



PUBLIC
FINANCE
ADVISORS



WEST
JORDAN
CITY, UTAH

SEPTEMBER
2023

IMPACT FEE FACILITIES PLAN (IFFP)
& IMPACT FEE ANALYSIS (IFA)

STORMWATER, WASTEWATER, AND WATER

PREPARED BY:

LRB PUBLIC FINANCE ADVISORS

FORMERLY LEWIS YOUNG ROBERTSON & BURNINGHAM INC.

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IMPACT FEE CERTIFICATION

IFFP CERTIFICATION

LRB Public Finance Advisors (formerly Lewis Young Robertson & Burningham, Inc.) and West Jordan City jointly certify that the Impact Fee Facilities Plan (IFFP) prepared for stormwater, wastewater, and 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 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; and
3. complies with every relevant respect with the Impact Fees Act.

LRB PUBLIC FINANCE ADVISORS & WEST JORDAN CITY

IFA CERTIFICATION

LRB Public Finance Advisors certifies that the Impact Fee Analysis (IFA) prepared for stormwater, wastewater, and 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 with every relevant respect with the Impact Fees Act.

LRB Public Finance Advisors makes this certification with the following caveats:

1. All the recommendations for implementation of the IFFP made in the IFFP documents or in the IFA documents are followed by City Staff and elected officials.
2. If all or a portion of the IFFP or IFA are modified or amended, this certification is no longer valid.
3. All information provided to LRB is assumed to be correct, complete, and accurate. This includes information provided by the City as well as outside sources.

LRB PUBLIC FINANCE ADVISORS



DEFINITIONS

The following acronyms or abbreviations are used in this document:

AF: Acre Foot

CFS: Cubic Feet per Second

ERC: Equivalent Residential Connection

GAL: Gallons

GPM: Gallons per Minute

GPD: Gallons per Day

IFA: Impact Fee Analysis

IFFP: Impact Fee Facilities Plan

KSF: Thousand Square Feet

LOS: Level of Service

LRB: LRB Public Finance Advisors (Formerly Lewis Young Robertson & Burningham, Inc.)

MG: Million Gallons

SF: Square Feet



SECTION 1: EXECUTIVE SUMMARY

The purpose of this IFFP, with supporting IFA, is to fulfill the requirements established in Utah Code Title 11 Chapter 36a, the “Impact Fees Act,” and help West Jordan City (the City) fund necessary capital improvements for future growth. This document will address the future stormwater, wastewater, and culinary water infrastructure needed to serve the City. For purposes of the impact fees, this analysis includes the appropriate fees the City may charge to new growth to maintain the established levels of service (LOS) over the ten-year IFFP time horizon.

- **Service Area:** The impact fees identified in this document will be assessed within the respective areas shown in **Figures 3.1, 4.1, and 5.1.**
- **Demand Analysis:** The demand units utilized in this analysis include acreage, million gallons per day (MGD), and equivalent residential connections (ERCs). As new development occurs within the City, it generates increased demand for City infrastructure. The system improvements identified in this study are designed to meet the demands of any new development or redeveloped property within the Service Area.
- **Level of Service:** The existing LOS for each utility or service is defined in detail in each section of this document. Through an inventory of existing facilities combined with existing development, this analysis identifies the LOS provided to the City’s existing development and ensures that future facilities maintain these standards.
- **Existing Facilities and Excess Capacity:** The demand analysis and LOS analysis allow for the development of a list of capital facilities necessary to serve new growth and maintain the existing LOS. This list includes any excess capacity of existing facilities, as well as future system improvements necessary to maintain the LOS. The inclusion of excess capacity is known as a “buy-in.” Any demand generated from new development that overburdens the existing system beyond the existing capacity justifies the construction of new facilities. This analysis includes a buy-in component for stormwater, wastewater, and culinary water.
- **Outstanding Debt:** The City issued the following bonds: 2016 Stormwater Revenue Bonds to fund stormwater infrastructure and 2014 Sewer Revenue Bonds to expand wastewater treatment plant capacity. The associated interest from these bonds and loans is included in this analysis and the respective fee calculations.
- **Future Capital Facilities Analysis:** The following chapters in this analysis identify the capital facilities needed to maintain the LOS based on the demand analysis specific to stormwater, wastewater, and culinary water. The plans consider a ten-year horizon, and growth projections are considered over a ten-year and build-out horizon. The impact fee calculations, however, consider a ten-year time horizon and the improvements necessary to serve the anticipated development over that time frame.



- **Funding of Future Facilities:** This analysis assumes future growth-related facilities will be funded through a combination of General Fund revenues, grant monies, other governmental revenues, and impact fee revenues. Where applicable, interest costs can be included in the total cost to fund proposed system improvements.

SUMMARY OF PROPOSED IMPACT FEES

The impact fees proposed in this analysis will be assessed within each public services' respective Service Area. The tables below illustrate the calculated impact fee for storm, wastewater, and culinary water.

TABLE 1.1: IMPACT FEE SUMMARY

	MEASUREMENT	PROPOSED FEE	EXISTING	% CHANGE
Stormwater	Per Acre	\$8,494	\$9,094	-7%
Wastewater*	Per ERC	\$3,495	\$1,973	77%
Culinary Water*	Per ERC	\$6,608	\$2,514	163%

*Fee is for 1 ERC based on ¾" water meter size. Larger water meters will be assessed a higher fee.

**Previous study is based on land use type and impervious surface area. The calculated cost per acre is shown here.

NON-STANDARD IMPACT FEES

The Impact Fees Act¹ allows the City to assess an adjusted fee that more closely matches the true impact that a specific land use will have upon the City's infrastructure. This adjustment could result in a different impact fee if evidence suggests a particular user will create a different impact than what is standard for its category. The following formulas will help determine the non-standard impact fee.

The formula for a non-standard impact fee should be included in the impact fee enactment (by resolution or ordinance). In addition, the impact fee enactment should contain the following elements:

- A provision establishing one or more service areas within which the local political subdivision or private entity calculates and imposes impact fees for various land use categories.
- A schedule of impact fees for each type of development activity that specifies the amount of the impact fee to be imposed for each type of system improvement or the formula that the local political subdivision or private entity will use to calculate each impact fee.
- A provision authorizing the local political subdivision or private entity to adjust the standard impact fee at the time the fee is charged to:
 - Respond to unusual circumstances in specific cases or a request for a prompt and individualized impact fee review for the development activity of the state, a school district, or a charter school and an offset or credit for a public facility for which an impact fee has been or will be collected.
 - Ensure that the impact fees are imposed fairly.

¹ 11-36a-402(1)(c)

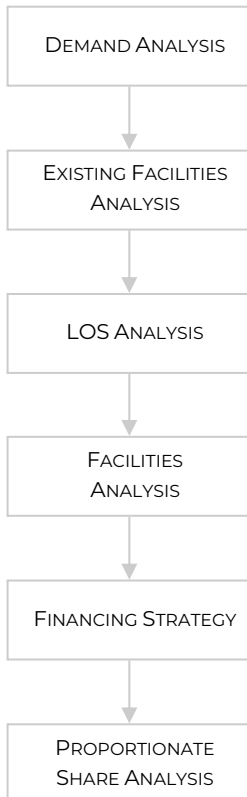


- A provision governing calculation of the amount of the impact fee to be imposed on a particular development that permits adjustment of the amount of the impact fee based upon studies and data submitted by the developer.
- A provision that allows a developer, including a school district or a charter school, to receive a credit against or proportionate reimbursement of an impact fee if the developer:
 - Dedicates land for a system improvement.
 - Builds and dedicates some or all of a system improvement.
 - Dedicates a public facility that the local political subdivision or private entity and the developer agree will reduce the need for a system improvement.
- A provision that requires a credit against impact fees for any dedication of land for, improvement to, or new construction of, any system improvements provided by the developer if the facilities:
 - Are system improvements; or,
 - Dedicated to the public and offset the need for an identified system improvement.

Other provisions of the impact fee enactment include exemption of fees for development activity attributable to low-income housing, the state, a school district, or a charter school. Exemptions may also include other development activities with a broad public purpose. If an exemption is provided, the entity should establish one or more sources of funds other than impact fees to pay for that development activity. The impact fee exemption for development activity attributable to a school district or charter school should be applied equally to either scenario.

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 IFFP and IFA. The IFFP identifies the demands placed upon the City's existing facilities by future development and evaluate how these demands will be met by the City. The IFFP is also intended to outline the improvements, which are intended to be funded by impact fees. The purpose of IFA is to allocate the cost of the new facilities and any excess capacity to new development, while ensuring that all methods of financing are considered. The Impact Fee Act requires that the IFFP and IFA consider the historic level of service provided to existing development and ensure that the proposed impact fees maintain the existing level of service. The following elements are important considerations when completing an IFFP and IFA.

