve 6" (2001)	1,630	620	1,011	19	50	33	978	946	913	880	848	815	783	750	717	685	652	620	587
	Valve 4" (1993)	1,278	690	588	27	50	26	562	537	511	486	460	435	409	383	358	332	307	281	256
	Valve 4" (1997)	1,278	588	690	23	50	26	665	639	614	588	562	537	511	486	460	435	409	383	358
	Valve 4" (2001)	2,556	971	1,585	19	50	51	1,534	1,483	1,432	1,380	1,329	1,278	1,227	1,176	1,125	1,074	1,023	971	920
	Valve 2" (1984)	843	607	236	36	50	17	219	202	186	169	152	135	118	101	84	67	51	34	17
Meters	Meter (after 2011)	24,300	12,150	12,150	5	10	2,430	9,720	7,290	4,860	2,430	-	-	-	-	-	-	-	-	-
Sleeves	Sleeves	22,011	880	21,131	2	50	440	20,690	20,250	19,810	19,370	18,930	18,489	18,049	17,609	17,169	16,728	16,288	15,848	15,408
	Total	**$ 3,071,563**	**$ 1,899,462**	**$ 1,172,101**			**$ 76,001**	**$ 1,096,100**	**$ 1,042,839**	**$ 989,579**	**$ 936,318**	**$ 883,226**	**$ 832,912**	**$ 782,598**	**$ 732,284**	**$ 681,970**	**$ 634,459**	**$ 586,948**	**$ 539,614**	**$ 492,280**

Return on Equity:	10%
Discount Rate:	4%
Current Year:	2020

	Total Exisitng Assets
Nominal Revenues	**$ 1,409,646**
Discounted Revenues	**$ 1,027,658**

Annual Return on Equity

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Nominal Revenues	$ 109,610	$ 104,284	$ 98,958	$ 93,632	$ 88,323	$ 83,291	$ 78,260	$ 73,228	$ 68,197	$ 63,446	$ 58,695	$ 53,961	$ 49,228
Discounted Revenues	$ 109,610	$ 100,273	$ 91,492	$ 83,238	$ 75,499	$ 68,459	$ 61,850	$ 55,648	$ 49,831	$ 44,576	$ 39,652	$ 35,052	$ 30,748

Hydro-Resources, Inc.
Water System Valuation Analysis
Calculation of Projected Return on Equity Income

