

WATER IMPACT FEE FACILITIES PLAN

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Prepared for:



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EXECUTIVE SUMMARY

The purpose of an Impact Fee Facilities Plan (IFFP) is to identify demands placed upon District facilities by future development and evaluate how these demands will be met by the District. The IFFP is also intended to outline the improvements that may be funded through impact fees.

WHY IS AN IFFP NEEDED?

The IFFP provides a technical basis for assessing updated impact fees throughout the District. This document will address the future infrastructure needed to serve the District with regard to future development based on current land use planning. The existing and future capital projects documented in this IFFP will ensure that level of service standards are maintained for all existing and future residents who reside within the service area. Local governments must pay strict attention to the required elements of the Impact Fee Facilities Plan, which are enumerated in the Impact Fees Act.

PROJECTED FUTURE GROWTH

To evaluate future infrastructure needs, it is first necessary to project how demand for culinary water will increase in the future. Using available information for existing development and growth projections from the District’s Water Master Plan, projected growth in system demand is summarized in Table ES-1 in terms of Water Capacity Units (WCUs).

**Table ES-1
Projected JSSD Water System Growth**

Year	Connected WCUs	Peak Day Production Requirement (MGD)
2023	1,645	3.0
2033	3,515	6.4
2040	5,461	9.9
2050	8,663	15.7
2060	11,090	20.2
2070	12,397	22.5
2080	12,997	23.6
Buildout	13,490	24.5

The basis for a WCU for historical flow rates is summarized in Table ES-2

**Table ES-2
Service Area Historic Flows**

Item	Value for District Existing Conditions
Connected Water Capacity Units (WCUs)	1,645
Average Day Flow (MGD)	1.21
Peak Day Flow (MGD)	2.68
Average Day Flow (gpd/WCU)	737
Peak Day Flow (gpd/WCU)	1,638
Average Day Flow with Required Redundancy (gpd/WCU)	840
Peak Day Flow with Required Redundancy (gpd/WCU)	1,818

LEVEL OF SERVICE

Level of service is defined in the Impact Fees Act as “the defined performance standard or unit of demand for each capital component of a public facility within a service area.” Summary values for both existing and proposed levels of service are contained in Table ES-3.

**Table ES-3
Existing Level of Service**

Criteria	Existing Level of Service	Performance Standard
Production / Treatment Production/Treatment Capacity (gpd/WCU)	1,818	1,818
Storage Storage (gallons per WCU) ¹	819	819
Transmission / Distribution ² Peak Hour Demand Pressure (psi)	40	40
Minimum Available Fire Flow (gpm) at 20 psi residual pressure during peak day demand	1500	1500
Maximum Pipe Velocity During Peak Hour Demand (fps)	7.0	7.0

1. Based on storage in the system as a whole without fire flow and storage in the tank zone without fire flow. Fire flow storage is also satisfied by tank zone in addition to the storage per WCU required.

2. Transmission /Distribution Criteria are met by in large throughout the system with a few, minor portions of the system not meeting the existing level of service due to their being located. See subsequent discussion in this IFFP regarding the curing of deficiencies.

EXISTING CAPACITY AVAILABLE TO SERVE FUTURE GROWTH

Demand from projected future growth will be met through a combination of available excess capacity in existing facilities and construction of additional capacity in new facilities. The calculated percentage of existing capacity available for use by future growth is summarized in Table ES-4.

Table ES-4
Project Cost Allocation to Development for the District Service Area
(Existing Facilities)

Project Description	Impact Fee Eligible Project Cost ¹	Percent to Existing and Bonded	Percent to 10-yr Unbonded Growth	Percent to Beyond 10-yr Unbonded Growth	Cost to Existing and Bonded	Percent to 10-yr Unbonded Growth	Percent to Beyond 10-yr Unbonded Growth
Storage Improvements							
6800 Tank	\$964,600	3.83%	21.73%	74.44%	\$43,131	\$244,409	\$837,460
Subtotal	\$964,600				\$43,131	\$244,409	\$837,460
Transmission / Distribution Improvements							
HWY 40 Crossing (boring, casings, pipeline)	\$976,872	64.49%	2.94%	32.56%	\$250,238	\$11,413	\$126,348
6800 Pipeline	\$297,624	64.49%	2.94%	32.56%	\$2,778,417	\$126,724	\$1,402,859
Subtotal	\$1,274,496				\$3,028,655	\$138,138	\$1,529,207
TOTAL	\$2,239,096				\$3,071,786	\$382,547	\$2,366,667

1. Project funding varies by project. Some projects were funded with the system level portion being restricted to only the upsize of the project. Other projects have alternative funding mechanisms such as grant funding which are not impact fee eligible. The amounts shown in this table are only those portions of projects which are impact fee eligible.

