PREPARED FOR:

PARK CITY 1884

PREPARED BY:

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PARK CITY

AUGUST 2024

WATER IMPACT FEE FACILITIES PLAN

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TABLE OF CONTENTS

Page No.

TABLE OF CONTENTS
(continued)

Page No.

LIST OF TABLES

No. Title Page No.

WATER IMPACT FEE FACILITIES PLAN (IFFP) SUMMARY

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

WHY IS AN IFFP NEEDED?

The IFFP provides a technical basis for assessing updated impact fees throughout the City. The IFFP addresses the future water system infrastructure needed to serve the City. The existing and future capital projects documented in the IFFP will ensure that level of service standards are maintained for all existing and future residents or other users who reside within the service area. Required elements of the Impact Fee Facilities Plan are enumerated in the Impact Fees Act, Title 11, Chapter 36a of the Utah Code.

PROJECTED FUTURE GROWTH

To evaluate the use of existing water system capacity and the need for future capacity, it is first necessary to calculate the demands associated with existing development and projected growth. Using available information for existing development and growth projections from the City's Water Master Plan, projected growth in water system demand is summarized in Table ES-1.

Table ES-1
Projected Water System Growth

Year	Projected Summer Potable Demand (gpm)
2020	5,049
2023	5,127
2025	5,179
2030	5,309
2033	5,387
2040	5,568
2050	5,828
2060	6,087
2065	6,217

This IFFP does not attempt to calculate an "average" residential unit type because of the wide variety of unit and development patterns present in Park City. Calculation of demand associated with each type of development will be discussed as part of a separate Impact Fee Analysis (IFA) document.

EXISTING CAPACITY AVAILABLE TO SERVE FUTURE GROWTH

Projected future growth will be met through a combination of available excess capacity in existing facilities and construction of additional capacity in new facilities. Existing capacity available to serve new growth was evaluated in the City's water system. To improve the accuracy of the analysis, the

system was divided into five different components (production, treatment, storage, conveyance, and admin. & service). The purpose of this breakdown is to consider the available capacity for each component individually. Excess capacity in each component of the system is summarized in Table ES-2.

Table ES-2
Projected Water System Growth

	Production Component[1]	Treatment Component[2]	Storage Component[3]	Conveyance Component[4]	Admin. & Service Component
Existing	88.30%	82.47%	74.48%	84.68%	82.47%
Growth in 10-yr Planning Window	2.79%	4.17%	8.40%	1.77%	4.17%
Growth Beyond 10-yr Planning Window	8.91%	13.36%	17.12%	13.55%	13.36%

[1] Applies to raw and drinking water source production
[2] Applies to all City drinking water source capacity (including 3Kings WTP, Quinn's WTP, and groundwater sources)
[3] Excluding storage at Woodside, Neck, Masonic Tanks.
[4] Applies to most City pipes excluding Park City Heights.

REQUIRED SYSTEM IMPROVEMENTS

Beyond available existing capacity, additional improvements required to serve new growth are summarized in Table ES-3. Included in the table is an allocation of estimated project costs between existing users and future development. The table does not include construction inflation or bond costs related to paying for impact fee eligible improvements.

Table ES-3
Required System Improvements

Name	Project Cost (2024 Dollars)	Percent to Existing	Percent to 10-Year	Percent to Growth Beyond 10-year
Spiro Mine Tunnel PH2	$4,500,000	82.47%	4.17%	13.36%
C1.1 - Three Kings Pressure Zone Expansion - Silver King Drive, Three Kings Drive, and 7th Street Piping	$1,370,000	82.79%	3.60%	13.61%
C1.2 - Three Kings Pressure Zone Expansion - Rossi Hill Drive and Sunny Side Road Piping	$419,000	82.79%	3.60%	13.61%
M1 - 13th Street Pump Station	$1,150,000	82.79%	3.60%	13.61%
M2 - Quarry Mountain Pump Station	$3,450,000	95.71%	1.02%	3.27%
Woodside Tank	$4,200,000	82.79%	3.60%	13.61%
C1.3 - Three Kings Pressure Zone Expansion - Woodside Transmission Line	$380,000	82.79%	3.60%	13.61%
Total	**$15,469,000**			

