

ESCALANTE CITY
 Budgeting Worksheet
 10 General - 07/01/2020 to 06/30/2021
 100.00% of the fiscal year has expired

Change In Net Position Revenue:	2018		2019		2020		2020		2021		Original		Revised		Worksheet Notes
	Actual		Actual		Actual		Budget		Actual		Budget		Budget		
Taxes															
3110 CURRENT YEAR PROPERTY TAXES	110,359		114,696		122,355		123,000		0		122,000		0		
3120 RESORT TAX	133,327		135,036		119,915		120,000		0		80,000		0		
3130 SALES AND USE TAXES	147,939		152,787		128,390		140,000		0		90,000		0		
3140 FRANCHISE TAXES	38,180		40,017		31,148		40,000		0		30,000		0		
3150 INNKEEPER TAX	33,981		36,761		31,352		35,000		0		25,000		0		
3160 FEE IN LIEU	15,971		13,931		11,253		15,000		0		15,000		0		
3180 RECREATION TAX	12,273		12,426		9,404		12,400		0		12,400		0		
Total Taxes	492,030		505,654		453,817		485,400		0		374,400		0		
Licenses and permits															
3210 BUSINESS LICENSES	4,580		4,456		4,073		4,100		0		4,500		0		
3220 BEER LICENSE	960		960		960		960		0		960		0		
3225 ANIMAL LICENSES	245		235		235		250		0		300		0		
Total Licenses and permits	5,785		5,651		5,268		5,310		0		5,760		0		
Intergovernmental revenue															
3301 FIRE DEPT ALLOTMENTS	10,461		10,453		10,537		10,400		0		10,500		0		
3310 STATE GRANT	115,818		754,190		344,000		344,000		0		0		0		
3320 LOCAL GRANT	0		2,168		113,000		113,000		0		13,000		0		
3345 AIRPORT GRANT	90,222		482,829		0		0		0		620,000		0		
3346 Federal Grants	0		0		200,000		200,000		0		0		0		
3356 CLASS "C" ROAD FUND ALLOTMENT	84,419		87,164		76,302		80,000		0		75,000		0		
3382 MOHR CHRISTENSEN CITY PARK	1,000		700		0		0		0		0		0		
Total Intergovernmental revenue	301,920		1,337,504		743,839		747,400		0		718,500		0		
Charges for services															
3386 FIRE DONATION	75		2,793		24,832		24,832		0		0		0		
Total Charges for services	75		2,793		24,832		24,832		0		0		0		
Interest															
3610 INTEREST EARNINGS - GENERAL	24,604		45,208		32,707		35,000		0		30,000		0		
Total Interest	24,604		45,208		32,707		35,000		0		30,000		0		
Miscellaneous revenue															
3385 MARATHON / ESCALANTE RIDING CLUB	0		6,000		0		0		0		0		0		
3620 RENTALS & AIRPORT	9,927		11,640		8,094		10,000		0		10,000		0		
3650 LOAN PROCEEDS	0		685,000		0		0		0		0		0		
3690 SUNDRY REVENUES	7,225		4,883		54,426		54,500		0		5,000		0		
Total Miscellaneous revenue	17,152		707,523		62,520		64,500		0		15,000		0		
Contributions and transfers															
3802.7 CONTRIBUTION, PRIVATE - CULTURE & RECR	0		0		17,036		17,036		0		0		0		
Total Contributions and transfers	0		0		17,036		17,036		0		0		0		
Total Revenue:	841,566		2,604,333		1,340,019		1,379,478		0		1,143,660		0		
Expenditures:															
General government															
Council															

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41110 SALARIES - MAYOR AND COUNCIL	8,100	8,100	9,375	12,000	0	12,000	0	
41130 EMPLOYEE BENEFITS	604	639	736	1,000	0	1,000	0	
41230 TRAVEL	2,500	2,349	3,996	4,000	0	3,359	0	
Total Council	11,204	11,088	14,107	17,000	0	16,359	0	
Administrative								
43110 SALARIES AND WAGES	29,521	34,925	29,067	41,000	0	41,000	0	
43130 EMPLOYEE BENEFITS	7,906	6,618	5,472	12,000	0	10,000	0	
43210 BOOKS/SUBSCRIPTIONS/MEMBERSHIP	1,098	1,727	1,044	1,200	0	1,200	0	
43220 PUBLIC NOTICES	2,973	525	650	800	0	500	0	
43230 TRAVEL	5,990	6,017	4,192	6,000	0	5,500	0	
43240 OFFICE SUPPLIES AND EXPENSE	13,171	7,262	7,430	12,000	0	6,000	0	
43250 EQUIP/SUPPLIES/ & MAINTENANCE	13,992	11,900	5,133	15,000	0	10,000	0	
43260 BLDGS/GROUNDS/SUPPLIES/MAINT.	25,078	33,317	25,852	55,000	0	20,000	0	
43270 UTILITIES	14,767	21,991	22,456	28,000	0	27,000	0	
43280 TELEPHONE	4,382	3,848	3,212	4,300	0	4,300	0	
43310 LEGAL SERVICES	20,735	89,011	19,792	32,000	0	10,000	0	
43320 AUDIT	5,100	5,287	5,387	5,387	0	5,500	0	
43360 AIRPORT	126,768	15,741	15,884	30,000	0	30,000	0	
43480 SPECIAL DEPT/BLDG INSPECTOR	2,250	2,210	2,150	2,150	0	2,200	0	
43510 INSURANCE AND SURETY BONDS	21,631	20,326	20,929	25,000	0	25,000	0	
43610 MISCELLANEOUS SUPPLIES	1,139	1,130	837	1,200	0	1,200	0	
43620 MISCELLANEOUS SERVICES & ECON	8,029	7,068	1,383	5,000	0	2,000	0	
43630 COMMUNITY EVENTS	0	0	1,250	5,000	0	2,000	0	
43760 SOFTWARE & INFORMATION TECHNOLOGY	7,520	6,068	8,340	12,000	0	10,000	0	
43805 2018 MULTI-PURPOSE BUILDING	0	0	23,000	23,000	0	23,000	0	
43974 CAPITAL OUTLAY	107,586	1,950,505	0	0	0	600,000	0	
Total Administrative	419,636	2,225,476	203,460	316,037	0	836,400	0	
Total General government	430,840	2,236,564	217,567	333,037	0	852,759	0	
Public safety								
Police								
54460 POLICE CONTRACT	55,000	55,000	27,500	55,000	0	55,000	0	
57650 EMT'S	1,500	1,500	0	1,500	0	1,500	0	
Total Police	56,500	56,500	27,500	56,500	0	56,500	0	
Fire								
57250 EQUIPMENT/SUPPLIES/MAINTENANCE	8,260	9,906	11,236	10,000	0	5,000	0	
57260 BLDGS/GROUNDS/SUPPLIES/MAINT	0	0	18,000	0	0	0	0	
57270 UTILITIES	8,675	9,433	6,336	8,000	0	8,000	0	
57280 TELEPHONE	1,842	1,778	1,619	2,000	0	2,000	0	
57470 MBA Lease Expense	6,625	6,500	6,375	6,375	0	6,500	0	
57610 MISCELLANEOUS SUPPLIES	3,529	7,500	11,000	11,000	0	0	0	
57740 CAPITAL OUTLAY - EQUIPMENT	0	0	652,190	670,190	0	0	0	
Total Fire	28,931	35,117	706,756	707,565	0	21,500	0	
Total Public safety	85,431	91,617	734,256	764,065	0	78,000	0	
Highways and public improvements								