REQUIRED SYSTEM IMPROVEMENTS

Beyond available existing capacity, additional improvements required to serve new growth are summarized in Table ES-5 which applies to the District Service Area as a whole. To satisfy the requirements of state law, the tables provide a breakdown of the percentage of the project costs attributed to existing and future users. For future use, capacity has been divided between capacity to be used by growth within the 10-year planning window of this IFFP and capacity that will be available for growth beyond the 10-year window.

**Table ES-5
Project Cost Allocation to Development for the District Service Area
(10-Year Planning Window)**

Project Description	Estimated Impact Fee Eligible JSSD Cost (2023 Dollars) ¹	Percent to Existing and Bonded	Percent to 10-yr Unbonded Growth	Percent to Beyond 10-yr Unbonded Growth	Cost to Existing and Bonded	Percent to 10-yr Unbonded Growth	Percent to Beyond 10-yr Unbonded Growth
Production / Treatment Improvements							
SP-7.1, FRWTP Phase 1	\$17,609,529	0.00%	10.54%	89.46%	\$0	\$1,856,383	\$15,753,146
SP-7.2b, CUWCD Raw Water	\$355,661	0.00%	4.53%	95.47%	\$0	\$16,124	\$339,537
Subtotal	\$17,965,190				\$0	\$1,872,507	\$16,092,683
Storage Improvements							
ST-3, Benloch Ranch Tank	\$1,125,000	0.00%	42.75%	57.25%	\$0	\$480,902	\$644,098
ST-6 (SP-8.3), Ventana Tank	\$1,404,859	0.00%	10.54%	89.46%	\$0	\$148,099	\$1,256,760
Subtotal	\$2,529,859				\$0	\$629,001	\$1,900,858
Transmission / Distribution Improvements							
T-1.1, 6800 to Lady Monument Transmission	\$388,000	0.00%	8.28%	91.72%	\$0	\$32,145	\$355,855
T-1.2, Lady Monument to Benloch Transmission	\$4,308,000	0.00%	8.28%	91.72%	\$0	\$356,913	\$3,951,087
T-1.3, Benloch Transmission Line	\$340,000	0.00%	8.28%	91.72%	\$0	\$28,169	\$311,831
T-1.4, Benloch to VR Transmission Line	\$421,000	0.00%	8.28%	91.72%	\$0	\$34,879	\$386,121
T-5, HWY 32 Benloch Ranch Transmission Line #1	\$2,662,000	0.00%	8.28%	91.72%	\$0	\$220,544	\$2,441,456
T-6, HWY 32 Transmission Line #2	\$492,000	0.00%	8.28%	91.72%	\$0	\$40,762	\$451,238
T-9 (SP-8.2), Ventana Piping	\$676,000	0.00%	8.28%	91.72%	\$0	\$56,006	\$619,994
PS-1, 6800 to Lady Monument Pump Station	\$1,919,000	0.00%	8.28%	91.72%	\$0	\$158,987	\$1,760,013
PS-2, Add Deer Canyon Preserve Pump Station	\$1,285,000	0.00%	8.28%	91.72%	\$0	\$106,461	\$1,178,539
PS-5, Benloch Pump Station	\$930,000	0.00%	8.28%	91.72%	\$0	\$77,050	\$852,950
PS-8, HWY 40 Pump Station	\$2,126,000	0.00%	8.28%	91.72%	\$0	\$176,137	\$1,949,863
PS-9, Deer Mountain Pump Station	\$896,000	100.00%	0.00%	0.00%	\$896,000	\$0	\$0
R-1, Deer Canyon Preserve Back Up Generator	\$100,000	100.00%	0.00%	0.00%	\$100,000	\$0	\$0
Operations Shop Building (Water Portion)	\$1,126,947	1.58%	4.95%	93.47%	\$17,768	\$55,823	\$1,053,356
Subtotal	\$17,669,947				\$1,013,768	\$1,343,876	\$15,312,303
TOTAL	\$38,164,996				\$1,013,768	\$3,845,384	\$33,305,843

1. Project funding varies by project. Some projects are planned with the system level portion being only the upsize of the project. Other projects have alternative funding mechanisms such as grant funding which are not impact fee eligible. The amounts shown in this table are only those portions of projects which are impact fee eligible.

IMPACT FEE FACILITIES PLAN

INTRODUCTION

Jordanelle Special Service District (JSSD or the District) has retained Bowen Collins & Associates (BC&A) to prepare an Impact Fee Facilities Plan (IFFP) for production/treatment, storage and transmission/distribution provided by the District. The purpose of an IFFP is to identify demands placed upon District facilities by future development and evaluate how these demands will be met by the District. The IFFP is also intended to outline the improvements which may be funded through impact fees.

