

NOTICE

*The Utility Board will meet on Thursday, January 30th, 2020 at 6:00 p.m. M.D.T.
At 320 East Newel Avenue, Hildale, Utah 84784.*

AGENDA:

1. Call to Order
2. Prayer & Pledge of Allegiance
3. Public Comment
4. Consideration of Utility Waiver Requests
5. Approval of Meeting Minutes
6. Director Report
7. Financial Report
8. Consideration and Possible Action on Propane Tank/Cylinder Sales
9. Consideration and Possible Action on Canyon Sandstone Graduate Student Opportunity
10. Consideration and Possible Action on Final Billing Collections Agent and Policy
11. Consideration and Possible Action on Large Purchase of Traffic Control Devices
12. Consideration and Possible Action on Service Rate Schedule
13. Consideration and Possible Action on Utility Waiver Policy Update
14. Consideration and Possible Action on High-Use Wastewater Waiver Policy
15. Preliminary Review of Water Treatment Options
16. Adjournment

Water Surge Billing Adjustment Application

Customer Information

Name: [REDACTED] Phone Number: [REDACTED]

Address: [REDACTED] Today's Date: 1/23/19

Account #: [REDACTED]

Please describe the circumstances of the water surge in detail:

Over the winter the cold froze the water line and a leak sprung. Due to the meter size and pressure at the line, the break resulted in a considerable amount of water loss on the property side of the meter. The leak continued for a day or two before anyone realized there was a problem. Once the problem was identified, I immediately hired a plumber to fix the break, but more than \$2,000 worth of water had already dumped into the garden.

Any help the District can offer would be greatly appreciated.

Thank you,

Charles Hammon

Customer Signature: [REDACTED]

For Office Use Only						
	Total water usage for the month		Amount reduced (up to 50%)		Amount due	Is the leak verifiable?
Approved by:					Date	Is the customer eligible? (no other claims within 36 months)

Utility Department Notes

Water Surge Customer Remediation Program

80.90 Water Surge Billing Adjustment

A. Water customers are eligible for a billing adjustment to reduce their water usage charge by up to 50% if the customer claims a verifiable water leak on the customer's property. Water leak reports to the Department are inspectable under the authority of the Water Superintendent. Customers are only eligible for a Water Surge Billing Adjustment once every 36 months. The Department shall maintain a record of a Water Surge Billing Adjustments.

B. Customer Claims can be denied for customers who are not compliant with Water Service Regulations, City Ordinances or state and federal laws. Claims may also be denied if no verifiable leak is discovered by the Water Superintendent.

C. Water Surge Billing Adjustments do not apply to culinary mainline water leaks.

D. The Water Surge Billing Adjustment Program may be temporarily suspended by the Utility Director within seven days of proper public noticing. Suspensions shall not exceed 60 days unless directed to by the City Councils.

E. The month's water usage that a Water Surge Billing Adjustment is applied shall not be applied to the annual sewer rate recalculation.

Leak Report Claim Procedures

The Department field staff regularly monitors and detects customer leaks through historical knowledge of customer use. Field Staff generally attempt customer notification at the physical residence and advise the customer of a potential leak. After advising the customer of the leak, they should inform them of the Water Surge Billing Adjustment, and that they can contact the office in order to make a claim. All claims are subject to inspection by the Water Superintendent, and the Utility Director. The Director may reject a claim if they determine that no verifiable water leak exists or if the customer is non-compliant with Water Service Regulations, City Ordinances, or State or Federal laws.

Claim Processing Procedures

The Accounts Receivable Clerk is responsible for processing all Water Surge Billing Adjustments. Adjustments will be annotated on a form or memorandum to be approved by the Utility Director (above). The annotated form or memorandum will serve to record the billing period to count down 36 months until they are eligible again.



Director's Report

January 30th, 2020

Hildale-Colorado City Utility Department
320 East Newel Avenue, Hildale UT 84784

Account Update

Number of accounts billed for December 2019:

Water base rate	879
Sewer	824
Gas base rate	680
Water Penalties	429
Gas Penalties	349

of shut off notices printed December 15, 2019 218

of final billed accounts with final bill date in December is 16

of new connect accounts in November is 15

Water Project Update

We've received the preliminary report from Sunrise on the treatment option for our current Treatment System, and it's attached to your packet. We're meeting with Bowen and Collins next week on the results of their study. Once completed we'll begin meetings with the cities on how best to proceed with the results. In early discussions with our project engineers, they've identified at least five separate locations for possible exploitation of the Navajo Sandstone and Kayenta Water Formations.

Safety Council, Culture and Competence

This month's Safety Council convened on the topic of Traffic Control and the need to standardize and implement the Manual on Uniform Traffic Control Devices, share resources and enhance safety awareness. Nathan Fischer, the Department's Gas Superintendent, is also a Traffic Control Safety Supervisor, who will begin drafting a city-wide policy.

Code Enforcement Officer

The Department's staff has expressed support to the administrations for the establishment of a Code Enforcement Office, who's main purpose would be to advise compliance, investigate alleged violations, and issue enforcement actions if necessary.

The staff's view of code enforcement is as an official action towards compliance, and with the aim of supporting residents to become complaint as opposed to taking action and levying penalties.

Earnings Report

2018		2019	
Description	Totals	Description	Totals
MT-WTR Usage	10,489	MT-WTR Usage	12,074
MT-NGAS Usage	33,393	MT-NGAS Usage	47,957
MT-PRO Usage	22,069	MT-PRO Usage	61,778
LP Usage	12,537	LP Usage	14,202
Description	Totals	Description	Totals
PENALTY-W Amount	\$9,503.73	PENALTY-W Amount	15,002.31
PENALTY-G Amount	\$3,087.33	PENALTY-G Amount	21,017.08
BR-WTR Amount	\$30,424.53	BR-WTR Amount	30,666.82
MT-WTR Amount	\$13,835.70	MT-WTR Amount	16,198.60
MT-NGAS Amount	\$29,147.29	MT-NGAS Amount	41,852.51
BR-GAS Amount	\$5,469.05	BR-GAS Amount	4,527.67
SEWER Amount	\$71,187.24	SEWER Amount	71,828.07
MT-PRO Amount	\$36,167.79	MT-PRO Amount	45,779.68
LP Amount	\$23,144.14	DIST-MPRO Amount	6.63
CYL-EX Amount	\$312.66	LP Amount	23,225.90
Total Charges	\$222,279	CYL-EX Amount	158.07
		Total Charges	\$ 270,263.34

Invoice	Description	Invoice Date	Due Date	Total Cost	Period	GL Activity	GL Account
BASIC AMERICAN SUPPLY (5637)							
244439	Ratchet & Socket	11/07/2019	12/20/2019	41.97	11/19	0	84-41-260
244469	Repair Fittings PVC	11/07/2019	12/10/2019	9.55	11/19	0	81-41-273
244501	Repair Fittings PVC	11/07/2019	12/10/2019	3.77	11/19	0	81-41-273
245462	Fittings for Richard St. Project	11/14/2019	12/20/2019	7.16	11/19	0	81-41-273
245732	Fittings for Richard St. Project	11/14/2019	12/20/2019	38.14	11/19	0	81-41-273
246051	Fittings for Richard St. Project	11/16/2019	12/20/2019	27.53	11/19	0	81-41-273
246494	Measuring Wheel	11/19/2019	12/20/2019	34.99	11/19	0	65-41-260
246877	Unions	11/21/2019	12/20/2019	4.98	11/19	0	84-41-273
248017	Penetrating Oil	11/26/2019	12/20/2019	4.99	11/19	0	84-41-273
248093	Antitrust Spray	11/28/2019	12/20/2019	6.99	11/19	0	84-41-273
246306	Marking Wand	11/18/2019	12/20/2019	24.99	11/19	0	65-41-260
Total BASIC AMERICAN SUPPLY (5637):				205.06			
Border States Industires Inc. (5679)							
919016630	Circuit Breaker Finder	11/26/2019	12/26/2019	116.84	11/19	0	64-41-250
Total Border States Industires Inc. (5679):				116.84			
CASELLE, INC. (1430)							
98753	CONTRACT for January 2020 - 80% Utilities	12/01/2019	12/31/2019	804.54	12/19	0	65-41-310
Total CASELLE, INC. (1430):				804.54			
CATALYST CONSTRUCTION (5712)							
103	Fiber Server Office Rent	12/01/2019	12/01/2019	100.00	12/19	0	90-41-580
Total CATALYST CONSTRUCTION (5712):				100.00			
CHEMTECH-FORD LABORATORIES, INC. (1481)							
19K0036	Water Radium Tests	12/02/2019	01/01/2020	560.00	11/19	0	81-41-314
Total CHEMTECH-FORD LABORATORIES, INC. (1481):				560.00			
Customer Deposit (5518)							
3.02600.5	3.02600.5 CUSTOMER DEPOSIT REFUND	12/03/2019	01/03/2020	199.23	12/19	0	81-21350
3.18203.5	3.18203.5 CUSTOMER DEPOSIT REFUND	12/10/2019	01/10/2020	10.10	12/19	0	81-21350
3.21800.0	3.21800.0 CUSTOMER DEPOSIT REFUND	12/11/2019	01/11/2020	46.41	12/19	0	81-21350
3.86000.7	3.86000.7 CUSTOMER DEPOSIT REFUND	12/03/2019	01/03/2020	246.29	12/19	0	81-21350
6.01000.4	6.01000.4 CUSTOMER DEPOSIT REFUND	12/03/2019	01/03/2020	208.58	12/19	0	81-21350
6.11200.2	6.11200.2 CUSTOMER DEPOST REFUND	12/03/2019	01/03/2020	56.70	12/19	0	81-21350
6.24210.2	6.24210.2 CUSTOMER DEPOSIT REFUND	12/03/2019	01/03/2020	141.00	12/19	0	81-21350
3.02600.6	3.02600.3 OVERPAYMENT REFUND	11/26/2019	12/26/2019	200.00	11/19	0	81-21350
6.44990.7	6.44990.7 CUSTOMER DEPOSIT REFUND	12/06/2019	01/06/2020	80.37	12/19	0	81-21350
6.46990.4	6.46990.4 CUSTOMER DEPOSIT REFUND	12/03/2019	01/03/2020	538.33	12/19	0	81-21350
OVER-PMT 3	3.50911.4 OVERPAYMENT REFUND	11/30/2019	12/30/2019	339.67	11/19	0	81-21350
Total Customer Deposit (5518):				2,066.68			
DJB GAS SERVICES, INC. (4750)							
1181191	WELDER Cylinder Rental	11/30/2019	12/30/2019	24.40	11/19	0	82-41-273
Total DJB GAS SERVICES, INC. (4750):				24.40			
DOMINION ENERGY (5607)							
5948550000	Natural Gas Transportation	11/27/2019	12/26/2019	2,943.58	11/19	0	84-41-434

Invoice	Description	Invoice Date	Due Date	Total Cost	Period	GL Activity	GL Account
Total DOMINION ENERGY (5607):				2,943.58			
HILDALE CITY (2160)							
NAT 1119	ENERGY & USE TAX GAS	11/30/2019	12/15/2019	895.48	11/19	0	84-21376
Total HILDALE CITY (2160):				895.48			
HILDALE CITY UTILITIES (2170)							
3180001 111	Lab Shop Utilities	12/05/2019	12/20/2019	839.71	12/19	0	65-41-280
3841101 111	Academy Ave Well Power	12/05/2019	12/20/2019	54.00	12/19	0	65-41-280
6077001 111	CITY HALL UTILITIES - 80% Utilities	12/05/2019	12/20/2019	204.93	12/19	0	65-41-280
6428701 111	Propane Yard Lease	12/05/2019	12/20/2019	100.00	12/19	0	84-41-580
Total HILDALE CITY UTILITIES (2170):				1,198.64			
HOME DEPOT (2220)							
11878	Insulation for Wells	10/30/2019	12/01/2019	252.35	11/19	0	81-41-273
2523949	Electric Heater - Power Strip	11/07/2019	12/01/2019	81.50	11/19	0	65-41-260
9012006	Insulation for Wells	10/31/2019	12/01/2019	100.39	11/19	0	81-41-273
Total HOME DEPOT (2220):				434.24			
Johnson, Harrison (5663)							
191117	Wendover, Doninion Energy, And Water Meeting	11/17/2019	12/17/2019	670.30	11/19	0	81-41-230
Total Johnson, Harrison (5663):				670.30			
LITTLE CREEK MTN. RANCH (4929)							
HAY121919	6 3/4 ton bales of hay	12/19/2019	12/19/2019	900.00	12/19	0	82-41-273
Total LITTLE CREEK MTN. RANCH (4929):				900.00			
NGL SUPPLY CO. LTD (5605)							
NGL29125	Propane Commodity	11/29/2019	12/09/2019	10,442.24	11/19	0	84-41-432
NGL293083	Propane Comodity	12/06/2019	12/16/2019	12,769.89	11/19	0	84-41-432
Total NGL SUPPLY CO. LTD (5605):				23,212.13			
O'REILLY AUTO PARTS (5522)							
3766-148007	Vehicle Repair Parts	10/09/2019	12/30/2019	87.85	12/19	0	65-41-250
3766-149880	Vehicle Repair Parts	10/22/2019	12/30/2019	47.95	12/19	0	65-41-250
3766-150155	Vehicle Repair Parts	10/24/2019	12/30/2019	52.77	12/19	0	65-41-250
3766-150836	Vehicle Repair Parts	10/29/2019	12/30/2019	101.22	12/19	0	65-41-250
3766-154217	Vehicle Repair Parts	11/21/2019	12/30/2019	41.05	12/19	0	65-41-250
Total O'REILLY AUTO PARTS (5522):				330.84			
PINNACLE GAS PRODUCTS (5471)							
112556	100lb Cylinders Tape & Teflon Tape	12/06/2019	01/05/2020	540.14	11/19	0	84-41-341
Total PINNACLE GAS PRODUCTS (5471):				540.14			
ROCKY MOUNTAIN POWER (4202)							
68544976 11	Cathodic Protection Power	11/26/2019	12/20/2019	11.24	11/19	0	84-41-285
Total ROCKY MOUNTAIN POWER (4202):				11.24			

Invoice	Description	Invoice Date	Due Date	Total Cost	Period	GL Activity	GL Account
SCHOLZEN PRODUCTS COMPANY, INC. (3450)							
3025103-00	Chlorine Cylinder Rental	11/22/2019	12/22/2019	86.40	11/19	0	81-41-432
Total SCHOLZEN PRODUCTS COMPANY, INC. (3450):				86.40			
SOUTH CENTRAL COMMUNICATIONS (3560)							
8297800 111	CITY HALL PHONE & FAX LINES - 60% Utilities	11/30/2019	12/15/2019	156.15	11/19	0	65-41-310
9592500 111	PRI PHONE ACCOUNT - 80% Utilities	11/30/2019	12/15/2019	415.71	11/19	0	65-41-310
Total SOUTH CENTRAL COMMUNICATIONS (3560):				571.86			
SOUTHERN UTAH UNIVERSITY (3592)							
S0045168	Bacteriological Testing	12/05/2019	01/04/2020	140.00	12/19	0	81-41-314
Total SOUTHERN UTAH UNIVERSITY (3592):				140.00			
ST. GEORGE WATER STORE (5415)							
57821	Bottled Water Service 5 bottles - 50% Utilities	11/23/2019	12/23/2019	15.00	11/19	0	65-41-235
58587	Bottled Water Service 2 bottle - 50% Admin	12/06/2019	01/05/2020	6.00	12/19	0	65-41-235
Total ST. GEORGE WATER STORE (5415):				21.00			
STAPLES CREDIT PLAN (1475)							
2378875771	Laptop Case	10/25/2019	12/10/2019	24.05	11/19	0	65-41-240
2379187031	Wireless Mouse, Printer Cartridge, Wallet for CD/DVD	10/26/2019	11/25/2019	56.44	11/19	0	65-41-240
2389347321	Dry Erase Markers, Sticky Notes, Pens, Printer Ink	11/15/2019	12/10/2019	218.26	11/19	0	65-41-240
Total STAPLES CREDIT PLAN (1475):				298.75			
SUMMIT ENERGY, LLC (4605)							
1119HILD	Natural Gas Commodity-11/19	12/09/2019	12/26/2019	7,718.73	11/19	0	84-41-431
Total SUMMIT ENERGY, LLC (4605):				7,718.73			
SUSAN STEED (5720)							
3	Overpayment from November	12/03/2019	12/30/2019	96.00-	10/19	0	65-41-271
3	City Office Cleaning - 60% Utilities	12/03/2019	12/30/2019	123.00	10/19	0	65-41-271
3	Utility Labshop Cleaning	12/03/2019	12/30/2019	175.00	10/19	0	65-41-271
Total SUSAN STEED (5720):				202.00			
TODD JIM (5711)							
81146A	Footwear Reimbursement	12/04/2019	12/04/2019	200.00	12/19	0	65-41-260
Total TODD JIM (5711):				200.00			
TOWN OF COLORADO CITY (3930)							
12	TOCC Litigation Settlement	12/01/2019	12/01/2019	6,266.67	12/19	0	64-41-911
8476	Advanced Network Consulting	11/20/2019	12/05/2019	328.79	11/19	0	65-41-317
8478	Utility Field Staff Payroll	11/15/2019	11/30/2019	11,375.64	11/19	0	65-41-110
8478	Utility Field Staff Payroll Taxes	11/15/2019	11/30/2019	1,354.89	11/19	0	65-41-130
8478	Utility Field Staff Payroll Benefits	11/15/2019	11/30/2019	2,347.06	11/19	0	65-41-140
8478	Secretarial Staff Payroll	11/15/2019	11/30/2019	4,916.11	11/19	0	65-41-110
8478	Recorder Payroll	11/15/2019	11/30/2019	1,641.10	11/19	0	65-41-110
8478	General Fund Payroll Taxes	11/15/2019	11/30/2019	446.87	11/19	0	65-41-130
8478	General Fund Payroll Benefits	11/15/2019	11/30/2019	3,120.83	11/19	0	65-41-140
8480	DOJ Court Judgment Cost Sharing - Jim Keith	11/15/2019	11/30/2019	1,212.61	11/19	0	63-41-310
8482	Utility Field Staff Payroll	11/29/2019	12/14/2019	11,143.09	11/19	0	65-41-110

Invoice	Description	Invoice Date	Due Date	Total Cost	Period	GL Activity	GL Account
8482	Utility Field Staff Payroll Taxes	11/29/2019	12/14/2019	1,288.68	11/19	0	65-41-130
8482	Secretarial Staff Payroll	11/29/2019	12/14/2019	4,778.66	11/19	0	65-41-110
8482	Recorder Payroll	11/29/2019	12/14/2019	1,641.10	11/19	0	65-41-110
8482	General Fund Payroll Taxes	11/29/2019	12/14/2019	487.19	11/19	0	65-41-130
8500	Auto Insurance Premium Portion	12/01/2019	12/16/2019	4,033.90	12/19	0	65-41-510
8503	Gasoline Used for Utilities	12/01/2019	12/16/2019	1,643.62	12/19	0	65-41-257
8503	Gasoline Used for Utilities	12/01/2019	12/16/2019	27.03	12/19	0	81-41-257
8503	Gasoline Used for Utilities	12/01/2019	12/16/2019	165.84	12/19	0	82-41-257
8503	Gasoline Used for Utilities	12/01/2019	12/16/2019	105.71	12/19	0	84-41-257
8508	DOJ Court Judgement Cost Sharing - Roger Carter	12/10/2019	12/25/2019	2,350.51	12/19	0	63-41-310
8509	Verizon Wireless	12/10/2019	12/25/2019	74.54	11/19	0	65-41-260
8511	DOJ Court Judgement Cost Sharing - Jim Keith	12/10/2019	12/25/2019	660.00	11/19	0	63-41-310
PROST1119	Total Propane Tax	11/30/2019	12/15/2019	2,050.30	11/19	0	84-21371
WAT1119	Total Water Tax	11/30/2019	12/15/2019	673.40	11/19	0	81-21371
Total TOWN OF COLORADO CITY (3930):				64,134.14			
TruckPro LLC Six States (3502)							
354762	Flex Tubing & Connectors	11/26/2019	12/26/2019	56.07	11/19	0	65-41-250
Total TruckPro LLC Six States (3502):				56.07			
TT Technologies (5723)							
209871	Air boring tool	11/19/2019	12/19/2019	7,484.69	11/19	0	81-42-780
Total TT Technologies (5723):				7,484.69			
U.S. POSTAL SERVICE (4020)							
191211	POSTAGE - 80% Utilities	12/11/2019	12/26/2019	560.00	12/19	0	65-41-260
Total U.S. POSTAL SERVICE (4020):				560.00			
UTAH STATE TAX COMMISSION (4221)							
STC 1119	Taxes Collected for Hildale	11/30/2019	12/30/2019	816.84	11/19	0	84-21375
Total UTAH STATE TAX COMMISSION (4221):				816.84			
WHEELER MACHINERY CO. (4441)							
RS00001386	Excavator 316 Rental for Canyon St. Project	10/18/2019	11/17/2019	618.28	11/19	0	84-41-341
RS00001418	Digger Rental	11/21/2019	12/21/2019	1,667.50	11/19	0	65-41-260
Total WHEELER MACHINERY CO. (4441):				2,285.78			
XPRESS BILL PAY (5646)							
44223	Xpress Bill Pay Trans. & Account Maintenance - 90% Utilities	12/01/2019	12/06/2019	383.63	12/19	0	65-41-160
Total XPRESS BILL PAY (5646):				383.63			
YSN Imports, Inc. (5727)							
133351	Propane Cylinders	11/29/2019	12/30/2019	3,817.11	12/19	0	84-41-341
137118	Large Propane Cylinders 420 lb & 200 lb	12/13/2019	01/13/2020	3,982.25	12/19	0	84-41-341
Total YSN Imports, Inc. (5727):				7,799.36			
ZION'S BANK (4470)							
191105 (1)W	Isolation Gasket	11/05/2019	12/25/2019	74.47	11/19	0	84-41-273
191112 (2)W	Snacks for Field Crew	11/12/2019	12/25/2019	96.41	11/19	0	65-41-235
191113 (1)HJ	Lodging for Harrison - Wendover Meeting	11/13/2019	12/25/2019	70.41	11/19	0	81-41-230

