

CULINARY WATER IMPACT FEE ANALYSIS (IFA)

WILLARD CITY, UTAH

JULY 2021



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IMPACT FEE CERTIFICATION

IFA CERTIFICATION

Lewis Young Robertson & Burningham, Inc. certifies that the Impact Fee Analysis prepared for culinary water services:

1. includes only the costs of public facilities that are:
 - a. allowed under the Impact Fees Act; and
 - b. actually incurred; or
 - c. projected to be incurred or encumbered within six years after the day on which each impact fee is paid;
2. does not include:
 - a. costs of operation and maintenance of public facilities;
 - b. costs for qualifying public facilities that will raise the level of service for the facilities, through impact fees, above the level of service that is supported by existing residents;
 - c. an expense for overhead, unless the expense is calculated pursuant to a methodology that is consistent with generally accepted cost accounting practices and the methodological standards set forth by the federal Office of Management and Budget for federal grant reimbursement;
 - d. offsets costs with grants or other alternate sources of payment; and
3. complies in each and every relevant respect with the Impact Fees Act.

LEWIS YOUNG ROBERTSON & BURNINGHAM, INC.



DEFINITIONS

The following acronyms or abbreviations are used in this document:

AF:	Acre Foot
ERC:	Equivalent Residential Connection
GAL:	Gallons
GPM:	Gallons per Minute
GPD:	Gallons per Day
IFA:	Impact Fee Analysis
IFFP:	Impact Fee Facilities Plan
LOS:	Level of Service
LYRB:	Lewis Young Robertson and Burningham, Inc.
MG:	Million Gallons



SECTION 1: EXECUTIVE SUMMARY

The purpose of this Impact Fee Analysis (IFA), is to fulfill the requirements established in Utah Code Title 11 Chapter 36a, the "Impact Fees Act," and help Willard City (the "City") fund necessary capital improvements for future growth. This document will address the future culinary water infrastructure needed to serve new development through the next ten years, as well as the appropriate impact fees the City may charge to new growth to maintain the level of service (LOS). The Willard City 2017 Culinary Water Capital Facilities Plan and the CFP 2021 Appendix (the "CFP", See **Appendix B**), along with information from the City, provide much of the information for this analysis as the basis for calculating impact fees.

- ☞ **Impact Fee Service Area:** The Service Area for the culinary water impact fees includes all areas within the City boundary and proposed annexation areas. This document identifies the necessary future system improvements for the Service Area that will maintain the proposed LOS into the future.
- ☞ **Demand Analysis:** The demand unit utilized in this analysis is equivalent residential connections (ERCs). The primary impact on the system will be growth in ERCs. As development occurs within the City, it generates increased demand on the culinary water system. The system improvements identified in this study are designed to maintain the proposed LOS for any new ERCs that connect to the system.
- ☞ **Level of Service:** The proposed LOS for source is based on peak day indoor and outdoor demand of 1.51 gallons per minute (gpm) per ERC. The proposed level of service for the storage component is 1,084 gallons of equalization storage. The distribution system LOS is based on maintaining 20 psi during conditions of fire flow, 30 psi during peak instantaneous demand, and 40 psi during peak day demand.¹
- ☞ **Excess Capacity:** Based on the proposed LOS, there are 439 gpm of source excess capacity. The excess capacity related to storage is 431,428 gallons. Excess capacity within distribution is based on proportionate ERCs within the 10-year planning horizon.
- ☞ **Outstanding Debt:** The City currently has one piece of outstanding debt related to culinary water improvements. These bonds were issued in 2013.
- ☞ **Capital Facilities Analysis:** Based on the projected growth of 1,013 ERCs, the excess capacity within the existing source and storage infrastructure will not be sufficient to maintain the proposed LOS. New development will need to cover the cost of the excess capacity they consume, as well as the proposed new source, storage and distribution facilities. A total of \$5,722,274 is considered growth-related cost within the IFA planning horizon.
- ☞ **Funding of Future Facilities:** This analysis assumes future growth-related facilities will be funded through a combination of utility revenues and impact fee revenues.

PROPOSED CULINARY WATER IMPACT FEE

The culinary water impact fees proposed in this analysis will be assessed within the Service Area. **Table 1.1** illustrates the appropriate fee associated with culinary water projects occurring within the next ten years.