Much of the analysis forming the basis of this IFFP has been taken from the District's Water Master Plan (2022). The reader should refer to the Water Master Plan for additional discussion of planning and evaluation methodology beyond what is contained in this IFFP. Minor adjustments to the cost information shown in the Master Plan has been incorporated into this IFFP to update costs to 2023 dollars (based on the ENR index) and match bid prices for recently bid future projects.

SERVICE AREA

The District has historically had two different service areas for impact fee purposes. These areas have been known as the "Areas A, B, B North, and B South" Area and the "Area C" service areas. These areas correspond to the areas of the same names shown in the Water Master Plan. Generally, areas north and west of Jordanelle Reservoir were included in "Areas A, B, B North, and B South" and areas south of Jordanelle Reservoir were included in "Area C".

The primary reason for a division between North and Source Service Areas was a difference in whether storage was considered project or system level and its cost. Since then, the cost and administration of storage in both areas has been re-evaluated. It is now understood that the cost of storage in the two areas isn't significantly different, and both areas administer storage as a system level improvement. As a result, no compelling reason exists for further division between these two service areas.

SOLD CAPACITY

JSSD is somewhat different than many other service districts in regards to the way the initial and principal backbone infrastructure has been constructed. Most of this initial system was constructed through a series of bonds that were paid for by developers in exchange for future commitments to capacity. Developers who thus participated in the bonds and are thus entitled to capacity are referred to as "bonded" users herein. Conversely, users who did not obtain capacity in the system through participation in previous bonds are referred to as "unbonded". Although a significant portion of the capacity in the system is not currently being used, bonded users are guaranteed at development the treatment/production, storage, and transmission/distribution capacity they purchased at the time of bonding. Thus, there is only limited available excess capacity for serving future growth outside of the developments that have purchased capacity. For the analysis contained in this IFFP and the subsequent Impact Fee Analysis (IFA), all outstanding bonded capacity is considered committed and has been evaluated as though the development has already occurred (i.e. it is considered along

with existing users). This accurately represents the District’s commitments to bonded users and correctly calculates remaining available capacity to new users.

IMPACT FEE FACILITY PLAN COMPONENTS

Requirements for the preparation of an IFFP are outlined in Title 11, Chapter 36a of the Utah Code Annotated (the Impact Fees Act). Under these requirements, an IFFP shall accomplish the following for each facility:

1. Identify the existing level of service.
2. Establish a proposed level of service.
3. Identify excess capacity to accommodate future growth at the proposed level of service.
4. Identify demands placed upon existing public facilities by new development.
5. Identify the means by which demands from new development will be met.
6. Consider the following additional issues:
 - a. Revenue sources to finance required system improvements;
 - b. Necessity of improvements to maintain the proposed level of service; and
 - c. Need for facilities relative to planned locations of schools.

EXISTING LEVEL OF SERVICE – UTAH CODE ANNOTATED 11-36a-302(1)(a)(i)

Level of service is defined in the Impact Fees Act as “the defined performance standard or unit of demand for each capital component of a public facility within a service area”. This section discusses the level of service being currently provided to existing users.

Unit of Demand

The projected flow used to design and evaluate system components will vary depending on the nature of each component. For example, production/treatment facilities are often evaluated to satisfy peak day demand. Conversely, transmission pipelines must meet peak hour flow. For the purpose of this analysis, it is useful to define these various demands in terms of Water Capacity Units (WCUs). A WCU represents the demand that a typical single-family residence places on the system. The basis of a WCU for historical flow rates is summarized in Table 1.

**Table 1
Service Area Historic Flows**

Item	Value for District Existing Conditions
Connected Water Capacity Units (WCUs)	1,645
Average Day Flow (MGD)	1.21
Peak Day Flow (MGD)	2.68
Average Day Flow (gpd/WCU)	737
Peak Day Flow (gpd/WCU)	1,638
Average Day Flow with Required Redundancy (gpd/WCU)	840
Peak Day Flow with Required Redundancy (gpd/WCU)	1,818

Level of Service / Performance Standards

Performance standards are those standards that are used to design and evaluate the performance of facilities. This section discusses the existing performance standards for the District. A subsequent section will consider existing level of service relative to these standards.

To improve the accuracy of the analysis, this Impact Fee Facilities Plan has divided the system into three different components (production/treatment, storage, transmission/distribution). Each of these components has its own set of current and proposed level of service:

Production / Treatment. Water production must be adequate to satisfy demands on both an annual and peak day basis. Production of supplies must take into account seasonal limitations in supply availability and reductions in yield because of dry year conditions or reasonable source or mechanical failure. Production capacity must be capable of satisfying all sources of demand including wholesale commitments where applicable. Based on measured demands plus the requisite buffer in supply required to satisfy the condition of potential reduced yield, this equates to a desired production capacity of 1,818 gpd/WCU. See the Water Master Plan for detailed analysis and discussion of this performance standard.