Invoice	Description	Invoice Date	Due Date	Total Cost	Period	GL Activity	GL Account
191113 (3)W	Gasline Survey Project	11/13/2019	12/25/2019	18.19	11/19	0	65-41-235
191114 (1)US	Mitch's Trip to Nephi UT - Water Meeting	11/14/2019	12/25/2019	57.64	11/19	0	65-41-230
191114 (2)US	Lodging for Mitch - Water Meeting in Nephi UT	11/14/2019	12/25/2019	117.42	11/19	0	65-41-230
191115 (2)HJ	Lodging for Harrison - Dominion Energy & Water Meeting	11/15/2019	12/25/2019	182.10	11/19	0	81-41-230
191117 (3)HJ	Facebook Add	11/17/2019	12/25/2019	75.00	11/19	0	84-41-310
191121 (3)U	Tools for Maintenance & Repair	11/21/2019	12/21/2019	130.93	11/19	0	84-41-260
191121 (4)U	Pipeline Survey Supplies	11/21/2019	12/25/2019	82.57	11/19	0	65-41-250
191122 (2)VB	Coffee, Drinks, Snacks	11/22/2019	12/25/2019	35.76	11/19	0	65-41-235
191122 (5)U	Tools for Maintenance & Repair	11/22/2019	12/25/2019	100.95	11/19	0	84-41-260
191123 (4)HJ	Facebook Add	11/23/2019	12/25/2019	25.08	11/19	0	84-41-310
191202 (4)W	Chair for Camera	12/02/2019	12/25/2019	269.95	11/19	0	82-41-273
191204 (3)V	Snacks	12/04/2019	12/25/2019	25.01	11/19	0	65-41-235
Total ZION'S BANK (4470):				1,361.89			
Grand Totals:				129,135.25			

Report GL Period Summary

Vendor number hash:	0
Vendor number hash - split:	0
Total number of invoices:	0
Total number of transactions:	0

CITY OF HILDALE
REVENUES WITH COMPARISON TO BUDGET
FOR THE 6 MONTHS ENDING DECEMBER 31, 2019

2017 JUDGMENT RESOLUTION FUND

	PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEARNED	PCNT
<u>REVENUES</u>					
63-38-101 TRANSFER FROM GENERAL FUND	.00	4,024.94	40,000.00	35,975.06	10.1
63-38-102 TRANSFER FROM WATER FUND	.00	1,341.65	13,600.00	12,258.35	9.9
63-38-103 TRANSFER FROM WASTEWATER	.00	1,341.65	13,300.00	11,958.35	10.1
63-38-105 TRANSFER FROM GAS FUND	.00	1,341.65	13,600.00	12,258.35	9.9
TOTAL REVENUES	.00	8,049.89	80,500.00	72,450.11	10.0
TOTAL FUND REVENUE	.00	8,049.89	80,500.00	72,450.11	10.0

CITY OF HILDALE
EXPENDITURES WITH COMPARISON TO BUDGET
FOR THE 6 MONTHS ENDING DECEMBER 31, 2019

2017 JUDGMENT RESOLUTION FUND

	PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEXPENDED	PCNT
<u>EXPENDITURES</u>					
63-41-310 PROFESSIONAL & TECHNICAL	2,350.51	18,256.97	60,500.00	42,243.03	30.2
63-41-315 LEGAL - GENERAL	.00	.00	20,000.00	20,000.00	.0
TOTAL EXPENDITURES	2,350.51	18,256.97	80,500.00	62,243.03	22.7
TOTAL FUND EXPENDITURES	2,350.51	18,256.97	80,500.00	62,243.03	22.7
NET REVENUE OVER EXPENDITURES	(2,350.51)	(10,207.08)	.00	10,207.08	.0

CITY OF HILDALE
REVENUES WITH COMPARISON TO BUDGET
FOR THE 6 MONTHS ENDING DECEMBER 31, 2019

LITIGATION DEFENSE FUND

		<u>PERIOD ACTUAL</u>	<u>YTD ACTUAL</u>	<u>BUDGET</u>	<u>UNEXPENDED</u>	<u>PCNT</u>
	<u>REVENUES</u>					
64-38-101	TRANSFER FROM GENERAL FUND	.00	3,133.32	17,900.00	14,766.68	17.5
64-38-102	TRANSFER FROM WATER FUND	.00	3,133.34	17,900.00	14,766.66	17.5
64-38-103	TRANSFER FROM WASTEWATER	.00	3,133.34	17,900.00	14,766.66	17.5
64-38-105	TRANSFER FROM GAS FUND	.00	3,133.34	17,900.00	14,766.66	17.5
		<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
	TOTAL REVENUES	.00	12,533.34	71,600.00	59,066.66	17.5
		<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
	TOTAL FUND REVENUE	.00	12,533.34	71,600.00	59,066.66	17.5
		<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

CITY OF HILDALE
EXPENDITURES WITH COMPARISON TO BUDGET
FOR THE 6 MONTHS ENDING DECEMBER 31, 2019

LITIGATION DEFENSE FUND

	PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEXPENDED	PCNT
<u>EXPENDITURES</u>					
64-41-230 TRAVEL	.00	.00	2,700.00	2,700.00	.0
64-41-250 EQUIPMENT SUPPLIES & MAINT	.00	116.84	.00	(116.84)	.0
64-41-316 LEGAL - LITIGATION DEFENSE	.00	.00	68,900.00	68,900.00	.0
64-41-911 JUDGMENTS AND LOSSES	6,266.67	31,333.35	.00	(31,333.35)	.0
	<u>6,266.67</u>	<u>31,450.19</u>	<u>71,600.00</u>	<u>40,149.81</u>	<u>43.9</u>
TOTAL EXPENDITURES	<u>6,266.67</u>	<u>31,450.19</u>	<u>71,600.00</u>	<u>40,149.81</u>	<u>43.9</u>
	<u>6,266.67</u>	<u>31,450.19</u>	<u>71,600.00</u>	<u>40,149.81</u>	<u>43.9</u>
TOTAL FUND EXPENDITURES	<u>6,266.67</u>	<u>31,450.19</u>	<u>71,600.00</u>	<u>40,149.81</u>	<u>43.9</u>
	<u>6,266.67</u>	<u>31,450.19</u>	<u>71,600.00</u>	<u>40,149.81</u>	<u>43.9</u>
NET REVENUE OVER EXPENDITURES	(6,266.67)	(18,916.85)	.00	18,916.85	.0

CITY OF HILDALE
REVENUES WITH COMPARISON TO BUDGET
FOR THE 6 MONTHS ENDING DECEMBER 31, 2019

JOINT ADMINISTRATION FUND

		<u>PERIOD ACTUAL</u>	<u>YTD ACTUAL</u>	<u>BUDGET</u>	<u>UNEXPENDED</u>	<u>PCNT</u>
	<u>REVENUES</u>					
65-38-102	TRANSFER FROM WATER FUND	.00	105,053.38	305,130.00	200,076.62	34.4
65-38-103	TRANSFER FROM WASTEWATER	.00	97,549.59	403,232.00	305,682.41	24.2
65-38-105	TRANSFER FROM GAS FUND	.00	37,519.07	312,802.00	275,282.93	12.0
65-38-900	SUNDRY REVENUES	1,167.00	7,019.50	.00	(7,019.50)	.0
		<u>1,167.00</u>	<u>247,141.54</u>	<u>1,021,164.00</u>	<u>774,022.46</u>	<u>24.2</u>
	TOTAL REVENUES	<u>1,167.00</u>	<u>247,141.54</u>	<u>1,021,164.00</u>	<u>774,022.46</u>	<u>24.2</u>
	TOTAL FUND REVENUE	<u>1,167.00</u>	<u>247,141.54</u>	<u>1,021,164.00</u>	<u>774,022.46</u>	<u>24.2</u>

CITY OF HILDALE
EXPENDITURES WITH COMPARISON TO BUDGET
FOR THE 6 MONTHS ENDING DECEMBER 31, 2019

JOINT ADMINISTRATION FUND

	PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEXPENDED	PCNT
<u>EXPENDITURES</u>					
65-41-110 SALARIES-PERMANENT EMPLOYEES	118.39	188,127.08	445,568.00	257,440.92	42.2
65-41-117 ATTORNEY SALARY	.00	.00	40,000.00	40,000.00	.0
65-41-130 PAYROLL TAXES	70.27	33,667.32	46,294.00	12,626.68	72.7
65-41-140 BENEFITS-OTHER	.00	47,821.47	100,470.00	52,648.53	47.6
65-41-144 PRINT AND POSTAGE	258.47	258.47	10,000.00	9,741.53	2.6
65-41-150 STIPENDS - UTILITY BOARD	800.00	5,300.00	11,700.00	6,400.00	45.3
65-41-160 MERCHANT PROCESSING	1,382.56	8,042.21	30,000.00	21,957.79	26.8
65-41-165 CAPITAL BUILDING	.00	.00	2,000.00	2,000.00	.0
65-41-170 CAPITAL EQUIPMENT	.00	.00	3,000.00	3,000.00	.0
65-41-175 CAPITAL RESERVES PURCHASES	.00	.00	12,000.00	12,000.00	.0
65-41-230 TRAVEL	.00	175.06	.00	(175.06)	.0
65-41-235 FOOD & REFRESHMENT	21.00	987.41	6,000.00	5,012.59	16.5
65-41-240 OFFICE EXPENSE & SUPPLIES	122.09	735.87	.00	(735.87)	.0
65-41-250 EQUIPMENT SUPPLIES & MAINT	1,321.27	11,756.85	26,500.00	14,743.15	44.4
65-41-257 FUEL	1,840.03	11,702.17	28,000.00	16,297.83	41.8
65-41-260 TOOLS & EQUIPMENT-NON CAPITAL	6,420.42	11,215.34	26,000.00	14,784.66	43.1
65-41-271 MAINT & SUPPLY - OFFICE	.00	1,647.28	4,000.00	2,352.72	41.2
65-41-280 UTILITIES	3,224.69	7,364.54	14,000.00	6,635.46	52.6
65-41-285 POWER	340.18	3,000.26	12,900.00	9,899.74	23.3
65-41-310 PROFESSIONAL & TECHNICAL	3,196.22	10,366.69	25,300.00	14,933.31	41.0
65-41-313 AUDITOR	.00	20,750.00	25,000.00	4,250.00	83.0
65-41-315 LEGAL - GENERAL	.00	.00	5,000.00	5,000.00	.0
65-41-317 INFORMATION TECHNOLOGY - CONS	850.01	3,273.07	.00	(3,273.07)	.0
65-41-319 INFORMATION TECHNOLOGY - SYSTE	.00	19.75	.00	(19.75)	.0
65-41-330 EDUCATION	.00	796.00	9,000.00	8,204.00	8.8
65-41-510 INSURANCE	4,033.90	59,356.70	130,000.00	70,643.30	45.7
65-41-720 BUILDINGS	.00	547.97	10,000.00	9,452.03	5.5
65-41-741 EQUIPMENT - OFFICE	.00	.00	3,200.00	3,200.00	.0
65-41-850 DEBT SERVICE - VEHICLE & EQUIP	.00	15,757.04	11,000.00	(4,757.04)	143.3
65-41-900 AUTOMATIC PAYMENT INCENTIVE	.00	.00	3,000.00	3,000.00	.0
65-41-901 SURVEY INCENTIVE PROGRAM	.00	(200.00)	11,000.00	11,200.00	(1.8)
65-41-960 TRANSFERS TO RESERVE FUNDS	.00	.00	27,000.00	27,000.00	.0
TOTAL EXPENDITURES	23,999.50	442,468.55	1,077,932.00	635,463.45	41.1
TOTAL FUND EXPENDITURES	23,999.50	442,468.55	1,077,932.00	635,463.45	41.1
NET REVENUE OVER EXPENDITURES	(22,832.50)	(195,327.01)	(56,768.00)	138,559.01	(344.1)

CITY OF HILDALE
REVENUES WITH COMPARISON TO BUDGET
FOR THE 6 MONTHS ENDING DECEMBER 31, 2019

WATER FUND

	PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEXPENDED	PCNT
<u>OPERATING REVENUES</u>					
81-37-111 WATER SALES - METERED	15,860.90	222,905.14	247,279.00	24,373.86	90.1
81-37-121 WATER SALES - FLAT RATE	30,741.34	185,231.82	327,651.00	142,419.18	56.5
81-37-331 CONNECTION CHARGES	2,050.00	11,880.00	25,000.00	13,120.00	47.5
81-37-332 CONSTRUCTION	2,227.00	10,802.87	62,400.00	51,597.13	17.3
81-37-411 INTEREST	.00	4,705.79	3,600.00	(1,105.79)	130.7
81-37-412 PENALTIES	35,147.07	105,892.23	50,000.00	(55,892.23)	211.8
TOTAL OPERATING REVENUES	86,026.31	541,417.85	715,930.00	174,512.15	75.6
<u>NON-OPERATING REVENUE</u>					
81-38-440 SUNDRY NON-OPERATING REVENUE	.00	.00	5,000.00	5,000.00	.0
81-38-450 TRANSFERS FROM R&R RESERVES	.00	.00	150,000.00	150,000.00	.0
81-38-999 CONTINGENCY	.00	.00	200,000.00	200,000.00	.0
TOTAL NON-OPERATING REVENUE	.00	.00	355,000.00	355,000.00	.0
TOTAL FUND REVENUE	86,026.31	541,417.85	1,070,930.00	529,512.15	50.6

CITY OF HILDALE
EXPENDITURES WITH COMPARISON TO BUDGET
FOR THE 6 MONTHS ENDING DECEMBER 31, 2019

WATER FUND

	PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEXPENDED	PCNT
<u>OPERATING EXPENDITURES</u>					
81-41-210 BOOKS, SUBSCR, & MEMBERSHIPS	.00	100.00	1,500.00	1,400.00	6.7
81-41-230 TRAVEL	.00	3,005.89	4,600.00	1,594.11	65.4
81-41-235 FOOD & REFRESHMENT	.00	31.53	600.00	568.47	5.3
81-41-250 EQUIPMENT SUPPLIES & MAINT	.00	.00	16,000.00	16,000.00	.0
81-41-257 FUEL	27.03	27.03	200.00	172.97	13.5
81-41-260 TOOLS & EQUIPMENT-NON CAPITAL	154.78	154.78	5,000.00	4,845.22	3.1
81-41-273 MAINT & SUPPLY - SYSTEM	4,781.39	18,810.77	58,000.00	39,189.23	32.4
81-41-285 POWER	12,905.65	73,269.01	80,000.00	6,730.99	91.6
81-41-311 ENGINEER	.00	14,966.25	5,000.00	(9,966.25)	299.3
81-41-314 LABORATORY & TESTING	280.00	6,233.00	8,000.00	1,767.00	77.9
81-41-315 LEGAL - GENERAL	.00	.00	1,000.00	1,000.00	.0
81-41-330 EDUCATION	.00	.00	4,000.00	4,000.00	.0
81-41-340 SYSTEM CONSTRUCTION SERVICES	580.00	580.00	2,000.00	1,420.00	29.0
81-41-341 CONST-CUSTOMER'S INSTALLATION	326.59	9,437.49	62,400.00	52,962.51	15.1
81-41-432 SPECIAL DEPT SUPPLIES	86.40	3,790.17	18,500.00	14,709.83	20.5
81-41-434 2019 WATER GRANT	33,335.85	62,201.57	.00	(62,201.57)	.0
81-41-580 RENT OR LEASE	1,180.84	1,180.84	.00	(1,180.84)	.0
TOTAL OPERATING EXPENDITURES	53,658.53	193,788.33	266,800.00	73,011.67	72.6
<u>NON-OPERATING EXPENDITURES</u>					
81-42-560 BAD DEBT EXPENSE	.00	.00	2,000.00	2,000.00	.0
81-42-730 IMPROVEMENTS OTHER THAN BLDGS	.00	.00	2,200.00	2,200.00	.0
81-42-742 EQUIPMENT - FIELD	.00	.00	2,500.00	2,500.00	.0
81-42-755 AZ STATE TAX SETTLEMENT	.00	150,000.00	150,000.00	.00	100.0
81-42-780 RESERVE PURCHASES	.00	7,484.69	.00	(7,484.69)	.0
81-42-815 PRINC. & INT W.RIGHTS LOAN	.00	.00	41,300.00	41,300.00	.0
81-42-911 TRANSFERS TO JOINT ADMIN FUND	.00	105,053.38	305,130.00	200,076.62	34.4
81-42-912 TRANSFERS TO LITIGATION	.00	3,133.34	17,900.00	14,766.66	17.5
81-42-914 TRANSFERS TO 2017 JMT RES FUND	.00	1,341.65	13,300.00	11,958.35	10.1
81-42-960 TRANSFERS TO RESERVE FUNDS	.00	.00	69,800.00	69,800.00	.0
81-42-999 CONTINGENCY	.00	.00	200,000.00	200,000.00	.0
TOTAL NON-OPERATING EXPENDITURES	.00	267,013.06	804,130.00	537,116.94	33.2
TOTAL FUND EXPENDITURES	53,658.53	460,801.39	1,070,930.00	610,128.61	43.0
NET REVENUE OVER EXPENDITURES	32,367.78	80,616.46	.00	(80,616.46)	.0

CITY OF HILDALE
REVENUES WITH COMPARISON TO BUDGET
FOR THE 6 MONTHS ENDING DECEMBER 31, 2019

WASTEWATER FUND

	PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEXPENDED	PCNT
<u>OPERATING REVENUES</u>					
82-37-311 SERVICE CHARGES	58,582.21	347,816.04	640,265.00	292,448.96	54.3
82-37-312 SERVICE CHARGES - CPMCWID	13,249.27	79,221.06	145,000.00	65,778.94	54.6
82-37-331 CONNECTION CHARGES	.00	(2,320.00)	10,000.00	12,320.00	(23.2)
82-37-332 SERVICING CUSTOMER INSTALL	442.50	4,866.88	20,000.00	15,133.12	24.3
82-37-411 INTEREST	.00	9,477.45	4,500.00	(4,977.45)	210.6
82-37-440 SUNDRY NON-OPERATING REVENUE	1,000.00	1,000.00	.00	(1,000.00)	.0
82-37-451 IMPACT FEE	.00	.00	10,000.00	10,000.00	.0
82-37-452 IMPACT FEE - CPMCWID	2,425.00	40,525.00	10,000.00	(30,525.00)	405.3
TOTAL OPERATING REVENUES	75,698.98	480,586.43	839,765.00	359,178.57	57.2
<u>NON-OPERATING REVENUES</u>					
82-38-102 TRANSFERS FROM R&R RESERVE	.00	.00	55,000.00	55,000.00	.0
82-38-999 CONTINGENCY	.00	.00	200,000.00	200,000.00	.0
TOTAL NON-OPERATING REVENUES	.00	.00	255,000.00	255,000.00	.0
TOTAL FUND REVENUE	75,698.98	480,586.43	1,094,765.00	614,178.57	43.9