WATER IMPACT FEE FACILITIES PLAN

INTRODUCTION

Park City has retained Bowen Collins & Associates (BC&A) to prepare an Impact Fee Facilities Plan (IFFP). Requirements for the preparation of an IFFP are outlined in Title 11, Chapter 36a of the Utah Code (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
    c. need for facilities relative to planned locations of schools

The following sections of this report have been organized to address each of these requirements. Much of the analysis forming the basis of this IFFP has been taken from the previous sections of the City's latest Water Master Plan. The reader should refer to the Water Master Plan for additional discussion of planning and evaluation methodology beyond what is contained here.

EXISTING LEVEL OF SERVICE - 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 performance standard for the system and level of service being currently provided to existing users.

PERFORMANCE STANDARD

Performance standards are the standards used to design and evaluate the performance of facilities. While the Impact Fees Act includes "defined performance standard" as part of the level of service definition, this report will make a subtle distinction between performance standard, and level of service. The performance standard will be considered the desired minimum level of performance for each component, while the existing level of service will be the actual current performance of the component. Thus, if the existing level of service is less than the performance standard, it is a deficiency. If it is greater than the performance standard, it may indicate excess capacity. This section discusses the existing performance standards for the city. 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 five different components (Production, Treatment, Storage, Conveyance, and Admin. & Service). Each of these components has its own set of performance standards:

Production

Water production must be adequate to satisfy demands on both an annual and peak day basis. Production of supplies must consider seasonal limitations in supply availability and reductions in yield because of dry year conditions. Production capacity must be capable of satisfying all sources of demand including secondary demands where applicable. Because Park City has both raw and culinary water supplies, production may include evaluations of some of the City's raw water demands. The City has sufficient production capacity to maintain an approximate 15 percent buffer to account for source reliability concerns.

Treatment

Water treatment must be adequate to provide culinary water treatment to water sources on an annual and peak day basis. This also includes providing water treatment to meet the latest State of Utah Drinking Water requirements. This is of particular concern for Park City due to its relatively unique source requirements. In 2014, the Utah Department of Environmental Quality raised the water quality standard for Judge Tunnel & Spiro Tunnel such that all water from these tunnels must be treated by the City. Historically, some of this water was treated and also mixed with Thiriot Springs to meet City drinking water needs while the rest was released to streams. The increased level of service required the City to construct the new 3Kings Water Treatment Plant This results in the City having additional redundancy and resiliency to loss of potable source water from groundwater wells or the Quinn's water treatment plant. At buildout, the City will have approximately 100% redundancy for treatment capacity. Because 3Kings Water Treatment Plant represents a level of service increase, all of the City's sources will be treated uniformly in calculating proportionate share of costs between existing and future users.

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.

1. **Equalization Storage*:*** 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. Equalization storage was calculated on a pressure zone basis for Park City based on demand pattern data provided in available meter data. The equalization volume was also compared against the State of Utah minimum storage recommendations to verify volumes meet State requirements. Because of the City's unique topography, the City has a large number of storage reservoirs that have redundant supply in many cases such that the performance standard is 1,751 gallons/gpm.
2. **Fire Flow Storage*:*** Fire flow storage is the amount of water needed to combat fires occurring in the distribution system. 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). Typical commercial facilities require a fire flow of at least 2,000 gpm for a duration of 2 hours (240,000 gallons). For some buildings in the City, the fire authority requires even greater fire flow. For some areas of Park City, the fire marshal requires even greater fire flow. The maximum fire flow required in the system is for the Old Town area with a total of 3,000 gpm for 3 hours (540,000 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. This is a storage requirement that is largely dependent on recommendations of City personnel and depends on the availability of sources and backup power. Park City personnel have indicated that they would prefer to equip key pump stations with the ability to use portable generators instead of providing additional emergency storage. This operational preference is based on limiting the water age in storage tanks during low demand periods in the City.