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Highways								
60110 SALARIES AND WAGES	37,793	43,390	31,966	46,000	0	46,000	0	
60130 EMPLOYEE BENEFITS	15,485	12,096	9,145	16,000	0	16,000	0	
60250 EQUIPMENT/SUPPLIES/MAINTENANCE	22,632	21,917	28,193	40,000	0	15,000	0	
60270 UTILITIES	30,450	31,635	25,881	34,000	0	33,000	0	
60275 DRAINAGE	1,991	4,995	0	0	0	0	0	
60730 CLASS "C" ROADS	48,401	48,401	48,401	48,401	0	48,401	0	
60740 CAPITAL OUTLAY	22,368	0	0	0	0	0	0	
70260 CHRISTMAS LIGHTS	5,713	3,748	695	1,000	0	0	0	
Total Highways	184,833	166,182	144,281	185,401	0	158,401	0	
Total Highways and public improvements	184,833	166,182	144,281	185,401	0	158,401	0	
Parks, recreation, and public property								
Parks								
70110 SALARIES AND WAGES	15,438	18,309	20,793	29,000	0	29,000	0	
70130 EMPLOYEE BENEFITS	6,167	5,220	5,381	8,000	0	8,000	0	
70250 EQUIPMENT/SUPPLIES/MAINTENANCE	2,462	1,097	2,101	3,000	0	1,000	0	
70270 UTILITIES	15,797	15,392	12,438	16,000	0	16,000	0	
70280 MARATHON / ESCALANTE RIDING CLUB	0	6,000	0	0	0	0	0	
70500 PARK	2,000	773	1,000	1,700	0	500	0	
Total Parks	41,864	46,791	41,713	57,700	0	54,500	0	
Total Parks, recreation, and public property	41,864	46,791	41,713	57,700	0	54,500	0	
Total Expenditures:	742,968	2,541,154	1,137,817	1,340,203	0	1,143,660	0	
Total Change in Net Position	98,598	63,179	202,202	39,275	0	0	0	

ESCALANTE CITY
 Budgeting Worksheet
 21 Municipal Building Authority - 07/01/2020 to 06/30/2021
 100.00% of the fiscal year has expired

	2018 Actual	2019 Actual	2020 Actual	2020 Budget	2021 Actual	Original Budget	Revised Budget	Worksheet Notes
Change in Net Position								
Revenue:								
Miscellaneous revenue	29,959	29,834	29,709	29,709	0	29,584	0	
3620 Lease revenues	29,959	29,834	29,709	29,709	0	29,584	0	
Total Miscellaneous revenue	29,959	29,834	29,709	29,709	0	29,584	0	
Total Revenue:								
Expenditures:								
Debt service								
4700.810 MBA Debt Service Principal	18,000	18,000	18,000	18,000	0	19,000	0	
4700.820 MBA Debt Service Interest	8,360	8,040	7,720	7,720	0	7,400	0	
Total Debt service	26,360	26,040	25,720	25,720	0	26,400	0	
Transfers								
4980 Budgeted Increase in Fund Balance	0	0	0	3,989	0	3,184	0	
Total Transfers	0	0	0	3,989	0	3,184	0	
Total Expenditures:	26,360	26,040	25,720	29,709	0	29,584	0	
Total Change in Net Position	3,599	3,794	3,989	0	0	0	0	

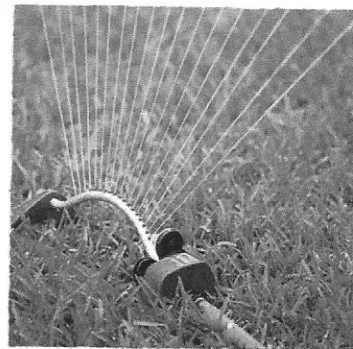
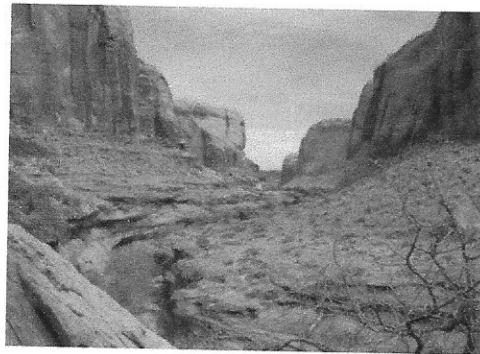
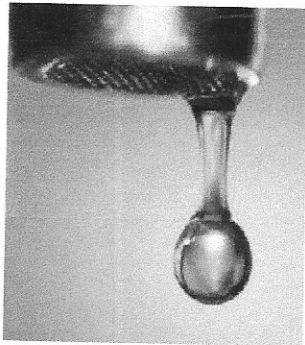
ESCALANTE CITY
 Budgeting Worksheet
 52 Sewer - 07/01/2020 to 06/30/2021
 100.00% of the fiscal year has expired