CITY OF HILDALE
EXPENDITURES WITH COMPARISON TO BUDGET
FOR THE 6 MONTHS ENDING DECEMBER 31, 2019

WASTEWATER FUND

	PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEXPENDED	PCNT
<u>OPERATING EXPENDITURES</u>					
82-41-210 BOOKS, SUBSCR, & MEMBERSHIPS	.00	.00	500.00	500.00	.0
82-41-230 TRAVEL	50.00	1,352.59	4,600.00	3,247.41	29.4
82-41-250 EQUIPMENT SUPPLIES & MAINT	364.50	805.75	8,000.00	7,194.25	10.1
82-41-257 FUEL	165.84	801.96	2,500.00	1,698.04	32.1
82-41-260 TOOLS & EQUIPMENT-NON CAPITAL	.00	1,413.94	7,000.00	5,586.06	20.2
82-41-273 MAINTENANCE & SUPPLY - SYSTEM	6,064.53	20,292.02	55,000.00	34,707.98	36.9
82-41-285 POWER	1,914.61	10,550.03	36,000.00	25,449.97	29.3
82-41-311 ENGINEER	.00	.00	500.00	500.00	.0
82-41-314 LABORATORY & TESTING	.00	.00	1,500.00	1,500.00	.0
82-41-315 LEGAL - GENERAL	.00	.00	1,000.00	1,000.00	.0
82-41-330 EDUCATION	.00	.00	5,000.00	5,000.00	.0
82-41-340 SYSTEM CONSTRUCTION SERVICES	.00	.00	5,000.00	5,000.00	.0
82-41-341 CONST-CUSTOMER'S INSTALLATION	.00	214.50	20,000.00	19,785.50	1.1
TOTAL OPERATING EXPENDITURES	8,559.48	35,430.79	146,600.00	111,169.21	24.2
<u>NON-OPERATING EXPENSES</u>					
82-42-560 BAD DEBT EXPENSE	.00	.00	1,500.00	1,500.00	.0
82-42-720 BUILDINGS	.00	.00	5,000.00	5,000.00	.0
82-42-742 EQUIPMENT - FIELD	.00	.00	5,400.00	5,400.00	.0
82-42-780 RESERVE PURCHASES	.00	5,381.56	55,000.00	49,618.44	9.8
82-42-812 PRINCIPAL ON BONDS - RDA B	3,067.52	23,310.78	33,500.00	10,189.22	69.6
82-42-813 PRINCIPAL ON BONDS - RDA - C	580.13	3,448.41	6,400.00	2,951.59	53.9
82-42-816 PRINCIPAL ON BONDS - DWQ	.00	.00	80,000.00	80,000.00	.0
82-42-822 INTEREST ON BONDS - RDA - B	5,496.48	28,073.22	69,300.00	41,226.78	40.5
82-42-823 INTEREST ON BONDS - RDA - C	1,039.87	6,271.59	13,100.00	6,828.41	47.9
82-42-911 TRANSFERS TO JOINT ADMIN FUND	.00	97,549.59	460,000.00	362,450.41	21.2
82-42-912 TRANSFERS TO LITIGATION	.00	3,133.34	17,900.00	14,766.66	17.5
82-42-914 TRANSFERS TO 2017 JMT RES FUND	.00	1,341.65	13,300.00	11,958.35	10.1
82-42-960 TRANSFERS TO RESERVE FUNDS	.00	.00	92,900.00	92,900.00	.0
82-42-999 CONTINGENCY	.00	.00	200,000.00	200,000.00	.0
TOTAL NON-OPERATING EXPENSES	10,184.00	168,510.14	1,053,300.00	884,789.86	16.0
TOTAL FUND EXPENDITURES	18,743.48	203,940.93	1,199,900.00	995,959.07	17.0
NET REVENUE OVER EXPENDITURES	56,955.50	276,645.50	(105,135.00)	(381,780.50)	263.1

CITY OF HILDALE
REVENUES WITH COMPARISON TO BUDGET
FOR THE 6 MONTHS ENDING DECEMBER 31, 2019

GAS FUND

	PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEXPENDED	PCNT
<u>OPERATING REVENUES</u>					
84-37-111 GAS SALES - METERED NAT GAS	41,794.07	87,021.59	150,000.00	62,978.41	58.0
84-37-112 GAS SALES - METERED PROPANE	84,145.19	178,932.60	379,874.00	200,941.40	47.1
84-37-113 GAS SALES - CYLINDER	541.13	1,935.85	10,600.00	8,664.15	18.3
84-37-114 GAS SALES - CYLINDER EXCHANGE	205.39	1,020.55	3,500.00	2,479.45	29.2
84-37-121 NATURAL GAS SALES - FLAT RATE	2,520.14	14,511.83	25,000.00	10,488.17	58.1
84-37-122 PROPANE GAS - FLAT RATE	3,109.43	18,537.23	34,000.00	15,462.77	54.5
84-37-160 CONSTRUCTION REVENUE	2,741.02	9,655.43	125,000.00	115,344.57	7.7
84-37-331 CONNECTION CHARGES	780.00	3,935.00	5,000.00	1,065.00	78.7
84-37-351 SUNDRY OPERATING REVENUE	.00	.00	47,000.00	47,000.00	.0
84-37-411 INTEREST	.00	6,175.29	3,500.00	(2,675.29)	176.4
84-37-412 PENALTIES	37,433.62	56,335.82	25,000.00	(31,335.82)	225.3
TOTAL OPERATING REVENUES	173,269.99	378,061.19	808,474.00	430,412.81	46.8
<u>NON-OPERATING REVENUES</u>					
84-38-102 TRANSFERS FROM R&R RESERVE	.00	.00	180,000.00	180,000.00	.0
84-38-901 APPROP - UTILITY FUND BALANCE	.00	.00	22,000.00	22,000.00	.0
84-38-999 CONTINGENCY	.00	.00	200,000.00	200,000.00	.0
TOTAL NON-OPERATING REVENUES	.00	.00	402,000.00	402,000.00	.0
TOTAL FUND REVENUE	173,269.99	378,061.19	1,210,474.00	832,412.81	31.2

CITY OF HILDALE
EXPENDITURES WITH COMPARISON TO BUDGET
FOR THE 6 MONTHS ENDING DECEMBER 31, 2019

GAS FUND

	PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEXPENDED	PCNT
<u>OPERATING EXPENDITURES</u>					
84-41-140 BENEFITS-OTHER	.00	266.48	3,000.00	2,733.52	8.9
84-41-210 BOOKS, SUBSCR, & MEMBERSHIPS	.00	800.00	2,000.00	1,200.00	40.0
84-41-230 TRAVEL	.00	.00	4,000.00	4,000.00	.0
84-41-250 EQUIPMENT SUPPLIES & MAINT	.00	479.45	5,000.00	4,520.55	9.6
84-41-257 FUEL	105.71	673.36	1,500.00	826.64	44.9
84-41-260 TOOLS & EQUIPMENT-NON CAPITAL	.00	2,367.66	5,000.00	2,632.34	47.4
84-41-273 MAINT & SUPPLY SYSTEM	253.29	6,268.62	11,700.00	5,431.38	53.6
84-41-280 UTILITIES	.00	100.00	.00	(100.00)	.0
84-41-285 POWER	89.66	581.59	1,000.00	418.41	58.2
84-41-310 PROFESSIONAL & TECHNICAL	.00	403.75	.00	(403.75)	.0
84-41-330 EDUCATION	2,015.06	3,202.38	8,000.00	4,797.62	40.0
84-41-341 CONST-CUSTOMER'S INSTALLATION	7,799.36	12,548.82	125,000.00	112,451.18	10.0
84-41-431 NATURAL GAS COMMODITY SUPPLY	.00	(17,606.17)	65,000.00	82,606.17	(27.1)
84-41-432 PROPANE GAS COMMODITY SUPPLY	24,910.43	79,137.48	250,000.00	170,862.52	31.7
84-41-434 NAT GAS COMMODITY TRANSPORT	36,824.87	(15,414.40)	19,000.00	34,414.40	(81.1)
84-41-580 RENT OR LEASE	200.00	3,197.52	4,500.00	1,302.48	71.1
TOTAL OPERATING EXPENDITURES	72,198.38	77,006.54	504,700.00	427,693.46	15.3
<u>NON-OPERATING EXPENDITURES</u>					
84-42-560 BAD DEBT EXPENSE	.00	.00	600.00	600.00	.0
84-42-750 SP PROJECTS CAPITAL	21,658.46	21,658.46	37,000.00	15,341.54	58.5
84-42-780 RESERVE PURCHASES	.00	3,210.45	180,000.00	176,789.55	1.8
84-42-911 TRANSFERS TO JOINT ADMIN FUND	.00	37,519.07	312,802.00	275,282.93	12.0
84-42-912 TRANSFERS TO LITIGATION	.00	3,133.34	17,900.00	14,766.66	17.5
84-42-914 TRANSFERS TO 2017 JMT RES FUND	.00	1,341.65	13,600.00	12,258.35	9.9
84-42-960 TRANSFERS TO RESERVE FUNDS	.00	.00	98,200.00	98,200.00	.0
84-42-999 CONTINGENCY	.00	.00	200,000.00	200,000.00	.0
TOTAL NON-OPERATING EXPENDITURES	21,658.46	66,862.97	860,102.00	793,239.03	7.8
TOTAL FUND EXPENDITURES	93,856.84	143,869.51	1,364,802.00	1,220,932.49	10.5
NET REVENUE OVER EXPENDITURES	79,413.15	234,191.68	(154,328.00)	(388,519.68)	151.8

CITY OF HILDALE
REVENUES WITH COMPARISON TO BUDGET
FOR THE 6 MONTHS ENDING DECEMBER 31, 2019

FUND 90

	PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEXPENDED	PCNT
<u>OPERATING REVENUES</u>					
90-37-111 FIBER SALES	.00	.00	5,000.00	5,000.00	.0
90-37-331 CONNECTION CHARGES	.00	.00	1,000.00	1,000.00	.0
90-37-332 CONSTRUCTION	.00	.00	10,000.00	10,000.00	.0
TOTAL OPERATING REVENUES	.00	.00	16,000.00	16,000.00	.0
TOTAL FUND REVENUE	.00	.00	16,000.00	16,000.00	.0

CITY OF HILDALE
EXPENDITURES WITH COMPARISON TO BUDGET
FOR THE 6 MONTHS ENDING DECEMBER 31, 2019

FUND 90

	PERIOD ACTUAL	YTD ACTUAL	BUDGET	UNEXPENDED	PCNT
<u>OPERATING EXPENDITURES</u>					
90-41-260 TOOLS & EQUIPMENT-NON CAPITAL	.00	3,757.30	.00	(3,757.30)	.0
90-41-273 MAINT & SUPPLY SYSTEM	.00	34.14	16,000.00	15,965.86	.2
90-41-580 RENT OR LEASE	100.00	400.00	.00	(400.00)	.0
TOTAL OPERATING EXPENDITURES	100.00	4,191.44	16,000.00	11,808.56	26.2
TOTAL FUND EXPENDITURES	100.00	4,191.44	16,000.00	11,808.56	26.2
NET REVENUE OVER EXPENDITURES	(100.00)	(4,191.44)	.00	4,191.44	.0



Propane Tank and Cylinder Sales Policy V. 012220

Hildale-Colorado City Utility Department
320 East Newel Avenue, Hildale UT 84784

Department Objective

The Department's objective is to allow local residents to make limited purchases of propane tanks when surplus inventory is accrued.

Policy

Article I.

The Gas Department may offer a sale of propane tanks (containers designed to hold and distribute greater than 25 gallons of propane) to the general public at market value with added administrative fee.

Article III.

The sale price will be based on market prices of similarly conditioned vessels with an added administrative fee of 25% of the assessed market price. The retail price of propane tanks is NOT designed to be market competitive. Sales prices shall be at least 25% greater than the purchase price the Department paid to acquire the tank.

Article II.

The Department may not sell propane tanks if the Director assesses that the sale may damage operational abilities to deliver to tank rental customers.

Article III.

All propane tank purchases must be paid in full prior to delivery of purchase. No payment plans are to be used.

Implementation

Propane tank purchase requests will be processed through accounts receivable and reviewed by the Director. The Director will determine if there are any operational or legal barriers to the sale before rendering a decision. Upon approval, the staff will collect the full purchase price for the propane tank prior to delivery or order to deliver to customer's address. Purchase requests that are disapproved may be resubmitted at a later date. Propane tanks may be delivered, but delivery costs will be accrued based on Department staff's time.

Impact Assessments

Legal

Offering products available to customers through private means does come with some legal exposure on the grounds that competition with a city government may be unfair. However, this is likely minimal.

Financial

Considering the policy requires a pass-through plus value, there will likely be minimal additive or subtractive effects on these sales. The annual economic effect is expected to be less than \$15,000.

Operational

In order to prevent the city from becoming a wholesaler and engendering large amounts of the Department staff's time, the high sales price will hopefully discourage massive interest.

IGA

The Colorado City Gas Department wholly owns the supply and distribution of propane tanks, but will likely have minimal effects on any IGA.



Delinquent Accounts Assessment and Collections Supplemental Policy

V02.013020

Hildale-Colorado City Utility Department
320 East Newel Avenue, Hildale UT 84784

Department Objective

The Department's objective is to align a new system that streamlines delinquent accounts to ensure customer accountability and help recover receivables owed by customers.

Supplement to Chapter § 52.04 LATE CHARGE and Sec. 52-4. - Late charge.

Article I.

Accounts are to be considered delinquent after disconnection of services, or accounts with balances greater than 90 days past due.

Article II.

The Department shall not waive principle amounts accurately billed to customers for services rendered, unless subject to other relevant and applicable policies, ordinances, and laws. Late penalties may be subject to reduction or elimination as long as the amount collected reflects the administrative costs of initiating that collection action.

Article III.

The Department may waive late fee penalties on delinquent accounts under waiver memorandum directives from the Director, reviewable by the Utility Board only. All memorandum directives that institute penalty waivers will ensure uniformity and compliance with injunctions, as well as, state and federal laws, and Department objectives.

Article IV.

The Director may appoint a collections officer, or a collections agency whereby accounts with past due balances greater than 120 days to be reported and collected upon by third parties.

Article VI.

Accounts sent to collections will have 15% of the total balance waived, prior to reporting by third party collection agency.

Impact Assessment and Analysis

Legal

This policy, when equally applied should alleviate the Department's exposure to accusations of favoritism who are currently benefiting from a lack of enforcement.

Financial

This policy will have an immediate and obvious financial benefit for the Department as it will increase accountability, and credibility to potential financing organizations, as well as, recouping some of the revenue we have in our aging accounts ledger. Moving forward it should make

important but small increases to cashflow availability and increase responsiveness of our customers.

In the FY 2020 the financial impact will like exceed \$200,000, and should decrease empathically in FY 2021 with no more than an annual impact of \$30,000 to \$50,000 on an annual basis thereafter.

Operational

This policy will have a marginal effect on administrative time and operations, but as it is considered a core operation necessary to any billing office, the cost in immaterial.

IGA

N/A

COLLECTION SERVICE AGREEMENT

A. PARTIES AND RECITALS

- a. This Agreement is entered into this 27th day of January, 2020 (Effective Date) between Ray Klein, Inc., doing business as Professional Credit Service, (Professional), a Washington Corporation, and the cities **Colorado City, Arizona and Hildale, Utah** (collectively the Client), pursuant to a joint Intergovernmental Cooperative Agreement for Utilities Systems Management, Operation, and Maintenance (Utility System Agreement) which allows the cities to act together as one entity for the operation and management of a joint Utility System, collectively "the Parties."
- b. Client is the owner, or represents the owner, of certain delinquent accounts that Client desires to collect, and Client wishes to retain the services of Professional for that purpose;
- c. Professional is a licensed collection agency; and
- d. In consideration of the mutual promises and for valuable consideration, the Parties hereby agree as follows:

B. DEFINITIONS

- a. **ACCOUNTS:** Accounts receivable due and owing to Client.
- b. **ACKNOWLEDGMENT:** Written or electronic receipt of the Referral or Assignment of Client's Accounts to Professional.
- c. **ASSIGNMENT:** A transfer of Client's rights and interest in Accounts for collection or management under the terms of this Agreement
- d. **CLIENT TOOLS:** Professional's proprietary client web portal, which is used for listing and acknowledging Accounts, reporting payments, requesting cancellation and hold of Accounts, client remittance, and financial and recovery reporting.
- e. **CREDIT REPORTING AGENCY:** Agencies that engage in assembling and evaluating consumer credit information or other information on consumers for the purpose of furnishing consumer reports to third parties.
- f. **REFERRAL:** A transfer of Accounts for collection or management to Professional as agent under the terms of this agreement.
- g. **CONFIDENTIAL INFORMATION:** All non-public information protected by law, contract, policy, as a trade secret or which is otherwise of value or proprietary to Client or Professional and shared with or learned by a Professional or Client to this Agreement while performing the requirements of this Agreement.

C. RELATIONSHIP OF PARTIES

- a. **INDEPENDENT CONTRACTOR:** Professional shall perform under this Agreement as an independent contractor, not as an employee, agent or servant of Client, and nothing herein contained shall be construed to be inconsistent with this relationship or status. Professional acknowledges that its agents, employees, and servants are not entitled to benefit from Client as employees of Client.

D. RESPONSIBILITIES OF PROFESSIONAL

- a. **GOOD FAITH:** Professional shall exercise due diligence and good faith in collection of assigned Accounts.
- b. **AGENCY CONDUCT & PROFESSIONALISM:** Professional shall work diligently to conduct its business in conformity with all state and federal laws pertaining to providing and maintaining collection agency functions. Professional shall maintain the highest standards of ethical

practice and professionalism. Professional shall make reasonable efforts to protect Client's image while performing collection activities.

- c. **LICENSES & BOND:** Professional has to its best knowledge obtained all licenses and permits required by law, has posted all bonds required by law, has complied with all laws and governmental regulations required of collection agencies and is a duly licensed.
- d. **ACCOUNT ACKNOWLEDGMENT:** Professional will Acknowledge Referral of account to Client via Client Tools or electronically in a mutually agreeable format. Professional reserves all discretion to accept Referrals.
- e. **CLIENT TOOLS ACCESS AND TRAINING:** Professional will provide access to and training for Client Tools for client to:
 - i. Administer Client user Accounts on Client Tools
 - ii. Communicate with Professional
 - iii. Upload and download electronic data between Client and Professional
 - iv. Upload new Accounts
 - v. Request Cancellation and holds on Accounts
 - vi. Report payments made directly to Client
 - vii. View real time Account and reporting Information
 - viii. View information regarding Accounts
- f. **TRUST REMITTANCE:** Professional shall remit to Client on a monthly basis, Client funds (net of monies owed to Professional) via Automatic Clearing House (ACH) payments into a Money Market or Demand Deposit account belonging to and designated by Client. Professional will provide remittance advice and notification electronically through Client Tools. Professional shall retain discretion of the posting order of monies on Client Account(s).
- g. **RECORD RETENTION & INSPECTION:** Professional shall to the best of its knowledge maintain records in reasonable accordance with generally accepted accounting principles and all laws and governmental regulations required of collection agencies. Professional shall make such records relating to the collection activity of Client's Accounts available to Client for audit or inspection and available to those parties authorized in writing by Client.
- h. **CREDIT REPORTING:** Professional reports consumer credit information to credit reporting agencies at the sole discretion of Professional. Client may request that Client Accounts listed with Professional not be reported to credit reporting agencies. Professional shall handle disputes and verification of debt in accordance with the requirements of Federal and state credit reporting laws and as required by credit reporting agencies.

E. RESPONSIBILITIES OF CLIENT

- a. **ORGANIZATION:** Client represents that Client's name in Section A.a. is Client's legal name, and that Client is an Individual or duly registered business entity in the State listed Section A.a. Client shall notify Professional of material changes to Client's legal structure or name changes within a reasonable period of time.
- b. **ACCOUNT INFORMATION:** Client shall provide Professional with all account information necessary to accommodate collection functions. Client shall also promptly notify Professional of any payments or changes that affect the amount owed or nature of Accounts assigned to Professional.
- c. **DOCUMENTS:** For Professional to provide services, Client agrees to:
 - i. Provide terms and conditions (including but not limited to Account interest rates) of all Accounts and the documentation to support the terms and conditions, and
 - ii. Promptly provide updated copies of any updated terms and conditions.

iii. Client warrants that the Account documents provided under this Agreement are accurate, legal, and the most current version of the terms and conditions for each Account.

- d. **ACCOUNT VERIFICATION:** Upon Acknowledging an Account, Client hereby warrants that Client reviewed each account prior to listing that Account with Professional, and that each Account is presently due, and that Client has taken no action prior to listing the Account which would impair the collection of the account.
- e. **ACCOUNT ITEMIZATION, DOCUMENTATION AND WITNESSES:** Client shall provide additional Account itemization, documentation, and witnesses as necessary for the purpose of verification and validation of debts and/or legal actions in pursuit of collecting Accounts. In the event Client is unable to locate and/or deliver necessary account itemization and/or documentation, Client shall provide as necessary an affidavit sufficient to support verification or validation of amount due and owing. Client shall promptly sign individual Account Assignments upon Professional's request, as necessary for Professional to collect Client's Accounts.
- f. **PAYMENT OF INVOICES:** Client shall remit to Professional all amounts owing within 30 days of the date of the invoice. Professional may deduct amounts owed over 30 days from any remittance due.
- g. **AUTHORIZED REPRESENTATIVE:** Client shall designate in Client Tools authorized representatives or agents that have authority to make decisions regarding Client Accounts. Client shall be responsible for updating authorized representatives.