TABLE 1.1: IMPACT FEE PER ERC

	COST	% TO IFA	COST TO IFA	ERCs SERVED	COST PER ERC
Buy-In					
Source Buy-in	\$328,652	26%	\$86,102	1,013	\$85
Storage Buy-in	\$798,196	78%	\$626,117	1,013	\$618
Distribution Buy-in	\$3,267,976	-	-	1,013	-
Future Facilities					
Source	\$6,886,699	48%	\$3,326,736	1,013	\$3,286
Storage	\$5,471,496	26%	\$1,442,985	1,013	\$1,425
Distribution	\$2,412,955	39%	\$952,553	1,013	\$941
Professional Expense	\$6,600	100%	\$6,600	1,013	\$7
Total Fee Per ERC					\$6,361

¹ Source: CFP p. 6-7



NON-STANDARD CULINARY WATER IMPACT FEES

The City reserves the right under the Impact Fees Act² to assess an adjusted fee that more closely matches the true impact that the land use will have upon the culinary water system. This adjustment could result in a lower impact fee if evidence suggests a particular user will create a different impact than what is standard for its category.

FORMULA FOR NON-STANDARD IMPACT FEES:

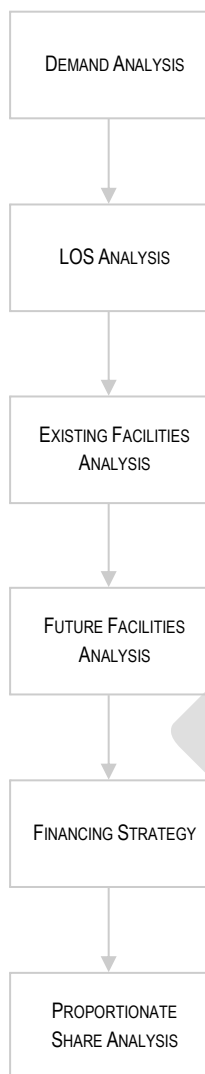
Estimated ERC * Impact Fee per ERC (\$6,361) = Impact Fee

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² 11-36a-402(1)(c)

SECTION 2: GENERAL IMPACT FEE METHODOLOGY

FIGURE 2.1: IMPACT FEE METHODOLOGY



The purpose of this study is to fulfill the requirements of the Impact Fees Act regarding the establishment of an IFA³ and identify the demands placed upon the City's existing facilities by future development, evaluate how these demands will be met by the City, and the future improvements required to maintain the existing LOS. The purpose of the IFA is to proportionately allocate the cost of the new facilities and any excess capacity to new development, while ensuring that all methods of financing are considered. The following elements are important considerations when completing an IFA.

DEMAND ANALYSIS

The demand analysis serves as the foundation for this analysis. This element focuses on a specific demand unit related to each public service – the existing demand on public facilities and the future demand as a result of new development that will impact system facilities.

LEVEL OF SERVICE ANALYSIS

The demand placed upon existing public facilities by existing development is known as the existing LOS. Through the inventory of existing facilities, combined with the growth assumptions, this analysis identifies the LOS which is provided to a community's existing residents and ensures that future facilities maintain these standards. Any excess capacity identified within existing facilities can be apportioned to new development. Any demand generated from new development that overburdens the existing system beyond the existing capacity justifies the construction of new facilities.

EXISTING FACILITY INVENTORY

In order to quantify the demands placed upon existing public facilities by new development activity, the analysis provides an inventory of existing **system** facilities. The inventory of existing facilities is important to properly determine the excess capacity of existing facilities and the utilization of excess capacity by new development.

FUTURE CAPITAL FACILITIES ANALYSIS

The demand analysis, existing facility inventory and LOS analysis allow for the development of a list of capital projects necessary to serve new growth and to maintain the existing system. This list includes any excess capacity of existing facilities, as well as future **system improvements** necessary to maintain the level of service. Any demand generated from new development that overburdens the existing system beyond the existing capacity justifies the construction of new facilities.

FINANCING STRATEGY

This analysis must also include a consideration of all revenue sources, including impact fees, future debt costs, alternative funding sources and the dedication of system improvements, which may be used to finance system improvements.⁴ In conjunction with this revenue analysis, there must be a determination that impact fees are necessary to achieve an equitable allocation of the costs of the new facilities between the new and existing users.⁵

PROPORTIONATE SHARE ANALYSIS

The written impact fee analysis is required under the Impact Fees Act and must identify the impacts placed on the facilities by development activity and how these impacts are reasonably related to the new development. The written impact fee analysis must include a proportionate share analysis, clearly detailing each cost component and the methodology used to calculate each impact fee. A local political subdivision or private entity may only impose impact fees on development activities when its plan for financing system improvements establishes that impact fees are necessary to achieve an equitable allocation of the costs borne in the past and to be borne in the future (UCA 11-36a-302).