Hydro-Resources, Inc. Water Company Assets

Asset Type	Asset Description	Remaining Value 2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052
Well No. 2	Site Work	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Fencing	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Electrical Shed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Electrical Service/Gear	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Step Up Transformer	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VFD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Motor Control Center	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Well Drilling	182,429	164,186	145,943	127,700	109,457	91,214	72,971	54,729	36,486	18,243	0	-	-	-	-	-	-	-	-	-
	Surface Casing	475	428	380	333	285	238	190	143	95	48	-	-	-	-	-	-	-	-	-	-
	Well Casing	14,607	13,146	11,686	10,225	8,764	7,303	5,843	4,382	2,921	1,461	0	-	-	-	-	-	-	-	-	-
	Well Pump and Motor	37,287	31,073	24,858	18,644	12,429	6,215	0	-	-	-	-	-	-	-	-	-	-	-	-	-
	Column Pipe	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Pump Shed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Discharge Piping	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Chlorinator	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Filters	900	750	600	450	300	150	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tanks	Hydro-Resources, Inc	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pipes and Mains	Segment B	3,167	1,584	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Segment C	11,485	10,602	9,718	8,835	7,951	7,068	6,184	5,301	4,417	3,534	2,650	1,767	883	-	-	-	-	-	-	-
	Segment D	1,366	683	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Segment E	13,212	11,561	9,909	8,258	6,606	4,955	3,303	1,652	-	-	-	-	-	-	-	-	-	-	-	-
	Segment G	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Segment H	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Segment I	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Segment I	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Segment J	14,039	13,162	12,284	11,407	10,529	9,652	8,774	7,897	7,019	6,142	5,265	4,387	3,510	2,632	1,755	877	-	-	-	-
	Segment K	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Segment L	8,800	8,250	7,700	7,150	6,600	6,050	5,500	4,950	4,400	3,850	3,300	2,750	2,200	1,650	1,100	550	-	-	-	-
	8" PVC pipe added between 2010 and 2020	63,428	61,382	59,336	57,290	55,244	53,198	51,152	49,106	47,060	45,014	42,968	40,922	38,875	36,829	34,783	32,737	30,691	28,645	26,599	24,553
Hydrants	Hydrant (1993)	3,026	2,690	2,354	2,018	1,681	1,345	1,009	673	336	-	-	-	-	-	-	-	-	-	-	-
	Hydrant (1997)	1,457	1,345	1,233	1,121	1,009	897	785	673	560	448	336	224	112	-	-	-	-	-	-	-
	Hydrant (1984)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Hydrant (after 2011)	55,598	53,804	52,011	50,217	48,424	46,630	44,837	43,044	41,250	39,457	37,663	35,870	34,076	32,283	30,489	28,696	26,902	25,109	23,315	21,522
	Meter Vault	10,000	9,000	8,000	7,000	6,000	5,000	4,000	3,000	2,000	1,000	-	-	-	-	-	-	-	-	-	-
Valves	Valve 8" (1975)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Valve 8" (1986)	165	83	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Valve 8" (1992)	330	289	248	206	165	124	83	41	-	-	-	-	-	-	-	-	-	-	-	-
	Valve 8" (1994)	1,239	1,115	991	867	743	619	495	372	248	124	0	-	-	-	-	-	-	-	-	-
	Valve 8" (1996)	991	908	826	743	661	578	495	413	330	248	165	83	-	-	-	-	-	-	-	-
	Valve 8" (1997)	1,610	1,486	1,362	1,239	1,115	991	867	743	619	495	372	248	124	0	-	-	-	-	-	-
	Valve 8" (1999)	619	578	537	495	454	413	372	330	289	248	206	165	124	83	41	-	-	-	-	-
	Valve 6" (1984)	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Valve 6" (1986)	65	33	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Valve 6" (1993)	1,174	1,043	913	783	652	522	391	261	130	-	-	-	-	-	-	-	-	-	-	-
	Valve 6" (2000)	522	489	456	424	391	359	326	293	261	228	196	163	130	98	65	33	-	-	-	-
	Valve 6" (2001)	554	522	489	456	424	391	359	326	293	261	228	196	163	130	98	65	33	-	-	-
	Valve 4" (1993)	230	205	179	153	128	102	77	51	26	-	-	-	-	-	-	-	-	-	-	-
	Valve 4" (1997)	332	307	281	256	230	205	179	153	128	102	77	51	26	-	-	-	-	-	-	-
	Valve 4" (2001)	869	818	767	716	665	614	562	511	460	409	358	307	256	205	153	102	51	0	-	-
	Valve 2" (1984)	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Meters	Meter (after 2011)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sleeves	Sleeves	14,968	14,527	14,087	13,647	13,207	12,766	12,326	11,886	11,446	11,006	10,565	10,125	9,685	9,245	8,804	8,364	7,924	7,484	7,044	6,603
	Total	**$ 444,946**	**$ 406,047**	**$ 367,148**	**$ 330,631**	**$ 294,115**	**$ 257,598**	**$ 221,081**	**$ 190,928**	**$ 160,776**	**$ 132,316**	**$ 104,349**	**$ 97,257**	**$ 90,164**	**$ 83,154**	**$ 77,289**	**$ 71,425**	**$ 65,601**	**$ 61,238**	**$ 56,958**	**$ 52,678**

Return on Equity:	10%
Discount Rate:	4%
Current Year:	2020

	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052
Nominal Revenues	$ 44,495	$ 40,605	$ 36,715	$ 33,063	$ 29,411	$ 25,760	$ 22,108	$ 19,093	$ 16,078	$ 13,232	$ 10,435	$ 9,726	$ 9,016	$ 8,315	$ 7,729	$ 7,142	$ 6,560	$ 6,124	$ 5,696	$ 5,268
Discounted Revenues	$ 26,722	$ 23,448	$ 20,386	$ 17,653	$ 15,099	$ 12,716	$ 10,493	$ 8,714	$ 7,055	$ 5,583	$ 4,234	$ 3,794	$ 3,382	$ 2,999	$ 2,681	$ 2,382	$ 2,104	$ 1,888	$ 1,689	$ 1,502

Hydro-Resources, Inc.
Water System Valuation Analysis
Calculation of Projected Return on Equity Income

Hydro-Resources, Inc. Water Company Assets

Asset Type	Asset Description	Remaining Value 2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067
Well No. 2	Site Work	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Fencing	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Electrical Shed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Electrical Service/Gear	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Step Up Transformer	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VFD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Motor Control Center	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Well Drilling	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Surface Casing	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Well Casing	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Well Pump and Motor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Column Pipe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Pump Shed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Discharge Piping	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Chlorinator	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Filters	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tanks	Hydro-Resources, Inc	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pipes and Mains	Segment B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
`	Segment C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Segment D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Segment E	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Segment G	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Segment H	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Segment I	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Segment I	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Segment J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Segment K	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Segment L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8" PVC pipe added between 2010 and 2020	22,507	20,461	18,415	16,369	14,323	12,276	10,230	8,184	6,138	4,092	2,046	-	-	-	-
Hydrants	Hydrant (1993)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Hydrant (1997)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Hydrant (1984)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Hydrant (after 2011)	19,728	17,935	16,141	14,348	12,554	10,761	8,967	7,174	5,380	3,587	1,793	-	-	-	-
	Meter Vault	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Valves	Valve 8" (1975)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Valve 8" (1986)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Valve 8" (1992)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Valve 8" (1994)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Valve 8" (1996)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Valve 8" (1997)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Valve 8" (1999)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Valve 6" (1984)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Valve 6" (1986)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Valve 6" (1993)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Valve 6" (2000)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Valve 6" (2001)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Valve 4" (1993)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Valve 4" (1997)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Valve 4" (2001)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Valve 2" (1984)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Meters	Meter (after 2011)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sleeves	Sleeves	6,163	5,723	5,283	4,842	4,402	3,962	3,522	3,082	2,641	2,201	1,761	1,321	880	440	0
	Total	**$ 48,398**	**$ 44,118**	**$ 39,839**	**$ 35,559**	**$ 31,279**	**$ 26,999**	**$ 22,720**	**$ 18,440**	**$ 14,160**	**$ 9,880**	**$ 5,600**	**$ 1,321**	**$ 880**	**$ 440**	**$ 0**