F. MUTUAL RESPONSIBILITIES

- a. **INDEMNIFICATION:** Professional agrees to defend, indemnify and hold Client harmless against any and all losses, expenses, damages, claims, and actions, provided said claims and causes of action arise out of the collection efforts of Professional and those representing or acting on behalf of Professional. Client agrees to defend, indemnify, and hold Professional harmless against any and all losses, expenses, damages, claims, and actions, which arise out of the actions of Client, its directors, officers, members, managers, affiliates, partners, agents, servants, and employees.
- b. **CONFIDENTIALITY:** It is understood and agreed by Professional and Client that this Agreement is confidential. Professional and Client shall not, without written consent, unless required by law, divulge any part of this Agreement. This includes, without limitation, the commission rate and any other information that a reasonable person would expect to be held in confidence. Each Party agrees that neither it nor its staff will: a) copy or remove any Confidential Information from the disclosing Party's premises; b) use any Confidential Information for its benefit or the benefit of any third party without the disclosing Party's prior written consent.
- c. **CONFIDENTIAL INFORMATION:** Each Party will maintain the confidentiality of all Confidential Information and safeguard it against loss or disclosure. The Parties' obligations pursuant to this section shall survive termination of this Agreement. The Parties' rights for breach of this Section shall survive termination of this Agreement. In the event of a breach of this Section, the non-breaching party will be entitled to injunctive relief in addition to all other remedies provided for under this Agreement or available at law.
- d. **NO SOLICITATION:** During the term of this Agreement and continuing for a period of six (6) months thereafter, Client agrees not to knowingly solicit, employ or attempt to solicit or employ in any capacity, either directly or indirectly, any employee of Professional or otherwise directly or indirectly solicit or induce such person to leave his or her employment.

G. ASSIGNMENT OF ACCOUNTS

- a. **EFFECTIVE DATE OF ASSIGNMENT:** Referral of an account by Client to Professional shall become effective as an Assignment upon Acknowledgment.
- b. **MASTER ASSIGNMENT AGREEMENT:** Client will from time to time refer Accounts to Professional for collection. Upon Acknowledgement of such Referral the Account shall become effective as an Assignment of such Account as though a separate written Assignment had been executed and delivered assigning such Account by Client to Professional. Professional may request additional Assignment forms for business purposes and Client agrees to sign such Assignment forms that are consistent with this Agreement. For valuable consideration received under this Agreement, and subject to the Termination and Cancellation provisions of this Agreement, Client grants, assigns and transfers and sets over all of Client's rights, title and interest to the Accounts including but not limited to principal, interest, costs and fees to Professional, and authorizes Professional to enforce any of Client's rights to compromise and settle said debts within Professional's delegated authority, and to endorse and collect any money order, check or other instrument received in Client's name for payment for said debts.

H. COLLECTION AUTHORITY

- a. **COLLECTION AUTHORITY:** Professional shall have full power and authority to endorse and collect any check, money order, and other instrument in payment of any Accounts referred to Professional. Professional shall have authority to institute legal collection action on any Account assigned by Client and to bring such legal action in the name of Professional. Any agreement agreeing otherwise regarding a specific individual Account shall not invalidate the power and authority detailed in this section.
- b. **FORWARD AUTHORITY:** Professional may, at its discretion, forward Client Accounts to an external collection agent, agency, or attorney to enforce collection.

I. PAYMENTS

- a. **FUNDS RECEIVED BY PROFESSIONAL:** Professional shall deposit all funds collected on Client's behalf less amounts due to Professional by Client, into a dedicated client trust account. Professional shall remit monthly, via ACH, amount owed to Client.
- b. **FUNDS RECEIVED BY CLIENT:** Client shall promptly notify Professional of any monies paid directly to Client on any Account previously referred to Professional. For each such payment made directly to Client, Professional shall be authorized to retain and deduct from client trust remittance the applicable amount due.

J. COMPENSATION AND COSTS

- a. **FULL COLLECTION SERVICE:** A commission rate of twenty-five percent (25%) shall be paid to Professional for services rendered under this Agreement on principal payments received by either Professional or Client, with the exception of subsections b and c below.
- b. **LEGAL & FORWARDING COLLECTION SERVICE:**
 - i. A commission rate of thirty-five percent (35%) shall be paid to Professional on principal payments received on referred Accounts that Professional has filed a court action or has incurred legal expense.
 - ii. A commission rate of thirty-five percent (35%) shall be paid to Professional on principal payments received on referred Accounts that Professional has forwarded to a collection agent, agency, investigator, or attorney to enforce collection.
 - iii. A commission rate of thirty-five percent (35%) shall be paid to Professional on principal payments received on referred Accounts that result in participation in any court action, including but not limited to probate, a small estate, claims, or bankruptcy.

- c. **SECOND PLACEMENT ACCOUNTS:** A commission rate of twenty-five percent (25%) shall be paid to Professional on principal payments received by either Professional or Client on referred Accounts that have been previously referred by other collection agencies.
- d. **INTEREST:** Professional will share interest income seventy-five percent (75%) to Client and twenty-five percent (25%) to Professional on payments received by either Professional or Client on Full Collection Service Accounts. Professional shall retain all interest income on payments received by either Professional or Client on all other Accounts.
- e. **COSTS & LEGAL FEES:** Professional shall pay its own costs, court costs, and legal fees associated with the collection of Accounts pursuant to this Agreement. Professional shall retain all attorney fees, court costs, post-judgment interest and other fees expended in collection of Accounts.

K. CANCELLATION POLICY: Client shall have the right to cancel assignment of Accounts, at no expense to Client; provided, however, Accounts for which Professional has expended legal fees and costs cannot be cancelled until Client reimburses the amount of such legal fees and costs to Professional and Accounts into which a payment plan has been entered cannot be cancelled until Client pays a commission to Professional for the full amount of the payment plan.

L. TERMINATION: This Agreement shall be effective as of the date first shown above and continue in effect until terminated. If Professional breaches any provision of this Agreement and if such breach is not cured within a reasonable period after receiving written notice from Client specifying such breach in reasonable detail, Client shall have the right to terminate this Agreement by giving written notice. Either Party may terminate this Agreement by giving at least thirty (30) days prior written notice of intent to terminate and therefore cancel all Accounts with Professional; however, Accounts cancelled by Client are subject to the above Cancellation Policy in Section K.

M. MISCELLANEOUS

- a. **ENTIRE AGREEMENT:** This Agreement, including any attachments, constitutes the entire Agreement and supersedes all prior agreements and understandings, both written and oral, between Professional and Client with respect to the subject matter hereof. No modification of this Agreement shall be effective unless in writing and signed by the Parties or their respective successors and assignees, if any. A waiver of any provision of this Agreement must be signed by the Party against whom enforcement of that waiver is sought. No waiver of any right or obligation under this Agreement by any Party on any occasion shall be deemed to operate as a waiver on any other occasion.
- b. **SEVERABILITY:** It is understood, and agreed, by Professional and Client that if any part, term, or provision of this Agreement is held by the courts to be illegal or in conflict with any applicable law, the validity of the remaining portions or provisions shall not be affected, and the rights and obligations of Professional and Client shall be construed and enforced as if the Agreement did not contain the particular part, term, or provision held to be invalid.
- c. **TRANSFER:** The Parties' rights and responsibilities pursuant to this Agreement inure to each Party's successors and assigns.
- d. **GOVERNING LAW & VENUE:** This Agreement shall be governed and construed in accordance with the laws of the state of Washington, and the obligations, rights and remedies of the Parties hereunder shall be determined in accordance with the laws of the state of Washington. Professional and Client each irrevocably consent to the exclusive jurisdiction and venue of any state court within Clark County, Washington, in connection with any matter based upon or arising out of this Agreement or the matters contemplated herein.
- e. **COUNTERPARTS:** This Agreement may be executed simultaneously in several counterparts, each of which shall be deemed an original and all of which together shall constitute one of the same instrument.

- f. **NOTICES:** Notices by Professional and Client about this Agreement must be in writing and personally delivered or sent by certified mail, postage prepaid, return receipt requested, to the following addresses:

To Professional:
Professional Credit Service
General Counsel
400 International Way Ste.,
250
Springfield, OR

To Client:
Colorado City, AZ and
Hildale, UT
Attn: Harrison Johnson
PO Box 840490
Hildale, UT 84784

- g. **COURT COSTS & EXPENSES:** The prevailing Party shall be entitled to reasonable attorney fees and court costs incurred by reason of enforcing any of the provisions of this Agreement at trial and on appeal. In the event Professional is required to enforce collection of amounts owing from Client, Professional will be entitled to a collection fee of twenty-five percent (25%) in addition to delinquent amounts owing.
- h. **SECTION HEADINGS:** Section headings are for convenient reference only and will not affect the meaning or interpretation of any provisions of this Agreement.
- i. **AUTHORITY:** The individuals executing this Agreement represent and warrant that they are authorized to execute this Agreement on behalf of the Parties hereto.

PROFESSIONAL CREDIT SERVICE

Authorized Signature

Date

Print Name & Title

COLORADO CITY, ARIZONA

Authorized Signature

Date

Print Name & Title

HILDALE, UT

Authorized Signature

Date

Print Name & Title

COLLECTION SERVICE AGREEMENT

A. PARTIES AND RECITALS

- a. This Agreement is entered into this 27th day of January, 2020 (Effective Date) between Ray Klein, Inc., doing business as Professional Credit Service, (Professional), a Washington Corporation, and the cities **Colorado City, Arizona and Hildale, Utah** (collectively the Client), pursuant to a joint Intergovernmental Cooperative Agreement for Utilities Systems Management, Operation, and Maintenance (Utility System Agreement) which allows the cities to act together as one entity for the operation and management of a joint Utility System, collectively "the Parties."
- b. Client is the owner, or represents the owner, of certain delinquent accounts that Client desires to collect, and Client wishes to retain the services of Professional for that purpose;
- c. Professional is a licensed collection agency; and
- d. In consideration of the mutual promises and for valuable consideration, the Parties hereby agree as follows:

B. DEFINITIONS

- a. **ACCOUNTS:** Accounts receivable due and owing to Client.
- b. **ACKNOWLEDGMENT:** Written or electronic receipt of the Referral or Assignment of Client's Accounts to Professional.
- c. **ASSIGNMENT:** A transfer of Client's rights and interest in Accounts for collection or management under the terms of this Agreement
- d. **CLIENT TOOLS:** Professional's proprietary client web portal, which is used for listing and acknowledging Accounts, reporting payments, requesting cancellation and hold of Accounts, client remittance, and financial and recovery reporting.
- e. **CREDIT REPORTING AGENCY:** Agencies that engage in assembling and evaluating consumer credit information or other information on consumers for the purpose of furnishing consumer reports to third parties.
- f. **REFERRAL:** A transfer of Accounts for collection or management to Professional as agent under the terms of this agreement.
- g. **CONFIDENTIAL INFORMATION:** All non-public information protected by law, contract, policy, as a trade secret or which is otherwise of value or proprietary to Client or Professional and shared with or learned by a Professional or Client to this Agreement while performing the requirements of this Agreement.

C. RELATIONSHIP OF PARTIES

- a. **INDEPENDENT CONTRACTOR:** Professional shall perform under this Agreement as an independent contractor, not as an employee, agent or servant of Client, and nothing herein contained shall be construed to be inconsistent with this relationship or status. Professional acknowledges that its agents, employees, and servants are not entitled to benefit from Client as employees of Client.

D. RESPONSIBILITIES OF PROFESSIONAL

- a. **GOOD FAITH:** Professional shall exercise due diligence and good faith in collection of assigned Accounts.
- b. **AGENCY CONDUCT & PROFESSIONALISM:** Professional shall work diligently to conduct its business in conformity with all state and federal laws pertaining to providing and maintaining collection agency functions. Professional shall maintain the highest standards of ethical

practice and professionalism. Professional shall make reasonable efforts to protect Client's image while performing collection activities.

- c. **LICENSES & BOND:** Professional has to its best knowledge obtained all licenses and permits required by law, has posted all bonds required by law, has complied with all laws and governmental regulations required of collection agencies and is a duly licensed.
- d. **ACCOUNT ACKNOWLEDGMENT:** Professional will Acknowledge Referral of account to Client via Client Tools or electronically in a mutually agreeable format. Professional reserves all discretion to accept Referrals.
- e. **CLIENT TOOLS ACCESS AND TRAINING:** Professional will provide access to and training for Client Tools for client to:
 - i. Administer Client user Accounts on Client Tools
 - ii. Communicate with Professional
 - iii. Upload and download electronic data between Client and Professional
 - iv. Upload new Accounts
 - v. Request Cancellation and holds on Accounts
 - vi. Report payments made directly to Client
 - vii. View real time Account and reporting Information
 - viii. View information regarding Accounts
- f. **TRUST REMITTANCE:** Professional shall remit to Client on a monthly basis, Client funds (net of monies owed to Professional) via Automatic Clearing House (ACH) payments into a Money Market or Demand Deposit account belonging to and designated by Client. Professional will provide remittance advice and notification electronically through Client Tools. Professional shall retain discretion of the posting order of monies on Client Account(s).
- g. **RECORD RETENTION & INSPECTION:** Professional shall to the best of its knowledge maintain records in reasonable accordance with generally accepted accounting principles and all laws and governmental regulations required of collection agencies. Professional shall make such records relating to the collection activity of Client's Accounts available to Client for audit or inspection and available to those parties authorized in writing by Client.
- h. **CREDIT REPORTING:** Professional reports consumer credit information to credit reporting agencies at the sole discretion of Professional. Client may request that Client Accounts listed with Professional not be reported to credit reporting agencies. Professional shall handle disputes and verification of debt in accordance with the requirements of Federal and state credit reporting laws and as required by credit reporting agencies.

E. RESPONSIBILITIES OF CLIENT

- a. **ORGANIZATION:** Client represents that Client's name in Section A.a. is Client's legal name, and that Client is an Individual or duly registered business entity in the State listed Section A.a. Client shall notify Professional of material changes to Client's legal structure or name changes within a reasonable period of time.
- b. **ACCOUNT INFORMATION:** Client shall provide Professional with all account information necessary to accommodate collection functions. Client shall also promptly notify Professional of any payments or changes that affect the amount owed or nature of Accounts assigned to Professional.
- c. **DOCUMENTS:** For Professional to provide services, Client agrees to:
 - i. Provide terms and conditions (including but not limited to Account interest rates) of all Accounts and the documentation to support the terms and conditions, and
 - ii. Promptly provide updated copies of any updated terms and conditions.

iii. Client warrants that the Account documents provided under this Agreement are accurate, legal, and the most current version of the terms and conditions for each Account.

- d. **ACCOUNT VERIFICATION:** Upon Acknowledging an Account, Client hereby warrants that Client reviewed each account prior to listing that Account with Professional, and that each Account is presently due, and that Client has taken no action prior to listing the Account which would impair the collection of the account.
- e. **ACCOUNT ITEMIZATION, DOCUMENTATION AND WITNESSES:** Client shall provide additional Account itemization, documentation, and witnesses as necessary for the purpose of verification and validation of debts and/or legal actions in pursuit of collecting Accounts. In the event Client is unable to locate and/or deliver necessary account itemization and/or documentation, Client shall provide as necessary an affidavit sufficient to support verification or validation of amount due and owing. Client shall promptly sign individual Account Assignments upon Professional's request, as necessary for Professional to collect Client's Accounts.
- f. **PAYMENT OF INVOICES:** Client shall remit to Professional all amounts owing within 30 days of the date of the invoice. Professional may deduct amounts owed over 30 days from any remittance due.
- g. **AUTHORIZED REPRESENTATIVE:** Client shall designate in Client Tools authorized representatives or agents that have authority to make decisions regarding Client Accounts. Client shall be responsible for updating authorized representatives.

F. MUTUAL RESPONSIBILITIES

- a. **INDEMNIFICATION:** Professional agrees to defend, indemnify and hold Client harmless against any and all losses, expenses, damages, claims, and actions, provided said claims and causes of action arise out of the collection efforts of Professional and those representing or acting on behalf of Professional. Client agrees to defend, indemnify, and hold Professional harmless against any and all losses, expenses, damages, claims, and actions, which arise out of the actions of Client, its directors, officers, members, managers, affiliates, partners, agents, servants, and employees.
- b. **CONFIDENTIALITY:** It is understood and agreed by Professional and Client that this Agreement is confidential. Professional and Client shall not, without written consent, unless required by law, divulge any part of this Agreement. This includes, without limitation, the commission rate and any other information that a reasonable person would expect to be held in confidence. Each Party agrees that neither it nor its staff will: a) copy or remove any Confidential Information from the disclosing Party's premises; b) use any Confidential Information for its benefit or the benefit of any third party without the disclosing Party's prior written consent.
- c. **CONFIDENTIAL INFORMATION:** Each Party will maintain the confidentiality of all Confidential Information and safeguard it against loss or disclosure. The Parties' obligations pursuant to this section shall survive termination of this Agreement. The Parties' rights for breach of this Section shall survive termination of this Agreement. In the event of a breach of this Section, the non-breaching party will be entitled to injunctive relief in addition to all other remedies provided for under this Agreement or available at law.
- d. **NO SOLICITATION:** During the term of this Agreement and continuing for a period of six (6) months thereafter, Client agrees not to knowingly solicit, employ or attempt to solicit or employ in any capacity, either directly or indirectly, any employee of Professional or otherwise directly or indirectly solicit or induce such person to leave his or her employment.

G. ASSIGNMENT OF ACCOUNTS

- a. **EFFECTIVE DATE OF ASSIGNMENT:** Referral of an account by Client to Professional shall become effective as an Assignment upon Acknowledgment.
- b. **MASTER ASSIGNMENT AGREEMENT:** Client will from time to time refer Accounts to Professional for collection. Upon Acknowledgement of such Referral the Account shall become effective as an Assignment of such Account as though a separate written Assignment had been executed and delivered assigning such Account by Client to Professional. Professional may request additional Assignment forms for business purposes and Client agrees to sign such Assignment forms that are consistent with this Agreement. For valuable consideration received under this Agreement, and subject to the Termination and Cancellation provisions of this Agreement, Client grants, assigns and transfers and sets over all of Client's rights, title and interest to the Accounts including but not limited to principal, interest, costs and fees to Professional, and authorizes Professional to enforce any of Client's rights to compromise and settle said debts within Professional's delegated authority, and to endorse and collect any money order, check or other instrument received in Client's name for payment for said debts.

H. COLLECTION AUTHORITY

- a. **COLLECTION AUTHORITY:** Professional shall have full power and authority to endorse and collect any check, money order, and other instrument in payment of any Accounts referred to Professional. Professional shall have authority to institute legal collection action on any Account assigned by Client and to bring such legal action in the name of Professional. Any agreement agreeing otherwise regarding a specific individual Account shall not invalidate the power and authority detailed in this section.
- b. **FORWARD AUTHORITY:** Professional may, at its discretion, forward Client Accounts to an external collection agent, agency, or attorney to enforce collection.

I. PAYMENTS

- a. **FUNDS RECEIVED BY PROFESSIONAL:** Professional shall deposit all funds collected on Client's behalf less amounts due to Professional by Client, into a dedicated client trust account. Professional shall remit monthly, via ACH, amount owed to Client.
- b. **FUNDS RECEIVED BY CLIENT:** Client shall promptly notify Professional of any monies paid directly to Client on any Account previously referred to Professional. For each such payment made directly to Client, Professional shall be authorized to retain and deduct from client trust remittance the applicable amount due.

J. COMPENSATION AND COSTS

- a. **FULL COLLECTION SERVICE:** A commission rate of twenty-five percent (25%) shall be paid to Professional for services rendered under this Agreement on principal payments received by either Professional or Client, with the exception of subsections b and c below.
- b. **LEGAL & FORWARDING COLLECTION SERVICE:**
 - i. A commission rate of thirty-five percent (35%) shall be paid to Professional on principal payments received on referred Accounts that Professional has filed a court action or has incurred legal expense.
 - ii. A commission rate of thirty-five percent (35%) shall be paid to Professional on principal payments received on referred Accounts that Professional has forwarded to a collection agent, agency, investigator, or attorney to enforce collection.
 - iii. A commission rate of thirty-five percent (35%) shall be paid to Professional on principal payments received on referred Accounts that result in participation in any court action, including but not limited to probate, a small estate, claims, or bankruptcy.

- c. **SECOND PLACEMENT ACCOUNTS:** A commission rate of twenty-five percent (25%) shall be paid to Professional on principal payments received by either Professional or Client on referred Accounts that have been previously referred by other collection agencies.
- d. **INTEREST:** Professional will share interest income seventy-five percent (75%) to Client and twenty-five percent (25%) to Professional on payments received by either Professional or Client on Full Collection Service Accounts. Professional shall retain all interest income on payments received by either Professional or Client on all other Accounts.
- e. **COSTS & LEGAL FEES:** Professional shall pay its own costs, court costs, and legal fees associated with the collection of Accounts pursuant to this Agreement. Professional shall retain all attorney fees, court costs, post-judgment interest and other fees expended in collection of Accounts.