Storage. Three major criteria are generally considered when sizing storage facilities for a water distribution system: operational or equalization storage, fire flow storage, and emergency or standby storage.

- Operational/Equalization Storage:** As required by the State of Utah, operational/equalization storage is the storage required to satisfy the difference between the maximum rate of supply and the rate of demand during peak conditions. Sources, major transmission pipelines, and pump stations are usually sized to convey peak day demands to optimize the capital costs of infrastructure. During peak hour demands, storage is needed to meet the difference in source/conveyance capacity and the increased peak instantaneous demands. Because demands can vary from day to

day, operational storage must be adequate to meet the average observed storage fluctuation in each zone. Based on the methodology described above and historic water use patterns, operational storage is recommended to be equal to 25 percent of peak day demand.

2. **Fire Flow Storage:** Fire flow storage is the amount of water needed to combat fires occurring in the service area. This storage is calculated based on the fire flow rate for structures in each area of the system multiplied by a specified duration as required by the fire authority. Typical residential homes require a fire flow of 1,500 gpm for a duration of 2 hours (180,000 gallons). Larger buildings on the upper hillside areas are planned to require a fire flow of 2,750 gpm for a duration of 2 hours (330,000 gallons). Larger buildings in the lower hillside areas are planned to require up to 3,500 gpm for 3 hours (630,000 gallons).
3. **Emergency Storage:** Emergency or standby storage is the storage needed to meet demands in the event of an unexpected emergency situation such as a line break, treatment plant failure, or other unexpected event. For the District, the critical scenario appears to be providing water during a power outage during the peak day. The level of service established for customers is to provide 6 hours of peak day demand of emergency storage.

Combined storage needs for the operational/equalization and emergency storage result in a desired performance standard of 819 gallons per WCU. The fire flow storage performance standard is evaluated by zone and is as defined above.

Transmission / Distribution. Based on input from District staff, the following criteria were used as the desired level of service for major conveyance facilities:

1. The system was evaluated for existing conditions and projected conditions at buildout. Each demand scenario included model runs at both peak day and peak hour demand.
2. The system should be capable of maintaining 50 psi during peak day demand and 40 psi during peak hour demands. This is higher than State of Utah requirements which require minimum pressures of 40 psi during peak day demand and 30 psi during peak hour demands per State of Utah Administrative Code R309-105-9(2).
3. Per State of Utah Administrative Code R309-105-9(2)(a), the system must be able to meet fire flow demands and still maintain greater than 20-psi residual pressure in the distribution system under peak day demand conditions. Fire flow demands were set at 1,500 gpm for residential areas with higher flows set at 2,750 for upper hillside areas with larger structures and 3,500 gpm for lower hillside areas.
4. The District has many pressure zones that use pumps to deliver water from lower pressure zones to higher pressure zones. These lift stations must be sized to deliver flow at peak day demands or better. In other words, the stations are to be sized such that the level in the destination reservoir at the end of a peak day of demand is the same as at the beginning of the day.

Summary of Existing Level of Service

Existing level of service values are summarized in Table 2.

Table 2
Existing Level of Service

Criteria	Existing Level of Service	Performance Standard
Production / Treatment Production/Treatment Capacity (gpd/WCU)	1,818	1,818
Storage Storage (gallons per WCU) ¹	819	819
Transmission / Distribution ² Peak Hour Demand Pressure (psi)	40	40
Minimum Available Fire Flow (gpm) at 20 psi residual pressure during peak day demand	1500	1500
Maximum Pipe Velocity During Peak Hour Demand (fps)	7.0	7.0

1. Based on storage in the system as a whole without fire flow and storage in the tank zone without fire flow. Fire flow storage is also satisfied by tank zone in addition to the storage per WCU required.

2. Transmission /Distribution Criteria are met by in large throughout the system with a few, minor portions of the system not meeting the existing level of service due to their being located. See subsequent discussion in this IFFP regarding the curing of deficiencies.

As shown in Table 2, JSSD existing level of service meets its performance standards. There are a few parts of the District's system with respect to qualitative features such as the presence of a backup generator at critical pump stations and a need for additional shop/office/operational space (see Table 5). Excess capacity and the curing of deficiencies will be discussed in subsequent sections of this IFFP. Costs for projects to correct deficiencies that do not meet the proposed level of service will not be included as part of the impact fee as required by the Impact Fee Act.