	2018	2019	2020	2020	2021	Original	Revised	Worksheet
	Actual	Actual	Actual	Budget	Actual	Budget	Budget	Notes
Income or Expense								
Income From Operations:								
Operating income								
3710 SEWER SERVICES	167,065	171,717	128,066	172,000	0	172,000	0	
3720 CONNECTION FEES	1,000	2,000	0	0	0	0	0	
Total Operating income	168,065	173,717	128,066	172,000	0	172,000	0	
Operating expense								
40110 SALARIES AND WAGES	60,595	61,229	57,186	68,000	0	68,000	0	
40130 EMPLOYEE BENEFITS	25,077	18,129	16,510	21,000	0	21,000	0	
40230 TRAVEL, EDUCATION AND TRAINING	2,891	2,777	2,350	2,350	0	2,500	0	
40250 EQUIPMENT/SUPPLIES/MAINTENANCE	10,160	21,175	18,653	20,000	0	20,000	0	
40270 UTILITIES	1,506	1,256	868	1,500	0	1,500	0	
40650 DEPRECIATION	58,825	58,825	44,119	58,825	0	58,825	0	
Total Operating expense	159,154	163,391	139,686	171,675	0	171,825	0	
Total Income From Operations:	8,911	10,326	(11,620)	325	0	175	0	
Non-Operating items:								
Non-Operating income								
3810 INTEREST EARNINGS	314	536	401	500	0	500	0	
3840 IMPACT FEES - SEWER	2,000	4,000	0	0	0	0	0	
40900 Benefit Expense (GASB 68)	11,223	9,753	0	0	0	0	0	
Total Non-Operating income	13,537	14,289	401	500	0	500	0	
Non-Operating expense								
40810 INTEREST EXPENSE	1,713	1,340	680	680	0	0	0	
40901 Pension Expense (GASB 68)	6,962	8,462	0	0	0	0	0	
Total Non-Operating expense	8,675	9,802	680	680	0	0	0	
Total Non-Operating items:	4,862	4,487	(279)	(180)	0	500	0	
Total Income or Expense	13,773	14,813	(11,899)	145	0	675	0	

ESCALANTE CITY
 Budgeting Worksheet
 51 Water - 07/01/2020 to 06/30/2021
 100.00% of the fiscal year has expired

	2018	2019	2020	2020	2021	Original	Revised	Worksheet
	Actual	Actual	Actual	Budget	Actual	Budget	Budget	Notes
Income or Expense								
Income From Operations:								
Operating income								
3710 WATER SALES	382,367	395,675	286,071	370,000	0	370,000	0	
3720 CONNECTION FEES	4,500	8,000	0	0	0	0	0	
3885 PENALTIES	2,715	5,750	4,690	5,500	0	5,000	0	
3890 MISCELLANEOUS	0	0	0	19,968	0	0	0	
Total Operating income	389,582	409,425	290,761	395,468	0	375,000	0	
Operating expense								
40110 SALARIES AND WAGES	56,800	61,251	53,670	68,000	0	68,000	0	
40130 EMPLOYEE BENEFITS	23,696	18,063	15,776	21,000	0	21,000	0	
40210 BOOKS/SUBSCRIPTIONS/MEMBERSHIP	100	100	100	100	0	100	0	
40230 TRAVEL	1,806	3,000	1,894	1,894	0	3,000	0	
40250 EQUIPMENT/SUPPLIES/MAINTENANCE	37,530	29,380	24,823	40,000	0	40,000	0	
40270 UTILITIES	1,359	3,362	2,337	2,800	0	3,000	0	
40280 TELEPHONE	0	21	0	0	0	0	0	
40310 PROFESSIONAL/TECHNICAL SERVICE	0	0	19,968	19,968	0	0	0	
40330 EDUCATION AND TRAINING	693	1,000	200	200	0	1,000	0	
40650 DEPRECIATION	176,014	164,709	123,531	163,265	0	164,708	0	
Total Operating expense	297,998	280,886	242,299	317,227	0	300,808	0	
Total Income From Operations:	91,584	128,539	48,462	78,241	0	74,192	0	
Non-Operating Items:								
Non-Operating income								
3810 INTEREST EARNINGS	901	1,056	545	1,000	0	800	0	
3840 IMPACT FEES - WATER	7,500	12,500	0	0	0	0	0	
3896 GRANT-WATER PROJECT	54,642	636	0	0	0	0	0	
40900 Benefit Expense (GASB 68)	10,360	9,754	0	0	0	0	0	
Total Non-Operating income	73,403	23,946	545	1,000	0	800	0	
Non-Operating expense								
40820 DEBT SERVICE - INTEREST	63,902	61,693	58,478	58,478	0	55,719	0	
40901 Pension Expense (GASB 68)	6,426	8,463	0	0	0	0	0	
Total Non-Operating expense	70,328	70,156	58,478	58,478	0	55,719	0	
Total Non-Operating Items:	3,075	(46,210)	(57,933)	(57,478)	0	(54,919)	0	
Total Income or Expense	94,659	82,329	(9,471)	20,763	0	19,273	0	

Escalante City Water Conservation Plan



Updated April 2020

Adopted by the Escalante City Council on _____, 20____



R • B • WHITE
— P.E. —

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LIST OF ATTACHMENTS

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Appendix B – Simple Water Conservation Measures

ESCALANTE CITY WATER CONSERVATION PLAN

1.0 INTRODUCTION

Escalante City is a rural community of approximately 800 people located in Garfield County, Utah. The domestic water system for the community is supplied by nine springs located in the Escalante Mountains about 14 miles northwest of town. This supply is supplemented by water from a well drilled into the Navajo Sandstone west of town. All water in the system is delivered to two 500,000-gallon storage tanks located on the west side of town and distributed from those tanks through the service area via pipelines of varying diameters.

Problems with the City's water supply and distribution system resulted in a moratorium on the issuance of water meters in the mid-2000s, effectively halting growth. To alleviate these concerns, the City implemented an extensive program to upgrade the existing water supply and distribution system. These upgrades involved replacing the existing transmission line from the springs to the city water tanks to eliminate leakage and associated maintenance expenditures, improving the reliability and quality of water yielded by the well, and increasing the serviceability of the water distribution system.

To ensure an adequate supply and distribution of water in the future, it is important that not only the physical system be upgraded but that conservation measures are implemented. The purpose of this document is to update the City's water conservation plan to help ensure water for the future.