K. CANCELLATION POLICY: Client shall have the right to cancel assignment of Accounts, at no expense to Client; provided, however, Accounts for which Professional has expended legal fees and costs cannot be cancelled until Client reimburses the amount of such legal fees and costs to Professional and Accounts into which a payment plan has been entered cannot be cancelled until Client pays a commission to Professional for the full amount of the payment plan.

L. TERMINATION: This Agreement shall be effective as of the date first shown above and continue in effect until terminated. If Professional breaches any provision of this Agreement and if such breach is not cured within a reasonable period after receiving written notice from Client specifying such breach in reasonable detail, Client shall have the right to terminate this Agreement by giving written notice. Either Party may terminate this Agreement by giving at least thirty (30) days prior written notice of intent to terminate and therefore cancel all Accounts with Professional; however, Accounts cancelled by Client are subject to the above Cancellation Policy in Section K.

M. MISCELLANEOUS

- a. **ENTIRE AGREEMENT:** This Agreement, including any attachments, constitutes the entire Agreement and supersedes all prior agreements and understandings, both written and oral, between Professional and Client with respect to the subject matter hereof. No modification of this Agreement shall be effective unless in writing and signed by the Parties or their respective successors and assignees, if any. A waiver of any provision of this Agreement must be signed by the Party against whom enforcement of that waiver is sought. No waiver of any right or obligation under this Agreement by any Party on any occasion shall be deemed to operate as a waiver on any other occasion.
- b. **SEVERABILITY:** It is understood, and agreed, by Professional and Client that if any part, term, or provision of this Agreement is held by the courts to be illegal or in conflict with any applicable law, the validity of the remaining portions or provisions shall not be affected, and the rights and obligations of Professional and Client shall be construed and enforced as if the Agreement did not contain the particular part, term, or provision held to be invalid.
- c. **TRANSFER:** The Parties' rights and responsibilities pursuant to this Agreement inure to each Party's successors and assigns.
- d. **GOVERNING LAW & VENUE:** This Agreement shall be governed and construed in accordance with the laws of the state of Washington, and the obligations, rights and remedies of the Parties hereunder shall be determined in accordance with the laws of the state of Washington. Professional and Client each irrevocably consent to the exclusive jurisdiction and venue of any state court within Clark County, Washington, in connection with any matter based upon or arising out of this Agreement or the matters contemplated herein.
- e. **COUNTERPARTS:** This Agreement may be executed simultaneously in several counterparts, each of which shall be deemed an original and all of which together shall constitute one of the same instrument.

- f. **NOTICES:** Notices by Professional and Client about this Agreement must be in writing and personally delivered or sent by certified mail, postage prepaid, return receipt requested, to the following addresses:

To Professional:
Professional Credit Service
General Counsel
400 International Way Ste.,
250
Springfield, OR

To Client:
Colorado City, AZ and
Hildale, UT
Attn: Harrison Johnson
PO Box 840490
Hildale, UT 84784

- g. **COURT COSTS & EXPENSES:** The prevailing Party shall be entitled to reasonable attorney fees and court costs incurred by reason of enforcing any of the provisions of this Agreement at trial and on appeal. In the event Professional is required to enforce collection of amounts owing from Client, Professional will be entitled to a collection fee of twenty-five percent (25%) in addition to delinquent amounts owing.
- h. **SECTION HEADINGS:** Section headings are for convenient reference only and will not affect the meaning or interpretation of any provisions of this Agreement.
- i. **AUTHORITY:** The individuals executing this Agreement represent and warrant that they are authorized to execute this Agreement on behalf of the Parties hereto.

PROFESSIONAL CREDIT SERVICE

Authorized Signature

Date

Print Name & Title

COLORADO CITY, ARIZONA

Authorized Signature

Date

Print Name & Title

HILDALE, UT

Authorized Signature

Date

Print Name & Title

Backhoe-Recalculation Rate

Back Hoe

Depreciation Per Year		Maintenance Cost	Fuel Cost
\$	8,000.00	\$ 10,000.00	\$ 1,000.00

Annual Fixed Costs

Depreciation	\$ 8,000.00
Maintenance Cost	\$ 10,000.00
Fuel Costs	\$ 1,000.00
	\$ 19,000.00

Current Variable Costs Per Hour of Operation

Operator	\$ 65.00
Capital Reserve Fund Fee	\$ 75.00
Administrative Cost	\$ 20.00
	\$ 160.00

Available Customer Hours	300
Fixed Cost of Customer Hour	\$ 65.00
Variable Cost of Customer Hour	\$ 160.00
Total Cost of Customer Hour	\$ 225.00

Impact Assessment

Legal

This may help reduce extraneous legal liability of providing market competitive services as a municipality, but otherwise it should be minimal.

Financial

Increasing the per hour cost of the backhoe will bring the revenue of operation hour use above straight-line depreciation and account for wear-and-tear use. Additionally, it should more accurately reflect the total administrative cost incurred by customer billing services.

Operational

This increase should allow us to come closer to the bids of private market competitors and reduce overall customer use of our backhoe.

IGA

The Department shall need to consider a reduced inter-departmental rate for other city department's use.



Waiver Review Policy V. 011720

Hildale-Colorado City Utility Department
320 East Newel Avenue, Hildale UT 84784

Department Objective

The Department's objective is to streamline the waiver process and allow customers to achieve faster outcomes with less administrative and bureaucratic headache. As many waiver requests are simply perfunctory, this should allow the Department to satisfy the vast majority of customer requests quickly.

Policy

Article I.

All waiver or discount requests from customers shall be administratively reviewed and adjudicated by the Department Director based on applicable existing ordinances, policies and objectives. The customer shall be notified by writing of the decision and shall be allowed to submit an appeal if the customer is not satisfied with the Department's administrative decision.

Article III.

The Department will gather information and implement a decision within 10 business days.

Article II.

If a customer requests an appeal and the customer remains unsatisfied with Department's decision, they shall have the opportunity to appeal to the Utility Board. If the customer remains unsatisfied or wishes to file a formal complaint, the Department Action Appeal and Complaint Policy V120318 shall be followed.

Implementation

Department staff will fill out waiver and discount requests and submit them to the Director along with any relevant account information that may include a written narrative. The Director shall gather any further necessary information and render a decision. Staff will inform the customer in writing. Department staff will make the necessary changes and disbursements to the customer's account with the 10 business day period.

Impact Assessments

Legal

This policy follows the Department's efforts to formalize and streamline previously ad hoc processes and will likely result in greater reductions of legal risk.

Financial

N/A

Operational

This change will reduce overall administrative costs by more quickly adjudicating customer waiver requests, while still allowing customers an appellate authority if they desire one.

IGA

There will be minimal effect on any IGA, but some waiver requests may need to be closely coordinated with the respective city manager if there are distinctions in ordinances or policies.



New Occupant High Waste Water Waiver Policy V011620

Hildale-Colorado City Utility Department
320 East Newel Avenue, Hildale UT 84784

Department Objective

The Department's objective is to allow customers, who are new to our community and have taken up residence to find that the previous customer's set sewer rate is significantly larger than the new customers needs, to alleviate the financial burden and more accurately reflect the appropriate rate.

Policy

Article I.

New customers whose service is activated after a sewer recalculation, may have their sewer rate recalculated based on three months of continued usage. If the recalculation is lower, then the Department shall reimburse the customer the difference between the old and new rate during the applicable period. A waiver and reimbursement under this policy must be applied for prior to the following rate setting period (Winter Months).

Article II.

The customer must certify that they have not occupied the property within the last 24 months. If customer is discovered to have been a previous occupant of the property, all reimbursed fees shall be reapplied, with an additional \$100 administrative fee and the Department may pursue applicable civil or criminal action against the offending parties.

Article III.

The previous customer may not be an occupant of the property. If the previous customer is found to be the occupant of the property, all reimbursed fees shall be reapplied, with an additional \$100 administrative fee, and the Department may pursue applicable civil or criminal action against the offending parties.

Article IV.

If the customer is in violation of any laws, ordinances or department regulations, they are not eligible for a waiver under this policy.

Implementation

Department staff will receive requests from customers who have concerns about previously set wastewater rates and inform the customer to return prior to the next wastewater rate setting period for reimbursement. Once requested, staff will either catalog the next three months of usage and conduct a recalculation and reimbursement if necessary, or if three months of usage has passed, conduct an immediate recalculation, and reimbursement if applicable.

Department staff shall require the customer to sign a document attesting that they are not a previous occupant of the property for the last 24 months, and that the previous customer is not currently an occupant. If a violation is suspected, the investigation may fall under the current

Department Notification and Investigation Policy 2019 and/or coordinated with the law enforcement.

Impact Assessments

Legal

This policy will give our staff more uniformity to address a common customer complaint, where they have previously been charged for services they weren't necessarily using.

Financial

The financial effects should remain minimal and will likely remain below \$1,000 annually.

Operational

There will be some added administrative effort to processing these requests. Additionally, if a violation is suspected there may be some investigation necessary.

IGA

Not Applicable.

COLORADO CITY CULINARY WATER
TREATMENT PLANT
PRELIMINARY ENGINEERING REPORT

DRAFT

January 2020

PREPARED BY:



SUNRISE ENGINEERING, INC.
11 North 300 West
Washington, UT 84780
TEL: 435-652-8450
FAX: 435-652-8416

Dustyn W. Shaffer, P.E.
Project Engineer
State of Utah No. 176874

Dustyn W. Shaffer, P.E.
Project Engineer
State of Arizona No. 38923

© Copyright 2019 Sunrise Engineering, Inc.

Table of Contents

1	PROJECT PLANNING.....	1
1.1	LOCATION.....	1
1.2	ENVIRONMENTAL RESOURCES PRESENT	1
1.3	POPULATION TRENDS.....	1
1.4	COMMUNITY ENGAGEMENT	3
2	EXISTING FACILITIES.....	3
2.1	LOCATION MAP.....	4
2.2	HISTORY.....	4
2.3	CONDITION OF EXISTING FACILITIES.....	4
2.4	FINANCIAL STATUS OF ANY EXISTING FACILITIES.....	5
2.5	WATER/ENERGY/WASTE AUDITS.....	5
3	NEED FOR STUDY	6
3.1	HEALTH, SANITATION, AND SECURITY.....	6
3.2	AGING INFRASTRUCTURE	6
3.3	REASONABLE GROWTH.....	7
4	ALTERNATIVES CONSIDERED.....	8
4.1	ALTERNATIVE 1	8
4.1.1	DESCRIPTION.....	8
4.1.2	DESIGN CRITERIA.....	8
4.1.3	MAP.....	8
4.1.4	ENVIRONMENTAL IMPACTS.....	8
4.1.5	LAND REQUIREMENTS	8
4.1.6	POTENTIAL CONSTRUCTION PROBLEMS.....	8
4.1.7	SUSTAINABILITY CONSIDERATIONS.....	8
4.1.8	COST ESTIMATES.....	9
4.2	ALTERNATIVE 2	9
4.2.1	DESCRIPTION.....	9
4.2.2	DESIGN CRITERIA.....	9
4.2.3	MAP.....	9
4.2.4	ENVIRONMENTAL IMPACTS.....	10
4.2.5	LAND REQUIREMENTS	10
4.2.6	POTENTIAL CONSTRUCTION PROBLEMS.....	10
4.2.7	SUSTAINABILITY CONSIDERATIONS.....	10
4.2.8	COST ESTIMATES.....	11
4.3	ALTERNATIVE 3	11
4.3.1	DESCRIPTION.....	11
4.3.2	DESIGN CRITERIA.....	11
4.3.3	MAP.....	11

4.3.4	ENVIRONMENTAL IMPACTS.....	12
4.3.5	LAND REQUIREMENTS	12
4.3.6	POTENTIAL CONSTRUCTION PROBLEMS.....	12
4.3.7	SUSTAINABILITY CONSIDERATIONS.....	12
4.3.8	COST ESTIMATES	13
4.4	ALTERNATIVE 4	13
4.4.1	DESCRIPTION	13
4.4.2	DESIGN CRITERIA	13
4.4.3	MAP.....	13
4.4.4	ENVIRONMENTAL IMPACTS.....	13
4.4.5	LAND REQUIREMENTS	14
4.4.6	POTENTIAL CONSTRUCTION PROBLEMS.....	14
4.4.7	SUSTAINABILITY CONSIDERATIONS.....	14
4.4.8	COST ESTIMATES	14
5	SELECTION OF PREFERRED ALTERNATIVE	15
5.1	MONETARY FACTORS	15
5.2	NON-MONETARY FACTORS	15
5.3	DECISION MATRIX SUMMARY	16
6	PROPOSED PROJECT (RECOMMENDED ALTERNATIVE)	17
6.1	PRELIMINARY PROJECT DESIGN.....	17
6.2	PROJECT SCHEDULE.....	17
6.3	PERMIT REQUIREMENTS	17
6.4	SUSTAINABILITY CONSIDERATIONS.....	17
6.4.1	WATER AND ENERGY EFFICIENCY	17
6.4.2	GREEN INFRASTRUCTURE	18
6.4.3	OTHER.....	18
6.5	TOTAL PROJECT COST ESTIMATE	18
6.6	ANNUAL OPERATING COST	18
6.6.1	INCOME	18
6.6.2	ANNUAL O&M.....	18
6.6.3	DEBT REPAYMENTS?.....	18
6.6.4	RESERVES?	18
7	CONCLUSIONS AND RECOMMENDATIONS	19
8	UTAH SUPPLEMENT	20
8.1	CONACT.....	20
8.2	WATER QUALITY	20
8.3	WATER SYSTEM ANALYSIS	20
8.4	ACCESSIBILITY – (NOT APPLICABLE?)	20
8.5	COORDINATES	20
8.6	RUS-WEP HOMELAND SECURITY INITIATIVE.....	20
8.7	CONTACT INFORMATION.....	21

8.8 CONTRACT DOCUMENTS 21

1 PROJECT PLANNING

Sunrise Engineering, Inc. (Sunrise) was retained by the Town of Colorado City to conduct a Preliminary Engineering Report to evaluate alternatives to address deficiencies of their culinary water treatment plant. The first alternative evaluated was the “do nothing” alternative which would be to keep the plant operating as it is. The other options evaluated are to either construct a new water treatment plant or to make changes and/or renovations to the existing plant.

1.1 LOCATION

Colorado City is located in Mohave County in northwestern Arizona. Colorado City shares a culinary water system with Hildale City which is located across the state line in Washington County, Utah.

1.2 ENVIRONMENTAL RESOURCES PRESENT

The proposed improvements will occur in existing rights-of-way and within previously disturbed areas. Additionally, the following two areas are determined to have minimal impacts.

1. FEMA Floodplain Map

The FEMA Floodplain Map classifies area of improvements as Zone X which are areas of 0.2% annual chance flood, areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile, and areas protected by levees from 1% annual chance flood.

2. National Wetlands

There are no wetlands determined to be found within the project vicinity.

1.3 POPULATION TRENDS

Table 1-1 shows Colorado City’s and Hildale’s recent connection history, and the average annual growth rate from 2011 to 2018. The population decrease that is reflected represents an unusual trend that is in large part due to political and cultural shifts in the community’s demographic over this time period. It is not expected that this population decline would continue long-term.

Table 1-1: Historical Population Growth

Calender Year	Hildale Population	Colorado City Population	Est. Combined Population (Census)	# of Connections	Est. Growth Rate
2011	2374	4317	6691	912	0.33%
2012	2387	4341	6728	917	0.55%
2013	2384	4336	6720	916	-0.12%
2014	2375	4318	6693	912	-0.40%
2015	2384	4335	6719	916	0.39%
2016	2257	4105	6362	867	-5.31%
2017	2319	4217	6536	891	2.73%
2018	2207	4014	6221	848	-4.82%
Average Growth Rate					-0.83%

The number of future connections was estimated by analyzing the historical number of connections and census records. Because Colorado City and Hildale utilize the same water system, the census records and past number of connections of both Colorado City and Hildale were included in the analysis.

Census population data shows that since 1990, the combined population of the communities have increased by 1.77% per year; however, in the last 5 years, the combined population has decreased by -1.45% per year. In the updated Hildale City Culinary Water Master Plan (completed by Sunrise Engineering in 2020), engineers and community leaders determined there will be no population change through year 2021, an estimated growth rate of 1.0% from 2022 to 2024, and a growth rate of 1.8% for the year 2025 and until the end of the planning period. This report uses the same growth rate for projecting the future population.

Table 1-2 below shows the results from the projected growth rate analysis. Both Hildale City and the Town of Colorado City are included in the results.

Table 1-2: Population Projections

Year	Combined Population or Projection	Annual Growth Rate
1990	3811	
2000	5229	3.21%
2010	6669	2.46%
2020	6222	-0.68%
2030	7135	1.37%
2040	8528	1.80%

1.4 COMMUNITY ENGAGEMENT

Before the Town Council approves the PER, it is anticipated that a public open house will be held to discuss the alternatives and recommendation in this report.

2 EXISTING FACILITIES

Groundwater from the Upper Virgin River basin currently provides the primary sources of drinking water for Colorado City and Hildale. These sources are derived from springs and wells. There are three groundwater systems in the area that are used as municipal water sources including the Navajo Sandstone aquifer, Shinarump aquifer, and the alluvial aquifer. (Sunrise, 2016)

The major source of culinary water comes from six deep wells in the Shinarump aquifer. The water from all but two of the deep wells run through the treatment plant before being pumped into the distribution system. The treatment plant is also fed by seven shallow wells drawing water from the alluvial aquifer. The shallow wells are higher in iron and manganese than the deep wells and contribute to higher turbidity in the water. Currently the deep wells provide half the source available to the treatment plant and the shallow wells provide the other half. The total source available is approximately 1,240 gpm.

We understand customers have long tended to avoid drinking water from the distribution system at their tap due to taste and odor issues, and many residents use bottled water or fill up containers at the Maxwell Canyon source. High iron and manganese from the wells have been known to result in stained laundry. This is one point of focus for the treatment facility.

The two wells that are not yet run through the treatment plant are the Power Plant and Academy wells. The Power Plant Well was formerly used for cooling water in the operation of the old power plant. In 2016, the City received an Operating Permit for the Power Plant Well from the State of Utah Department of Environmental Quality (UDEQ). The permit was granted along with monitoring and reporting requirements, specifically to watch radionuclides that were found to be present. This well has pumped directly into the system.

The Academy Well was drilled in 2017 and piping has been installed such that it could be sent to the treatment plant. However, the well was not put online due to permitting requirements not yet being met with the Arizona Department of Environmental Quality (ADEQ). Colorado City is currently in communication with the ADEQ to obtain a permit to operate the Academy Well.

The culinary system also contains water from two springs (Jans and Maxwell springs) located in the Navajo Sandstone aquifer. The two springs come from horizontal wells and offer good quality of water that feeds directly into the distribution system. These springs make up a small portion of the overall source for the culinary water system.

The existing treatment plant has an approximate max capacity of 1,200 gpm. The treatment plant is a potassium permanganate media water treatment plant. The water treatment plant chlorinates the well water and treats for high iron and manganese content through an oxidation and rapid

greensand filter process. Oxidation is accomplished using potassium permanganate (KMnO₄) and Chlorine (Cl₂). The raw water is injected with KMnO₄, goes into a static mixer, then passes through a contact chamber before entering the first set of filters. After the first set of filters Cl₂ is injected and water passes through another static mixer before passing through the second set of filters and then into two clearwell tanks. A backwash cycle is used to clean contaminants from filter media. The backwash water with its contaminants is sent to the sewer system. The backwash process is performed on a timed basis where filters are currently backwashed after being operated for approximately 15 hours. All six filters are continually operated and there is no redundancy or backup filters.

2.1 LOCATION MAP

Appendix A shows a map with the location of the existing water treatment plant.

2.2 HISTORY

The first set of filters for the existing treatment plant were installed in the early 1980's. Then in the early 2000's the filter vessels were sand blasted and lined with an epoxy coating and the media was replaced. A second set of filters were added in the late 1990's. Each set of filters contains three filters each.

In 2017, Sunrise Engineering performed an optimization report on the existing plant. The purpose of the report was to identify areas where improvements could be made and to provide recommendations. These recommendations have not yet been implemented into the plant. A copy of this optimization report is attached in Appendix H.

In March of 2019, The Town of Colorado City and City of Hildale were given a Notice of Violation (NOV) from the State of Utah Division of Drinking Water (DDW). The NOV was a result of radium levels in the Power Plant Well that exceeded the State's Maximum Contaminant Levels (MCL).

An update to the Hildale City's Water Master Plan is currently being done by Sunrise Engineering. The capital improvements outlined in this report will be included in the updated plan.

2.3 CONDITION OF EXISTING FACILITIES

The six filters in the existing treatment plant were designed to have the ability to run in parallel, meaning that raw water would only go through one filter vessel before entering the clearwell. Historically this setup has not sufficiently treated the water, so modifications were made to run the filters in series. This means water passes through two filters, one on each set. This modification increased the effectiveness of the treatment but reduced efficiency and design flow capacity.

The two sets of filters in the plant are different sizes. Manufacturers indicate that filters of differing sizes can contribute to problems with filtration rates and overall performance differences between the two banks of filters when being run in series.