DEMAND ANALYSIS

The demand analysis serves as the foundation for the IFFP and IFA. 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 affect system facilities.

EXISTING FACILITY INVENTORY

In order to quantify the demands placed upon existing public facilities by new development activity, to the extent possible the IFFP provides an inventory of the City's existing system facilities. The inventory valuation should include the original construction cost and estimated useful life of each facility. The inventory of existing facilities is important to determine the excess capacity of existing facilities and the utilization of excess capacity by new development.

LEVEL OF SERVICE ANALYSIS

"Level of service" or LOS means the defined performance standard or unit of demand for each capital component of a public facility within a service area. Through the inventory of existing facilities, combined with the growth assumptions, this analysis identifies the existing LOS that is provided to a community's existing residents and ensures that future facilities maintain these standards.

EXCESS CAPACITY AND 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 LOS. 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.

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.² 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.³

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).

² 11-36a-302(2)

³ 11-36a-302(3)



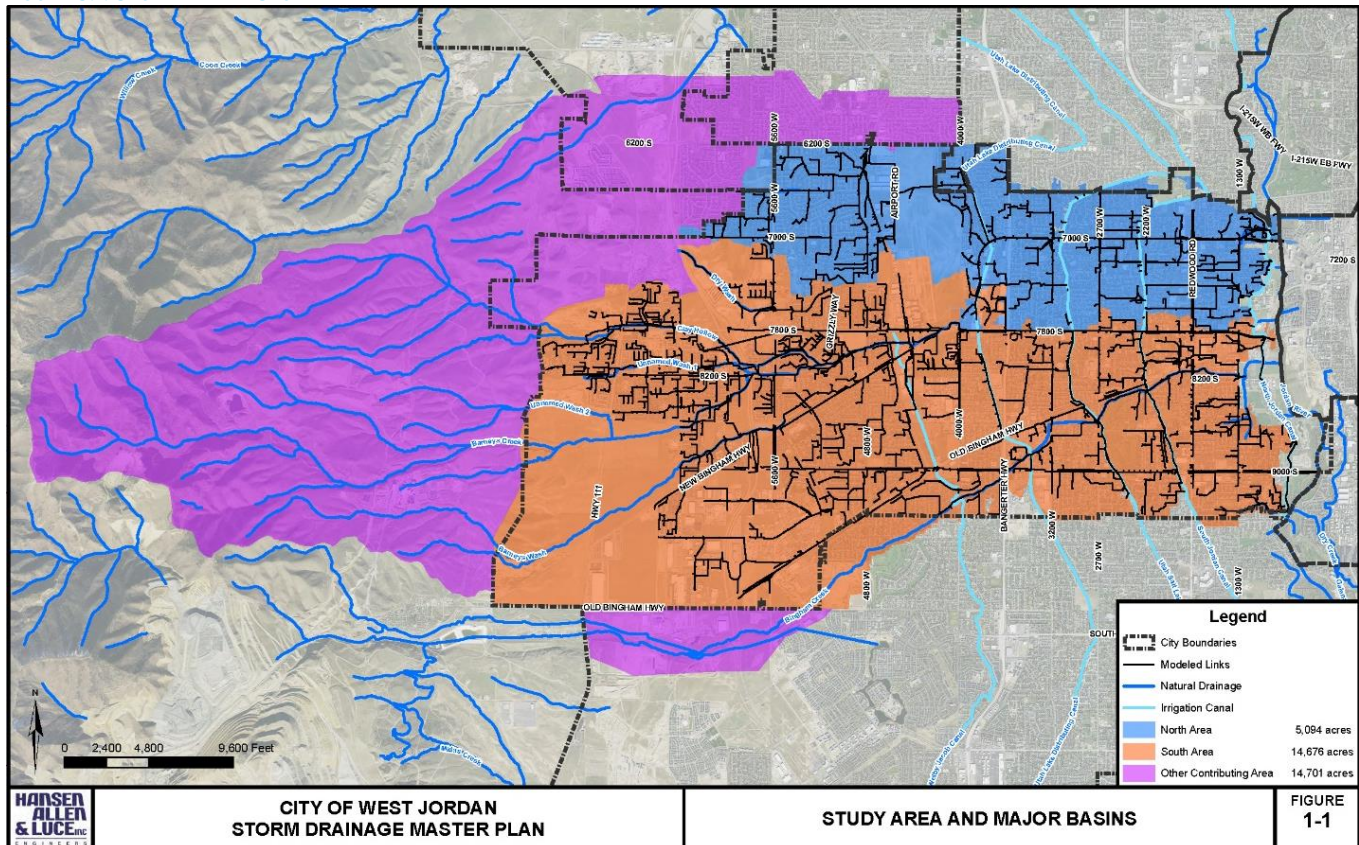
SECTION 3: STORMWATER IFFP & IFA

This section of the analysis addresses the stormwater IFFP, with supporting IFA, to help the City plan for the necessary capital improvements for future growth. This section will address the future stormwater infrastructure needed to serve the City through the next ten years, as well as address the appropriate stormwater impact fees the City may charge to new growth to maintain the existing LOS. The information provided herein is taken from the Storm Drainage Master Plan for the City of West Jordan, completed in April 2023 by Hansen, Allen, & Luce, Inc., with updates, additional data and revisions provided by the City's Engineering Department.

SERVICE AREA

Utah Code requires the impact fee enactment to establish one or more service areas within which impact fees will be imposed.⁴ This document identifies the necessary future system improvements for the Service Area that will maintain the existing LOS into the future. According to the 2023 West Jordan City Storm Drainage Master Plan, the Service Area includes areas within the City boundary, flows from West Valley City, South Jordan, and unincorporated areas of Salt Lake County.

FIGURE 3.1: STORMWATER STUDY AREA



⁴ UC 11-36a-402(1)(a)

TABLE 3.1: PROJECTED ACRES

	ACRES
2023	19,770
2024	19,871
2025	19,972
2026	20,073
2027	20,175
2028	20,278
2029	20,381
2030	20,485
2031	20,589
2032	20,694
2033	20,799
2060	23,854
IFFP Growth	1,029
Buildout Growth	4,084
Source: 2023 West Jordan City Storm Drainage Master Plan, p. 1-1	
2022 Water Master Plan, Table ES-1	

DEMAND

The demand unit used in this analysis is acreage. As residential and commercial growth occurs within the Service Area, the impervious surfaces within the City will increase, resulting in additional run-off. The stormwater capital improvements identified in this study are based on maintaining the current level of service. The proposed impact fees are based upon the projected growth in acres, which is used to quantify the impact that future users will have upon the City's system. According to the 2023 Storm Drainage Master Plan, approximately 19,700 acres are attributed to the City's stormwater system. It is estimated that the developable acres within the City is 4,084. **Table 3.1** illustrates the acres in the City's stormwater system, as determined by the City's engineers.

EXISTING FACILITIES INVENTORY

In order to quantify the demands placed upon existing public facilities by new development activity, the City's existing depreciation schedule provides an inventory of the City's existing 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. A total of \$60 million in original system value is considered in this analysis when determining buy-in value (see **Table 3.2**).

LEVEL OF SERVICE STANDARDS

Impact fees cannot be used to finance an increase in the LOS to current or future users of capital improvements. Therefore, it is important to identify the stormwater LOS to ensure that the new capacities of projects financed through impact fees do not exceed the established standard.

The methodology in determining what stormwater facilities will be required is based on standard engineering practices that are widely used in the industry. The City's LOS is based on a 10-year frequency storm event. In general terms, the developer is expected to pay for the infrastructure to collect and detain the runoff generated in the 10-year return frequency storm. In addition, the LOS is based on a run-off coefficient by land-use type, which measures the average impact of different development types within the service area. According to the 2023 Storm Drainage Master Plan, runoff from the area was modeled to be detained to 0.1 cfs per acre.

EXCESS CAPACITY

For the purposes of this analysis, excess capacity has been defined based on the proportion of acres within the IFFP relative to the acres at buildout. It is anticipated that the existing system will serve new development through buildout. There will be an increase of 1,029 acres in the next ten years,

with an estimated total of 23,854 acres at buildout. The increase in acres in the IFFP planning horizon represents approximately 25 percent of the increase in acres to buildout.