2.0 DESCRIPTION OF THE WATER SYSTEM

2.1 HISTORY AND USAGE

Major components of the existing water system were constructed or renovated at the following approximate dates:

Initial development of springs:	1890s
Initial construction of a pipeline from the springs to the City:	1890s
Initial construction of the City water distribution system:	1890s
Construction of a ductile iron pipeline from the springs to the City:	1963
Construction of the current water storage tanks:	1982
Initial construction of the City's water well:	1991
Upgrade of the spring collection system and upper pipeline:	1998
Installation of the current chlorination system:	1998
Installation of a storage-tank water-level monitoring system:	2005

Rehabilitation and deepening of the existing water well:	2008
Installation of an HDPE spring water transmission pipeline:	2009
Upgrade of the City culinary water distribution system:	2009-2011

As of the time of this plan upgrade, there were 666 service connections to the Escalante drinking water system. Of these, 540 were residential, 90 were commercial, and 36 were other (e.g., governmental, institutional, etc.).

System demand for indoor water use in the State of Utah is calculated based on the concept of Equivalent Residential Connections (“ERCs”). The number of ERCs served by a drinking water system is calculated based on the difference between the average annual per-connection water use by all non-residential connections and the average annual per-connection water use of all residential connections. The ERC concept and associated calculations for Escalante are further explained in the City’s Drinking Water Master Plan¹. In 2018 (the last year for which annual water use data were available at the time of this document), there were 976 ERCs on the Escalante water system.

2.2 CURRENT SYSTEM STATUS

The 4-inch diameter ductile iron pipeline running from the springs to the City storage tanks was replaced in 2009 with 6-inch diameter high-density polyethylene pipe to minimize water losses and maintenance expenditures. As a result, the spring collection system and transmission pipeline line from the springs to the city water tanks are generally in excellent condition.

A few years after the water well was drilled it began yielding water with objectionable taste, presumably due to elevated sulfide and iron concentrations. The well was rehabilitated in 2008 by sealing the annular space behind the casing, deepening the well, and installing a well screen. This resulted in a substantial improvement to water quality.

Water lines in some of the service area formerly extended for more than one block before looping through to an adjacent block. This increased the number of water users that were impacted by system disruptions, created long distances for some users to tie into the system, and resulted in some dead-end pipe sections, creating poor-quality stagnant water and safety concerns if a section of line becomes inoperable during an emergency. Furthermore, over 2½ miles of 4-inch and smaller diameter piping existed within the system, creating low-flow capacity in several areas of the City service area, which was of further concern in the event of an emergency. With the installation of new piping from 2009 through 2011, these problems have largely been eliminated.

¹ Richard B. White, PE, PLLC. 2020. Drinking Water System Master Plan and Hydraulic Model Design Elements Report. Project report prepared for Escalante City. Draper, Utah.

The City water system contains two water storage tanks – one constructed of steel and one constructed of concrete. The water storage tanks were fitted in 2005 with a system to allow remote monitoring of water levels and to notify appropriate City personnel in the event of a low-water situation. This system operates off a cell phone system, with coverage in the area currently being unreliable. Thus, plans are underway to evaluate alternatives for more efficient operation of the tank monitoring system.

The total volume of culinary water used from the Escalante water system in 2018 was 72,090,000 gallons. The amount of water diverted from sources into the collection system was measured at 77,300,000 gallons. The difference (5,210,000 gallons) represents improperly measured flows, water that was not billed to customers, and/or water that was lost from the system. The City is evaluating options for more-accurately measuring inflow to the system to better account for potential water losses.

Based on a population of 800 residents and 72,090,000 gallons of total water use, the average annual water use in Escalante in 2018 was 247 gallons per capita per day. This value is 13% lower than the average 2015 per capita water use for the region as a whole (284 gallons per capita per day) as reported by the Utah Division of Water Resources². The published water conservation goal for the region that includes Escalante is an average annual water use of 231 gallons per capita per day by 2030. Compared with the remainder of the region, Escalante is well on the way to achieving that goal.

2.3 WATER RIGHTS

The City has rights to the following nine springs in the vicinity of Posy Lake:

1. C.C. Spring
2. John Allen Bottom Spring #1
3. John Allen Bottom Spring #4
4. John Allen Bottom Spring #5
5. John Allen Bottom Spring #6
6. Deep Creek Spring #1
7. Deep Creek Spring #2
8. Deep Creek Spring #3
9. Deep Creek Spring #4

These springs have an 1892 priority. As a group, the flow right associated with these springs is 0.5 cubic foot per second (“cfs”), which is equivalent to 224.3 gallons per minute

² Hansen, Allen & Luce, Inc. and Bowen Collins & Associates, Inc. 2019. Utah’s Regional M&I Water Conservation Goals. Project report prepared for the Utah Division of Water Resources. Available online at <https://water.utah.gov/wp-content/uploads/2019/12/Regional-Water-Conservation-Goals-Report-Final.pdf>.

("gpm"). Water rights associated with all of the springs are designated for municipal use throughout the year.

Since springs do not issue water at a constant rate, the City also supplies water from its well during periods of high use and low discharge from the springs. The City has a right to divert 550 AF/yr from this well under water right 97-2214. This right was obtained from and is subject to a contract with the Utah Board of Water Resources. Since this right is limited by the volume of water and not the flow rate, the rate at which this water can be supplied by the well is limited only by the capacity of the pump and the associated piping system.

The well pump is rated nominally at a discharge rate of 450 gpm. The permit issued by the Utah Division of Drinking Water for operation of the City's well allows a long-term pumping rate of 320 gpm, based on the rate at which a 24-hour pumping test was performed following rehabilitation of the well (470 gpm). The Utah Division of Drinking Water also established a "safe yield" for the well of 250 gpm based on the pumping test rate. These rates were a function of the pumping equipment used for the test and should not be construed as having an influence on the water right.

Pine Creek Irrigation Company conveyed water right 97-6 to Escalante City in 2016. This right, which is part of four supplemental water right groups, allows the diversion of 1.4817 cfs from Pine Creek and four supplemental wells for irrigation and stock watering. The precise number of irrigated acres and heads of stock appurtenant to each individual right within the four supplemental groups associated with this right have not yet been evaluated by the Utah Division of Water Rights. Until this occurs, the City cannot change the beneficial use of this right to municipal purposes. The City has submitted applications to the Utah Division of Water Rights for apportionment of this right but, as of the date of this plan, no final decisions had been made.