³UC 11-36a-301,302,303,304

⁴ UC 11-36a-302(2)

⁵ UC 11-36a-302(3)

SECTION 3: OVERVIEW OF SERVICE AREA, DEMAND, AND LOS

SERVICE AREAS

Utah Code requires the impact fee enactment to establish one or more service areas within which impact fees will be imposed.⁶ The Service Area for the culinary water impact fees includes all areas within the City boundary and proposed annexation areas as illustrated in **Exhibit 8.1** in **Appendix B**. This document identifies the necessary future system improvements for the Service Area that will maintain the existing level of service (LOS) into the future.

DEMAND UNITS

The demand unit utilized in this analysis is equivalent residential connections, or ERCs. The primary impact on the system will be growth in residential and commercial ERCs through development. As development occurs within the City, it generates increased demand on the culinary water system, above the current demand. The system improvements identified in this study are designed to maintain the existing level of service for any new or redeveloped property within the City. If growth assumptions change substantially, the impact fee analysis should be updated to reflect these changes.

TABLE 3.1: SERVICE AREA ERC GROWTH PROJECTIONS

	ERCs	CHANGE IN ERCs
Current	820	
10 Year	1,833	1,013

Source: LYRB, City, IFFP p.5-8 and Utah Division of Water Rights

LEVEL OF SERVICE STANDARDS

Impact fees cannot be used to finance an increase in the level of service to current or future users of capital improvements. Therefore, it is important to identify the culinary water level of service to ensure that the new

capacities of projects financed through impact fees do not exceed the established standard.

The IFFP identifies the existing LOS for source, storage, and distribution. According to the Impact Fee Act, the proposed level of service may diminish or equal the existing level of service. As shown below, the proposed LOS is less than the existing LOS. The proposed LOS identified in the CFP for source is based on peak day indoor and outdoor demand of 1.51 gallons per minute (gpm) per ERC. The proposed level of service for the storage component is 1,084 gallons of equalization storage, plus 330,000 gallons for fire suppression. No emergency storage is deemed necessary. The distribution system LOS is based on maintaining 20 psi during conditions of fire flow, 30 psi during peak instantaneous demand, and 40 psi during peak day demand.⁷ **Table 3.2** illustrates existing system LOS based on the total culinary water ERCs.

TABLE 3.2: EXISTING & PROPOSED LOS

ACTUAL EXISTING LOS	PROVIDED LOS	PROPOSED LOS	MEASUREMENT
Source (Observed)	2.04	1.51	gpm/ERC
Storage (Per Code + Emergency)	1,610	1,084	gal/ERC
Water Rights (Observed - Volume)	5.59	1.51	AF/ERC

Source: LYRB, CFP pp.6,11-21

⁶ UC 11-36a-402(1)(a)

⁷ Source: CFP p. 7

SECTION 4: EXISTING FACILITIES INVENTORY

EXISTING FACILITIES

SOURCE

The City has a total of 1,800 gpm of source capacity, as shown in **TABLE 4.1**.

STORAGE

The City has a total of 1,650,000 gallons of storage capacity, as shown in **TABLE 4.2**.

DISTRIBUTION

The City has a total of \$3,208,632 in existing distribution infrastructure. This infrastructure serves existing development.

MANNER OF FINANCING EXISTING PUBLIC FACILITIES

The City currently has one piece of outstanding debt related to culinary water improvements. These bonds were issued in 2013 and have a remaining \$340,806 in debt service. The proceeds of the bonds were used for the purpose of refinancing the 1995 Bonds and the 1995B Bonds. The interest associated with these bonds is included in the determination of existing value and the appropriate buy-in figure.