Storage requirements are calculated for the system as a whole and for each individual storage zone.

Conveyance (Transmission, Distribution, And Pumping)

Based on input from City staff, the following criteria were used as the performance standards for major conveyance facilities:

1. The system was evaluated for existing conditions and projected conditions in 2065. Each demand scenario included model runs at both peak day and peak hour demand for both winter and summer.
2. Under peak day demand, the system must be capable of maintaining constant levels at all system tanks and reservoirs.
3. Under peak hour demand, the system must be capable of limiting the maximum rate of draining in all system tanks and reservoirs to two times the tank or reservoir's size (e.g. - a 1 million gallon tank will drain at a rate of 2 mgd or less during the peak hour). This criterion limits the fluctuation of all tanks and reservoirs to 50 percent of their total volume during a peak day and ensures operational storage is adequate.
4. The system should be capable of maintaining 60 psi at all retail points of delivery during peak hour demands. Pressures as low as 45 psi are sometimes accepted by City personnel for areas with steep slopes (average above 10 percent). However, the target for design should be 60 psi to provide superior service at all connections and minimize customer complaints.
5. If any major source fails or is off-line, the system must be capable of delivering water from the remaining sources to satisfy a demand equal to the production rate of the remaining sources. If any major transmission line fails or is off-line, the system must be capable of delivering water from other delivery points sufficient to satisfy Spring/Fall demand conditions.
6. If the JSSD Connection is unavailable (because of contract concerns, City preference, or maintenance), the system must be capable of meeting winter day demand with snow making. This criterion is important to consider because of the large snow making demand on the system from the Deer Valley Ski Resort.
7. Per requirements of the State of Utah, 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 and 2,000 gpm for commercial areas per the Park City Fire Marshall. Higher fire flows of 3,000 gpm for Historic Main Street and the Park City Mountain Resort area were selected by the Park City Fire Marshall as well as custom fire flows for a few other large structures.

Administrative and Service Buildings

In addition to the water system needs, Park City personnel need to be able to provide administrative and service functions for the City to satisfy customers. Generally, the City considers its existing administrative and service buildings satisfactory for existing needs and believes they will be satisfactory for future needs as well.

Unit of Demand

In typical water systems, the unit of demand is often defined in terms of an equivalent residential unit (ERU). For Park City, however, development size and type vary so significantly across the City that the concept of "typical residential unit" does not really apply. In addition, defining typical use in the City is also complicated by the large tourist population within the City.

To overcome this challenge and best capture these unique aspects of City water use, the City has abandoned any attempt of defining a "typical" residential unit and has instead calculated its impact fee based solely on peak day demand. Impact fees can then be customized for individual developments based on projected peak day demands for the development type and size.

Existing Level of Service

Existing level of service has been divided into the same five components as identified for the system performance standard (source production, treatment, storage, conveyance, and admin. & service). Existing level of service values are summarized in Table 1 below.

Table 1
Existing Level of Service for Various System Requirements

	Existing Level of Service
Source Production	
Gpm of source production / gpm of peak day demand	1.30
Treatment (Potable) Production	
Gpm of potable (treatment) production / gpm of peak day demand	2.45
Storage[1]	
Gallons of storage / gpm of peak day demand	2,026
Conveyance (Transmission, Pumping and Distribution)	
% of system meeting performance standard of 45 psi min. during peak hour demands[2]	98.50%
% of system meeting performance standard of 20 psi min. during fire flows	98.10%
% of system meeting performance standard of 7 fps max. pipe velocity during peak hour demands	99.10%
Administrative & Service	
Administrative and Service Buildings	Satisfactory

[1] Does not include fire storage volumes in calculation.
[2] A percentage less than 100% indicates that the City has some limited areas where pressure fall below 45 psi.