The City also owns water rights associated with springs known locally as Barker Springs, located adjacent to the City's sewage lagoons. These water rights are for the use of 0.924 cfs (415 gpm) for irrigation and stock watering. Three additional rights, not owned by Escalante City, are part of the larger supplemental group. These rights were conveyed to the City in 1987 to facilitate construction of the sewage lagoons. These rights have never been apportioned among the larger supplemental group, nor have they been changed to municipal use.

2.4 PROJECTED GROWTH

The Utah Governor's Office of Management and Budget ("GOMB") prepares periodic population projections to aid in planning. GOMB's most recent projection of future growth in Escalante's population was based on an average annual growth rate of 0.98% through 2060. However, Escalante's population has remained essentially static since 1990. Therefore, for the purposes of this plan, population was projected based on no growth, 0.5% growth, and 1.0% growth. These growth scenarios and their 2060 water requirements are summarized in Table 1.

TABLE 1

**Escalante Water System Current and
Projected Design Requirements**

System Feature	Units	Current Capacity	2060 Requirement		
			No Growth	At 0.5% Growth	At 1.0% Growth
Population	--	--	802	989	1,221
Number of water connections	--	--	666	821	1,014
Number of ERCs	--	--	976	1,203	1,485
Total required storage	Gallons	1,000,000	526,200	634,700	770,300
Peak daily source capacity	gpm	674	644	794	980
	cfs	1.50	1.43	1.77	2.18
Average annual source capacity	AF/yr	1,086	487	601	741
	cfs	1.50	0.67	0.83	1.02

Note: See the City's drinking water master plan for background calculations. The 2060 "No Growth" requirement is the same as the current (2020) requirement.

The water requirements in Table 1 were calculated based on rules promulgated by the Utah Division of Drinking Water, assuming that the number of ERCs would increase at the same rate as the projected population.

With 1 million gallons of storage capacity, the current water system adequately meets the storage requirements of R309-510 through at least 2060, even with 1% annual growth (under which the projected storage requirement would be 770,300 gallons). Based on a flow of 224 gpm from the currently-developed springs and a flow of 450 gpm from the City's well (the nominal discharge capacity of the current pump), the current available source capacity of the Escalante drinking water system is 674 gpm (1.50 cfs). This supply is adequate to meet the required current and future average annual source capacities through 2060. However, if growth occurs, the current source capacity may only be adequate to meet peak daily source capacity requirements through 2022 to 2028, depending on the rate at which growth occurs. The ability to deliver this water will depend on the continued yield of the sources and maintenance of the system to minimize water losses.

The potential future shortfall in source capacity emphasizes the importance of converting water right 97-6 to municipal use and upgrading the spring collection system to capture that water. Furthermore, the City should consider evaluating the use of water from Barker Springs for irrigation of the cemetery and potentially other nearby property, thereby reducing the demand for irrigation use of culinary water. This could be done by changing only the point of use of the water since the rights associated with Barker Springs are currently designated for irrigation use.

3.0 WATER CONSERVATION CHALLENGES AND OPPORTUNITIES

3.1 CHALLENGES

Most of the challenges related to water distribution inefficiencies have been resolved. Furthermore, the City's graduated water rate structure encourages water conservation (see Appendix A). The primary remaining challenges regarding water conservation are as follows:

- The water-level monitoring system on the storage tanks is not currently active due to poor cell phone coverage. With a fiber-optic line now available near the tanks, this system could be upgraded.
- The flow meters on the springs and the water well are old and may not be accurately measuring source yields. Furthermore, there are no flow meters measuring the tank discharge into the distribution system.
- Water users often plant large areas of grass and other water-intensive landscaping and use culinary water to irrigate those areas.
- Although water rights are adequate for the anticipated growth in the immediate future, additional municipal water rights are needed to supply future growth. Furthermore, periodic drought conditions will still limit the amount of water that can be delivered to water users.

3.2 GOALS AND IMPLEMENTATION

Since the shutdown of the City water well in 2004, significant water conservation measures were implemented throughout the City. A primary goal of the City water conservation plan has been to encourage residents to continue conserving water as system improvements are made and the sources become more reliable. Additional goals of this water conservation plan include the following activities:

- Storage tank monitoring system. The City will evaluate options for upgrading the tank water-level monitoring system. The City will also evaluate options for adding flow meters to the discharge line(s) from the tanks to the distribution system.
- Source flow meters. The City will evaluate options for upgrading the source flow meters at the chlorinator building and the well house.
- Educate the public. The City has been providing water-conservation tips with water bills that are sent out during the spring and summer months (i.e., the high water-use season). This will continue. Examples of simple water conservation measures that may be included with the utility bills are provided in Appendix B.
- Keep an accurate record. Water meter readings are maintained in a database that will allow usage to be tracked. These readings will be periodically compared with data

collected from meters that are installed on the main lines (i.e., from the springs, the well, and the water tanks) to determine if significant losses are occurring in the system.

- Maintain the system. In addition to responding to system emergencies (i.e., broken water mains, etc.), water quality and flow records will be periodically reviewed to determine if long-term system maintenance needs exist (e.g., redevelopment of the well or springs).
- Limit the timing of outdoor watering. Outdoor watering accounts for nearly two-thirds of water usage in Utah. The amount of water required to achieve the same results is significantly higher during the mid-day hours, due to higher temperatures and winds. The City will encourage water users to curtail outdoor irrigation with culinary water during the hours of 10:00 am to 6:00 pm.

Consistent with the goal established by the Utah Division of Water Resources for the region that includes Escalante, the City has a goal to reduce water use by at least 6 percent per capita before the year 2030. In other words, the City's goal is to reduce average daily culinary water consumption from 247 gallons per capita per day to 231 gallons per capita per day in keeping with the regional goal set by the Utah Division of Water Resources. This goal can be reached through the water conservation efforts outlined in this document. Attainment of this goal will be measured by monitoring use each year and recalculating the average per capita was use. If progress toward the reduction goal slows, additional effort to involve the community will be undertaken.