MANNER OF FINANCING EXISTING PUBLIC FACILITIES

The City's existing stormwater infrastructure has been funded through a combination of utility rate revenues and other governmental funds, including debt service. The City issued the Series 2016 Stormwater Revenue Bonds to fund improvements to the City's stormwater infrastructure. The interest associated with this bond is included in the calculation of the impact fee.

TABLE 3.2: STORMWATER BUY-IN

	ELIGIBLE VALUE
Existing Stormwater System	60,528,185
Series 2016 Interest	725,861
TOTAL BUY-IN	\$61,254,046

Source: West Jordan City Depreciation Schedule

FUTURE CAPITAL FACILITIES ANALYSIS

The following table identifies the needed system improvements to maintain the stated LOS, according to the City, over the next 10 years. The impact fee analysis only considers the projects to be constructed in the next ten years and includes the growth-related cost to determine the impact fees. The complete project list can be found in **Appendix A**.

TABLE 3.3: ESTIMATE OF IMPACT FEE ELIGIBLE PROJECT COSTS

PROJECT TYPE	PROJECT COST WITHIN IFFP	% GROWTH RELATED	TOTAL
10-Year West Jordan City Projects	\$2,768,181	32%	\$878,345
100-Year West Jordan City Projects	\$13,397,491	97%	\$13,057,473
2007 and 2015 Master Plan West Jordan City Projects	\$3,731,520	80%	\$2,985,216
Developer Projects*	\$7,233,996	100%	\$7,233,996
TOTAL	\$27,131,187	89%	\$24,155,031

*Development costs will be built by developers and reimbursed by the City through impact fees.

Source: West Jordan City Engineering Department

2023 West Jordan City Storm Drainage Master Plan, Table 5-2

PROPOSED STORMWATER IMPACT FEE

The stormwater impact fee is based on the plan-based methodology. Using this approach, impact fees are calculated based on a defined set of capital costs specified for future development. The improvements are identified in a capital plan or impact fee facilities plan as growth-related system improvements. The City's existing and proposed future facilities are then proportionately allocated, providing an equitable distribution of the existing and proposed facilities that will serve development. The total cost is divided by the total demand units the improvements 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 and LOS.

STORMWATER IMPACT FEE COST PER ACRE CALCULATION

The stormwater impact fees proposed in this analysis will be assessed within the entire 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.

TABLE 3.4: ESTIMATE OF IMPACT FEE COST PER ACRE

	TOTAL COST	% TO IFFP	GROWTH RELATED COSTS WITHIN IFFP HORIZON	FUTURE ACRES	FEE PER ACRE
Existing Stormwater System	\$61,254,046	4%	\$2,643,077	1,029	\$2,568
Future Stormwater Projects	\$24,155,031	25%	\$6,087,769	1,029	\$5,915
Professional Expense	\$11,000	100%	\$11,000	1,029	\$11
TOTAL PER ACRE	\$85,420,077		\$8,741,846		\$8,494
TOTAL PER IMPERVIOUS ACRE*	\$85,420,077		\$8,741,846	643	\$13,588

*Total Impervious Acres found in Table 3.5.

STORMWATER IMPACT FEE BY LAND USE

Table 3.5 allocates growth-related costs to the stormwater system based on the land use type and impervious surface percentage. The growth-related cost of \$8.7M is multiplied by proportionate share for each type of land use and then divided by the amount of land area by type of land use.

TABLE 3.5: RECOMMENDED STORMWATER IMPACT FEE SCHEDULE

	GROWTH IN DEVELOPED ACRES	% IMPERVIOUS*	GROWTH IN IMPERVIOUS ACRES	PROPORTIONATE SHARE	PROPOSED COST PER ACRE	EXISTING FEE	% CHANGE
Single Family	398	50%	199	30.93%	\$6,794	\$7,165	-5.18%
Multifamily	111	60%	67	10.37%	\$8,153	\$12,283	-33.63%
Commercial	161	85%	136	21.21%	\$11,550	\$18,425	-37.32%
Industrial	248	85%	211	32.76%	\$11,550	\$12,283	-5.97%
Office	26	85%	22	3.40%	\$11,550	\$15,354	-24.78%
Open Space	86	10%	9	1.34%	\$1,359	NA	NA

*Source: 2023 West Jordan City Storm Drainage Master Plan, Table 3-2

NON-STANDARD STORMWATER IMPACT FEES

The City reserves the right under the Impact Fees Act to assess an adjusted fee that more closely matches the true impact that the land use will have upon stormwater facilities.⁵ This adjustment could result in a higher fee if the City determines that a particular user may create a greater impact than what is standard for its land use. The City may also decrease the impact fee if the developer can provide documentation, evidence, or other credible analysis that the proposed impact will be lower than what is proposed in this analysis. The formula for determining a non-standard impact fee is found below.

FORMULA FOR NON-STANDARD STORMWATER IMPACT FEE (BY LAND USE):

Impervious Acres x \$13,588 = Impact Fee

⁵ UC 11-36a-402(1)(c)



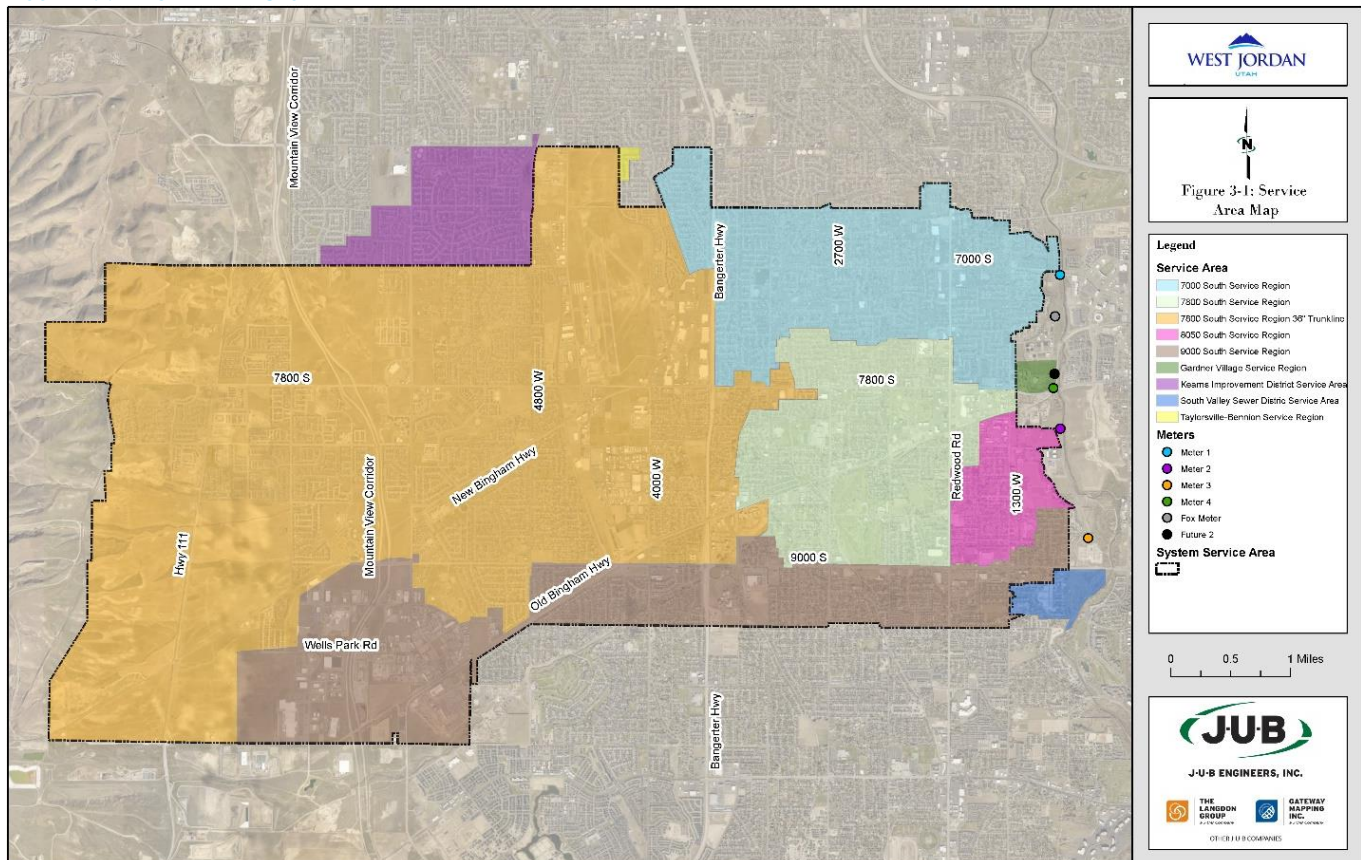
SECTION 4: WASTEWATER IFFP AND IFA

Impact fees are calculated based on many variables centered on proportionality and LOS. This section will discuss the existing and proposed level of service, the availability of excess capacity, the needed future facilities to serve new development, and the appropriate impact fee to be assessed to new development to maintain the existing LOS. This analysis deals with the City's sewer collection system. Sewer treatment is provided by South Valley Water Reclamation Facility (SVWRF). The information utilized in this analysis is based off the City's existing 2019 Sanitary Sewer Master Plan Update, with updates provided by the City's engineering department.