PROPOSED LEVEL OF SERVICE - 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 City 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.

By definition, the proposed level of service will be equal to the performance standard and will not change.

Table 2
Proposed Performance Standards and Level of Service for Various System Requirements

	Proposed Performance Standard	Proposed Level of Service
Production		
Production Capacity (gpm production/gpm peak day demand)	1.15	1.15
Treatment		
Treatment Capacity (gpm treatment/gpm peak day demand)	2.02	2.02
Storage		
Storage (gallons storage/gpm peak day demand)[1]	1,751	1,751
Conveyance (Transmission, Pumping, and Distribution)		
Culinary Peak Hour Demand Pressure (psi) / Percent of System that Meets the Standard	45 / 100%	100.00%
Minimum Available Fire Flow at 20 psi during Peak Day Demand (gpm) / Percent of System that Meets the Standard	1,500[2] / 100%	100.00%
Maximum Pipe Velocity Peak Hour (feet per second) / Percent of System that Meets Standard	7.0 / 100%	100.00%
Administrative & Service		
Administrative and Service Buildings	Satisfactory	Satisfactory

[1] Does not include fire storage volumes in calculation.
[2] Required fire flow indicated is for newer residential neighborhood. Fire flow may be lower or higher based on Fire Authority requirements.

EXCESS CAPACITY TO ACCOMMODATE FUTURE GROWTH (11-36A-302(1)(A)(III)

Projected future growth will be met through a combination of available excess capacity in existing facilities and construction of additional capacity in new facilities. 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 five different components (Production, Treatment, Storage, Conveyance, and Administrative & Service). 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:

Production

The Water Master Plan includes an analysis of available supply to service existing and projected demands. Because the City has a variety of sources with various costs, the City will use excess capacity of each source proportionally by existing and future users. Table 3 summarizes how excess source capacity in the City will be divided. Production includes use of existing potable and raw water sources.

Table 3
Excess Capacity in City Sources

Facilities	Summer Peak Demand to Existing (gpm)	Summer Peak Demand to 10-Year (gpm)	Summer Peak Demand to Beyond 10-Year (gpm)
Peak Source Demand (Potable + Raw Water)	8,227	260	831
	Percent to Existing	**Percent to 10-Year**	**Percent to Growth Beyond 10-Year**
Sources (Potable + Raw Water)	88.30%	2.79%	8.91%

Treatment

The Water Master Plan includes an analysis of available supply to service existing and projected treated water demands (potable or culinary). Because the City has a variety of drinking water sources and treatment facilities with various costs, the City will use excess capacity of each potable source proportionally by existing and future users. Table 4 summarizes how excess treated water capacity in the City will be divided amongst all users.

Table 4
Excess Capacity in City Treated Water

Facilities	Potable Summer Demand to Existing (gpm)	Potable Summer Demand to 10-Year Growth (gpm)	Potable Summer Demand to Growth Beyond 10-Year
Potable Demand	5,127	260	831
	Percent to Existing	**Percent to 10-Year**	**Percent to Growth Beyond 10-Year**
Potable Capacity Share	82.47%	4.17%	13.36%

Storage

Park City owns and operates a large number of storage reservoirs. Most of the City's pressure zones have excess capacity to serve new growth. The only exception includes the pressure zones served by the Woodside, Masonic, and Neck Tank. All other new growth will be serviced using excess storage in existing reservoirs.

The projected use of excess capacity in the existing storage reservoirs without deficiencies is summarized in Table 5. For the purposes of this calculation, only equalization storage is shown. Since both existing and future users will benefit from fire flow and emergency storage, using the percentages shown in the table divides these components proportionally based on demand. It should be emphasized that the values shown in the table do not include storage associated with the Woodside, Neck, Masonic Tanks which either have existing storage deficiencies or will be replaced by the King's Crown Tank project. This will need to be taken into account in the calculation of final impact fees.