PROPOSED LEVEL OF SERVICE - UTAH CODE ANNOTATED 11-36a-302(1)(a)(ii)

The proposed level of service is the performance standard used to evaluate system needs in the future. The Impact Fees Act indicates that the proposed level of service may:

1. Diminish or equal the existing level of service; or
2. Exceed the existing level of service if, independent of the use of impact fees, the District implements and maintains the means to increase the level of service for existing demand within six years of the date on which new growth is charged for the proposed level of service.

For each component (Production/Treatment, Storage, and Transmission/Distribution), the proposed future level of service is equal to the existing performance standard.

EXCESS CAPACITY TO ACCOMMODATE FUTURE GROWTH – UTAH CODE ANNOTATED 11-36a-302(1)(a)(iii)

Demand from projected future growth will be met through a combination of available excess capacity in existing facilities and construction of new facilities that will provide additional capacity. Defining existing system capacity in terms of a single number is difficult. To improve the accuracy of the analysis, we have divided the system into three different components (Production/Treatment, Storage, Transmission/Distribution). The purpose of this breakdown is to consider the available capacity for each component individually. Excess capacity in each component of the system is as follows. See also Table 3 below.

Production / Treatment

Existing sources within the District, which consist of wells and water from the Keetley Water Treatment Plant (KWTP) have a reliable peak production capacity of 11.14 million gallons per day (MGD). The capacity in existing sources has been sold (to existing connections, wholesale customers, and undeveloped bonded developments). As a result, there is no excess production/treatment capacity within the District for use by future users outside of those who are bonded.

Storage

Many of the existing storage tanks in the JSSD system currently have some amount of excess capacity but will not have excess capacity once all bonded users connect to the system. Many existing tanks also only serve only one development due to the topography in the District and the spread out nature of development. Thus, there is almost no excess existing storage tank capacity for use by future users outside those who are bonded. The exception to this is the recently constructed 6800 South Tank. Use of capacity for the tank has been based on projected growth associated with its service area.

Transmission / Distribution

The District system level transmission and distribution systems are (and are designed to be) mutually supportive to all users throughout the District. Once completed, all systems will interconnect around both sides of Jordanelle Reservoir and pumping/conveyance capacity will be sufficient to supply a reasonable level of water service throughout the District in an emergency scenario in which a source is offline. Because of the interconnectedness of the transmission/distribution infrastructure, it is most appropriate to assign the same proportional use of capacity to all assets based on expected total future demand. Therefore, the amount of excess capacity to be used for future growth is based on the future growth share of total transmission / distribution capacity.

Table 3
Project Cost Allocation to Development for the District Service Area
(Existing Facilities)

Project Description	Impact Fee Eligible Project Cost ¹	Percent to Existing and Bonded	Percent to 10-yr Unbonded Growth	Percent to Beyond 10-yr Unbonded Growth	Cost to Existing and Bonded	Percent to 10-yr Unbonded Growth	Percent to Beyond 10-yr Unbonded Growth
Storage Improvements							
6800 Tank	\$964,600	3.83%	21.73%	74.44%	\$43,131	\$244,409	\$837,460
Subtotal	\$964,600				\$43,131	\$244,409	\$837,460
Transmission / Distribution Improvements							
HWY 40 Crossing (boring, casings, pipeline)	\$976,872	64.49%	2.94%	32.56%	\$250,238	\$11,413	\$126,348
6800 Pipeline	\$297,624	64.49%	2.94%	32.56%	\$2,778,417	\$126,724	\$1,402,859
Subtotal	\$1,274,496				\$3,028,655	\$138,138	\$1,529,207
TOTAL	\$2,239,096				\$3,071,786	\$382,547	\$2,366,667

1. Project funding varies by project. Some projects were funded with the system level portion being restricted to only the upside of the project. Other projects have alternative funding mechanisms such as grant funding which are not impact fee eligible. The amounts shown in this table are only those portions of projects which are impact fee eligible.

DEMANDS PLACED ON FACILITIES BY NEW DEVELOPMENT - UTAH CODE ANNOTATED 11-36A-302(1)(A)(IV)

Growth and new development in the District are discussed in the District’s Water Master Plan. These growth projections are predominantly based on the most recent applications for development which have passed or are currently working through the approval process. JSSD is a young system experiencing extreme growth at this time. The projections include consideration of developable area, zoning, the nature of surrounding development, designated open space / wilderness area, and other factors. Future growth based on the master plan analysis is shown in Table 4.

Table 4
JSSD Service Area Water System Growth

Year	Connected WCUs	Peak Day Production Requirement (MGD)
2023	1,645	3.0
2033	3,515	6.4
2040	5,461	9.9
2050	8,663	15.7
2060	11,090	20.2
2070	12,397	22.5
2080	12,997	23.6
Buildout	13,490	24.5

INFRASTRUCTURE REQUIRED TO MEET DEMANDS OF NEW DEVELOPMENT - UTAH CODE ANNOTATED 11-36a-302(1)(a)(v)

To satisfy the requirements of state law, the effect of demand placed upon existing system facilities by future development was evaluated using the process outlined below. Each of the steps was completed as part of this plan’s development. Additional description of the methodology used in the process outlined below can be found in the Water Master Plan.