In the optimization report for the existing treatment plant it was determined that when the plant is operating at maximum capacity the filtration rates are very high for the media configuration. Because of this, the report stated that even though the plant was originally setup to handle upwards of 2,400 gpm if ran in parallel, the existing configuration and condition of the plant is such that it would not be recommended to exceed the current max flow of 1,200 gpm.

Currently the plant does not have any redundancy with the filters. This means that there is no backup filter when one is taken offline. When a filter is taken offline for a backwash or maintenance this puts an added strain on the remaining filters. It is generally recommended to have one or multiple redundant filters.

An added and significant concern is the electrical interference that the electronic equipment at the treatment plant experiences from an unknown source. This causes the water to carry a charge through the treatment process and has two major effects. First, instruments that should be used for testing and measuring water characteristics during the treatment process do not function properly or at all. Second, operators suspect that the charge the water carries interferes with the treatment process and causes it to be less effective. The City is currently looking into the cause of this problem. Prior to the implementation of the preferred alternative the electrical interference should be identified and mitigated.

2.4 FINANCIAL STATUS OF ANY EXISTING FACILITIES

A copy of the certified 2018 budget is included in Appendix G which shows the expenses for the water department. Table 2-1 shows a breakdown of the existing treatment plant operation and maintenance (O&M) expenses. The water department budget is not specifically broken out into how much of the overall system O&M is spent on the treatment plant. Because of this an assumption was made regarding the percent of the budget that goes to the treatment plant. Based on comparisons of other treatment facilities in the county, it was assumed that 30% of the water budget goes towards O&M of the existing plant.

Table 2-1: O&M Cost Breakdown

Operation and Maintenance Costs	
Power Costs	\$ 20,311.80
Chemical Costs	\$ 11,225.28
Other O&M	\$ 265,410.58
Total O&M	\$ 296,947.66

2.5 WATER/ENERGY/WASTE AUDITS

No recent audits have been performed on the system in conjunction with the proposed project.

3 NEED FOR STUDY

3.1 HEALTH, SANITATION, AND SECURITY

The State of Utah Public Drinking Water Regulations (R309), in accordance with the National Safe Drinking Water Act, have adopted “primary” regulations for the protection of public health and “secondary” regulations related to taste and aesthetics. Applicable “primary” standards and treatment techniques must be met by all public drinking water systems. “Secondary” standards are optional standards which are meant to help water suppliers avoid consumer complaints.

These “primary” regulations require removal of numerous contaminants in order to comply with the maximum contaminant levels (MCLs) outlined in R309-200. The contaminants found in the raw water used for the culinary water system in Colorado City / Hildale are iron, manganese, and radium.

Raw water from the Power Plant Well contains more radium and manganese than is allowed per the Utah R309 state code. Water from this well needs to be treated before it can be put into the system. Water tests from the other deep wells also show radium levels above the State MCLs. Because of the tests from other deep wells City officials anticipate that all the deep wells, including Academy Well, contain high levels of radium.

In order to address contaminant levels from Power Plant and Academy wells the water from these wells need to go through the treatment plant. This will increase the amount of source available from the deep wells. These are the preferred wells to use due to the inferior quality of water from the shallow wells.

The increase in usage of the deep wells will also increase the concentration of radium that is going into the plant. With the increase in radium concentration going to the treatment plant, it is anticipated that the existing facility will not be able to treat the radium sufficiently to keep contaminants under the MCLs for iron, manganese, and radium.

3.2 AGING INFRASTRUCTURE

The existing filters in the plant are aged, worn, and not performing as originally designed. As stated above, the reconfiguration of filter banks has also changed the way the plant operates. Improvements to the plant will need to be made for it to meet existing and future needs of the system.

3.3 REASONABLE GROWTH

The existing wells (treated) along with the springs and Power Plant Well meet the current source demands. The required treatment of the Power Plant Well means the treatment plant will need to have a higher capacity, or the amount of culinary water source for the community will be deficient. As the number of connections increase, the required source will become more deficient. Recommendations will be made to remedy this capacity deficiency.

See the current culinary water master plan for a breakdown of required water rights, source, storage, distribution for the current population and for future growth (Sunrise 2020).

4 ALTERNATIVES CONSIDERED

Four possible alternatives were considered to address issues detailed in the previous sections. These alternatives consisted of the “do nothing alternative”, constructing a new treatment plant, renovating the existing plant with new filters, and adding additional filters to the existing plant.

4.1 ALTERNATIVE 1

4.1.1 DESCRIPTION

This alternative is the “do nothing” alternative. This alternative would keep the existing treatment plant the way it is. The existing plant is struggling to meet the needs of the community in its current condition. Keeping the current system as is will not address the issue of radium and the NOV received from the State, since the Power Plant and Academy wells are not even tied into the treatment facility. Due to the existing conditions of the treatment plant, the current water quality issues of the existing wells, and the need for water from the Power Plant and Academy wells, this alternative is ruled out as a possible alternative.

4.1.2 DESIGN CRITERIA

No design criteria are given for this alternative.

4.1.3 MAP

No map is given for this alternative.

4.1.4 ENVIRONMENTAL IMPACTS

No environmental impacts are cited for this alternative.

4.1.5 LAND REQUIREMENTS

No land is required for this alternative.

4.1.6 POTENTIAL CONSTRUCTION PROBLEMS

No construction problems are anticipated with this alternative.

4.1.7 SUSTAINABILITY CONSIDERATIONS

4.1.7.1 WATER AND ENERGY EFFICIENCY

No change would occur to the existing water and energy efficiencies.

4.1.7.2 GREEN INFRASTRUCTURE

Not Applicable

4.1.7.3 OTHER

Not Applicable

4.1.8 COST ESTIMATES

No cost estimate is included with this alternative.

4.2 ALTERNATIVE 2

4.2.1 DESCRIPTION

Alternative 2 is to construct a new pressure filtration treatment plant. This would be a similar type of plant as the existing treatment facility, but with modern equipment and designed to meet current and future requirements. With a low flow system and need to treat iron and manganese as well as radium, a pressure filtration is a common recommendation made by treatment specialists. A new plant would be sized appropriately to treat the levels of contaminants that are currently present in the raw water. A new facility would use updated equipment and media to be able to properly treat the amount of contaminants coming into the facility. A new plant would have the ability for increased production to accommodate the volume of water from Power Plant Well and Academy Well and be expandable for future growth.

A new plant would be designed to incorporate more efficient and simpler operations and maintenance. This would provide for automated systems so that the treatment plant requires less hands-on operation. For this, and any alternative, the electrical interference that is described in Section 2.3 will need to be addressed.

The installation of a new facility will replace the need to implement the recommendations found in the optimization report.

4.2.2 DESIGN CRITERIA

The design criteria for the project are based on regulations from ADEQ, the State of Utah Rules for Public Drinking Water Systems and the requirements shown in the updated water master plan. These rules outline the requirements for contaminate removal and what levels of contaminate are allowed in the treated water. The master plan outlines the requirements for flow to meet current conditions and future needs.

4.2.3 MAP

See Appendix B for map of proposed improvements.

4.2.4 ENVIRONMENTAL IMPACTS

Environmental impacts would include construction disturbance in the area around the existing treatment plant where the new treatment plant would be located. This site is owned by the City and has been previously disturbed. The rest of the project would occur under roadways or locations that have previously been disturbed.

4.2.5 LAND REQUIREMENTS

This project would occur on land currently owned by either the Town of Colorado City or Hildale City. The most likely location would be on the site of the existing treatment facility.

4.2.6 POTENTIAL CONSTRUCTION PROBLEMS

Coordination between manufacturer, contractor, engineer, and town/city staff, would be necessary. One of the primary challenges will be to construct a new facility while keeping the existing treatment plant in service. Where most of the culinary water in the community comes from this facility, the transition from the old plant to the new plant will take coordination and planning.

4.2.7 SUSTAINABILITY CONSIDERATIONS

4.2.7.1 WATER AND ENERGY EFFICIENCY

The operations could be designed to be automated so that backwashes and water to waste processes are done consistently and only as needed, reducing water usage and waste. Updated electrical systems and controls would also increase efficiency.

4.2.7.2 GREEN INFRASTRUCTURE

Not Applicable.

4.2.7.3 OTHER

A main concern for these projects is the time it would take to implement each alternative. Where a new plant is starting from scratch it is anticipated that this alternative would take the longest to be put into operation. The primary scheduling issue for this alternative is design and construction of a new building, piping, and treatment facilities. Permitting with the State(s) may also take longer than the other alternatives. It is anticipated that the lead time for equipment will be significant but similar to the other alternatives.

4.2.8 COST ESTIMATES

The estimated cost of this alternative is \$4,423,000. An itemized cost estimate of this alternative is found in Appendix C. This cost estimate assumes a new plant with a max flow capacity of 1,500 gpm to account for future growth. Where growth is estimated to be slow for the next few years it is possible that a future plant could be designed at a lower max flow but be built to have space for additional filters when a high flow is needed in the future.

4.3 ALTERNATIVE 3

4.3.1 DESCRIPTION

Alternative 3 is to renovate the building of the existing treatment plant but to replace the existing filters and most of the internal piping so that the new filters would be set in parallel. The new filters would be designed and sized to treat current contaminant levels found in the raw water and provide sufficient flows for current and future needs.

Because the treatment plant provides the majority of source that is needed for the city, the plant cannot be shut down to perform a renovation. The renovation would need to happen in a way that would allow for the facility to stay in operation. This would require that one set of the filters be operational while the other set is replaced. The new filters would need to be fully constructed, operational, and receive an operating permit to be put into the distribution system. After the new set of filters is operational the other filter set could be replaced.

It is possible that one set of filters will not be able to function well enough to perform the process described above. The other option to keep water flowing into the system is to rent a mobile treatment facility for the duration of the renovation.

This renovation would include recommendations that were made during the optimization report. However, recommendations for improvements to the chemical and chlorine injections would still need to be implemented. Also, the purchasing and setup of instrumentation for testing will be required.

4.3.2 DESIGN CRITERIA

The design criteria for the project are based on regulations from ADEQ, the State of Utah Rules for Public Drinking Water Systems and the requirements shown in the updated water master plan. These rules outline the requirements for contaminate removal and what levels of contaminate are allowed in the treated water. The master plan outlines the requirements for flow to meet current conditions and for future needs.

4.3.3 MAP

See Appendix B for map of proposed improvements.

4.3.4 ENVIRONMENTAL IMPACTS

Environmental impacts would include construction disturbance in the area around the existing treatment plant while filters are being replaced or where a mobile treatment plant would be set up. The rest of the project would occur under roadways or location that have previously been disturbed.

4.3.5 LAND REQUIREMENTS

This project would occur on the existing site which is currently owned by Colorado City.

4.3.6 POTENTIAL CONSTRUCTION PROBLEMS

Installing new filters in the existing building will require planning and coordination to address potential construction and design challenges. Tying in the new filters to the existing piping will require careful design and construction consideration. The existing treatment plant does not have a lot of available space. Over the years, treatment components have been added and rearranged. This poses a problem when trying to maintain service to the community while replacing the old equipment, piping, electrical and controls, etc.

Drinking water still needs to be produced while the plant is being renovated. If one set of filters can handle the system demand, the filters may be able to be replaced in phases. Phasing this way would cause construction challenges associated with installing new equipment while not disturbing ongoing operations. Another option would be to rent a temporary mobile treatment plant. This option would reduce the constructability issues but would also increase the costs.

4.3.7 SUSTAINABILITY CONSIDERATIONS

4.3.7.1 WATER AND ENERGY EFFICIENCY

The operations could be designed to be automated so that backwashes and water to waste processes are done consistently and only as needed, thereby reducing water usage and waste. Updated electrical systems and controls would also increase efficiency.

4.3.7.2 GREEN INFRASTRUCTURE

Not Applicable

4.3.7.3 OTHER

A primary challenge for these projects is the time it would take to implement each alternative. By eliminating the need to construct a new building it is anticipated that this option may be constructed faster than the new plant. However, this is unclear and sometimes retrofits can be just as costly and time consuming. Incorporating new filters into the existing plant and being

constrained by the footprint of the existing building has the possibility of a longer, more complex construction process and certainly more unknowns. With a longer design and the constructability issues discussed in Section 4.3.6, we will assume this alternative will require a similar amount of time to implement as Alternative 1.

4.3.8 COST ESTIMATES

The estimated cost for this alternative is \$3,239,000. An itemized cost estimate of this alternative is in Appendix C.

4.4 ALTERNATIVE 4

4.4.1 DESCRIPTION

This alternative is to add additional pressure filtration filters to the existing plant. The additional filters would be configured to run with the existing plant filters. The new filters and existing filters would work together in series and parallel so that water would be treated adequately with sufficient capacity. The exact configuration of the filters would be determined during design.

Like Alternative 3 the new filters would need to be installed while the existing plant remains in operation. The new filters would need to be installed in a different building or a room be added on to the existing plant. Installing new filters will still have conflicts and challenges tying into the existing plant while keeping it in operation.

This alternative would not address any of the aspects of the optimization report. To ensure the plant operates properly with the additional filters the recommendations from the optimization report would still need to be implemented.

4.4.2 DESIGN CRITERIA

The design criteria for the project is based on the State of Utah Rules for Public Drinking Water Systems and the requirements shown in the updated water master plan. The rules outline the requirements for contaminate removal and what levels of contaminate are allowed in the treated water. The master plan outlines the requirements for flow that is required from the treatment plant for current conditions and for future needs.

4.4.3 MAP

See Appendix B for map of proposed improvements.

4.4.4 ENVIRONMENTAL IMPACTS

Environmental impacts would include construction disturbance in the area around the existing treatment plant where the additional radium treatment equipment would be setup and building

constructed. The rest of the project would occur under roadways or locations that have previously been disturbed.

4.4.5 LAND REQUIREMENTS

This project would occur on the existing site which is currently owned by Colorado City.

4.4.6 POTENTIAL CONSTRUCTION PROBLEMS

Configuring the new filters to operate with the existing filters will be a challenge for both design and construction. Tying in the existing piping to the new filters will require careful design and construction consideration. In order to integrate the new filters with the existing filters it is likely that components of the existing facility will be replaced including piping, electrical, and controls.

4.4.7 SUSTAINABILITY CONSIDERATIONS

4.4.7.1 WATER AND ENERGY EFFICIENCY

No change in water or energy efficiency is anticipated with this alternative.

4.4.7.2 GREEN INFRASTRUCTURE

Not Applicable

4.4.7.3 OTHER

A primary challenge for these projects is the time it would take to implement each alternative. By eliminating the need to construct a new building it is anticipated that this option may be constructed faster than the new plant. However, creating a configuration that works with the existing could pose other challenges that impact design time and constructability. Where this alternative is not confined by the footprint of the existing facility, the risk of being more costly or time consuming is less than Alternative 3. However, the risk of being costly and time consuming is still there. The main risk is that the new filters will still need to be configured with the existing filters and facility. With these factors it is anticipated that any reduction in time will not be significant, so a similar implementation time is assumed for this alternative.

4.4.8 COST ESTIMATES

The estimated capital cost for this alternative is \$1,962,000. An itemized cost estimate of this alternative is located in Appendix C.

5 SELECTION OF PREFERRED ALTERNATIVE

5.1 MONETARY FACTORS

In order to identify the most economical option, a life cycle cost analysis was performed for each alternative. Table 5-1 shows the results of the life cycle cost analysis. The detailed analysis is in Appendix D. Because Alternative 1 was already ruled out as possible alternative, the present worth of Alternative 1 is not included in the results. Alternative 3 shows lowest present worth cost among the alternatives.

Table 5-1: Lifecycle Cost Analysis Results

Description	Present Worth Cost
Alternative 2 - New Pressure Filtration System	\$ 7,825,889.54
Alternative 3 - Renovate Existing Plant	\$ 7,378,729.15
Alternative 4 - Add Additional Train of Filters	\$ 7,639,632.34

In addition to the present worth of each alternative, the initial capital cost is a factor in selecting a preferred alternative. Table 5-2 shows the capital cost summary of the alternatives. Alternative 4 has a significantly lower initial capital cost than the other alternatives.

Table 5-2: Capital Cost Summary

Description	Initial Capital Cost
Alternative 2 - New Pressure Filtration System	\$ 4,423,000.00
Alternative 3 - Renovate Existing Plant	\$ 3,428,000.00
Alternative 4 - Add Additional Train of Filters	\$ 2,106,000.00

The capital costs and present worth analysis were put into a decision matrix along with the non-monetary factors that are described below. Each alternative was assigned a score in each category with a max score of 10 per category. Table 5-3 shows the summary of scores of each alternative for the monetary factors.

Table 5-3: Monetary Score Summary

Monetary Decision Matrix Score Summary				
Decision Factors	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Capital Costs	10	2	4	6
Present Worth	10	7	9	8

5.2 NON-MONETARY FACTORS

A large non-monetary factor for Colorado City and Hildale is the time frame to implement one of the alternatives. The existing treatment plant requires that deficiencies be addressed as soon as possible. All the alternatives would have the same lead time on obtaining resources from treatment

manufacturers. With lead time and the complexity of all the alternatives it is anticipated that all the alternatives would require similar schedules for implementation.

Another decision factor is the efficiency of treatment. For this analysis this factor is primarily associated with how much of the existing plant is remaining after the project. The score for this factor was determined by whether the existing facility will need further modifications or adjustments beyond those included in the project described for each alternative. The additional modifications and adjustments referenced are primarily the recommendations described in the optimization report.

Other non-monetary factors were considered in the selection process. These factors include environmental consideration, constructability, needs of the applicant, and public health risks. Table 5-4 shows the summary of the decision matrix scores for these non-monetary factors.

Table 5-4: Non-Monetary Score Summary

Non-Monetary Decision Matrix Score Summary				
Decision Factors	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Environmental Considerations	5	9	9	8
Constructability	10	8	2	5
Needs of the Applicant	0	10	8	7
Public Health Risks	5	10	10	10
Treatment Efficiency	3	10	8	6
Time of implementation	10	6	6	7

5.3 Decision Matrix Summary

These considerations along with the considerations mentioned above were placed in a decision matrix and each given a score. The summary of the scores is shown in Table 5-5 and the full decision matrix is shown in Appendix E.

Table 5-5: Decision Matrix Score Summary

Decision Matrix Score Summary	
Alternative	Score
Alternative 1	53
Alternative 2	62
Alternative 3	56
Alternative 4	57

Based on the analysis presented in this report, Alternative 2 is recommended to meet current and projected needs for culinary water treatment.

6 PROPOSED PROJECT (RECOMMENDED ALTERNATIVE)

It is recommended, based on the comparisons and constraints discussed in the previous sections of this report, that Alternative 2 be designed and constructed as soon as the appropriate funding is available. As stated in Section 4 a detailed cost estimate for this project is located in Appendix C. Constructing a new facility will give the Colorado City and Hildale the ability to have sufficiently treated water and the required source for future growth.

Section 4 states that the new plant could be built to meet the current design flow rate but have the spacing and connecting equipment in place to expand and increase the flow rate when required by growth. This would help to lower the initial capital costs of the project. The actual savings and feasibility of this option would need to be determined during design.

6.1 PRELIMINARY PROJECT DESIGN

In general, the new treatment facility would be a pressure filtration system using a form of green sand media to remove radium, iron, and manganese. The raw water will be pre-chlorinated and chemicals will be added prior to entering the filters. The chemical composition and process will be determined during design and is dependent on manufacturer chosen to provide filters.

The new treatment plant will be placed adjacent to the existing treatment plant. The treated water from the clearwell will be pumped directly into the system. Water pumped into the system will then backfill Colorado City and Hildale's water tanks. The recommended preliminary design capacity for the treatment plant is 1,500 gpm of treated water. This flow is based on the culinary water master plan to account for future growth.

6.2 PROJECT SCHEDULE

The following is a preliminary project schedule for the recommended project. Once the PER has been reviewed and approved it is anticipated that the process to obtain funding will begin immediately. It is anticipated that requests for proposals will go out early 2021. Engineering Design is anticipated to begin summer of 2021 and construction to begin by spring of 2022. Construction completion is anticipated by winter 2022.

6.3 PERMIT REQUIREMENTS

The project will need to be permitted through DDW and ADEQ before it can become operational.

6.4 SUSTAINABILITY CONSIDERATIONS

6.4.1 WATER AND ENERGY EFFICIENCY

As outlined in Section 4, newer, more automated systems will result in reduced waste and an increase in overall plant efficiency.

6.4.2 GREEN INFRASTRUCTURE

Not applicable, project will be constructed on the same previously disturbed property as the existing facility.

6.4.3 OTHER

The current project will address the needs for future growth therefore mitigating the need for more projects in the future.

6.5 TOTAL PROJECT COST ESTIMATE

See Appendix C for an itemized cost estimate for the proposed project.

6.6 ANNUAL OPERATING COST

6.6.1 INCOME

No income is provided by treatment facility.

6.6.2 ANNUAL O&M

Table 6-1 shows a breakdown of O&M costs of the proposed project. O&M costs are not expected to vary significantly from that of the existing treatment facility.