Return on Equity:	10%
Discount Rate:	4%
Current Year:	2020

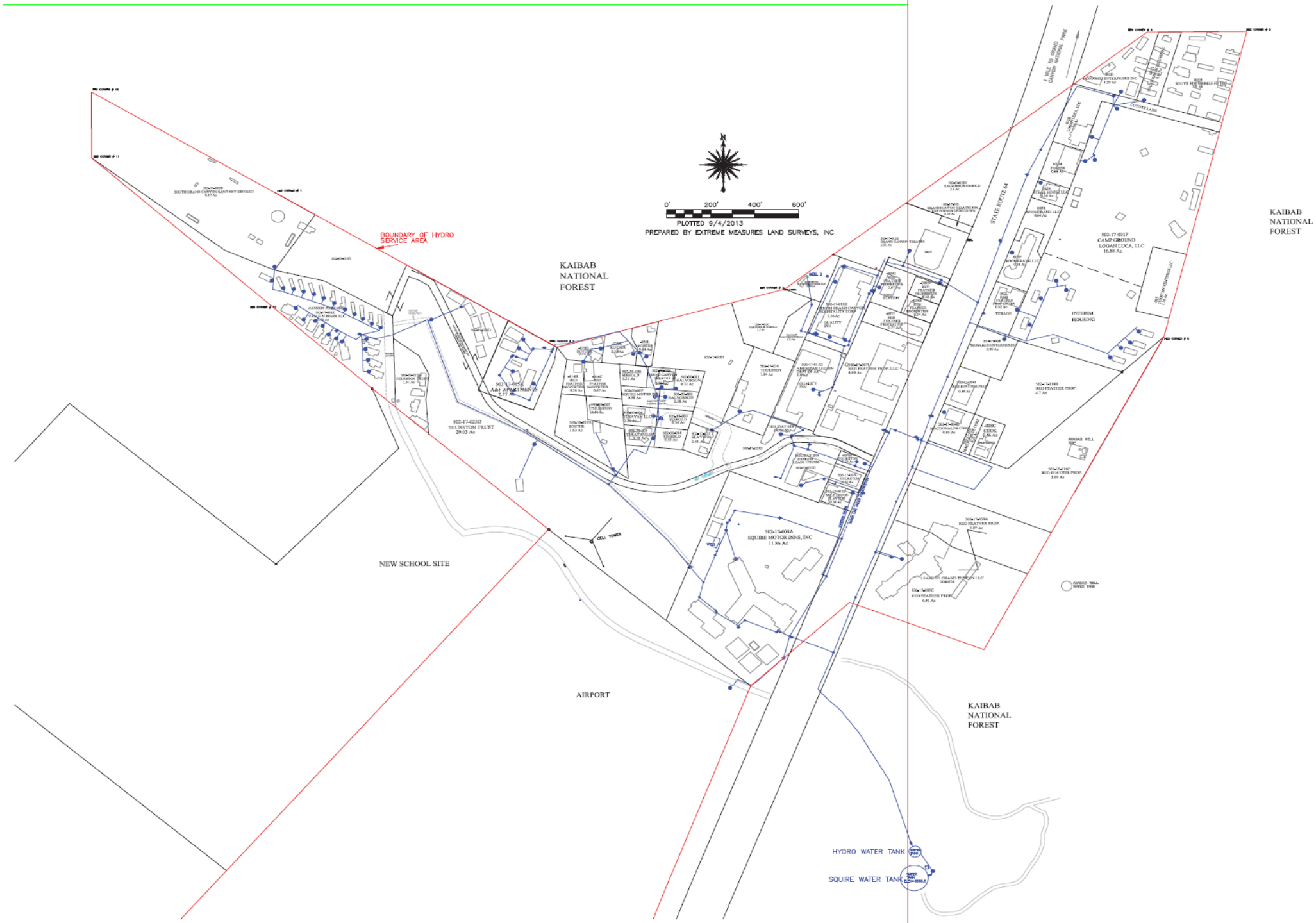
	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067
Nominal Revenues	$ 4,840	$ 4,412	$ 3,984	$ 3,556	$ 3,128	$ 2,700	$ 2,272	$ 1,844	$ 1,416	$ 988	$ 560	$ 132	$ 88	$ 44	$ 0
Discounted Revenues	$ 1,327	$ 1,163	$ 1,010	$ 866	$ 733	$ 608	$ 492	$ 384	$ 284	$ 190	$ 104	$ 24	$ 15	$ 7	$ 0

Hydro Resources Inc. Valuation Study

Richard Humpherys, P.E.