3.3 WATER EDUCATION PROGRAM

The City regularly mails newsletters with water billings urging conservation and prudent use of water. This will continue in the future.

Escalante City
Escalante, Utah

Water Conservation Plan
April 2020

APPENDIX A

Water Rate Ordinance

Richard B. White, PE, PLLC

8.10.050 Fees, Rates and Charges

- A. **Billings and Payments:** The city shall, through its properly designated employees, promptly bill all persons, firms, corporations, partnerships and other legal entities for all services furnished by the consolidated city water and sewer system. The form of the statement will show the separate charges due for water supplied and sewer services furnished by the consolidated city water and sewer system. Users shall pay the total sum of water charges and sewer charges. Such charges may not be paid separately. Water services shall be disconnected to any consumer who shall become delinquent for more than ninety (90) days from the date of the billing, in the payment of water or sewer charges.
- B. **May Be Established by Resolution:** The rates, penalty fee for delinquency in payment, connection fee, inspection fee, reconnection fees, and other charges incidental to the connection and services from the city water and sewer systems, shall be fixed from time to time by resolution enacted by the city council. The city council may, from time to time, promulgate rules for levying, billing, guaranteeing and collecting charges for culinary water services and all other rules necessary for the management and control of the system. Rates for services furnished shall be uniform with respect to each class or classes of service established or that may hereafter be established. Rates may be established at different levels for premises outside the corporate boundaries of the city.
- C. **Fee Specified:**
1. **Water Impact Fees:**
 - a. Applicants for new water connections shall pay an impact fee of two thousand five hundred dollars (\$2,500.00).
 2. **Sewer Impact Fees:**
 - a. Applicants for new sewer connections shall pay an impact fee of one thousand dollars (\$1,000.00).
 3. **Water Connection Fees:**
 - a. For three-fourth inch (3/4") service (meter installation) - five hundred dollars (\$500.00).
 - b. For service over three-fourth inch (3/4") service - as determined by the city council.
 - c. Applicants for new water connections shall pay a connection fee of one thousand five hundred dollars (\$1,500.00). An additional one thousand five-hundred-dollar deposit (\$1,500) with a minimum of one thousand (\$1000.00) will be assessed for going through an asphalt chip sealed street.
 - d. If a water meter is moved from one location to another on the same property, the fee shall be an additional four hundred dollars (\$400.00) to move such meter.

- e. The city shall approve applications for new water connections only when such a request is accompanied by an approved municipal project approval form for which city water is required.
 - f. The city council shall limit the availability of new connections for sale as to not exceed the available water supply and water rights of the city. A permanent minimum water right of .550 gallons per minute shall be required for each connection, active or inactive. The city council may impose moratoriums on the sale of new connections as required for the availability of water and operational integrity of the system.
 - g. A twenty-five-dollar (\$25.00) fee shall be imposed when the meter is taken out.
 - h. A twenty-five-dollar (\$25.00) fee shall be imposed when the meter is reinstalled.
4. Sewer Connection Fees:
- a. The city shall approve applications for new sewer connections only when such a request is accompanied by the approved municipal project approval form which city sewer is required.
 - b. The city council may at any time limit the number of or deny applications for new sewer connections to ensure adequate sewer capacity for the existing users of the system.
 - c. Applicants for new sewer connections shall pay a connection fee of five hundred dollars (\$500.00). An additional one thousand five-hundred-dollar deposit (\$1,500) with a minimum of one thousand (\$1000.00) will be assessed for going through an asphalt chip sealed street.
5. User Fees: All User Fees base rates shall increase annually by a rate of 4%.
- a. User Fees Inside City Limits:
- (1) Inactive Water Connections: A monthly rate of twenty-six dollars (\$26.00) shall be assessed on each inactive water connection inside city limits. Inactive connections purchased or installed before April 1998 shall only be assessed inactive connection fees after that date. A fee of twenty-five dollars (\$25.00) shall be assessed to activate or inactivate any connection. If the owner of a connection is over sixty-two (62) years of age the fee to activate or inactivate any connection will be five dollars (\$5.00). Prior to activating any connection, the balance of all fees must be paid in full.
 - (2) Active Water Connections: A monthly rate of twenty-six dollars (\$26.00) for zero gallons used shall be assessed for each active connection.
 - (3) Usage Rates: A monthly rate of one dollar (\$1.00) will be assessed for each one thousand gallons of water used up to ten thousand (10,000) gallons per connection; three dollars (\$3.00) shall be assessed for each additional one thousand (1,000) gallons up to twenty five thousand gallons (25,000); six dollars (\$6.00) shall be assessed for each additional one thousand (1,000) gallons up to fifty thousand gallons (50,000), and nine dollars (\$9.00) shall be assessed for each additional one thousand (1,000) gallons in excess of fifty

thousand gallons (50,000). The use of water by the user may be restricted or regulated by the city council in times of drought.

b. User Fees and Restrictions Outside City Limits:

- (1) Inactive Water Connections: A monthly rate of thirty-one dollars (\$31.00) shall be assessed on each inactive water connection outside city limits. A fee of twenty-five dollars (\$25.00) shall be assessed to activate or inactivate any connection. If the owner of a connection is over sixty-two (62) years of age the fee to activate or inactivate any connection will be five dollars (\$5.00). Prior to activating any connection, the balance of all fees must be paid in full.
- (2) Charges for usage outside the corporate limits of the city shall be thirty-one dollars (\$31.00) per month for zero gallons used for each active connection.
- (3) Usage Rates: A monthly rate of one dollar (\$1.00) will be assessed for each one thousand gallons of water used up to ten thousand (10,000) gallons per connection; three dollars (\$3.00) shall be assessed for each additional one thousand (1,000) gallons up to twenty five thousand gallons (25,000); six dollars (\$6.00) shall be assessed for each additional one thousand (1,000) gallons up to fifty thousand gallons (50,000); and nine dollars (\$9.00) shall be assessed for each additional one thousand (1,000) gallons in excess of fifty thousand gallons (50,000). The use of water by the user may be restricted or regulated by the city council in times of drought.