Table 6-1: Annual O&M

Annual O&M	
Power	\$ 19,296.21
Chemical	\$ 11,225.28
Other O&M	\$ 265,410.58
Total O&M	\$ 295,932.07

6.6.3 DEBT REPAYMENTS?

6.6.4 RESERVES?

7 CONCLUSIONS AND RECOMMENDATIONS

The Town of Colorado City and Hildale City are experiencing deficiencies in their existing culinary water treatment plant and under a Notice of Violation (NOV) from the State of Utah. There is an immediate need to improve the treatment quality and to increase the capacity of the plant.

The existing facility is aged and is not operating as it was intended to. In order to reliably treat the culinary water and provide sufficient source for the system, it is recommended that the community begin steps to implement the improvements outlined in this report. Of the four options analyzed in this study, the preferred alternative was found to be Alternative 2, which is to replace the existing treatment plant with a modern rapid sand filtration system and components. This alternative will provide improved water quality and future growth requirements for source.

8 UTAH SUPPLEMENT

The following section includes items in the Utah supplement which have not previously been addressed in previous sections of the report.

8.1 CONTACT

The applicant is advised that Rural Development Rural Utilities Service-funded projects must comply with provisions of Section 363 of the CONTACT. This section prohibits funding for any actions that drain, dredge, fill, level, or otherwise manipulate a wetland or to engage in any activity that results in impairing or reducing the flow, circulation, or reach of water, except in the case of activity related to the maintenance of previously converted wetlands.

8.2 WATER QUALITY

The purpose of this report is to provide a recommended project to increase water quality. Water quality test results that were done for this report are included in Appendix F.

8.3 WATER SYSTEM ANALYSIS

See updated Culinary Water Master Plan.

8.4 ACCESSIBILITY

Not Applicable

8.5 COORDINATES

Coordinates for the treatment plant site are shown in Table 8-1.

Table 8-1: Coordinates

Facility	Latitude	Longitude	Township, Range, Section
Existing Treatment Facility / Location for Improvements	36° 59' 26.58" N	112° 59' 0.58"	T42N, R6W, S31

8.6 RUS-WEP HOMELAND SECURITY INITIATIVE

8.7 CONTACT INFORMATION

Contact Information for the applicant is as follows:

Town of Colorado City
Vance Barlow, Town Manager
Ph. (928) 875-2646
P.O. Box 70
Colorado City, AZ 86021

Contact information for the Project Engineer is as follows:

Sunrise Engineering
Dustyn Shaffer, PE
Ph (435)652-8450
11 North 300 West
Washington, Utah 84780

8.8 CONTRACT DOCUMENTS

The applicant is advised that for USDA Rural Development RUS-funded projects, the 2013/2014 Engineers Joint Contract Documents Committee (EJCDC) contract documents, used in conjunction with RUS Bulletin 1780-26 (rev4/14/2014), are the only RD-preapproved construction contract documents. Most EJCDC documents must be purchased from a third-party vendor.

References

Sunrise Engineering, Inc. 2016. Water Master Planning & Hydrogeological Study for Hildale City and Town of Colorado City.

Sunrise Engineering, Inc. 2020 Culinary Water Master Plan Update for Hildale City.

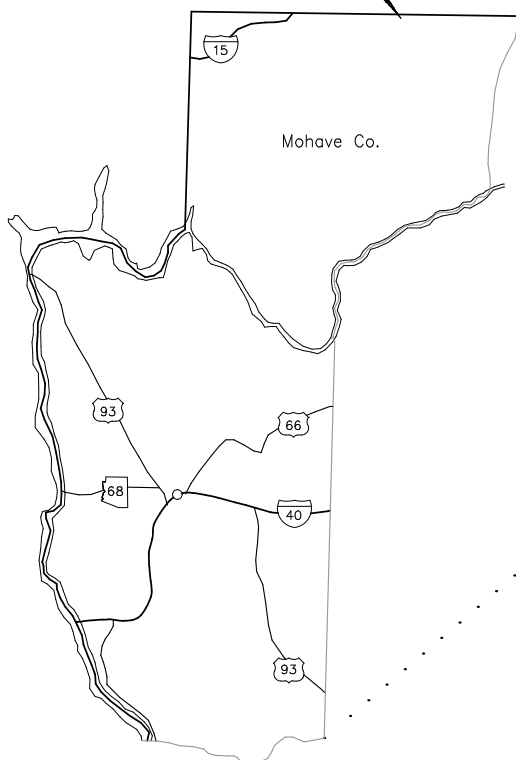
Appendix A

Location Map

AREA MAP

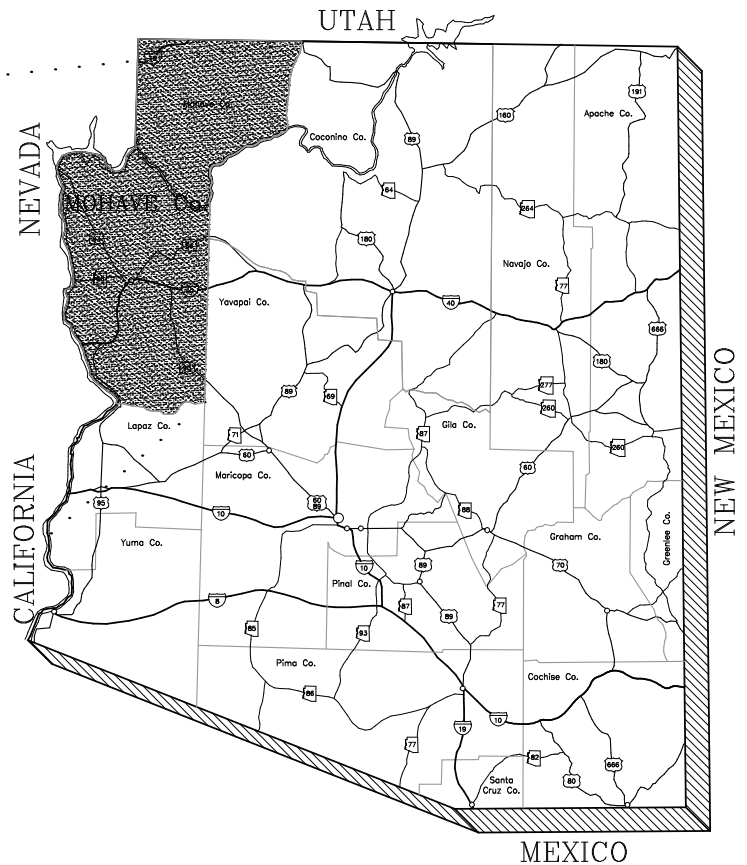


COLORADO CITY

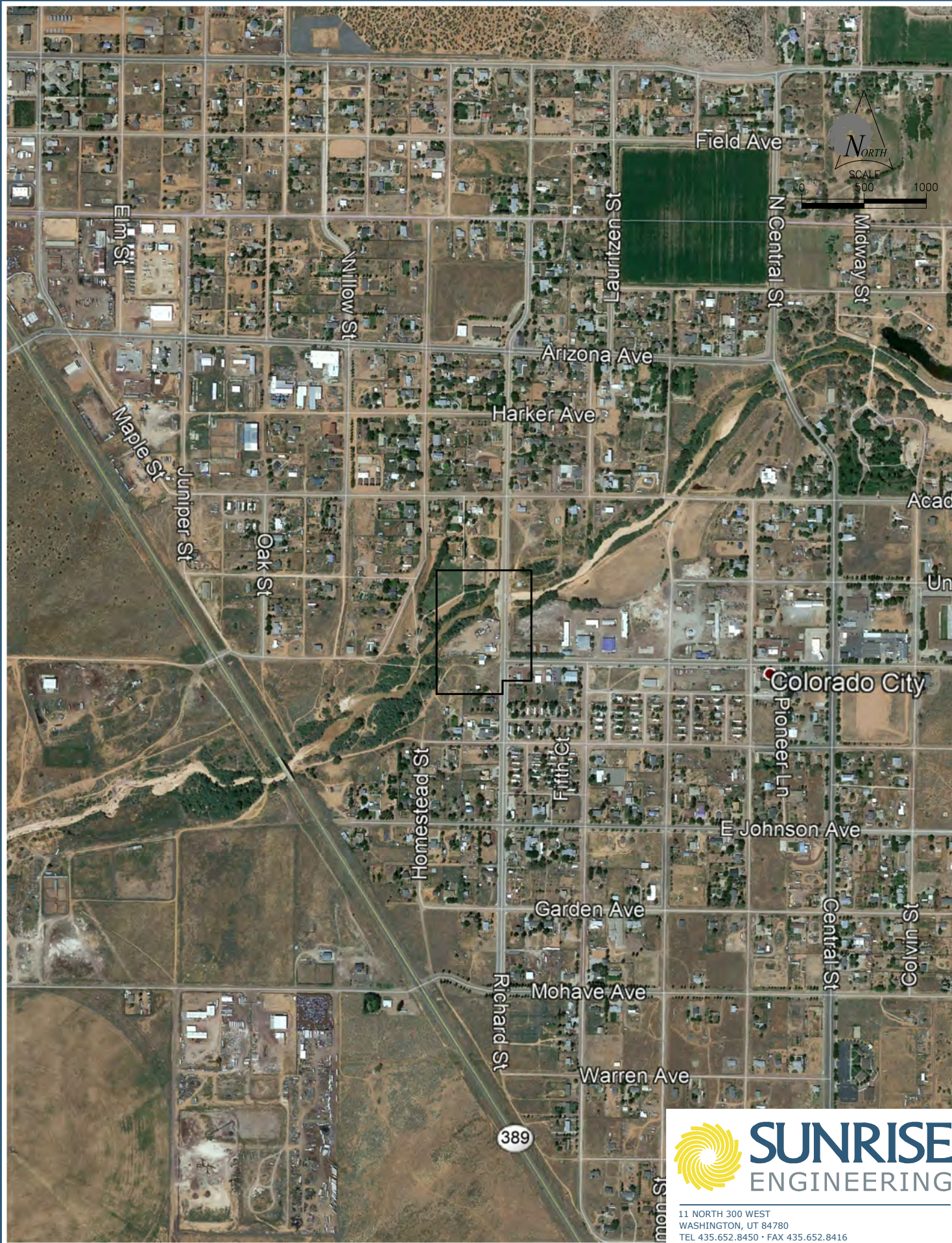


Mohave Co.

AREA MAP



11 NORTH 300 WEST
WASHINGTON, UT 84780
TEL 435.652.8450 • FAX 435.652.8416
www.sunrise-eng.com

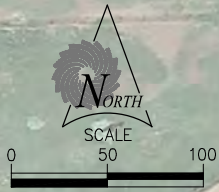


11 NORTH 300 WEST
WASHINGTON, UT 84780
TEL 435.652.8450 • FAX 435.652.8416
www.sunrise-eng.com

Appendix B

Map of Improvements

COLORADO CITY PRELIMINARY ENGINEERING REPORT ALTERNATIVES MAP



University Ave

POSSIBLE LOCATIONS FOR
NEW TREATMENT PLANT
(ALTERNATIVE 2)

CHEMICAL INJECTION
AND CHLORINE STORAGE

EXISTING
TREATMENT
PLANT

POSSIBLE LOCATION
OF NEW FILTERS
(ALTERNATIVE 3)

Township Ave

Richard St



11 NORTH 300 WEST
WASHINGTON, UT 84780
TEL 435.652.8450 • FAX 435.652.8416
www.sunrise-eng.com

Appendix C

Cost Estimates

ALTERNATIVE 2

SUNRISE ENGINEERING, INC.

CONSULTING ENGINEERS AND SURVEYORS

Opinion of Probable Costs for Utah DDW



Project: New Package Pressure Filtration System
1500 gpm plant
 Owner: Town of Colorado City

Project No: 5803
 Date: 12-Jan-19
 By: BCW/DWS

ITEM NO.	DESCRIPTION	QTY	UNITS	UNIT COST	AMOUNT
1	Mobilization	1	LS	\$ 145,000	\$ 145,000
2	Pilot Study	1	LS	\$ 75,000	\$ 75,000
Treatment Plant Building Construction (6000 SF)					
3	Earthwork - Excavation	1	LS	\$ 15,000	\$ 15,000
4	Earthwork - Structural Fill / Compaction	1	LS	\$ 10,000	\$ 10,000
5	Footings/Foundation/Floor	1	LS	\$ 192,000	\$ 192,000
6	Package Pressure Filtration system	1	LS	\$ 860,000	\$ 860,000
7	Install Package Treatment System	1	LS	\$ 300,000	\$ 300,000
8	Building	1	LS	\$ 320,000	\$ 320,000
9	Plumbing & Accessories	1	LS	\$ 55,000	\$ 55,000
10	Mechanical Piping (Valves, Supports, Marking)	1	LS	\$ 115,000	\$ 115,000
11	Misc. Furnishings (Rails, Grating, Furnishings)	1	LS	\$ 50,000	\$ 50,000
12	Electrical Systems	1	LS	\$ 265,000	\$ 265,000
13	Mechanical Systems	1	LS	\$ 125,000	\$ 125,000
14	SCADA & Controls	1	LS	\$ 150,000	\$ 150,000
15	Chlorine Contact Chamber	1	LS	\$ 150,000	\$ 150,000
16	Chlorinator (Chlorine gas) System	1	LS	\$ 80,000	\$ 80,000
17	Disassemble Existing Plant	1	LS	\$ 30,000	\$ 30,000
18	Effluent Pump Station	1	LS	\$ 175,000	\$ 175,000
		Subtotal			\$ 2,892,000
		Construction Subtotal			\$ 3,112,000
	Contingency	20	%		\$ 622,000
		TOTAL CONSTRUCTION COST			\$ 3,734,000
Incidentals					
1	Funding & Administrative Services	1.0%	L.S.		\$ 40,000
2	Civil Engineering Design	6.5%	L.S.		\$ 250,000
3	Engineering Construction Admin / Observation	8.0%	Hourly		\$ 300,000
	<u>Geotechnical Engineering</u>				
4	Geotechnical Report / Subsurface Investigation		Est.		\$ 15,000
	<u>Electrical Engineering</u>				
5	Electrical Engineering Design	1	Est.		\$ 64,000
6	SCADA Design and Cordination	1	Est.		\$ 20,000
		TOTAL PROJECT COST			\$ 4,423,000

In providing opinions of probable construction cost, the Client understands that the Engineer has no control over costs or the price of labor, equipment or materials, or over the Contractor's method of pricing, and that the opinion of probable construction cost provided herein is made on the basis of the Engineer's qualifications and experience. The Engineer makes no warranty, expressed or implied, as to the accuracy of such opinions compared to bid or actual costs.

ALTERNATIVE 3

SUNRISE ENGINEERING, INC.

CONSULTING ENGINEERS AND SURVEYORS

Opinion of Probable Costs for Utah DDW



Project: Renovate Existing Plant with New Filters
1500 gpm plant
 Owner: Town of Colorado City

Project No: 5803
 Date: 12-Jan-19
 By: BCW/DWS

ITEM NO.	DESCRIPTION	QTY	UNITS	UNIT COST	AMOUNT
1	Mobilization	1	LS	\$ 91,000	\$ 91,000
2	Rent Mobile Treatment Plant	1	LS	\$ 300,000	\$ 300,000
3	Pilot Study	1	LS	\$ 75,000	\$ 75,000
Treatment Plant Building Construction (No New Building Sections)					
4	Package Pressure Filtration system	1	LS	\$ 975,000	\$ 975,000
5	Install Package Treatment System	1	LS	\$ 425,000	\$ 425,000
6	Plumbing & Accessories	1	LS	\$ 70,000	\$ 70,000
7	Mechanical Piping (Valves, Supports, Marking)	1	LS	\$ 50,000	\$ 50,000
8	Misc. Furnishings (Rails, Grating, Furnishings)	1	LS	\$ 20,000	\$ 20,000
9	Electrical Systems	1	LS	\$ 120,000	\$ 120,000
10	Mechanical Systems	1	LS	\$ 65,000	\$ 65,000
11	SCADA & Controls	1	LS	\$ 100,000	\$ 100,000
		Subtotal			\$ 1,825,000
		Construction Subtotal			\$ 2,291,000
	Contingency	20	%		\$ 458,000
		TOTAL CONSTRUCTION COST			\$ 2,749,000
Incidentals					
1	Funding & Administrative Services	1.0%	L.S.		\$ 30,000
2	Civil Engineering Design	6.6%	L.S.		\$ 190,000
3	Engineering Construction Admin / Observation	8.0%	Hourly		\$ 220,000
	Geotechnical Engineering				
5	Geotechnical Report / Subsurface Investigation		Est.		\$ -
	Electrical Engineering				
6	Electrical Engineering Design	1	Est.		\$ 35,000
7	SCADA Design and Coordination	1	Est.		\$ 15,000
		TOTAL PROJECT COST			\$ 3,239,000

In providing opinions of probable construction cost, the Client understands that the Engineer has no control over costs or the price of labor, equipment or materials, or over the Contractor's method of pricing, and that the opinion of probable construction cost provided herein is made on the basis of the Engineer's qualifications and experience. The Engineer makes no warranty, expressed or implied, as to the accuracy of such opinions compared to bid or actual costs.

ALTERNATIVE 4

SUNRISE ENGINEERING, INC.

CONSULTING ENGINEERS AND SURVEYORS

Opinion of Probable Costs for Utah DDW



Project: Add Additional Train of Filters
 1500 gpm plant
 Owner: Town of Colorado City

Project No: 5803
 Date: 12-Jan-19
 By: BCW/DWS

ITEM NO.	DESCRIPTION	QTY	UNITS	UNIT COST	AMOUNT
1	Mobilization	1	LS	\$ 61,000	\$ 61,000
2	Pilot Study	1	LS	\$ 75,000	\$ 75,000
Treatment Plant Building Construction (750SF)					
3	Earthwork - Excavation	1	LS	\$ 8,000	\$ 8,000
4	Earthwork - Structural Fill / Compaction	1	LS	\$ 6,000	\$ 6,000
5	Footings/Foundation/Floor	1	LS	\$ 27,000	\$ 27,000
6	Package Pressure Filtration system	1	LS	\$ 600,000	\$ 600,000
7	Install Package Treatment System	1	LS	\$ 150,000	\$ 150,000
8	Building	1	LS	\$ 49,000	\$ 49,000
9	Plumbing & Accessories	1	LS	\$ 80,000	\$ 80,000
10	Mechanical Piping (Valves, Supports, Marking)	1	LS	\$ 50,000	\$ 50,000
11	Misc. Furnishings (Rails, Grating, Furnishings)	1	LS	\$ 8,000	\$ 8,000
12	Electrical Systems	1	LS	\$ 100,000	\$ 100,000
13	Mechanical Systems	1	LS	\$ 65,000	\$ 65,000
14	SCADA & Controls	1	LS	\$ 85,000	\$ 85,000
		Subtotal			\$ 1,228,000
		Construction Subtotal			\$ 1,364,000
	Contingency	20	%		\$ 273,000
		TOTAL CONSTRUCTION COST			\$ 1,637,000
Incidentals					
1	Funding & Administrative Services	1.0%	L.S.		\$ 20,000
2	Civil Engineering Design	7.1%	L.S.		\$ 116,000
3	Engineering Construction Admin / Observation	8.0%	Hourly		\$ 131,000
	Geotechnical Engineering				
5	Geotechnical Report / Subsurface Investigation		Est.		\$ 8,000
	Electrical Engineering				\$ -
6	Electrical Engineering Design	1	Est.		\$ 35,000
7	SCADA Design and Cordination	1	Est.		\$ 15,000
		TOTAL PROJECT COST			\$ 1,962,000

In providing opinions of probable construction cost, the Client understands that the Engineer has no control over costs or the price of labor, equipment or materials, or over the Contractor's method of pricing, and that the opinion of probable construction cost provided herein is made on the basis of the Engineer's qualifications and experience. The Engineer makes no warranty, expressed or implied, as to the accuracy of such opinions compared to bid or actual costs.