TABLE 4.3: ALLOCATION OF OUTSTANDING BOND INTEREST

	PRINCIPAL	COUPON	INTEREST
2013 Bonds	\$261,000	Increasing	\$79,806
Allocation Strategy			
	PRINCIPAL	ALLOCATION	INTEREST
Water	\$261,000	100%	\$79,806

TABLE 4.4: ALLOCATION OF INTEREST COMPONENT

	ORIGINAL COST	INTEREST	TOTAL	NOTES
Source	\$322,684	\$5,968	\$328,652	See Table 4.5
Storage	\$783,702	\$14,495	\$798,196	See Table 4.6
Distribution	\$3,208,632	\$59,343	\$3,267,976	See Table 4.7
Total	\$4,315,018	\$79,806	\$4,394,824	

EXCESS CAPACITY

Based on the existing LOS, there is 497 gpm of source excess capacity available for new growth. The excess capacity related to storage is 473,376 gpd, or approximately 36 percent of the total system storage capacity. As stated previously, development is not expected to increase the amount of irrigated acreage in the City. Therefore, only indoor demands were considered in calculating the number of ERCs that will be served by the excess capacity. However, for the purposes of calculating existing used capacity, the indoor and outdoor LOS is applied to existing ERCs. The tables below illustrate the calculation of excess capacity and the proportional value included in the calculation of the impact fee.

TABLE 4.5: ILLUSTRATION OF SOURCE EXCESS CAPACITY

	GPM	NOTES
Existing Source Capacity	1,674	IFFP p.12
Required for Existing Dev to Maintain LOS	1,177	820 Existing ERCs x LOS of 1.51 gpm/ERC
Excess Capacity	497	

TABLE 4.1: EXISTING SOURCE FACILITIES

SOURCE	ALLOWED FLOW GPM	ACTUAL FLOW GPM
1936 Well (Irrigation)	325	-
1995 Well (WS004)	1,140	850
2003 North Well (WS007)	1,773	700
Upper Spring (WS003)	1,346	250
TOTAL	4,584	1,800
Current ERCs	820	820
Provided LOS per ERC	5.59	2.20
Estimated Loss	7%	7%
Total Capacity After Loss	4,263	1,674
Provided LOS After Loss	5.20	2.04

Source: CFP Pg. 12 Table 4.1, Willard City

TABLE 4.2: EXISTING STORAGE FACILITIES

	STORAGE VOLUME GAL
Upper Tank	500,000
Lower Tank #1	400,000
Lower Tank #2	200,000
New Reservoir	550,000
Total	1,650,000
Less Fire	330,000
Available	1,320,000
Current ERCs	820
Provided LOS per ERC	1,610

CFP Pg. 16 Table 5.1



	GPM	NOTES
Required for New Dev to Maintain LOS	1,525	1,013 New ERCs x LOS of 1.51 gpm/ERC
% of Total	26.2%	439 gpm / 1,674 gpm
Value of Existing Source Improvements	\$328,652	Source: City Depreciation Statements Includes associated interest
Value to New Growth	\$86,102	\$328,652 x 26.2%
Additional Source Needed for IFA	1,087	
Remaining ERCs to Serve	721	

TABLE 4.6: ILLUSTRATION OF STORAGE EXCESS CAPACITY

	GALLONS	NOTES
Existing Storage Capacity	1,320,000	IFFP p.16
Required for Existing Dev to Maintain LOS	888,572	820 Existing ERCs x LOS of 1,084 gal/ERC
Excess Capacity	431,428	
Required for New Dev to Maintain LOS	1,097,169	1,013 New ERCs x LOS of 1,084 gal/ERC
% of Total	78.4%	431,428 gal / 550,000-gal New Tank
Value of Existing Storage Improvements	\$798,196	Source: City, Based on most recent constructed reservoir #4
Value to New Growth	\$626,117	\$798,196 x 78.4%
Additional Storage Needed for IFA	1,097,169	
Remaining ERCs to Serve	614	

As shown in **Tables 4.4-4.6**, there is capacity related to source and storage. However, based on the forecasted growth in ERCs, the City will need to construct additional distribution facilities to serve the demand within the next ten years. **Section 5** addresses the proposed capital improvements and the proportion of impact fee eligible costs.

SECTION 5: CAPITAL FACILITY ANALYSIS

The estimated costs attributed to new growth were analyzed based on existing development versus future development patterns. From this analysis, a portion of future development costs were attributed to new growth and included in this impact fee analysis as shown in **Table 5.1**. Capital projects related to curing existing deficiencies were not included in the calculation of the impact fees. The costs of projects related to curing existing deficiencies cannot be funded through impact fees.

Based on the projected growth of 1,013 ERCs, the excess capacity within existing infrastructure will not be sufficient to maintain the proposed LOS. Therefore, new facilities will be needed, as summarized below and detailed in **Appendix A**.