- c. The city council may at any time change rates, eliminate services, restrict the amount of usage or modify any provision, policy or procedure for out of city water use without the need to give such user notice and without hearing. This is a mandatory provision based on the irrevocable, perpetual policy of the city that the municipality has no obligation to deliver water on a permanent, continuing, temporary basis to any user outside the city limits.

6. Advance Payment Privileges:

- a. In the interest of the city saving billing and bookkeeping costs, a user may pay in advance on year's total minimum water and sewer user fees and the user shall be entitled to a twenty-dollar (\$20.00) discount for that year.

7. Sewer Rates:

- a. Basis of User Charge: Each equivalent residential unit (ERU) will be charged twenty-seven dollars (\$27.00) per month.
- b. Equivalent Residential Unit: An equivalent residential unit is a unit of measurement estimated to equate to an average residential household's use. It is estimated that the average residential household will add approximately ten thousand (10,000) gallons of flow to the wastewater treatment facility monthly. It is impossible to gauge the flow of wastewater from each contributor and it is difficult to measure the flow based on culinary water usage since there are many and varied uses in the city

which do not reach the wastewater treatment facility. Therefore, the city has estimated the residential equivalent based on state department of environmental quality estimated quantity of domestic wastewater (Utah state administrative rules for large underground wastewater disposal systems R317-5, effective date November 15, 1991; tables 5-2).

Equivalent residential units are defined as follows:

Classification of User	Number of ERUs
Single-family dwelling	1 per household
Trailer parks – permanent residents	1 per trailer
Recreational vehicle parks: Independent spaces (with sewer connection)	0.125 per space
Dependent spaces (with available showers)	0.40 per space
Small/miscellaneous businesses (estimated flow <10,000 gal/mo)	1 per business
Elementary school (cafeteria, gymnasium and shower)	0.05 per person
Secondary school (cafeteria, gymnasium and shower)	0.0625 per person
Gas stations and convenience stores (estimated 50 vehicles/pump/day)	0.125 per vehicle served
Launderette (self-serve) (estimated 30 loads/washer/day)	0.125 per load of laundry
Restaurants	0.0875 per seat
Motels	0.155 per person/day
Churches	1 per estimated 10,000 gal/mo

- c. Inactive Services: All sewer services which have been approved and connection fees paid to the city which have not been installed or utilized shall pay seventy five percent (75%) of the base fee of an equivalent residential unit. The charge was determined by a ratio of debt service cost to total costs of the system, estimated as follows:

$$\text{\$88,431.00} / \text{\$119,031.00}^{**} = 75 \text{ percent}$$

* debt service

** total annual costs of operation.

- d. Enforcement: The city may discontinue culinary water service and seek restitution in civil court as appropriate for the nonpayment of sewer fees when such payment is delinquent in excess of ninety (90) days.
- e. Annual Review: The monthly charge will be reviewed and calculated once a year in conjunction with the city's annual budgeting procedure.

- f. Special Treatment of Sewage: Where the sewage which is discharged by any commercial or industrial establishment in the city sanitary sewer system is of such character as to require special treatment or to constitute an unusual or abnormal burden on the disposal facilities, such additional charges shall be assessed as the city council shall determine.
- g. Owner to Bear Cost: Any owner of property who has not made application for connection shall bear the expense of the construction of his own service stub and shall be held responsible for replacing the street to its original condition.
- h. Connection and Fee Required: The city will require that all possible connections that can be served must connect to the system and the connection fee must be paid by the time each connection to the system is made.
- i. Subdivider Responsibility:
 - (1) All charges for each building or water user and all developments within the subdivision shall be paid for by the subdivider, which shall include the city's cost of connections and the prevailing rates for water meters, and the city shall become the owner thereof. Each building or place where water is consumed shall be deemed a separate connection.
 - (2) Subdividers shall provide, at their own expense and upon approval of the city council, all materials, lines, labor, preparations and all other items necessary to establish a water connection from the main water line to the location of the water use, except the city shall provide and install the meter upon payment of the fees and costs provided in this section to be the obligation of the subdivider.
- D. Disposition Of Funds: All connection fees and monthly user charges collected under the provisions of this chapter shall be deposited in the city water and sewer system funds and used to meet the operation and maintenance costs of the systems; debt service on obligations appertaining to the construction associated with the completion of the systems; and such other allocations as the city council may by resolution provide.
- E. Application for Culinary Water Connection: Any person seeking a water connection shall file with the water department a written signed connection application that can be obtained from the city recorder.
- F. Application for Sewer Connection: Any person seeking a sewer connection shall file with the sewer department a written signed connection application that can be obtained from the city recorder.
- G. Irrigation of Public Schools: Escalante City water rates for the outside irrigation of public schools shall be amended to the following rate structure. The provisions of this subsection G shall not amend rates for connections used for inside domestic usage of public schools or for any other purpose than to benefit the direct irrigation needs of public schools.

1. Base Rate: A base rate of seventeen dollars (\$17.00) shall be assessed monthly and shall entitle the consumer to the use of fifteen thousand (15,000) gallons of water per month.
2. Overage: An overage charge of one dollar (\$1.00) shall be charged for each one thousand (1,000) gallons of overage per month not exceeding four hundred fifty thousand (450,000) gallons. Any water overage in excess of the four hundred fifty thousand (450,000) gallons per month shall be charged five dollars (\$5.00) for each one thousand (1,000) gallons.

Following the enactment of this subsection G, the Escalante City council may at its discretion, reduce all or portions of water overage charges incurred in 2005 prior to the passage date of this ordinance.

3. Special Requirements: Consumers utilizing this rate shall only use water for irrigation purposes between the hours of six o'clock (6:00) P.M. and ten o'clock (10:00) A.M. and comply with all other usage restriction means implemented by Escalante City.
4. Expiration and Repealer: All provisions of this subsection G shall expire one year from the date of enactment. Any previous ordinance in conflict is hereby repealed.