Appendix D

Life Cycle Cost Analysis

Present Worth Analysis

Planning Period [yr]	20
Real Discount Rate	1.5%
Nominal Discount Rate	3.5%

Option #1 Do Nothing

Description	Type	Amount	Net Present Value
Capital Costs	Present Amount	\$ -	\$ -
Annual O&M Costs	Uniform Amount	\$ 296,947.66	\$ 5,098,187.04
Salvage Value	Future Amount	\$ -	\$ -
			\$ 5,098,187.04

Option #2 New Pressure Filtration System

Description	Type	Amount	Net Present Value
Capital Costs	Present Amount	\$ 4,423,000.00	\$ 4,423,000.00
Annual O&M Costs	Uniform Amount	\$ 295,932.07	\$ 5,080,750.75
Salvage Value	Future Amount	\$ 3,269,200.44	\$ 1,642,988.61
			\$ 7,860,762.13

Option #3 Renovate Existing Plant

Description	Type	Amount	Net Present Value
Capital Costs	Present Amount	\$ 3,239,000.00	\$ 3,239,000.00
Annual O&M Costs	Uniform Amount	\$295,932.07	\$5,080,750.75
Future Replacement	Future Amount	\$ 400,000.00	\$ 283,567.53
Salvage Value for Future Replacements	Future Amount	\$ 209,595.09	\$ 105,335.34
Salvage Value for Renovation	Future Amount	\$ 2,394,062.91	\$ 1,203,174.34
			\$ 7,294,808.59

Option #4 Add An Additional Train of Filters

Description	Type	Amount	Net Present Value
Capital Costs	Present Amount	\$ 1,962,000.00	\$ 1,962,000.00
Annual O&M Costs	Uniform Amount	\$ 310,779.45	\$ 5,335,660.10
Future Renovation of Plant	Future Amount	\$ 2,200,000.00	\$ 1,559,621.39
Salvage Value of Renovation	Future Amount	\$ 1,152,772.99	\$ 579,344.38
Salvage Value of Adding Filters	Future Amount	\$ 1,450,185.68	\$ 728,813.85
			\$ 7,549,123.26

Appendix E

Decision Matrix

Colorado City Preliminary Engineering Report Decision Matrix				
	Alternative 1 No Action	Alternative 2 New Plant	Alternative 3 Renovate Plant	Alternative 4 Add Filters
Environmental Considerations	Environmental effects due to energy and water lost in inefficient plant. No new disturbance. 5	Construction within existing roadways and Town owned property that has been previously disturbed. Increased efficiency of facility. 9	Construction within existing roadways and Town owned property that has previously been disturbed. Increased efficiency of facility. 9	Construction within existing roadways and Town owned property that has previously been disturbed. Less efficiency than Alternatives 2 and 3. 8
Capital Costs	None initially 10	High initially 2	High initially 4	Moderate initially 6
Present Worth	Lowest worth. 10	Similar Present Worth 7	Similar Present Worth 9	Similar Present Worth 8
Constructability	N/A 10	New Construction, Less complications due to tying into existing facility. 8	Will be challenging to work around existing equipment while keeping it in operation 2	Easier construction than alternative 3 but still requires to work with existing building and equipment while keeping 5
Needs of the Applicant	Does not meet the needs of the applicant. Current plant has inadequate capacity and quality 0	Meets current and future needs of the applicant 10	Meets the current and future needs. Replacements may be required in near future. 8	Meets needs of Applicant, will require modifications in future 7
Public Health Risks	Possible effects on public health due to deficiencies in radium treatment and insufficient amount of water produced for future 5	none 10	none 10	none 10
Treatment Efficiency	Not efficient 3	Full treatment efficiency 10	Mostly Efficient, Chlorine and Chemicals will need adjustments 8	Potentially Efficient, Existing filters will still need modifications 6
Time of implementation	No time required 10	Similar time to implement 6	Similar time to implement 6	Slightly Faster to 7
Total/80	53	62	56	57

Appendix F

Water Quality

Radiochemistry Results for Culinary Water in the Town of Colorado City (AZ) and Hildale City (UT)

Well	Sample Date	Sample Type	Radioactive Chemical	Units	Result	% Under/Over MCL
Power Plant 244gpm	2/24/2014	Drinking Water	Radium-228	pCi/L	5.4	8.00%
			Radium-228 LLD	pCi/L	0.24	
			Radium-228 Variance	pCi/L	0.5	

Power Plant 244gpm	5/6/2014	Drinking Water	Radium-228	pCi/L	5.8	16.00%
			Radium-228 LLD	pCi/L	0.41	
			Radium-228 Variance	pCi/L	0.75	
			Gross Alpha	pCi/L	11	-26.67%
			Gross Alpha LLD	pCi/L	2.3	
			Gross Alpha Variance	pCi/L	4.2	
			Gross Beta	pCi/L	17	
			Gross Beta LLD	pCi/L	4.8	
			Gross Beta Variance	pCi/L	4.3	

Well 22 185 gpm	6/10/2019	Drinking Water	Radium-228	pCi/L	5.7	
			Radium-228 LLD	pCi/L	0.38	
			Radium-228 Variance	pCi/L	0.57	
			Radium- 226	pCi/L	3.5	
			Radium- 226 LLD	pCi/L	0.07	
			Radium- 226 Variance	pCi/L	0.23	
			Combined Radium	pCi/L	9.2	84.00%
			Gross Alpha	pCi/L	6.2	-58.67%
			Gross Alpha LLD	pCi/L	4	
			Gross Alpha Variance	pCi/L	4.6	
			Gross Beta	pCi/L	18	
			Gross Beta LLD	pCi/L	4.8	
			Gross Beta Variance	pCi/L	5.7	

After Treatment Plant approx. 1200 gpm	6/6/2019	Drinking Water	Radium-228	pCi/L	1.1	-78.00%
			Radium-228 LLD	pCi/L	0.39	
			Radium-228 Variance	pCi/L	0.45	
			Gross Alpha	pCi/L	3.7	-75.33%
			Gross Alpha LLD	pCi/L	0.2	
			Gross Alpha Variance	pCi/L	3.3	
			Gross Beta	pCi/L	10	
			Gross Beta LLD	pCi/L	3.9	
			Gross Beta Variance	pCi/L	4.3	

Combinde Radium MCL limit is 5 pCi/L

Gross Alpha MCL limit is 15 pCi/L

Water Quality Results for Culinary Water in the Town of Colorado City (AZ) and Hildale City (UT)

Well	Sample Date	Sample Type	Radioactive Chemical	Result	Units	EPA Maximum Contaminant Level	% Under/Over MCL
Power Plant	2/24/2014	Drinking Water	INORGANIC				
244gpm			Bicarbonate (HCO ₃)	360	mg/L	-	-
			Carbonate (CO ₃)	ND	mg/L	-	ND
			CO ₂	261	mg/L	-	-
			Hydroxid (OH)	ND	mg/L	-	ND
			Calcium Carbonate (CaCO ₃)	295	mg/L	-	-
			Ammonia as N	0.4	mg/L	-	-
			Chloride	16	mg/L	250	-1462.50%
			Color	ND	Color Units	15	ND
			Conductivity	553	umho/cm	-	-
			Cyanide, Free	ND	mg/L	0.2	ND
			Fluoride	0.3	mg/L	4	-1233.33%
			MBAS Surfactants	ND	mg/L	0.5	ND
			Nitrate as N	ND	mg/L	10	ND
			Odor	ND	0-5 Scale	1	ND
			pH	7.6	pH Units	3	-
			Phosphate, ortho as P	0.03	mg/L	-	ND
			Sulfate	47	mg/L	250	-431.91%
			Total Dissolved Solids	368	mg/L	1000	-171.74%
			Turbidity	0.46	NTU	5	-986.96%

ND - Not Discovered in Sample

METALS (Total)				
Aluminum	ND	mg/L	0.2	ND
Antimony	ND	mg/L	0.006	ND
Arsenic	0.0006	mg/L	0.01	-94.00%
Boron	0.17	mg/L	-	-
Barium	0.823	mg/L	2	-58.85%
Beryllium	ND	mg/L	0.004	ND
Calcium	45.9	mg/L	-	-
Cadmium	ND	mg/L	0.005	ND
Chromium	ND	mg/L	0.1	ND
Copper	ND	mg/L	1.3	ND
Iron	0.13	mg/L	0.3	-56.67%
Lead	ND	mg/L	0.015	ND
Mercury	ND	mg/L	0.002	ND
Magnesium	25.8	mg/L	-	-
Manganese	0.156	mg/L	0.05	212.00%
Nickel	ND	mg/L	0.1	ND
Potassium	4.2	mg/L	-	-
Selenium	0.0006	mg/L	0.05	-98.80%
Silver	ND	mg/L	0.1	ND
Silica, (as SiO ₂)	12.5	mg/L	-	-
Sodium	52.1	mg/L	-	-
Thallium	ND	mg/L	0.002	ND
Zinc	ND	mg/L	5	ND

Appendix G

Certified Budget

Appendix H

Optimization Report



Culinary Water Treatment Optimizing and Evaluation

Hildale / Colorado City

June 2, 2017



HILDALE / COLORADO CITY

CULINARY WATER TREATMENT OPTIMIZING and EVALUATION

Contributors:

**Dave Hardy
Mike Rau
Dustyn Shaffer**



We would like to thank you for the opportunity to visit your treatment plant in Colorado City. We found the plant staff welcoming and helpful throughout our visit. It was obvious to us that Victor and Nap are willing and committed to making improvements where needed and to overcome the unique challenges they face.

The source water quality in Hildale /Colorado City is challenging, but given the intelligence and willingness to improve demonstrated by Victor and Nap, we believe that there is no reason why it cannot become a very good water system; one that protects public health and earns the respect and appreciation from your customers. Some of the tools needed to accomplish this are missing as outlined in this report, but given the proper attention, resources and commitment, good things will happen.

Our goal on this visit was to gather information that would provide an operational understanding of the processes used at your facility, and their respective challenges, and to make suggestions for improvement where applicable. We believe our visit was successful in achieving this goal.

Below are our observations, ideas and recommendations.

Source Water Characteristics, Testing and Treatment

The treatment plant needs to be optimized for iron and manganese removal in order to eliminate colored water events in the distribution system and to improve taste. The following are suggestions for operational analysis and adjustments that will help to minimize iron and manganese in the plant effluent water.

- Manganese sorption onto the filter media is dependent on the redox conditions within the filter. For this reason, it is important to have a stable free chlorine residual present in the filters. In the presence of chlorine, dissolved manganese will adsorb onto the filter media. The chlorine will also continually “regenerate” sorption sites on the surface of the filter media. Loss of chlorine residual in the filters could not only result in reduced manganese removal, but could even cause the filter media to release manganese back into the water. For this reason we recommend the following:
 - An additional chlorine feed point be added upstream of filters A, B and C. This would allow a residual to be maintained through all 6 filters.
 - Maintain a free chlorine residual of at least 0.5 mg/L leaving all filters at all times. It is critical to maintain a residual at ALL times. As explained above, a loss of chlorine residual could result in a “slug” of dissolved manganese leaving the filter.

- Testing should be conducted to track iron and manganese through the treatment process. Iron and manganese can be dissolved, colloidal, or precipitated at any stage of treatment. The goal is to precipitate all the iron and manganese either before or during filtration. Precipitated iron/manganese has been oxidized and will be removed by the filters. We recommend testing the following sites for iron and manganese (dissolved and total – the sample can be filtered with a 0.2 micron filter to measure the dissolved portion.) By subtracting the dissolved from the total value you can calculate the precipitated portion.
 - Raw water (plant influent) – before any chemical addition
 - KMnO₄ contactor effluent – after KMnO₄ contactor but before chlorine addition
 - Filter Influent – After chlorine addition
 - Filter Effluent

- Testing as outlined above will allow you to track iron/manganese through the treatment process and to see how changes to the process (e.g., Chemical doses, etc.) affect iron and manganese oxidation and removal. We also recommend that you collect duplicate samples and analyze one in-house while sending the other to a certified commercial laboratory for analysis in order to establish the accuracy of your in-house results. This should be done until you have established that the results are comparable. The goal should be to keep total filter effluent iron and manganese consistently below the secondary MCLs of 0.3 and 0.05 mg/L respectively.

- We recommend that your source water be analyzed for Total Organic Carbon (TOC). High levels of TOC can complicate the oxidation and removal of iron and manganese. Organics can bind to iron and manganese and prevent precipitation. If TOC is consistently less than 2 mg/L this should not be a concern and further testing would not be necessary. If TOC is elevated enough to cause problems, there may be a need to add a flocculation process.

- It is also recommended to test each well for Iron and manganese. It would be good to understand which wells are better/worse and to use that information in deciding which wells to use when. Also, if you see iron increasing over time from a certain well it could indicate that the well is fouled with iron reducing bacteria. In such a circumstance, it may be worthwhile to consider chemically treating the well.

- The Plant has 12 wells that can service the treatment plant. It is understood that the deep wells produce much better water quality. The reason stated for using the shallow wells was that they were cheaper to pump and it was a cost-based decision. We recommend that a discussion take place as to the benefit of water quality over cost to determine if the plant could significantly improve operations by using the deep wells as much as possible.
- No daily lab testing is being done at the facility although at times the operators have run some testing to try and diagnose issues and performance. By collecting and recording daily values, the operators can begin to see trends in performance and relate them to the results from their lab work. We suggest that the operators should run DAILY lab tests on the following:
 - Iron (Raw, Filter Influent, and Filter Effluent)
 - Manganese (Raw, Filter Influent, and Filter Effluent)
 - pH (Raw, Filter Effluent)
 - Conductivity and TDS (Raw, Filter Effluent)
- The equipment used for measuring water quality parameters needs attention and calibration. These instruments should be calibrated according to the manufacturers' recommendations to ensure that the results are reflective of the actual conditions.
 - We suggest that standards be obtained for each parameter in order to verify accuracy and calibrate the equipment.
 - We also would encourage the utility to invest in analytical equipment specific to each analyte. Multifunction units rarely provide accurate and consistent readings. An example of this is the portable LaMotte SMART3 Colorimeter that is used at the plant. It has the ability to measure a form of turbidity (FAU) but the method it uses is not reliable because the instrument is not designed specifically for measuring turbidity. It measures light attenuation instead of light scatter at 90 degrees and does not give comparable results.
- Suggested lab equipment
 - Hach 2100Q portable turbidimeter
 - Hach Pocket Colorimeter II – for free chlorine measurement
 - Myron L 4P II Ultrameter – conductivity/TDS

Chemical Feed Systems

- Currently chemical “feed rates” are set by hand and are at a constant feed rate, but the dosage varies due to flow changes that happen as wells turn on and off to maintain the finished water storage tank levels. Having a consistent dosage will greatly improve the consistency of all downstream processes, and ultimately the removal of iron and manganese.

The consistency of the chlorine dosage is very important because, as mentioned above, it directly effects the Oxidation Reduction Potential of the water. Large changes and/or loss of chlorine residuals can “strip” out manganese within the filter media and within the distribution system which can cause colored water events at the customers tap.

- We suggest that the operators begin calculating and recording chemical DOSAGES in mg/L and pace the feed rate of KMnO₄ and Chlorine on their combined raw water flowrate. This would require communications between the feeders and the PLC. It may also require new feeders that would accept a 4-20 mA signal.
- Operators indicated that the chlorine eductor becomes coated very frequently which reduces the vacuum at the chlorinators and decreases chlorine feed.
 - We suggest that an additional eductor be installed with a bypass valve to allow the operator to switch the eductor without disrupting chlorine feed. This will also give the operator time to maintain the other and place it back in service. *Note: the hope is that the improvement of water quality will make this event happen less frequently as well.*

Filtration

- The filters at the plant are reported to have the ability to filter 300 gpm each. They are of the same type, but have different dimensions which creates a problem with filtration rates; this alone can contribute to performance differences between the two banks of filters.
 - The original filters (A,B,C) are 7.5 feet in diameter giving them a filter surface area of 44.2 ft²; and a filtration rate of 6.8 gpm/ft².
 - Filters D,E,F built in 1999 are 6.5 feet in diameter giving them a filter surface area of 33.2 ft² and a filtration rate of 9.1 gpm/ft².
- Given the information above, the filtration rates are very high for the media configuration. This problem is then magnified when a filter is taken offline for backwash. This places the burden on the other filters to take in the water that was being treated by the filter that was placed into backwash. The increased filtration rates on the remaining filters can be as much as 50%. Filters do not perform well with rapid and large flow increases. These events undoubtedly cause short term filter breakthroughs that are undesirable and not conducive to producing consistent water quality.
- The backwash rate at the plant was 850 gpm. This puts the backwash rate in the smaller filters at 25.6 gpm/ft² and the rate in the larger filters at 19.25 gpm/ft². The rate for the large filter seems very appropriate; the rate for the small filters however is excessive. Too high of a wash rate can lead to the loss of media and poor scouring action between media grains due to over fluidization and expansion. We recommend lowering the wash

rate on the small filters to 640 gallons per minute. *Both sets of filters will then wash at 19.25 gpm/ft².*

- The current “filter to waste” cycle is currently too short to serve its purpose. The purpose of filter to waste is to “ripen” the filter prior to it returning to service. An alternative and effective way to improve initial filter performance is by practicing what is called “rinse to waste”. Rinse to Waste is done at the end of the backwash cycle. The method is described below:
 - Following the high rate backwash, instead of dropping the flow quickly to zero, Lower the backwash flowrate to a subfluidized rate:
 1. 265 gpm for the large filters
 2. 200 gpm for the small filters
 - Allow the wash to continue at this rate(s) for 7 minutes (this will allow for one volume of water to be rinsed out of the filter vessel and remove the remnant particles from the filter at a subfluidized rate). *Because the filter media is in a subfluidized state during this rinse period, no additional particles are being detached from the media and those left in the vessel during the high rate backwash step are rinsed out. This will dramatically reduce the ripening spike as the filter comes back online. Until you have a turbidimeter on your filter effluent you won’t be able to see the results, but this method has proven very effective in other plants.*
- The filters currently run as two banks of three in a series configuration. KMnO₄ is fed upstream of a common 30,000 gallon contact chamber and currently only has the ability to reach filters A, B, and C. Water passes from the contactor to filters A,B,C and then passes on to D, E and F. Prior to water entering filters D, E and F chlorine is injected.
 - We suggest that an additional chlorine application point be added ahead of filters A,B, and C.
 - We also suggest that the piping from the KMnO₄ contact chamber be plumbed so that flow from it can be split to feed both trains of filters in parallel. By treating both sets of filters the same -- both should perform equally.

Filter Maintenance

- The pressurized filters at the plant should be inspected annually for the proper media depths and for the general appearance of the media and vessel. Operators reported that the filter vessels and media look pretty “slimy” and have seen “iron balls” forming in the media.

- We recommend that the filters be shock chlorinated with 50 PPM of chlorine on an annual basis, but initially only on one filter to determine the effect on performance. Given that filters A,B and C have not been exposed to chlorine on a regular basis, we recommend that one of these filters be the initial test filter for this procedure. The process would include:
 1. Dosing with 50 PPM of chlorine and letting the filter sit overnight.
 2. Draining the highly chlorinated water to waste
 3. Refill the filter to the normal water level with plant influent water
 4. Backwash the filter in normal fashion a minimum of two times.
 5. Run the filter in filter to waste mode and test the effluent for turbidity, iron, and manganese at intervals to determine performance compared to the other filters.
 6. Place the filter back in service

Solutions / Suggestions and Best Practices

- Best practice would be to have a filter offline and ready for service at all times as a replacement for the filter that is being taken offline to be backwashed. When one influent valve is closing (on the filter to be backwashed) the filter influent valve is opening on the standby filter thus making for a near zero change of flow to the other online filters.
- By correcting the chemical feed locations and returning the filters to a parallel operation, the plant would have 5 filters that could be used at one time in parallel with one filter being held in reserve to replace the filter that is being taken offline.
- Set a limit of 6 gpm/ft² as the maximum filtration rate for ALL filters. This means that the plant capacity (running in parallel) would still remain at 1200 gpm. But with the improvements to the upstream processes and the way filters are operated, water quality should be markedly improved. We understand that not gaining additional capacity is disappointing, but given the configuration of the plant and size of the filters we could not recommend a higher filtration rate be used. This reduction in filtration rate will also help optimize the filters for iron and manganese removal.
- The operators have no way of knowing how filters are performing over time because there are no online instruments on the filters. This information is critical to evaluating plant performance, determining individual filter performance issues and when a filter run should be terminated and backwashed. We strongly suggest that all filters be fitted with a turbidimeter so that each unit can be monitored and trended on a continual basis. Our recommendation would be to use Hach TU5300 series online turbidimeters.

- Backwash durations are currently set by the operators' eyeball, which is not uncommon in the industry, as long as the operators eyeball is trained and "calibrated" based on actual turbidity measurements of the waste wash water stream. As a rule of thumb, the turbidity of the waste wash water at the end of the backwash should be between 5 and 10 NTU.

Method: Take a grab sample of the backwash water at the end of the backwash to determine if it is below 10 NTU. If it is above 10 NTU the filter backwash time should be increased. If it is recorded below 5 NTU the backwash time can be decreased.

Miscellaneous

- The state regulation for ground water systems require turbidity to be less than 5 NTU. Although the state only requires these values to be checked annually we feel strongly that turbidity should be monitored continually. Some of the worst water quality outbreaks in our nation have happened with utilities "technically" meeting the regulations. In some cases, regulations aren't good enough. We highly recommend that you set your own stringent water quality goals for your plant and then commit to never exceed those values. Having online turbidimeters that provide history and real time trends will help you monitor and improve your performance in order to achieve your goals.
- Develop a regimented distribution system flushing program to maintain the health and water quality of your distribution lines.
 - Plan flushing events and notify residents in advance so they can avoid using water during those events
- It was reported that an operator spends about 1-2 hours at the plant each day. We would suggest that the plant needs additional attention dedicated to its operations and maintenance. Some of the recommendations we have made will require such.