1. **Existing Demand** – The demand existing development places on the District’s system was estimated based on historic water use and flow records.
2. **Existing Capacity** – The capacities of existing system facilities were estimated using size data provided by the District and a hydraulic computer model. The capacities of existing production and pumping facilities were taken from the District’s master plan.
3. **Existing Deficiencies** – Existing deficiencies in the system were looked for by comparing defined levels of service against calculated capacities.
4. **Future Demand** – The demand future development will place on the system was estimated based on development projections as discussed in a previous section.

5. **Future Deficiencies** – Future deficiencies in the collection system were identified using defined level of service and results from the computer model.
6. **Recommended Improvements** – Needed system improvements were identified to remedy existing deficiencies and meet demands associated with future development.

The steps listed above “identify demands placed upon existing public facilities by new development activity at the proposed level of service; and... the means by which the political subdivision or private entity will meet those growth demands” (Section 11-36a-302(1)(a) of the Utah Code Annotated).

10-Year Improvement Plan

Planned improvements to satisfy level of service requirements for projected demands within the next 10 years have been identified for the District service area in the District’s Water Master Plan and are summarized in Table 4. These improvements will be constructed in phases as funding becomes available. Only infrastructure to be constructed within a 10-year window will be considered in the calculation of these impact fees to avoid uncertainty surrounding improvements further into the future. The locations of projects to be completed in the next 10 years are shown in the District’s Water Master Plan. It should be noted that this list of projects only includes projects with components of cost that are eligible to be included in the impact fee calculations.

Table 5
Project Cost Allocation to Development for the District Service Area
(10-Year Planning Window)

Project Description	Estimated Impact Fee Eligible JSSD Cost (2023 Dollars) ¹	Percent to Existing and Bonded	Percent to 10-yr Unbonded Growth	Percent to Beyond 10-yr Unbonded Growth	Cost to Existing and Bonded	Percent to 10-yr Unbonded Growth	Percent to Beyond 10-yr Unbonded Growth
Production / Treatment Improvements							
SP-7.1, FRWTP Phase 1	\$17,609,529	0.00%	10.54%	89.46%	\$0	\$1,856,383	\$15,753,146
SP-7.2b, CUWCD Raw Water	\$355,661	0.00%	4.53%	95.47%	\$0	\$16,124	\$339,537
Subtotal	\$17,965,190				\$0	\$1,872,507	\$16,092,683
Storage Improvements							
ST-3, Benloch Ranch Tank	\$1,125,000	0.00%	42.75%	57.25%	\$0	\$480,902	\$644,098
ST-6 (SP-8.3), Ventana Tank	\$1,404,859	0.00%	10.54%	89.46%	\$0	\$148,099	\$1,256,760
Subtotal	\$2,529,859				\$0	\$629,001	\$1,900,858
Transmission / Distribution Improvements							
T-1.1, 6800 to Lady Monument Transmission	\$388,000	0.00%	8.28%	91.72%	\$0	\$32,145	\$355,855
T-1.2, Lady Monument to Benloch Transmission	\$4,308,000	0.00%	8.28%	91.72%	\$0	\$356,913	\$3,951,087
T-1.3, Benloch Transmission Line	\$340,000	0.00%	8.28%	91.72%	\$0	\$28,169	\$311,831
T-1.4, Benloch to VR Transmission Line	\$421,000	0.00%	8.28%	91.72%	\$0	\$34,879	\$386,121
T-5, HWY 32 Benloch Ranch Transmission Line #1	\$2,662,000	0.00%	8.28%	91.72%	\$0	\$220,544	\$2,441,456
T-6, HWY 32 Transmission Line #2	\$492,000	0.00%	8.28%	91.72%	\$0	\$40,762	\$451,238
T-9 (SP-8.2), Ventana Piping	\$676,000	0.00%	8.28%	91.72%	\$0	\$56,006	\$619,994
PS-1, 6800 to Lady Monument Pump Station	\$1,919,000	0.00%	8.28%	91.72%	\$0	\$158,987	\$1,760,013
PS-2, Add Deer Canyon Preserve Pump Station	\$1,285,000	0.00%	8.28%	91.72%	\$0	\$106,461	\$1,178,539
PS-5, Benloch Pump Station	\$930,000	0.00%	8.28%	91.72%	\$0	\$77,050	\$852,950
PS-8, HWY 40 Pump Station	\$2,126,000	0.00%	8.28%	91.72%	\$0	\$176,137	\$1,949,863
PS-9, Deer Mountain Pump Station	\$896,000	100.00%	0.00%	0.00%	\$896,000	\$0	\$0
R-1, Deer Canyon Preserve Back Up Generator	\$100,000	100.00%	0.00%	0.00%	\$100,000	\$0	\$0
Operations Shop Building (Water Portion)	\$1,126,947	1.58%	4.95%	93.47%	\$17,768	\$55,823	\$1,053,356
Subtotal	\$17,669,947				\$1,013,768	\$1,343,876	\$15,312,303
TOTAL	\$38,164,996				\$1,013,768	\$3,845,384	\$33,305,843