SERVICE AREA

Utah Code requires the impact fee enactment to establish one or more service areas within which impact fees will be imposed.⁶ This document identifies the necessary future system improvements for the Service Area that will maintain the existing LOS into the future. The 2019 Sanitary Sewer Master Plan Update indicates the Service Area includes areas within the City boundary, excluding two areas located at the north portion of the City boundaries.

FIGURE 4.1: WASTEWATER STUDY AREA



⁶ UC 11-36a-402(1)(a)

DEMAND

The demand unit related to wastewater is MGD. It is anticipated that 2.34 MGD of future flow will be added to the system in the next ten years.

EXISTING FACILITIES INVENTORY

The collection system collects sewer flows from all areas within the service area and portions of the county within reach of City sewer collection system outfall lines which the city operates and maintains. The existing system consists of approximately 365 miles of pipeline, ranging from 8" to 36" in diameter and 7,039 manholes. Also, in operation are three existing lift stations, none of which are owned by the City and are privately owned. A total of \$54,225,099 in original system value is considered in this analysis when determining buy-in value.

LEVEL OF SERVICE

Impact fees cannot be used to finance an increase in the LOS to current or future users of capital improvements. Therefore, it is important to identify the sewer LOS to ensure that the new capacities of projects financed through impact fees do not exceed the established standard. This analysis considers a level of service based on Utah Administrative Code (UAC) R317 design criteria of 100 gallons per capita per day (gpcd) with a peaking factor 2.5. Based on the Master Plan's calculation of 3.41 persons per ERC, the LOS is determined at 341 GPD per ERC.

EXCESS CAPACITY

It is difficult to quantify excess capacity in a sewer collection system, as new pipes that are added to the system typically tie into the existing pipelines and system, in addition to the fact that excess capacity varies throughout the system depending upon line sizes and the amount of development near the sewer lines. Therefore, a buy-in component is considered in this analysis, with the existing lines being shared across all development, both existing and future. This is the best way to ensure a fair allocation of costs to all development in the service area.

TABLE 4.1: PROJECTED GROWTH IN DEMAND

YEAR	MGD
2022	15.75
2023	15.97
2024	16.19
2025	16.42
2026	16.65
2027	16.88
2028	17.12
2029	17.36
2030	17.60
2031	17.84
2032	18.09
IFFP Growth	2.34
Buildout Growth	7.24

TABLE 4.2: VALUE OF EXISTING FACILITIES

Collection Facilities	\$54,225,099
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Source: West Jordan City Deprecation Schedule

TABLE 4.3: LEVEL OF SERVICE

GPCD Standard	100
Avg. HH Size	3.41
GPD per ERC	341

Source: 2019 Sanitary Sewer Master Plan Updated, Table 5-3

TABLE 4.4: COLLECTION EXISTING FACILITIES

INFRASTRUCTURE CATEGORY	ORIGINAL VALUE (PAID BY CITY)	% TO GROWTH	COST TO GROWTH	MGD	FEE PER MGD	FEE PER GPD
Collection Buy-In	\$54,255,099	10%	\$5,684,836	2.34	\$2,427,521	\$2.43

Source: West Jordan City Depreciation Schedule

MANNER OF FINANCING EXISTING PUBLIC FACILITIES

The City issued the Series 2008 and 2014 Sewer Revenue Bonds. The Series 2014 expanded the SVWRF treatment capacity, while the Series 2008 did not expand the SVWRF treatment capacity and

rather improved it. Therefore, the interest associated with the Series 2014 bonds is included in the calculation of the impact fee.

TABLE 4.5: TREATMENT BUY-IN ALLOCATION

	CAPACITY (MGD)	TOTAL	IFFP DEMAND (MGD)	% ATTRIBUTED TO NEW GROWTH	TOTAL
Series 2008	18.22	\$9,109,463	2.34	0%	\$0
Series 2014	7.52	\$30,544,176	2.34	31%	\$9,511,861
TOTAL		\$39,653,639			\$9,511,861

FUTURE CAPITAL FACILITIES ANALYSIS

The 2019 Sanitary Sewer Master Plan Update calls for approximately \$37M of future collection system improvements. The capital improvements plan from the Master Plan has been reviewed by City staff for this analysis and updated as needed, resulting in a total of \$46M (\$62M construction year cost) of future system improvements. Only the costs of system improvements that are expected to be constructed within the ten-year planning horizon are included in this 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 the impact fee analysis.

Table 4.6 summarizes the City's plans to expand the existing wastewater collection system and create additional capacity within the system to address the City's projected needs. Future treatment system improvements are not considered in this analysis.

TABLE 4.6: TEN-YEAR ALLOCATION OF CAPITAL IMPROVEMENTS

PROJECT DESCRIPTION	CONST. YEAR	CONST. YEAR COST	% FLOW FUTURE USERS	COST TO FUTURE USERS
1300 West	2022	\$1,339,713	0%	\$0
1300 West	2024	\$921,006	0%	\$0
9000 South	2024	\$5,456,688	36%	\$1,964,408
7800 South	2024	\$1,652,215	66%	\$1,090,462
9000 South	2027	\$6,400,797	39%	\$2,496,311
9000 South	2028	\$5,798,572	34%	\$1,971,515
9000 South	2029	\$3,753,900	39%	\$1,464,021
Old Bingham Highway	2030	\$6,887,517	55%	\$3,788,135
Hawley Park/9580 South	2031	\$3,781,638	67%	\$2,533,698
Wells Park Road	2025	\$4,648,782	74%	\$3,440,099
Jordan River Parkway	2032	\$1,601,801	32%	\$512,576
Bagley Park Road	2026	\$2,044,958	57%	\$1,165,626
Grizzly Way	2032	\$1,187,197	8%	\$94,976
Grizzly Way	2032	\$1,027,350		\$0
7800 South	2027	\$812,930	41%	\$333,301
7000 South	2030	\$2,332,273	55%	\$1,282,750
Campus View Drive, Cobble Ridge Drive, Jordan Landing Boulevard	2030	\$2,532,402	19%	\$481,156
6400 W to SR 111	2025	\$1,897,979	100%	\$1,897,979
New Bingham Sewer	2024	\$8,112,000	33%	\$2,676,960
TOTAL		\$62,189,719		\$27,193,971

Source: 2019 Sanitary Sewer Master Plan Update, Appendix E

PROPOSED WASTEWATER IMPACT FEE

PLAN BASED IMPACT FEE CALCULATION

The wastewater impact fees proposed in this analysis will be assessed within the Service Area. The tables below illustrate the appropriate impact fee to maintain the existing level of service, based on the assumptions within this document. The fees below represent the maximum allowable impact fee assigned to new development. The total fee per ERC is \$3,495 (Fee per GPD x 341).

TABLE 4.7: IMPACT FEE PER MGD

	COST	% TO GROWTH	COST TO GROWTH	MGD	FEE PER MGD	FEE PER GPD
Existing Facilities (Collection Buy-In)	\$54,255,099	10%	\$5,684,836	2.34	\$2,427,521	\$2.43
Existing Facilities (Treatment Buy-In)	\$39,653,639	24%	\$9,511,861	2.34	\$4,061,725	\$4.06
Future Facilities (Collection CIP)	\$27,193,971	32%	\$8,796,077	2.34	\$3,756,073	\$3.76
Professional Expense	\$11,000	100%	\$11,000	2.34	\$4,697	\$0.00
TOTAL	\$121,113,709		\$24,003,774		\$10,250,016	\$10.25

TABLE 4.8: IMPACT FEE PER ERC

	GPD (LOS)	PROPOSED FEE	CURRENT FEE	% CHANGE
ERC	341.00	\$3,495	\$1,973	77%

WASTEWATER IMPACT FEE BY METER SIZE

Table 4.9 shows the maximum allowable impact fee per water meter size.