LOCATION // DATE 2020

Water System Inventory


BOUNDARY OF HYDRO SERVICE AREA
KAIBAB NATIONAL FOREST
0' 200' 400' 600'
PLOTTED 9/4/2013
PREPARED BY EXTREME MEASURES LAND SURVEYS, INC
KAIBAB NATIONAL FOREST
NEW SCHOOL SITE
AIRPORT
KAIBAB NATIONAL FOREST
HYDRO WATER TANK
SQUIRE WATER TANK
STATE ROUTE 64
INTERIM HOUSING
CAMP GROUND LOGAN LUCA, LLC 16.88 Ac
A&F APARTMENTS 2.17 Ac
SQUIRE MOTOR INNS, INC 11.86 Ac
THURSTON TRUST 29.03 Ac

Hydro Well Information

Well Name	ADWR Number	Year Drilled	Casing Depth (ft)	Casing Diameter (in)	Casing Material	Flow Rate (gpm)	Pump (hp)
Tusayan #2	55-542928	1994	2306	13	Steel	78	75

Hydro Storage Tank

Tank Name	Install Date	In-Operation	Capacity (MG)	Height (ft)	Diameter (ft)
Hydro Tank	1975	Yes	0.525	32'	53'

Hydro Water Mains

Pipe Segment[(1)]	Length (ft.)	Diameter (in.)	Material
Segment B	1,113	8"	Sch 40 PVC
Segment C	732	8"	C-900 PVC
Segment D	480	8"	Sch 40 PPVC
Segment E	1,351	6"	Sch 40 PPVC
Segment G	3,026	2"	Sch 40 PPVC
Segment H	2,022	6"	Sch 40 PPVC
Segment I	476	8"	Sch 40 PPVC
Segment I	820	8"	Sch 40 PPVC
Segment J	727	8"	C-900 PVC
Segment K	318	8"	C-900 PVC
Segment L	430	4"	C-900 PVC
8" PVC pipe added between 2010 and 2020	1,438	8"	PVC

Hydro valves, Meters, and Hydrants

Item (Installation Year)	Quantity/Size
Hydrant (1993)	3 ea
Hydrant (1997)	1 ea
Hydrant (1984)	2 ea
Hydrant (After 2011)	16 ea
Valve 8" (1975)	3 ea
Valve 8" (1986)	2 ea
Valve 8" (1992)	1 ea
Valve 8" (1994)	3 ea
Valve 8" (1996)	2 ea
Valve 8" (1997)	3 ea
Valve 8" (1999)	1 ea
Valve 6" (1984)	7 ea
Valve 6" (1986)	1 ea
Valve 6" (1993)	4 ea
Valve 6" (2000)	1 ea
Valve 6" (2001)	1 ea
Valve 4" (1993)	1 ea
Valve 4" (1997)	1 ea
Valve 4" (2001)	2 ea
Valve 2" (1984)	1 ea
Meters (after 2011)	81 ea
4" Meter Vault	2ea

Water System Condition Evaluation

Condition Scoring System

Condition Score	Portion of the Facility Needing Replacement
1	0-10%
2	11-30%
3	31-60%
4	60-75%
5	76-100%

Expected Useful Life

Facility	Useful Life (years)
Wells	50
Storage Tanks	40
Pipelines	50
Meter Vault	50
Hydrants and Valves	50

Tusayan #2 Well Condition

Item	Quantity/Size	Date	Overall Rank	Useful Life (Years)	Age (years)	Remaining Useful Life (Years)
Site Work	1 lot	1994	4	40	26	14
Fencing	200 LF	1994	4	30	26	4
Electrical Shed	1 ea	1994	4	40	26	14
Electrical Service/Gear	1 lot	1994	3	25	26	0
Step Up Transformer	1 ea	1994	3	25	26	0
VFD	1 ea	2014	3	15	6	9
Motor Control Center	1 ea	1994	4	25	26	0
Well Drilling	3,000 LF	1994	4	50	26	24
Surface Casing	25 LF	1994	4	50	26	24
Well Casing	2,306 LF	1994	4	50	26	24
Well Pump and Motor	1 ea	2020	1	20	0	20
Column Pipe	2,600 LF	1994	4	40	26	14
Pump Shed	1 ea	1994	4	25	26	0
Discharge Piping	1 lot	1994	4	40	26	14
Chlorinator	1 ea	2006	4	25	14	11
Filters	3 ea	2020	1	20	0	20

Storage Tank Condition

Site	Install Date	Capacity (MG)	Overall Condition Rank	Useful Life (years)	Age (years)	Remaining Useful Life
Site 2	1975	0.525	5	40	45	0