1. Project funding varies by project. Some projects are planned with the system level portion being only the upsize of the project. Other projects have alternative funding mechanisms such as grant funding which are not impact fee eligible. The amounts shown in this table are only those portions of projects which are impact fee eligible.

It should be noted that the District's Water Master Plan indicated that there may be a need to construct Phase 2 of the FRWTP near the end of the 10-year planning window. However, future unbonded users will not be required to purchase capacity in Phase 2 of the FRWTP until capacity in Phase 1 is exhausted. Rather than predict the financing situation and the cost of Phase 2 nine or ten years from now for this IFFP, we recommend that this IFFP and the associated IFA be updated near the time when FRWTP Phase 1 capacity is nearing exhaustion and planning for Phase 2 is more refined.

Project Cost Attributable to Future Growth

To satisfy the requirements of state law, Tables 3 and 5 provide a breakdown of the capital facility projects and the percentage of the project costs attributed to existing and future users. As defined in Utah Code Annotated Section 11-36a-102(15), the Impact Fee Facilities Plan should only include the proportionate share of "the cost of public facilities that are roughly proportionate and reasonably related to the service demands and needs of any development activity." While several of the projects identified in the table are required solely to meet future growth, some projects also provide a benefit to existing users. Projects that benefit existing users include those projects addressing existing capacity needs and maintenance related projects.

For some projects, the division of costs between existing and future users is easy because 100 percent of the project costs can be attributed to one category or the other (e.g. infrastructure needed solely to serve new development can be 100 percent attributed to new growth, while projects related to existing condition or capacity deficiencies can be 100 percent attributed to existing user needs). For projects needed to address both existing deficiencies and new growth or where a higher level of service is being proposed, costs have been divided proportionally between existing and future users based on their use of the facility. A few additional notes regarding specific projects are as follows:

- **Transmission and Distribution Costs:** As noted previously, the District system level transmission and distribution systems are (and are designed to be) mutually supportive to all users throughout the District. Once completed, all systems will interconnect around both sides of Jordanelle Reservoir and pumping/conveyance capacity will be sufficient to supply a reasonable level of water service throughout the District in an emergency scenario in which a source is offline. Because of the interconnectedness of the transmission/distribution infrastructure, it is most appropriate to assign the same proportional use of capacity to all assets based on expected total future demand. Therefore, the assigned use of capacity to all transmission/distribution improvements is the same based on future growth share of total transmission / distribution capacity.
- **Operations Shop Building:** This project has been identified by the District after completion of the Water Master Plan. The project consists of office space and Shop/Storage Space for water and sewer personnel/operations. This IFFP includes only 50% of the anticipated project cost because the other 50% of cost is attributable to sewer. Bonded users constructed office/operational/shop space sufficient for the system/capacity thereby constructed. Unbonded users (existing and future) need to add office/operational/shop space commensurate with their demand.

- **PS-9 Deer Mountain Pump Station:** This project will serve only existing and bonded users in the Deer Mountain Development. Thus 100% of the cost is allocated to existing and bonded users.
- **R-1 Deer Canyon Preserve Back Up Generator:** This project will serve only existing and bonded users in the Deer Canyon Preserve Development. Thus 100% of the cost is allocated to existing and bonded users.

Tables 3 and 5 do not include bond costs related to paying for impact fee eligible improvements. These costs, if any, should be considered as part of the impact fee analysis.

Project Cost Attributable to 10 Year Growth

Included in Tables 3 and 5 is a breakdown of capacity associated with growth both at full build-out and through the next 10 years. This is necessary because many of the projects identified in the table will be built with capacity to accommodate flows or service beyond the 10-year growth window. This has been done following the same general process as described above.

Basis of Construction Cost Estimates

The costs of construction for projects to be completed within ten years have been taken from the 2022 Water Master Plan and adjusted to 2023 dollars using the ENR index. Some costs have been refined to match with recently received contractor quotes. Project costs not included in the Water Master Plan are based on the design engineer's project cost estimates (Operations Shop Building). Unit costs have been estimated based on past District experience with projects of a similar nature and BC&A experience with other projects outside of the District. As necessary, costs have been brought up to current dollars based on estimated construction inflation. Additional details regarding cost estimates are contained in the Water Master Plan.