HISTORY

Adopted by Ord. 1985 Code § 14-214, § 14-126, § 14-128, § 14-170, § 14-190 on 1/1/1985
Amended by Ord. 1998-02 on 4/7/1998
Amended by Ord. 2000-11 on 7/26/2000
Amended by Ord. 2003-01 on 4/1/2003
Amended by Ord. 2004 Code on 1/1/2004
Amended by Ord. 2005-03 on 8/16/2005
Amended by Ord. 2007-04 on 5/1/2007
Amended by Ord. 2014-02 on 5/6/2014
Amended by Ord. 2014-03 on 8/5/2014
Amended by Ord. 2015-01 on 4/7/2015

Escalante City
Escalante, Utah

Water Conservation Plan
April 2020

APPENDIX B

Example Water Conservation Measures

Richard B. White, PE, PLLC

EXAMPLE WATER CONSERVATION MEASURES

- When washing dishes by hand, don't let the water run while rinsing. Fill one sink with wash water and the other with rinse water.
- Some refrigerators, air conditioners and ice-makers are cooled with wasted flows of water. Consider upgrading with air-cooled appliances for significant water savings.
- Adjust sprinklers so only your lawn is watered and not the house, sidewalk, or street.
- Run your clothes washer and dishwasher only when they are full. You can save up to 1,000 gallons a month.
- Choose drought-tolerant shrubs and groundcovers instead of turf for hard-to-water areas such as steep slopes and isolated strips.
- Use the garbage disposal sparingly. Compost vegetable food waste and save gallons of water every time.
- Plant in the fall when conditions are cooler and rainfall is more plentiful.
- For cold drinks, keep a pitcher of water in the refrigerator instead of running the tap.
- Monitor your water bill for unusually high use. Your bill and water meter are tools that can help you discover leaks.
- Water your lawn and garden between the hours of 6 pm and 10 am when temperatures are cooler, thereby minimizing evaporation.
- Spread a layer of organic mulch around plants to retain moisture and save water.
- Use a broom instead of a hose to clean your driveway and sidewalk and save water every time.
- If your shower fills a one-gallon bucket in less than 20 seconds, replace the showerhead with a water-efficient model.
- Collect the water you use for rinsing fruits and vegetables, and then reuse it to water houseplants.
- If water runs off your lawn easily, split your watering time into shorter periods to allow for better absorption.
- Check indoor and outdoor faucets, sprinklers and hoses for leaks. Repair leaks promptly.
- Check the root zone of your lawn or garden for moisture before watering using a spade or trowel. If it's still moist two inches under the soil surface, there is no need to water.
- When buying new appliances, consider those that offer cycle and load size adjustments. They are more water and energy efficient.
- Shorten your shower by a minute or two and you'll save up to 150 gallons per month.
- Upgrade older toilets with water efficient models.
- Adjust your lawn mower to a higher setting. A taller lawn shades roots and holds soil moisture better than if it is closely clipped.
- When cleaning out fish tanks, give the nutrient-rich water to your plants.

- When running a bath, plug the tub before turning the water on and then adjust the temperature as the tub fills up.
- Collect water from your roof to water your container plants.
- Designate one glass for your drinking water each day or refill a water bottle. This will cut down on the number of glasses to wash.
- Rather than following a set watering schedule, check for soil moisture two to three inches below the surface before watering.
- Install a rain sensor on your irrigation controller so your system won't run when it's raining.
- Don't use running water to thaw food. Defrost food in the refrigerator for water efficiency and food safety.
- Use drip irrigation for shrubs and trees to apply water directly to the roots where it's needed.
- Reduce the amount of lawn in your yard by planting shrubs and ground covers appropriate to your site and region.
- Teach your children to turn off faucets tightly after each use.
- Remember to check your sprinkler system valves periodically for leaks and keep the sprinkler heads in good shape.
- Soak pots and pans instead of letting the water run while you scrape them clean.
- Don't water your lawn on windy days when most of the water blows away or evaporates.
- Water your plants deeply but less frequently to encourage deep root growth and drought tolerance.
- Know where your master water shut-off valve is located.
- Group plants with the same watering needs together to avoid over-watering some while under-watering others.
- Use a layer of organic material on the surface of your planting beds to minimize weed growth that competes for water.
- Use a minimum amount of organic or slow release fertilizer to promote a healthy and drought tolerant landscape.
- Turn off the water while brushing your teeth and save 25 gallons a month.
- Learn how to shut off your automatic watering system in case it malfunctions or you get an unexpected rain.
- Set a timer when watering your lawn or garden to remind you when to stop. A running hose can discharge up to 10 gallons per minute.
- If your toilet flapper does not close after flushing, replace it.
- Make sure there are water-saving aerators on all of your faucets.
- Next time you add or replace a flower or shrub, choose a low water use plant for year-round landscape color.
- Install an instant water heater near your kitchen sink so you don't have to run the water while it heats up. This also reduces energy costs.

- If installing a lawn, select a turf mix or blend that matches your climate and site conditions.
- When the kids want to cool off, use the sprinkler in an area where your lawn needs it the most.
- Winterize outdoor spigots when temperatures dip below freezing to prevent pipes from leaking or bursting.
- Insulate hot water pipes for more immediate hot water at the faucet and for energy savings.
- Wash your car on the lawn, and you'll water your lawn at the same time.
- Drop your tissue in the trash instead of flushing it.
- Direct water from rain gutters toward water-loving plants in the landscape for automatic water savings.
- Use a hose nozzle or turn off the water while you wash your car.
- Washing dark clothes in cold water saves both on water and energy while it helps your clothes to keep their colors.
- Leave lower branches on trees and shrubs and allow leaf litter to accumulate on the soil. This keeps the soil cooler and reduces evaporation.
- Plant with finished compost to add water-holding and nutrient-rich organic matter to the soil.
- Water only when necessary. More plants die from over-watering than from under-watering.
- Adjust your watering schedule each month to match seasonal weather conditions and landscape requirements.
- Turn off the water while you wash your hair.
- Wash your pets outdoors in an area of your lawn that needs water.
- Apply water only as fast as the soil can absorb it.
- Aerate your lawn at least once a year so water can reach the roots.
- When washing dishes by hand, fill the sink basin or a large container and rinse when all of the dishes have been soaped and scrubbed.
- Turn off the water while you shave.
- When you give your pet fresh water, don't throw the old water down the drain. Use it to water your trees or shrubs.
- If you accidentally drop ice cubes when filling your glass from the freezer, don't throw them in the sink. Drop them in a house plant instead.
- Throw trimmings and peelings from fruits and vegetables into your yard compost to prevent using the garbage disposal.
- When you have ice left in your cup from a take-out restaurant, don't throw it in the trash. Dump it on a plant.