TABLE 4.9: WASTEWATER IMPACT FEE PER METER SIZE

WATER METER SIZE	ERC MULTIPLIER	PROPOSED FEE PER ERC	EXISTING FEE	% CHANGE
¾"	1.00	\$3,495	\$1,973	77%
1"	1.67	\$5,837	\$3,353	74%
1.5"	3.33	\$11,639	\$6,509	79%
2"	5.33	\$18,630	\$10,454	78%
3"	11.67	\$40,790	\$21,106	93%
4"	20.00	\$69,905	NA	NA
6"	41.67	\$145,647	NA	NA

NON-STANDARD IMPACT FEE

The City reserves the right under the Impact Fees Act⁷ to assess an adjusted fee that more closely matches the true impact that the land use will have upon the wastewater 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. The formula for a non-standard impact fee calculation is shown below.

NON-STANDARD IMPACT FEE FORMULA:

Estimated ERCs x \$3,495 = Impact Fee

⁷ 11-36a-402(1)(c)

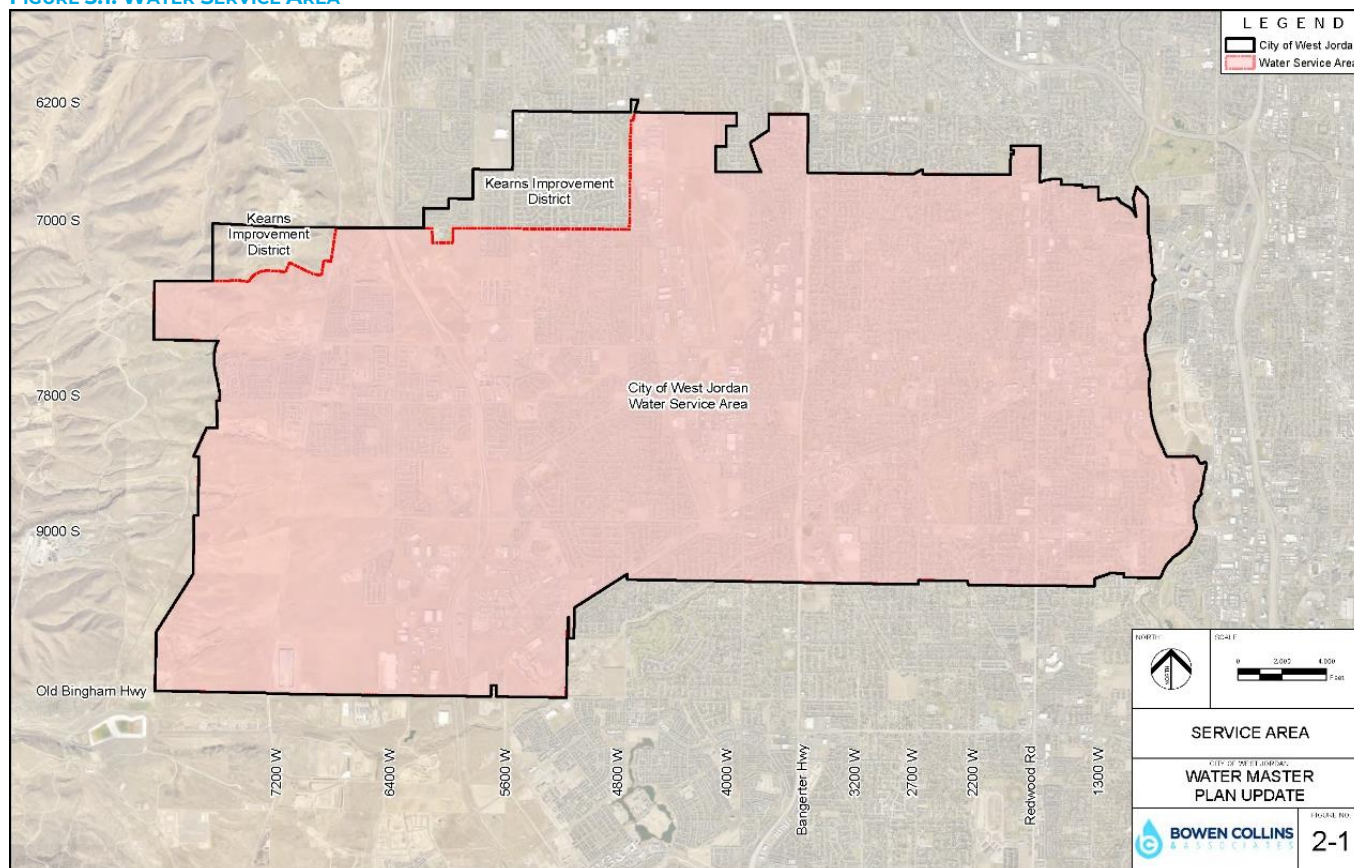
SECTION 5: CULINARY WATER IFFP AND IFA

This section of the analysis addresses the culinary water IFFP with supporting IFA, to help the City plan for the necessary capital improvements for future growth. This section will address the future water infrastructure needed to serve the City through the next ten years, as well as address the appropriate water impact fees the City may charge to new growth to maintain the existing LOS. The information provided herein is taken from the Water Master Plan for West Jordan City, Utah, completed in August 2022 by Bowen Collins & Associates, with updates, additional data and revisions provided by the City's Engineering Department.

SERVICE AREA

Utah Code requires the impact fee enactment to establish one or more service areas within which impact fees will be imposed.⁸ This document identifies the necessary future system improvements for the Service Area that will maintain the existing LOS into the future. The Service Area for water services includes areas within the City boundary with the exception of areas located at the northwest portion of the City that is served by Kearns Improvement District (KID).

FIGURE 5.1: WATER SERVICE AREA



⁸ UC 11-36a-402(1)(a)

TABLE 5.1: PROJECTED GROWTH IN DEMAND UNITS

	ERCs
2022	43,464
2023	44,491
2024	45,534
2025	46,591
2026	47,665
2027	48,755
2028	49,861
2029	50,984
2030	52,124
2031	53,281
2032	54,207
IFFP Growth	10,743

TABLE 5.2: SOURCE CAPACITY

SOURCE	ESTIMATED CAPACITY (GPM)
Well No. 3	470
Well No. 4	1,585
Well No. 5	1,045
Well No. 6	1,325
TOTAL	4,425

Source: 2022 Water Master Plan, Table 3-2

TABLE 5.3: STORAGE CAPACITY

STORAGE NAME	VOLUME (MG)
Airport 1	4
Airport 2*	4
Cemetery 1	2.5
Grizzly 1	4
Grizzly 2	4
Old Bingham	2
Barney's Wash 1	3
Barney's Wash 2	3
Zone 3 North	3
Terminal 1	3
Terminal 2	4
U-111	4
Bench	3
Bingham Junction 1	3
TOTAL	46.5

Source: 2022 Water Master Plan, Table 5-1

* Tank is not active and is currently being replaced.

DEMAND

The primary demand unit related to the water IFA is ERCs. It is anticipated that 10,743 ERCs will be added to the system in the next ten years.

EXISTING FACILITIES INVENTORY

West Jordan's existing water derives from two sources: Jordan Valley Water Conservancy District (JVWCD) and City wells. JVWCD's contracted supply to the city is 20,000 acre-ft per year annually. There are four active culinary wells in the City, in addition to one well under construction (see **Table 5.2**). The four active wells have a combined design production capacity of 4,425 gallons per minute. The City has 14 storage reservoirs. **Table 5.3** lists each tank and their specifications. The tanks have a combined total storage capacity of about 46.5 million gallons.

The City's culinary water distribution system consists primarily of a network of pipes, ranging in size from 4 to 36 inches in diameter. The majority of pipes are constructed of a variety of materials including ductile iron, cast iron, and steel. The water distribution network is divided into seven major pressure zones.⁹ There are also two sub-zones within one of the seven pressures zones (Zone 3). Pressure zone boundaries are bounded by pressure reducing valves (PRV), isolation valves, and separation of distribution piping. The hydraulic grade in each pressure zone is governed by the water level in the storage tank(s) that serve it. The value of the existing distribution system is shown in **Table 5.4**. This value represents the original cost of infrastructure based on the City's existing depreciation schedule.

⁹ Although Zone 7 has been designated, it does not presently have any water demand. See Water Master Plan, page 5-7.

TABLE 5.4: VALUE OF EXISTING SYSTEM

	IFFP ELIGIBLE ORIGINAL COST	% TO IFFP HORIZON	COST TO IFFP HORIZON	TOTAL ERCs SERVED	BUY-IN COST PER ERCs
Water Distribution Existing Facilities	\$122,571,967	16%	\$19,875,185	10,743	\$1,850

Source: West Jordan City Depreciation Schedule

LEVEL OF SERVICE

Impact fees cannot be used to finance an increase in the level of service (LOS) to current or future users of capital improvements. Therefore, it is important to identify the water LOS to ensure that the new capacities of projects financed through impact fees do not exceed the established standard. The City's provided LOS as defined in the 2022 Water Master Plan is 1,764 GPD per ERC for peak day source demand and 650 gallons per ERC for storage.