Engineering Evaluation

2019 Monthly Water Demands

Month	Water Used (gallons)
Jan	2,880,096
Feb	2,208,954
Mar	2,989,858
Apr	3,600,207
May	3,578,900
Jun	3,457,163
Jul	3,833,588
Aug	3,753,502
Sep	2,861,041
Oct	3,264,519
Nov	2,824,519
Dec	2,260,818
Total	37,513,165

Tusayan Wells

Water System	Well Name	ADWR #	Maximum Pumping Flow Rate (gpm)
Hydro	Tusayan #2	55-542928	78
Squire	Squire #1	55-560179	60
Anasazi(2)	Red Feather Well	55-523284	15

Well Capacity Analysis based on Annual Water Demand

Well	Tank ID	ADWR #	Flow Rate (gpm)	Maximum Annual Water Production (gallons)[1]	
				Only Hydro In-Service	Hydro and Squire In-Service
Hydro	Tusayan #2	55-542928	78	40,996,800	40,996,800
Squire	Squire #1	55-560179	60	-	31,536,000
Maximum Annual Water Production Capacity Less 10%				36,897,120	65,279,520
Hydro Annual Water Supply Requirement				39,763,166	39,763,166
Surplus/(Deficit) Available for Redundancy and to Supply the Squire and Anasazi Water Systems				(2,866,046)	25,516,354

Well Capacity Analysis based on Flowrate

Facility	Tank ID	ADWR #	Total Flow Rate (gpm)	
			Tusayan #2 Well Only in Service	Tusayan #2 and Squire #1 Wells in Service
Hydro	Tusayan #2	55-542928	78	78
Squire	Squire #1	55-560179	-	60
Total Water Production			78	138
Maximum Day Demand for Hydro Customers Only			99	99
Max Day Demand + 20% margin for Hydro Customers Only			119	119
Surplus/(Deficit)			(41)	19

Storage Tank Volumes

Facility	Ownership	Material	Quantity	Storage Volume (gallons)	Total Storage Volume (gallons)
Hydro	Owned	Steel Bolted	1	525,000	525,000
Squire	2 MG Leased to Hydro	Steel Welded	1	3,000,000	3,000,000
Airport	NA	(Above Ground)	2	1,400,000	2,800,000
Anasazi	NA	Welded Steel	1	400,000	400,000

Storage Tank Capacity

Facility	Total Available Storage Volume (MG)		
	Only Hydro In-Service	Hydro and Squire In-Service	Hydro, Airport, and Squire In-Service
Hydro	0.525	0.525	0.525
Squire[(1)]	-	2.0	2.0
Airport	-	-	2.8
Anasazi[(4)]	-	-	-
Total Storage Volume	0.525	2.525	5.325
Equalizing Storage Requirement	0.04	0.04	0.04
Emergency Storage Requirement	2.0	2.0	2.0
Fire Storage Requirement	1.02	1.02	1.02
Total Storage Requirement for Hydro Only	3.06	3.06	3.06
Surplus/(Deficit)	(2.53)	(0.724)	1.434

Utility Valuation

Tusayan #2 Well Valuation

Item	Date	Quantity/ Size	Unit Cost ($)	Construction Cost ($)	Replacement Cost New ($)	Overall Condition Rank	Useful Life (years)	Age (years)	Remaining Useful Years	Adjustment Factor	Replacement Cost New Less Depreciation ($)
Site Work	1994	1 lot	20,000	20,000	25,337	4	40	26	14	35%	8,868
Fencing	1994	200 LF	20	4,000	5,067	4	30	26	4	13%	676
Electrical Shed	1994	1 ea	15,000	15,000	19,003	4	40	26	14	35%	6,651
Electrical Service/Gear	1994	1 lot	55,000	55,000	69,678	3	25	26	0	5%	3,484
Step Up Transformer	1994	1 ea	15,000	15,000	19,003	3	25	26	0	5%	950
VFD	2014	1 ea	36,525	36,525	42,039	3	15	6	9	60%	25,224
Motor Control Center	1994	1 ea	25,000	25,000	31,672	4	25	26	0	5%	1,584
Well Drilling	1994	3,000 LF	240	720,000	912,144	4	50	26	24	48%	437,829
Surface Casing	1994	25 LF	75	1,875	2,375	4	50	26	24	48%	1,140
Well Casing	1994	2,306 LF	25	57,650	73,035	4	50	26	24	48%	35,057
Well Pump and Motor	2020	1 ea	123,812	123,812	124,290	1	20	0	20	100%	124,290
Column Pipe	1994	2,600 LF	10	26,000	32,939	4	40	26	14	35%	11,528
Pump Shed	1994	1 ea	10,000	10,000	12,669	4	25	26	0	5%	633
Discharge Piping	1994	1 lot	25,000	25,000	31,672	4	40	26	14	35%	11,085
Chlorinator	2006	1 ea	3,500	3,500	4,434	4	25	14	11	44%	1,951
Filters	2020	3 ea	1,000	3,000	3,000	1	20	0	20	100%	3,000
					1,408,357						673,950