Table 5
Excess Storage Capacity

Tank	Percent to Existing	Percent to 10-Year	Growth Beyond 10-Year
Aerie	83.63%	3.90%	12.47%
Bald Eagle	96.52%	0.83%	2.66%
Fairway Hills	51.85%	11.46%	36.69%
Park City Heights	47.06%	34.23%	18.71%
Flagstaff	62.41%	8.95%	28.64%
Red Cloud	49.63%	11.99%	38.38%
Iron Canyon	91.10%	2.12%	6.78%
Silver Lake	94.08%	1.41%	4.51%
North Lake Flat	77.22%	5.42%	17.36%
Solamere	88.26%	2.79%	8.94%
Boot Hill (1 and 2)	90.32%	2.31%	7.38%
Quarry Mountain	95.71%	1.02%	3.27%
Sandstone Cove	100.00%	0.00%	0.00%
Thaynes (1 and 2)	64.44%	8.47%	27.09%
Weighted Average	**74.48%**	**8.40%**	**17.12%**

Conveyance (Transmission, Distribution, and Pumping)

To calculate the percentage of existing capacity to be used by future growth in existing facilities, existing and future flows were examined in the system model for each transmission pipeline. For the purposes of this analysis, transmission pipelines have been defined as all pipelines larger than 8 inches in diameter and represent the system level pipeline improvements in the City. A summary of the results of this analysis are contained in the appendix of this report. The method used to calculate excess capacity available for use by future flows is as follows:

1. **Calculate Flows –** The peak flow in each facility was calculated in the model for both existing and future flows. The maximum capacity of each facility was also calculated. Defining an absolute maximum capacity in water system facility is difficult because capacity is a function of both pipeline size (with corresponding velocity) and required delivery pressure. In water distribution systems, however, a common design guideline is

to limit velocities to less than 7 ft/sec. This has been used as the definition for maximum capacity in this analysis.

2. **Identify Available Capacity –** Where a facility has capacity in excess of projected flows at buildout, the available capacity in the facility was defined as the difference between existing flows and buildout flows. Where the facility has capacity less than projected flows at buildout, the available capacity in the facility was defined as the difference between existing flows and the facility's maximum capacity.
3. **Calculate Percent of Excess Capacity Used in Existing Facilities –** The projected growth in flow was compared against the facility's available capacity. Where the future flow exceeded the capacity of the facility, the available excess capacity was calculated by dividing the remaining capacity (total capacity less existing flow) by the total available capacity. Where the future flow was less than the capacity of the facility, the percent of excess capacity being used in each facility was calculated by dividing the growth in flow in the facility (future flow less existing flow) by the total available capacity. If reimbursement agreements exist, facilities under these agreements should be removed from the calculation since payment for excess capacity in these facilities will be dictated by agreement and will be considered as part of the impact fee analysis.
4. **Calculate Excess Capacity for the System as a Whole –** Each pipeline in the system has a different quantity of excess capacity to be used by future growth. To develop an estimate of excess capacity on a system wide basis, the capacities of each of these pipelines and their contribution to the system as a whole must be considered. To do this, each pipeline must first be weighted based on its contribution to system. For this purpose, each pipeline has been weighted based on the estimated cost of the pipeline. The excess capacity in the system as a whole can then be calculated as the sum of the weighted capacity used by future growth divided by the sum of total weighted capacity in the system.

Most pipes in the City's water system are grouped together because the system is close to the same age and pipelines have similar remaining capacity across the system. An exception to this includes the Park City Heights development that is relatively new in the City and has a significant amount of area that remains to be developed. Park City Heights pipelines are therefore treated separately from the balance of the City's conveyance. The Park City Heights conveyance projects were constructed in 2021 in conjunction with the Park City Heights Tank and growth in Park City Heights. The capacity distribution of the two conveyance projects therefore matches the tank project. The projected use of excess capacity in the existing conveyance system and the Park City Heights conveyance projects are summarized in Table 6.