EXCESS CAPACITY

An analysis of current capacity based on the proposed LOS illustrates that there is no available capacity within the existing system related to source and storage. This analysis does include a proportionate share analysis and buy-in component for the distribution system.

MANNER OF FINANCING EXISTING PUBLIC FACILITIES

The City issued the Series 2021 Water Revenue Bonds to fund City water tanks, which do not have excess capacity. Therefore, the interest associated with these bonds is not included in the impact fee calculation.

FUTURE CAPITAL FACILITIES ANALYSIS

The capital improvements plan from the Master Plan has been reviewed by City staff for this analysis and updated as needed. This IFFP considers only projects that will be constructed in the ten-year time horizon, and the water impact fees will be based on these numbers. 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 the impact fee analysis. **Table 5.5** summarizes the City's capital plans to cure existing system deficiencies and create additional capacity within the system. Due to the large number of distribution projects on the City's CIP, the distribution projects are simply subtotaled in the table below, while the complete project list can be found in **Appendix B**.

TABLE 5.5: TEN YEAR ALLOCATION OF CAPITAL IMPROVEMENTS

	FUTURE GROWTH COST	IFFP ELIGIBLE	IFFP COST
Pipelines Subtotal	\$25,792,201	21%	\$8,990,092
Booster Pump Stations Subtotal	\$16,646,978	31%	\$5,234,943
Storage Subtotal	\$92,163,872	34%	\$33,632,130
Wells Subtotal	\$3,241,858	100%	\$3,241,858
CIP TOTAL	\$137,689,072		\$51,099,023

PROPOSED CULINARY WATER IMPACT FEE

This analysis has identified the future demand, the existing and proposed LOS, the availability of excess capacity, and summarizes the future facilities needed to serve new development. The following section identifies the appropriate impact fee to be assessed to new development to maintain the existing LOS.

CULINARY WATER IMPACT FEE CALCULATION

Impact fees can be calculated based on a defined set of costs specified for future development, usually defined within a Master Plan, Capital Improvement Plan and/or 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 LOS 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 throughout the entire Service Area. **Table 5.6** below illustrates the appropriate impact fee to maintain the existing LOS, based on the assumptions within this document. The maximum allowable impact fee assignable to new development per unit is **\$6,608** per ERC.

TABLE 5.6: CULINARY WATER IMPACT FEE PER UNIT

	TOTAL COST	% TO GROWTH	COST TO GROWTH	ERCs SERVED	COST PER ERC
Distribution Buy-In	\$122,571,967	16%	\$19,875,185	10,743	\$1,850
Future Source	\$3,241,858	100%	\$3,241,858	10,743	\$302
Future Storage	\$97,920,696	34%	\$33,632,130	10,743	\$3,131
Future Transmission	\$58,935,467	24%	\$14,225,035	10,743	\$1,324
Professional Expense	\$11,000	100%	\$11,000	10,743	\$1
TOTAL PER ERC	\$282,680,988		\$70,985,208		\$6,608

WATER IMPACT FEE BY METER SIZE

Table 5.7 shows the maximum allowable impact fee per meter size.

TABLE 5.7: WATER IMPACT FEE PER METER SIZE

WATER METER SIZE	ERC MULTIPLIER	PROPOSED FEE PER ERC	EXISTING FEE	% CHANGE
¾"	1.00	\$6,608	\$2,514	163%
1"	1.67	\$11,035	\$4,274	158%
1.5"	3.33	\$22,005	\$8,296	165%
2"	5.33	\$35,221	\$13,324	164%
3"	11.67	\$77,115	\$26,900	187%
4"	20.00	\$132,160	NA	NA
6"	41.67	\$275,355	NA	NA

NON-STANDARD IMPACT FEE

The proposed fees are based upon growth in ERCs within the City. The City reserves the right under the Impact Fees Act to assess an adjusted fee that more closely matches the true impact that the land use will have upon the water system.¹⁰ This adjustment could result in a higher impact fee if the City determines that a particular user may create a greater impact than what is standard for its land use. The City may also decrease the impact fee if the developer can provide documentation, evidence, or other credible analysis that the proposed impact will be lower than what is proposed in this analysis. The formula for determining a non-standard impact fee is found below.

FORMULA FOR NON-STANDARD CULINARY WATER IMPACT FEES:

Number of ERCs x \$6,608= Impact Fee per Unit

¹⁰ 11-36a-402(1)(c)

SECTION 6: GENERAL IMPACT FEE CONSIDERATIONS

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.¹¹ 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.¹² 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 include a consideration of all revenue sources, including impact fees and the dedication of system improvements, which may be used to finance system improvements.¹³ 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.¹⁴

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 reimbursement for any grants or donations received for growth related projects, or for developer funded IFFP projects.

¹¹ 11-36a-102(21)

¹² 11-36a-102(14)

¹³ 11-36a-302(2)

¹⁴ 11-36a-302(3)



- **Debt Financing:** The City does not anticipate the need to utilize debt financing to fund future capital facility projects. Should the City desire to fund future projects through debt financing, the Impact Fees Act allows for the costs related to the financing of future capital projects to be included in the impact fee. However, the impact fee analysis should be updated to reflect this inclusion.

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 of each impact fee calculation 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 capital improvements related to new growth. In addition, alternative funding mechanisms are identified to help offset the cost of future capital improvements.

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.¹⁵ The facilities must be considered system improvements or be dedicated to the public, and offset the need for an improvement identified in the IFFP.

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.

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 six years should be spent on those projects outlined in the IFFP as growth-related costs to maintain the LOS. Impact fees collected as a buy-in to existing facilities can be allocated to the General Fund to repay the City for historic investment.

¹⁵ 11-36a-402(2)



GROWTH-DRIVEN EXTRAORDINARY COSTS

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

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 later are accurately calculated to include the costs of construction inflation. This analysis includes an inflation component to reflect the future cost of facilities. The impact fee analysis should be updated regularly to account for changes in cost estimates over time.



APPENDIX A: STORMWATER CAPITAL IMPROVEMENT PLAN

PROJECT ID	LOCATION	YEAR	PROJECT (\$)	PROJECT (\$) INFLATED	IFFP HORIZON	IMPACT FEE	IF ELIGIBLE
10-YEAR WEST JORDAN CITY PROJECTS							
C6	2200 W and approx. 6645 S	2023	\$376,000	\$391,040	\$391,040	20%	\$78,208
C32	Approx. 8140 S and Approx. 1250 W	2023	\$57,000	\$59,280	\$59,280	15%	\$8,892
C9	Near 7800 S Wetland Ponds	2025	\$850,000	\$956,134	\$956,134	40%	\$382,454
C20	Dannon Way, Bagley Park Rd, and Leo Park Rd	2030	\$419,000	\$573,430	\$573,430	10%	\$57,343
C21	From Grizzly Way to Orion Hill Dr	2030	\$498,000	\$681,547	\$681,547	50%	\$340,774
R41	9000 S and 4400 W Barrington Drive	2031	\$75,000	\$106,748	\$106,748	10%	\$10,675
C19	4950 W from Park Vale Dr to 7670 S	2036	\$351,000	\$607,818	\$0	70%	\$0
C8	Between Redwood Dr and Heather Way (behind commercial district)	2035	\$548,000	\$912,460	\$0	25%	\$0
SUBTOTAL			\$3,174,000	\$4,288,459	\$2,768,181	32%	\$878,345
100-YEAR WEST JORDAN CITY PROJECTS							
87	9800 S and approx. 6800 W	2023	\$2,025,000	\$2,106,000	\$2,106,000	100%	\$2,106,000
CDTS- 1846	4660 W and Barney's Creek	2025	\$98,000	\$110,237	\$110,237	40%	\$44,095
CDTS- 1842	4800 W and Barney's Creek	2025	\$179,000	\$201,351	\$201,351	40%	\$80,540
83	Bacchus and Barney's Creek	2025	\$9,000,000	\$10,123,776	\$10,123,776	100%	\$10,123,776
CDTS- 8050	Duck Ridge Way and Barney's Wash	2026	\$251,000	\$293,634	\$293,634	85%	\$249,589
CDTS- 7897	6700 W and Clay Hollow	2032	\$343,000	\$507,724	\$507,724	85%	\$431,565
CDTS- 8037	5140 W and Barney's Creek	2032	\$37,000	\$54,769	\$54,769	40%	\$21,908
CDTS- 8025	5420 W and Barney's Creek	2033	\$86,000	\$132,393	\$0	100%	\$0
82	Bacchus and 8600 S	2035	\$2,550,000	\$4,245,937	\$0	100%	\$0
84	Btwn BNH and OBH, approx. 7500 W	2035	\$885,000	\$1,473,590	\$0	100%	\$0
85	NBH and approx. 7200 W	2035	\$810,000	\$1,348,710	\$0	100%	\$0
86	NBH and Bacchus Hwy	2035	\$255,000	\$424,594	\$0	100%	\$0
88	9800 S and approx. 6400 W	2035	\$998,000	\$1,661,743	\$0	100%	\$0
CDTS- 2543	Airport Rd and Barney's Creek	2040	\$747,000	\$1,513,285	\$0	25%	\$0
CDTS- 8574	1500 W and Bingham Creek	2040	\$164,000	\$332,234	\$0	15%	\$0
CDTS- 8347	2500 W and Bingham Creek	2040	\$3,385,000	\$6,857,389	\$0	15%	\$0
CDTS- 8354	2250 W and Bingham Creek	2040	\$695,000	\$1,407,942	\$0	15%	\$0
CDTS- 8353	2250 W and Bingham Creek	2040	\$234,000	\$474,041	\$0	15%	\$0
CDTS- 7911	Clay Hollow at 7800 S and Fallwater Dr	2040	\$295,000	\$597,616	\$0	60%	\$0
89	9800 S and approx. 5600 W	2040	\$1,185,000	\$2,400,593	\$0	100%	\$0
90	9400 S and approx. 6400 W	2040	\$3,225,000	\$6,533,258	\$0	100%	\$0
91	Dannon Way and Mtn View Corridor Trail	2040	\$2,025,000	\$4,102,278	\$0	100%	\$0
92	Dannon Way and Feulner Park Rd	2040	\$4,800,000	\$9,723,919	\$0	100%	\$0
93	5200 W and 9800 S	2040	\$1,215,000	\$2,461,367	\$0	100%	\$0
SUBTOTAL			\$35,487,000	\$59,088,381	\$13,397,491	97%	\$13,057,473