Storage Tank Valuation

Install Year	Capacity (MG)	Construction Method	Construction Cost ($)	Replacement Cost New ($)	Overall Condition Rank	Useful Life (years)	Age (years)	Remaining Useful Life (Years)	Adjustment Factor (%)	Replacement Cost New Less Depreciation ($)
1975	0.525	Bolted Steel	550,000	696,776	4	40	45	0	5%	34,839

Water Main Valuation

Pipe Segment[1]	Install Year	Diameter (in)	Material	Length (ft)	Unit Cost ($)	Construction Cost ($)	Replacement Cost New ($)	Age (Years)	Remaining Useful Life (Years)	Adjustment Factor	Replacement Cost New Less Depreciation ($)
Segment B	1986	8	Sch 40 PVC	1,113	71	79,023	79,182	34	16	32%	25,338
Segment C	1997	8	C 900 PVC	732	60	43,965	44,173	23	27	54%	23,854
Segment D	1986	8	Sch 40 PVC	480	71	34,080	34,149	34	16	32%	10,928
Segment E	1992	6	Sch 40 PVC	1,351	61	82,411	82,577	28	22	44%	36,334
Segment G	1984	2	Sch 40 PVC	3,026	10	30,260	38,335	36	14	28%	10,734
Segment H	1984	6	Sch 40 PVC	2,022	61	123,342	123,591	36	14	28%	34,605
Segment I	1984	8	Sch 40 PVC	476	71	33,796	33,864	36	14	28%	9,482
Segment I	1984	8	Sch 40 PVC	820	71	58,220	58,337	36	14	28%	16,334
Segment J	2000	8	C 900 PVC	727	60	43,665	43,872	20	30	60%	26,323
Segment K	1984	8	C 900 PVC	318	60	19,100	19,190	36	14	28%	5,373
Segment L	2000	4	C 900 PVC	430	64	27,371	27,501	20	30	60%	16,501
8" PVC pipe added between 2010 and 2020	2015	8	PVC	1,438	71	102,098	102,304	5	45	90%	92,073
	Totals			12,933			584,772				215,806

Fire Hydrant Valuation

Hydrant Name	Install Year	Quantity	Unit Cost ($)	Construction Cost ($)	Replacement Cost New ($)	Age (Years)	Remaining Useful Life (Years)	Adjustment Factor	Replacement Cost New Less Depreciation ($)
Hydrant (1993)	1993	3	5,578	16,734	16,814	27	33	46%	7,734
Hydrant (1997)	1997	1	5,578	5,578	5,605	23	27	54%	3,026
Hydrant (1984)	1975	2	5,578	11,156	11,209	45	5	10%	1,121
Hydrant (after 2011)	2015	16	5,578	89,251	89,674	5	45	90%	80,707
Meter Vault	1994	2	25,000	$50,000	50,000	26	24	48%	24,000
			Total		173,302				116,588

Valve Valuation

Valve/ Meter Name	Install Year	Quantity	Unit Cost ($)	Construction Cost ($)	Replacement Cost New ($)	Adjustment Factor	Replacement Cost New Less Depreciation ($)
Valve 8" (1975)	1975	3	2,054	6,163	6,193	10%	619
Valve 8" (1986)	1986	2	2,054	4,109	4,128	32%	1,321
Valve 8" (1992)	1992	1	2,054	2,054	2,064	44%	908
Valve 8" (1994)	1994	3	2,054	6,163	6,193	48%	2,972
Valve 8" (1996)	1996	2	2,054	4,109	4,128	52%	2,147
Valve 8" (1997)	1997	3	2,054	6,163	6,193	54%	3,344
Valve 8" (1999)	1999	1	2,054	2,054	2,064	58%	1,197
Valve 6" (1984)	1984	7	1,623	11,358	11,412	28%	3,195
Valve 6" (1986)	1986	1	1,623	1,623	1,630	32%	522
Valve 6" (1993)	1993	4	1,623	6,490	6,521	46%	3,000
Valve 6" (2000)	2000	1	1,623	1,623	1,630	60%	978
Valve 6" (2001)	2001	1	1,623	1,623	1,630	62%	1,011
Valve 4" (1993)	1993	1	1,272	1,272	1,278	46%	588
Valve 4" (1997)	1997	1	1,272	1,272	1,278	54%	690
Valve 4" (2001)	2001	2	1,272	2,544	2,556	62%	1,585
Valve 2" (1984)	1984	1	839	839	843	28%	236
			Total		59,743		24,314

Meter Valuation

Meter Name	Install Year	Quantity	Unit Cost ($)	Construction Cost ($)	Replacement Cost New ($)	Adjustment Factor	Replacement Cost New Less Depreciation ($)
Meter (after 2011)	2015	81	300	24,300	24,300	50%	12,150
			Total		24,300		12,150