ADDITIONAL CONSIDERATIONS

Manner Of Financing - Utah Code Annotated 11-36a-302(2)

The District may fund the infrastructure identified in this IFFP through a combination of different revenue sources.

Federal and State Grants and Donations. Impact fees cannot reimburse costs funded or expected to be funded through federal grants and other funds that the District has received for capital improvements without an obligation to repay. Grants and donations are not currently shown in this analysis. The District has pursued and received grant funding for work at the FRWTP treatment plant Phase 1 project. Grants received and available for the FRWTP Phase 1 project have offset the project cost and only real costs incurred by the District are included in this IFFP. Therefore, no adjustment need be made during the impact fee analysis.

Bonds. None of the costs contained in this IFFP include the cost of bonding. The cost of bonding required to finance impact fee eligible improvements identified in the IFPP may be added to the calculation of the impact fee. This will be considered in the impact fee analysis.

Interfund Loans. Because infrastructure must generally be built ahead of growth, there often arise situations in which projects must be funded ahead of expected impact fee

revenues. In some cases, the solution to this issue will be bonding. In others, funds from existing user rate revenue will be loaned to the impact fee fund to complete initial construction of the project and will be reimbursed later as impact fees are received. Consideration of potential interfund loans will be included in the impact fee analysis and should be considered in subsequent accounting of impact fee expenditures.

Impact Fees. It is recommended that impact fees be used to fund growth-related capital projects as they help to maintain the proposed level of service and prevent existing users from subsidizing the capital needs for new growth. Based on this IFFP, an impact fee analysis will be able to calculate a fair and legal fee that new growth should pay to fund the portion of the existing and new facilities that will benefit new development.

Developer Dedications and Exactions. Developer exactions are not the same as grants. If a developer constructs a system improvement or dedicates land for a system improvement identified in this IFFP or dedicates a public facility that is recognized to reduce the need for a system improvement, the developer will be entitled to an appropriate credit against that particular developer's impact fee liability or a proportionate reimbursement. If the value of the credit is less than the development's impact fee liability, the developer will owe the balance of the liability to the District. If the recognized value of the improvements/land dedicated is more than the development's impact fee liability, the District must reimburse the difference to the developer from impact fee revenues collected from other developments. The concept of impact fee credits pertains to system level improvements only. Developers will be responsible for the construction of project improvements (i.e. improvements not identified in the Impact Fee Facilities Plan) without credit against the impact fee.

NECESSITY OF IMPROVEMENTS TO MAINTAIN LEVEL OF SERVICE - UTAH CODE ANNOTATED 11-36A-302(3)

According to State statute, impact fees cannot be used to correct deficiencies in the District's system and must be necessary to maintain the proposed level of service established for all users. Only those facilities or portions of facilities that are required to maintain the proposed level of service for future growth have been included in this IFFP. This will result in an equitable fee as future users will not be expected to fund any portion of the facilities that will benefit existing residents.

School Related Infrastructure -Utah Code Annotated 11-36a-302(2)

As part of the noticing and data collection process for this plan, information was gathered regarding future school district and charter school development. Where the District is aware of the planned location of a school, required public facilities to serve the school have been included in the impact fee analysis.

Noticing and Adoption Requirements -Utah Code Annotated 11-36a-502

The Impact Fees Act requires that entities must publish a notice of intent to prepare or modify any IFFP. If an entity prepares an independent IFFP rather than include a capital facilities element in the general plan, the actual IFFP must be adopted by enactment. Before the IFFP can be adopted, a reasonable notice of the public hearing must be published in a local newspaper at least 10 days before the actual hearing. A copy of the proposed IFFP must be made available in each public library within the District during the 10-day noticing period

for public review and inspection. Utah Code requires that the District post a copy of the ordinance in at least three places. These places may include the District offices and the public libraries within the District's jurisdiction. Following the 10-day noticing period, a public hearing will be held, after which the District may adopt, amend and adopt, or reject the proposed IFFP.


IMPACT FEE CERTIFICATION UTAH CODE ANNOTATED 11-36a-306(1)

This IFFP has been prepared in accordance with Utah Code Annotated Title 11 Chapter 36a (the “Impact Fees Act”), which prescribes the laws pertaining to the imposition of impact fees in Utah. The accuracy of this IFFP relies in part upon planning, engineering, and other source data, provided by the District and its designees.

In accordance with Utah Code Annotated, 11-36a-306(1), Bowen Collins & Associates makes the following certification:

I certify that the attached impact fee facilities plan:

- 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; or
 - 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; and
- 3. complies in each relevant respect with the Impact Fees Act.



Justin Dietrich, P.E.