TABLE 5.1: ILLUSTRATION OF CAPITAL IMPROVEMENTS SCHEDULED TO BE COMPLETED IN THE NEXT 10 YEARS

PROJECT DESCRIPTION	2017	2020	REPLACEMENT/ DEFICIENCY	IMPACT FEE ELIGIBLE	DEVELOPER COST	% TO IFFP	COST TO IFFP DEMAND
Source	\$1,230,000	\$7,257,543	\$387,918	\$6,886,699	-	48%	3,326,736
Distribution	\$8,355,750	\$10,657,017	\$7,035,301	\$2,412,955	\$1,208,760	39%	952,553
Storage	\$2,866,250	\$6,110,742	\$639,245	\$5,471,496	-	26%	1,442,985

SYSTEM VS. PROJECT IMPROVEMENTS

System improvements are defined as existing and future public facilities designed to provide services to service areas within the community at large.⁸ Project improvements are improvements and facilities that are planned and designed to provide service for a specific development (resulting from a development activity) and considered necessary for the use and convenience of the occupants or users of that development.⁹ To the extent possible, this analysis only includes the costs of system improvements related to new growth within the proportionate share analysis.

FUNDING OF FUTURE FACILITIES

The IFFP must also include a consideration of all revenue sources, including impact fees and the dedication of system improvements, which may be used to finance system improvements.¹⁰ In conjunction with this revenue analysis, there must be a determination that impact fees are necessary to achieve an equitable allocation of the costs of the new facilities between the new and existing users.¹¹

In considering the funding of future facilities, the City has determined the portion of future projects that will be funded by impact fees as growth-related, system improvements. No other revenues from other government agencies, grants or developer contributions have been identified within the IFFP to help offset future capital costs. If these revenues become available in the future, the impact fee analysis should be revised. It is anticipated that future project improvements will be funded by the developer. These costs have not been included in the calculation of the impact fee.

Other revenues such as utility rate revenues will be necessary to fund non-growth-related projects and to fund growth related projects when sufficient impact fee revenues are not available. In the latter case, impact fee revenues will be used to repay utility rate revenues for growth related projects. A brief description of alternative financing options is included below.

- ☞ **Utility Rate Revenues:** Utility rate revenues serve as the primary funding mechanism within enterprise funds. Rates are established to ensure appropriate coverage of all operations and maintenance expenses, debt service coverage, and capital project needs. Impact fee revenues are generally considered non-operating revenues and help offset future capital costs.
- ☞ **Grants, Donations and Other Contributions:** Grants and donations are not expected as a future funding source. The impact fees should be adjusted if grant monies are received. New development may be entitled to a reimbursement for any grants or donations received for growth related projects, or for developer funded IFFP projects.
- ☞ **Debt Financing:** The City may need to utilize debt financing to fund the new storage facility or other infrastructure. The Impact Fees Act allows for the costs related to the financing of future capital projects to be included in the impact fee. This allows the City to finance and quickly construct infrastructure for new development and reimburse itself later from impact fee revenues for the costs of principal and interest. However, no future debt expense is included in this analysis.

⁸ 11-36a-102(21)

⁹ 11-36a-102(14)

¹⁰ 11-36a-302(2)

¹¹ 11-36a-302(3)

PROPOSED CREDITS OWED TO DEVELOPMENT

The Impact Fees Act requires a local political subdivision or private entity to ensure that the impact fee enactment allows a developer, including a school district or a charter school, to receive a credit against or proportionate reimbursement of an impact fee if the developer: (a) dedicates land for a system improvement; (b) builds and dedicates some or all of a system improvement; or (c) dedicates a public facility that the local political subdivision or private entity and the developer agree will reduce the need for a system improvement.¹² The facilities must be considered system improvements or be dedicated to the public, and offset the need for an improvement identified in the IFFP.

EQUITY OF IMPACT FEES

Impact fees are intended to recover the costs of capital infrastructure that relate to future growth. The impact fee calculations are structured for impact fees to fund 100 percent of the growth-related facilities identified in the proportionate share analysis as presented in the impact fee analysis. Even so, there may be years that impact fee revenues cannot cover the annual growth-related expenses. In those years, other revenues such as general fund revenues will be used to make up any annual deficits. Any borrowed funds are to be repaid in their entirety through impact fees.