Sleeve Valuation

Asset Name	Quantity /Size	Construction Cost ($)	Replacement Cost New ($)	Installation Date	Age	Remaining Useful Years	Adjustment Factor	Replacement Cost New Less Depreciation ($)
Sleeves	3	$21,528	22,011	2018	2	48	96%	21,131
		Total	22,011					21,131

Asset Valuation Summary

Asset Type	Replacement Cost New ($)	Replacement Cost New Less Depreciation ($)
Wells	$1,408,000	$674,000
Tanks	$697,000	$35,000
Pipes and Mains	$585,000	$216,000
Hydrants	$123,000	$117,000
Valves	$60,000	$24,000
Meters	$24,000	$12,000
Sleeves (for future road crossings)	$22,000	$21,000
Total	$2,919,000	$1,099,000

Market Survey of Acquired Water Systems

Purchaser	Acquired System	Purchase Date	Purchase Price	Inflated Price
City of Peoria	New River Utility Company	Aug-16	$10,000,000	$10,908,000
EPCOR	Willow Valley Water Company (Global Water)	Aug-16	$2,494,834	$2,722,000
City of Buckeye	Valencia Water Company (Global Water)	Jul-15	$55,000,000	$60,819,000
Town of Queen Creek	H_2O Water Inc.	Sep-13	$34,000,000	$37,937,000
City of Avondale	Rigby Water Company	May-11	$2,560,000	$2,940,000
Town of Queen Creek	Queen Creek Water Company	Mar-08	$36,896,000	$43,402,000
City of Avondale	Wilhoit Water Company	Sep-09(5)	$350,000	$418,000
Town of Queen Creek	Diversified Utilities, Inc.	Expected 2020	$10,000,000	$10,000,000

Utility Cost Per Account

Acquired System	Inflated Price[1]	Number of Accounts[2]	Cost per Account
New River Utility Company	$10,908,000	2,882	$3,800
Willow Valley Water Company (Global Water)	$2,722,000	1,620	$1,700
Valencia Water Company (Global Water)[3]	$60,819,000	7,000	$8,700
H_2O Water Inc.	$37,937,000	9,637	$3,900
Rigby Water Company	$2,940,000	326	$9,000
Queen Creek Water Company	$43,402,000	9,224	$4,700
Wilhoit Water Company	$418,000	143	$2,900
Diversified Utilities, Inc.	$10,000,000	1587	$6,300
Average - Cost per Account			$5,100
Minimum - Cost per Account			$1,700
Maximum - Cost per Account			$9,000

Market Survey of Water System Assets

Acquired System	Water Production (AFY)[1]	Wells[2]	Storage Volume (MG)[3]	Other Notable System Assets[4]
New River Utility Company	6,295	5	3	2 pressure tanks; 8 booster pumps; 3 gas chlorination systems; 4 arsenic treatment filters.
Willow Valley Water Company (Global Water)	2,848	10	0.5	12 booster pump stations.
Valencia Water Company (Global Water)	2,775	18	6.5	5 separate systems:[1] Town of Buckeye Division,[4] Greater Buckeye Division, several booster stations, pressure tanks, water mains.
H_2O Water Inc.	12,163	5	13.3	6 inactive wells; booster pumps; water mains; service lines; water meters; fire hydrants.
Rigby Water Company	132	3	0.16	8.2 miles of water mains; 21 gate valves; 2 blow offs; 354 service lines and meters; 8 fire hydrants; 3 pressure tanks; 6 booster pumps.
Queen Creek Water Company	19,116	11	4.3	Booster pumps; water mains; service lines; water meters; fire hydrants.
Wilhoit Water Company	NA	2	0.04	1 pneumatic tank; 1 booster pump; 1 compressor.
Diversified Utilities, Inc.	6,590	4	1.22	2 wells in service, 1 not-equipped well, 3 storage tanks, 3 pump stations

Balance Sheet Summary

Revenue/Expense Category	2015	2016	2017	2018
Operating Revenue	$765,050	$614,584	$579,849	$592,763
Operating Expenses	($502,816)	($566,340)	($584,355)	($539,233)
Other Income (Expense)	$23,885	$31,278	$33,905	$31,519
Net Income/(Loss)	$286,119	$79,522	$29,399	$85,049

Valuation Summary

Method and System	Valuation ($)
Cost Approach – Water System	1,099,000
Market Approach – Water System	500,000 – 2,000,000
Revenue Approach	1,409,646

Infrastructure Improvements needed to have a Stand-Alone Water System

Infrastructure Item	Planning Level Project Cost ($)
Additional well	$2,500,000
2.5 MG of storage capacity	$3,500,000
Twelve-inch water main, 1,600 ft. long from the distribution system to a storage tank	$450,000
Eight-inch, 1,200 ft. looping main on the south of the Squire Hotel	$250,000
Eight-inch, 1,200 ft. looping main starting on the east side of Highway 64, crossing Highway 64, and running south to the IMAX Theater	$250,000
Eight-inch, 1,000 ft. looping main along RP Drive between a current Hydro pipe and a privately owned pipe.	$200,000
Total	$7,150,000