2007 and 2015 Master Plan West Jordan City Projects							
80	Ron Wood Detention W of Mountain View Corridor at 8700 S	2024	\$3,450,000	\$3,731,520	\$3,731,520	80%	\$2,985,216
31	8660 S and 1841 W	2034	\$165,000	\$264,170	\$0	100%	\$0
37	Prosperity Road	2034	\$213,000	\$341,020	\$0	100%	\$0
38	Dannon Way	2034	\$242,000	\$387,450	\$0	6%	\$0
SUBTOTAL			\$4,070,000	\$4,724,160	\$3,731,520	80%	\$2,985,216
DEVELOPER PROJECTS							
98	9000 S	2024	\$1,471,000	\$1,591,034	\$1,591,034	100%	\$1,591,034
78	7400 S from 6500 W to 6200 W	2027	\$389,000	\$473,278	\$473,278	100%	\$473,278
94	7180 S from the railroad to Mountain View Corridor	2028	\$1,076,000	\$1,361,483	\$1,361,483	100%	\$1,361,483
95	7200 S	2029	\$968,000	\$1,273,822	\$1,273,822	100%	\$1,273,822
96	7200 S Along the Union Pacific Railroad from 7600 S	2029	\$420,000	\$552,691	\$552,691	100%	\$552,691
97	to 7200 S	2030	\$1,448,000	\$1,981,688	\$1,981,688	100%	\$1,981,688
41	9800 S Hwy 111	2035	\$822,000	\$1,368,690	\$0	100%	\$0
44	7400 W	2035	\$269,000	\$447,905	\$0	100%	\$0
45	6600 W	2035	\$208,000	\$346,335	\$0	100%	\$0
46	6800 W	2035	\$257,000	\$427,924	\$0	100%	\$0
47	7600 W	2035	\$243,000	\$404,613	\$0	100%	\$0
48	9400 S	2035	\$243,000	\$404,613	\$0	100%	\$0
50a	6800 W	2035	\$304,000	\$506,182	\$0	100%	\$0
50b	6800 W	2035	\$734,000	\$1,222,164	\$0	100%	\$0
51	7300 W	2035	\$229,000	\$381,302	\$0	100%	\$0
53	7300 W	2035	\$218,000	\$362,986	\$0	100%	\$0
54	7200 W	2035	\$218,000	\$362,986	\$0	100%	\$0
62	9800 S	2035	\$185,000	\$308,039	\$0	100%	\$0
64	9400 S	2035	\$1,347,000	\$2,242,854	\$0	100%	\$0
99	9000 S	2035	\$655,000	\$1,090,623	\$0	100%	\$0
63	Hwy 111	2040	\$550,000	\$1,114,199	\$0	100%	\$0
65	Hwy 111	2040	\$744,000	\$1,507,207	\$0	100%	\$0
SUBTOTAL			\$12,998,000	\$19,732,619	\$7,233,996	100%	\$7,233,996
TOTAL CIP			\$55,729,000	\$87,833,619	\$27,131,187	89%	\$24,155,031

Source: West Jordan City Engineering Department
2023 West Jordan City Storm Drainage Master Plan, Table 5-2



APPENDIX B: WASTEWATER CAPITAL IMPROVEMENT PLAN

MAJOR TRUNKLINE AREA	PROJECT DESCR.	LOCATION	YEAR	BUDGET EST.	CONST. YEAR COST	% FLOW EXISTING USERS	% FLOW FUTURE USERS	CONST. COST TO FUTURE USERS
8050 S	1300 W	1300 W from 8600 S to 8200 S	2022	\$1,191,000	\$1,339,713	100%	0%	\$0
9000 S	1300 W	1300 W from 9000 S to 9220 S	2024	\$757,000	\$921,006	100%	0%	\$0
9000 S	9000 S	9000 S from Redwood Rd to Jordan River Parkway	2024	\$4,485,000	\$5,456,688	64%	36%	\$1,964,408
7800 S	7800 S	7800 S from between Mountain View Corridor and Highlands Loop Rd to 5600 W	2024	\$1,358,000	\$1,652,215	34%	66%	\$1,090,462
9000 S	9000 S	2700 W to Redwood Rd	2027	\$4,677,000	\$6,400,797	61%	39%	\$2,496,311
9000 S	9000 S	About 3500 W to 2700 W	2028	\$4,074,000	\$5,798,572	66%	34%	\$1,971,515
9000 S	9000 S	4000 W to 3695 W	2029	\$2,536,000	\$3,753,900	61%	39%	\$1,464,021
9000 S	Old Bingham Hwy	4800 W to 4000 W	2030	\$4,474,000	\$6,887,517	45%	55%	\$3,788,135
9000 S	Hawley Pk/9580 S	Wells Park to Bagley Park	2031	\$2,362,000	\$3,781,638	33%	67%	\$2,533,698
9000 S	Wells Park Rd	Prosperity to Hawley Park	2025	\$3,674,000	\$4,648,782	26%	74%	\$3,440,099
9000 S	Jordan River Parkway	Jordan River Parkway from 9000 S to 8800 S	2032	\$962,000	\$1,601,801	68%	32%	\$512,576
9000 S	Bagley Park Rd	Bagley Park Dr from 5600 W to 9580 S	2026	\$1,554,000	\$2,044,958	43%	57%	\$1,165,626
7800 S	Grizzly Way	Grizzly Way from Swift Water Way to 7800 S	2032	\$713,000	\$1,187,197	92%	8%	\$94,976
7800 S	Grizzly Way	Grizzly Way from approx. Big Spring Drive to Swift Water Way	2032	\$617,000	\$1,027,350			\$0
7800 S	7800 S	7800 S from 1300 W to 1200 W	2027	\$594,000	\$812,930	59%	41%	\$333,301
7000 S	7000 S	7000 S from Bangerter Highway to 3200 W	2030	\$1,515,000	\$2,332,273	45%	55%	\$1,282,750
7000 S	Campus View Dr, Cobble Ridge Dr, Jordan Landing Blvd	Campus View Dr from Watkins Way to Cobble Ridge Dr; Cobble Ridge Dr from Campus View Dr to Jordan Landing Blvd; Jordan Landing Blvd from Cobble Ridge Drive to Jordan Village Road	2030	\$1,645,000	\$2,532,402	81%	19%	\$481,156
9000 S Sewer	6400 W to SR 111		2025	\$1,500,000	\$1,897,979	0%	100%	\$1,897,979
New Bingham Sewer			2024	\$7,800,000	\$8,112,000	67%	33%	\$2,676,960
TOTAL CIP				\$46,488,000	\$62,189,719			\$27,193,971