NECESSITY OF IMPACT FEES

An entity may only impose impact fees on development activity if the entity's plan for financing system improvements establishes that impact fees are necessary to achieve parity between existing and new development. This analysis has identified the improvements to public facilities and the funding mechanisms to complete the suggested improvements. Impact fees are identified as a necessary funding mechanism to help offset the costs of new capital improvements related to new growth. In addition, alternative funding mechanisms are identified to help offset the cost of future capital improvements.

¹² 11-36a-402(2)

SECTION 6: CULINARY WATER IMPACT FEE CALCULATION

Impact fees are calculated based on many variables centered on proportionality and LOS. The previous sections identified the future demand, the existing and proposed level of service, the availability of excess capacity and the needed future facilities to serve new development. The following section identifies the appropriate impact fee to be assessed to new development to maintain the existing LOS.

PROPOSED CULINARY WATER IMPACT FEE

PLAN BASED IMPACT FEE CALCULATION

Impact fees can be calculated based on a defined set of costs specified for future development, usually defined within the Master Plan, Capital Improvement Plan and IFFP. The total project costs are divided by the total demand units the projects are designed to serve. Under this methodology, it is important to identify the existing level of service and determine any excess capacity in existing facilities that could serve new growth. Impact fees are then calculated based on many variables centered on proportionality share and LOS.

The culinary water impact fees proposed in this analysis will be assessed within the Service Area. The table below illustrates the appropriate impact fee to maintain the existing LOS, based on the assumptions within this document. The fee below represents the maximum allowable impact fee assignable to new development. The total fee per ERC is **\$6,361**.

TABLE 6.1: IMPACT FEE PER ERC

	COST	% TO IFA	COST TO IFA	ERCs SERVED	COST PER ERC
Buy-In					
Source Buy-in	\$328,652	26%	\$86,102	1,013	\$85
Storage Buy-in	\$798,196	78%	\$626,117	1,013	\$618
Distribution Buy-in	\$3,267,976	-	-	1,013	-
Future Facilities					
Source	\$6,886,699	48%	\$3,326,736	1,013	\$3,286
Storage	\$5,471,496	26%	\$1,442,985	1,013	\$1,425
Distribution	\$2,412,955	39%	\$952,553	1,013	\$941
Professional Expense	\$6,600	100%	\$6,600	1,013	\$7
Total Fee Per ERC					\$6,361

NON-STANDARD IMPACT FEES

The City reserves the right under the Impact Fees Act¹³ to assess an adjusted fee that more closely matches the true impact that the land use will have upon the culinary water system. This adjustment could result in a lower impact fee if evidence suggests a particular user will create a different impact than what is standard for its category.

FORMULA FOR NON-STANDARD IMPACT FEES:

Estimated ERC * Impact Fee per ERC (\$6,361) = Impact Fee

CONSIDERATION OF ALL REVENUE SOURCES

The Impact Fees Act requires the proportionate share analysis to demonstrate that impact fees paid by new development are the most equitable method of funding growth-related infrastructure. See Section 5 for further discussion regarding the consideration of revenue sources.

EXPENDITURE OF IMPACT FEES

Legislation requires that impact fees should be spent or encumbered within six years after each impact fee is paid. Impact fees collected in the next five to six years should be spent only on those projects outlined in the IFFP as growth related costs to maintain the LOS.

GROWTH-DRIVEN EXTRAORDINARY COSTS

The City does not anticipate any extraordinary costs necessary to provide services to future development.

¹³ 11-36a-402(1)(c)



SUMMARY OF TIME PRICE DIFFERENTIAL

The Impact Fees Act allows for the inclusion of a time price differential to ensure that the future value of costs incurred at a later date are accurately calculated to include the costs of construction inflation. While an inflation component may be included in the impact fee analysis to reflect the future cost of facilities, at the request of the City it is not considered in the cost estimates in this study. However, the impact fee analysis should be updated regularly to account for changes in costs estimates over time.