Conclusions and Recommendations

Conclusions

- The Hydro water system condition is typical for a system of similar age and assets. Specifically:
  - The Tusayan #2 well was recently rehabilitated and is expected to be serviceable for a number of years. Hydro does not own the land where the well is located.
  - The storage tank is at the end of its useful life and has some rust and leakage issues. However, the tank has also undergone some recent rehabilitation to the floor and could remain serviceable until a new storage solution is constructed.
  - The water distribution mains, hydrants, and valves are in an appropriate condition for the age of the infrastructure.
- The Hydro water system is not a complete, standalone water system because it does not have adequate infrastructure capacity in the following areas:
  - The Tusayan #2 well cannot supply maximum day demands and must rely on the Squire #1 well to supply a portion of the maximum daily demands. The land where the Tusayan #2 well is located is not owned by Hydro.
  - The Hydro system must rely on the Squire storage tank to meet storage needs.
  - The Hydro system must rely on some of the water mains in the Squire water system as well as multiple private water mains to complete the looping that would improve the ability to supply fire flows.
  - In the event of a fire, the Hydro system must rely on the Squire system for fire flow pumping capacity.
  - The pipeline between the storage tanks and the distribution system is owned by the Squire system. The Hydro system relies on the storage in the Airport system to meet summer demands due to the limited combined well capacity of the Hydro and Squire systems.
- The water system has an estimated value of $1,099,000 based on the depreciated value of the infrastructure. The water system has a value of $1,409,646 based on the revenue valuation method. The water system has a value range of $500,000 - $2,000,000 based on the market analysis method. The actual value of the water system will be set by a willing seller and a willing buyer, so the intent of these cost estimates is to provide an approximate valuation range for guidance. The value of the Hydro system is adversely affected by the reality that the system is not a standalone water system, and this reality is not reflected in these utility valuation estimates.
- The cost of upgrading the Hydro water system to a stand-alone utility that meets municipal standards is $7,150,000 in addition to the purchase price of the utility.

Recommendations

- Acquisition of the Hydro Resources, Inc. Water Company by the Town of Tusayan is an option available to the Town but is not recommended in its current form because the Hydro water system is not a stand-alone water system that can be managed independently. The Town has four separate water systems (Hydro, Squire, Anasazi, Airport) that have evolved and developed over time in response to the specific needs and goals of each water system owner. The needs and goals of a public water utility are often different from the needs and goals of private utility owners. Expected levels of water supply reliability and redundancy are often higher for public water systems than for private water systems. If the Town acquires a water system, the Town would want to operate it and be able to control the destiny of the water system, which would provide the opportunity to benefit water customers with a quality, reliable water supply. In owning a water utility, the Town also takes on responsibilities and the risks inherent in successful water delivery, so the Town needs to have enough control and authority to manage those risks.
- The estimated cost of constructing the infrastructure needed to make the Hydro water system an independent water utility is approximately $7,150,000 and is one option available if the Town chooses to acquire the Hydro system. These infrastructure improvements could be phased over time beginning first with an increased water supply, followed by a new storage tank with a water main to the storage tanks, and then the water mains for looping.

Recommendations, contd.

•The scope of this study includes only an evaluation of the Hydro system for potential acquisition, and the Town has not expressed any interest in acquiring the other water utilities. However, to understand the value of the Hydro system, a cursory understanding of the other interconnected and inter-related water systems has been obtained in this study. It is highly likely that the cost of owning and operating a single, combined water system would be less expensive than constructing the infrastructure needed to operate the Hydro system as a stand-alone water utility. A combined utility containing the assets of all four water systems provides the following benefits:

1. The combined well water supplies appears to be adequate for current needs, although an additional water supply should be pursued to improve long term water supply reliability. An additional water supply would be difficult for any of the water utilities to do independently.
2. The combined storage of the water systems appears to be adequate for current storage needs, although the Hydro storage tank will need to be replaced and perhaps increased in size to maintain water storage reliability.
3. The combined water distribution system provides more interconnectivity and looping than any water system provides individually. A larger water main to the Hydro and Squire storage tanks and a larger main connecting the Hydro and Airport system would improve the ability to move water through a combined distribution system. The need for the three water mains recommended for a Hydro stand-alone system could be re-evaluated in the context of a combined water system.
4. Water supply reliability for the Anasazi water system would be increased.
5. Water utility assets have a finite life (see Table 7) and will need to be repaired or replaced over time. The economies of scale provided by a combined utility will make it easier to sustainably fund water infrastructure maintenance and replacement to manage water system assets over the long term.

•If the Town chooses to acquire the Hydro system, then the functions of a water utility will need to be added to the Town's organization to provide water customer billing, customer service, water utility management, regulatory compliance, and water utility asset management.