Source: West Jordan City Engineering Department
2019 Sanitary Sewer Master Plan Update, Appendix E



APPENDIX C: WATER CAPITAL IMPROVEMENT PLAN

PROJECT ID	PROJECTS	YEAR	COST ESTIMATE	CONST. YEAR COST	% FUTURE GROWTH	FUTURE GROWTH COST	IFFP ELIGIBLE	IFFP COST
PIPELINES								
DP-1	Increase transmission capacity from pump station and complete pipeline in N side of 7800 S	2030	\$1,401,000	\$1,917,365	7.9%	\$151,472	44.3%	\$67,034
DP-2	High water user does not have service redundancy	2029	\$553,000	\$727,710	0.0%	\$0	44.3%	\$0
DP-3	Zone 2 Transmission	2028	\$3,004,000	\$3,801,018	2.4%	\$91,224	44.3%	\$40,372
DP-4	Low pressures in Zone 3	2029	\$1,601,000	\$2,106,807	47.5%	\$1,000,733	44.3%	\$442,879
DP-6	Separate Pressure Zones 3 and 4	2030	\$687,000	\$940,207	47.5%	\$446,598	44.3%	\$197,644
DP-7	The City prefers to have transmission pipelines on both sides of 5 lane roads	2030	\$3,004,000	\$4,111,181	5.1%	\$209,670	44.3%	\$92,790
TP-8	Source transmission is needed for Zone 5 S Tank	2024	\$4,170,000	\$4,510,272	100.0%	\$4,510,272	44.3%	\$1,996,039
TP-9	Source transmission is needed for new Zone 5 N Tank	2027	\$1,098,000	\$1,335,885	100.0%	\$1,335,885	44.3%	\$591,201
TP-10	Outflow transmission is needed for new Zone 5 N Tank	2026	\$1,510,000	\$1,766,486	100.0%	\$1,766,486	44.3%	\$781,766
TP-11	Transmission is needed for new Zone 5 S Tank	2024	\$2,750,000	\$2,974,400	100.0%	\$2,974,400	44.3%	\$1,316,333
TP-12	Transmission is needed for new Zone 7 N Tank	2035	\$1,900,000	\$3,163,640	100.0%	\$3,163,640	0.0%	\$0
TP-13	Transmission is needed for new Zone 7 S Tank	2035	\$1,390,000	\$2,314,452	100.0%	\$2,314,452	0.0%	\$0
TP-14	Transmission is needed on N side of Maples area	2027	\$400,000	\$486,661	63.5%	\$309,030	44.3%	\$136,762
TP-15	Additional transmission capacity is needed	2024	\$2,510,000	\$2,714,816	100.0%	\$2,714,816	44.3%	\$1,201,453
TP-16	Additional transmission capacity is needed	2027	\$1,380,000	\$1,678,981	100.0%	\$1,678,981	44.3%	\$743,040
TP-17	Transmission is needed for new Zone 5 S BPS	2024	\$1,200,000	\$1,297,920	100.0%	\$1,297,920	44.3%	\$574,400
TP-18	Transmission is needed from the S end of Zone 5 to the N end.	2025	\$2,220,000	\$2,497,198	35.3%	\$881,511	44.3%	\$390,116
FF-1	Insufficient fire flow at W Jordan Elementary School	2022	\$250,000	\$250,000	0.0%	\$0	44.3%	\$0
FF-2	Inadequate fire flow to residential area	2023	\$480,000	\$499,200	0.0%	\$0	44.3%	\$0
FF-3	Inadequate fire flow to residential area	2025	\$540,000	\$607,427	0.0%	\$0	44.3%	\$0



PROJECT ID	PROJECTS	YEAR	COST ESTIMATE	CONST. YEAR COST	% FUTURE GROWTH	FUTURE GROWTH COST	IFFP ELIGIBLE	IFFP COST
FF-4	Inadequate fire flow to residential area	2025	\$150,000	\$168,730	0.0%	\$0	44.3%	\$0
FF-5	Inadequate fire flow to residential area	2025	\$210,000	\$236,221	0.0%	\$0	44.3%	\$0
FF-6	Inadequate fire flow to residential area	2026	\$660,000	\$772,107	0.0%	\$0	44.3%	\$0
FF-7	Inadequate fire flow to residential area	2026	\$340,000	\$397,752	0.0%	\$0	44.3%	\$0
PZ-1	Low pressures in Zone 1	2028	\$50,000	\$63,266	2.4%	\$1,518	44.3%	\$672
PZ-2	Low pressures in Zone 5	2031	\$10,000	\$14,233	63.5%	\$9,038	44.3%	\$4,000
PRV-1	New PRV needed in 9000 S	2031	\$230,000	\$327,362	100.0%	\$327,362	44.3%	\$144,875
PRV-2	Need PRV in Future 7000 S Transmission pipeline	2027	\$230,000	\$279,830	100.0%	\$279,830	44.3%	\$123,840
PRV-3	Need PRV in Future 7000 S Transmission pipeline	2031	\$230,000	\$327,362	100.0%	\$327,362	44.3%	\$144,875
SUBTOTAL			\$34,158,000	\$42,288,489		\$25,792,201	21%	\$8,990,092
BOOSTER PUMP STATION								
PS-1	Zone 5 S Booster Station	2026	\$3,300,000	\$3,860,533	100.0%	\$3,860,533	44.3%	\$1,708,495
PS-2	Zone 5 N Booster Station	2024	\$3,300,000	\$3,569,280	100.0%	\$3,569,280	44.3%	\$1,579,599
PS-3	Zone 7 N Booster Station	2031	\$2,800,000	\$3,985,273	100.0%	\$3,985,273	44.3%	\$1,763,699
PS-4	Zone 7 S Booster Station	2035	\$2,800,000	\$4,662,206	100.0%	\$4,662,206	0.0%	\$0
PS-5	Additional Zone 2 Booster Pump	2027	\$150,000	\$182,498	100.0%	\$182,498	44.3%	\$80,765
PS-6	Additional Zone 3 Booster Pump	2028	\$150,000	\$189,798	17.9%	\$33,961	44.3%	\$15,030
PS-7	Additional Zone 4 Booster Pump	2029	\$150,000	\$197,390	100.0%	\$197,390	44.3%	\$87,356
SUBTOTAL			\$12,650,000	\$16,646,978		\$16,491,141	31%	\$5,234,943
STORAGE								
S-1	Additional Storage Required in Zone 1	2022	\$10,400,000	\$10,400,000	100.0%	\$10,400,000	48.6%	\$5,055,573
S-2	Additional Storage Required in Zone 3	2021	\$6,000,000	\$5,769,231	0.2%	\$12,407	48.6%	\$6,031
S-3	Additional Storage Required in Zone 5	2023	\$13,800,000	\$14,352,000	100.0%	\$14,352,000	48.6%	\$6,976,691
S-4	Additional Storage Required in Zone 5	2026	\$13,800,000	\$16,144,048	100.0%	\$16,144,048	48.6%	\$7,847,828
S-5	Additional Storage Required in Zone 6	2023	\$10,400,000	\$10,816,000	100.0%	\$10,816,000	48.6%	\$5,257,796
S-6	Additional Storage Required in Zone 7	2035	\$6,900,000	\$11,489,007	100.0%	\$11,489,007	0.0%	\$0
S-7	Additional Storage Required in Zone 7	2035	\$6,900,000	\$11,489,007	100.0%	\$11,489,007	0.0%	\$0
S-8	Additional Storage Required in Zone 4	2028	\$13,800,000	\$17,461,402	100.0%	\$17,461,402	48.6%	\$8,488,211
SUBTOTAL			\$82,000,000	\$97,920,696		\$92,163,872	36%	\$33,632,130



PROJECT ID	PROJECTS	YEAR	COST ESTIMATE	CONST. YEAR COST	% FUTURE GROWTH	FUTURE GROWTH COST	IFFP ELIGIBLE	IFFP COST
WELLS								
W-1	Equip Well 8	2025	\$3,241,858	\$3,241,858	100.0%	\$3,241,858	100%	\$3,241,858
SUBTOTAL			\$3,241,858	\$3,241,858		\$3,241,858	100%	\$3,241,858
TOTAL CIP			\$131,690,000	\$160,098,021		\$137,689,072	37%	\$51,099,023
Source: West Jordan City Engineering Department 2022 Water Master Plan, Table 10-1								