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APPENDIX A: DETAIL OF PROPOSED CAPITAL IMPROVEMENTS

#	PROJECT DESCRIPTION	2017	2020	TOTAL ESTIMATED COST	REPLACEMENT/ DEFICIENCY	IMPACT FEE ELIGIBLE	DEVELOPER COST	NEW CAPACITY	UNIT	ERCs SERVED	REMAINING ERCs	% TO IFFP	COST TO IFFP DEMAND
Source													
2	Replace pump at 1962/1995 well to increase pumping rate to 1,000 gpm	62,500	68,295	68,295	68,295	17,074	-	150	gpm				
3	Rehabilitate existing spring to increase flow	93,750	102,443	102,443	102,443	-	-	0					
6	Install generators for back-up power at Control Building and Wells	198,750	217,179	217,179	217,179	-	-	0					
17	Develop additional water sources by drilling new well(s)	875,000	2,289,875	2,289,875	-	2,289,875	-	700					
18	Drill and construct new well and well house to service South end of Willard City		2,289,875	2,289,875		2,289,875	-	700	gpm				
19	Drill and construct new well and well house to service part of North End of Willard City		2,289,875	2,289,875		2,289,875	-	700	gpm				
	Total Source	\$1,230,000	\$7,257,543	\$7,257,543	\$387,918	\$6,886,699	-	2,250		1,493	721	48%	\$3,326,736
Distribution													
4	Replace existing water line on 200 E from Center St to 200 South	236,375	258,293	258,293	258,293	-	-					21%	-
5	Replace old valve with new Pressure Reducing Valve in Control Building	12,500	13,659	13,659	13,659	-	-					21%	-
7	Upsize existing water line to 10" line 750 North from Main St to 600 West	724,300	791,462	791,462	672,743	118,719	-					21%	25,354
8	Upsize water line to 8" line on Main St. from 500 North to 850 North	452,500	494,459	494,459	445,013	49,446	-					21%	10,560
9	Install 8" line on 200 West from 550 North to 750 North	214,250	234,117	234,117	-	-	234,117					21%	-
10	Install new 8" water line from Hargis Hill to Main St.	80,000	87,418	87,418	87,418	-	-					21%	-
12	Upsize water line to 8" on Main St. from 550 South to South City Limit	585,200	639,464	639,464	617,683	21,781	-					21%	4,652



#	PROJECT DESCRIPTION	2017	2020	TOTAL ESTIMATED COST	REPLACEMENT/ DEFICIENCY	IMPACT FEE ELIGIBLE	DEVELOPER COST	NEW CAPACITY	UNIT	ERCs SERVED	REMAINING ERCs	% TO IFFP	COST TO IFFP DEMAND
13	Upsize existing 6" lines to 8" lines throughout City as funds allow	4,427,500	4,838,049	4,838,049	4,838,049	-	-					21%	-
14	Emergency connections with neighboring water systems	93,750	102,443	102,443	102,443	-	-					21%	-
15	Install 12" line from Control Building to 300 East 300 North	198,125	216,497	216,497	-	216,497	-					21%	46,236
16	Install 12" line on 300 East from 300 North to 1650 North	1,331,250	1,454,693	1,454,693	-	480,049	974,644					21%	102,521
20	Install pressurized irrigation system within City to eliminate need for culinary water outdoor use	-	-	-	-	-	-					21%	-
21	New 12" PVC distribution waterline from South end water tank		1,135,838	1,135,838	-	1,135,838	-					50%	567,919
22	New 12" PVC distribution waterline from North end water tank		390,625	390,625	-	390,625	-					50%	195,313
	Total Distribution	\$8,355,750	\$10,657,017	\$10,657,017	\$7,035,301	\$2,412,955	\$1,208,760	-		-	1,013	39%	\$952,553
Storage													
1	Construct new 0.5 MG tank for lower pressure zone	615,000	672,027	672,027	-	672,027	-	500,000					
11	Repair or replace Lower Tank #1	585,000	639,245	639,245	639,245	-	-						
18	Construct new 0.25 MG tank for upper pressure zone	380,000	415,236	415,236	-	415,236	-	250,000					
19	Construct new 1.15 MG tank(s) for lower pressure zone	1,286,250	1,405,520	1,405,520	-	1,405,520	-	1,150,000					
20	Construct new 600,000 Gallon culinary water tank on South end of Willard City		1,214,625	1,214,625	-	1,214,625	-	600,000					
21	Construct new 1.25 Million Gallon culinary water tank on North end of Willard City		1,764,088	1,764,088	-	1,764,088	-	1,250,000					
	Total Storage	\$2,866,250	\$6,110,742	\$6,110,742	\$639,245	\$5,471,496	-	\$3,750,000		2,330	614	26%	\$1,442,985



**APPENDIX B: CULINARY WATER CAPITAL FACILITIES PLAN (NOVEMBER 2017) AND
CAPITAL FACILITIES PLAN 2021 APPENDIX**