Table 6
Excess Conveyance Capacity

Conveyance System	Percent to Existing	Percent to 10-Year	Growth Beyond 10-Year
Existing Conveyance System	82.47%	4.17%	13.36%
Park City Heights Culinary Water	47.06%	34.23%	18.71%
Park City Heights Off-Site Water	47.06%	34.23%	18.71%

Administrative & Service

Use of the City's administrative and service buildings will be based on proportional growth in demand because the City believes the existing facilities will meet the needs of future growth through

buildout. Calculated use of the City's existing administration and maintenance facilities now and in the future are summarized in Table 7.

Table 7
Excess Admin / Building Capacity

Administration Facilities	Percent to Existing	Percent to 10-Year	Percent to Growth Beyond 10-Year
Admin & Maintenance Facilities	82.47%	4.17%	13.36%

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

Growth and new development in the City are discussed in the City's Water Master Plan. These growth projections are based on planning data available from Snyderville Basin Water Reclamation District (SBWRD), the Ken Gardner Policy Institute, and feedback from City personnel regarding specific development plans. These projections include consideration of developable area, and the nature of surrounding development, designated open space and other factors. Additional information on growth projections is included in the Water Master Plan. Future growth as projected in the Water Master Plan is shown in Table 8.

Table 8
Projected Water System Growth

Year	Projected Summer Potable Demand (gpm)	Total (raw + potable) Summer Peak Day Demand (gpm)
2020	5,049	8,149
2023	5,127	8,227
2025	5,179	8,279
2030	5,309	8,409
2033	5,387	8,487
2040	5,568	8,668
2050	5,828	8,928
2060	6,087	9,187
2065	6,217	9,317

INFRASTRUCTURE REQUIRED TO MEET DEMANDS OF NEW DEVELOPMENT - 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. More 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 City's system was estimated based on historic water use and flow records.

2. **Existing Capacity** – The capacities of existing system collection facilities were estimated using size data provided by the City and a hydraulic computer model. The capacities of existing facilities were taken from the City's water system model.
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).

10-Year Improvement Plan

In the City's Water Master Plan, capital facility projects needed to provide service to various parts of the City at projected ten-year and buildout scenarios were identified. Only infrastructure to be constructed within a ten-year horizon will be considered in the calculation of these impact fees to avoid uncertainty surrounding improvements further into the future. Table 9 summarizes the components of projects identified in the Water Master Plan that will need to be constructed within the next ten years. Details associated with the costs used for each project are contained in the Water Master Plan. Projects that exclusively resolve existing deficiencies or maintenance needs have been excluded from the list of projects.

Table 9
Project Costs Allocated to Projected Development, 10-year Planning Window

Name	Project Cost[1]	Percent to Existing	Percent to 10-Year	Percent to Growth Beyond 10-year	Cost to Existing	Cost to 10-Year	Cost to Growth Beyond 10-Year
Spiro Mine Tunnel PH2	$4,500,000	82.47%	4.17%	13.36%	$3,711,011	$187,854	$601,134
C1.1 - Three Kings Pressure Zone Expansion - Silver King Drive, Three Kings Drive, and 7th Street Piping	$1,370,000	82.79%	3.60%	13.61%	$1,134,223	$49,320	$186,457
C1.2 - Three Kings Pressure Zone Expansion - Rossi Hill Drive and Sunny Side Road Piping	$419,000	82.79%	3.60%	13.61%	$346,890	$15,084	$57,026
M1 - 13th Street Pump Station	$1,150,000	82.79%	3.60%	13.61%	$952,085	$41,400	$156,515
M2 - Quarry Mountain Pump Station	$3,450,000	95.71%	1.02%	3.27%	$3,301,921	$35,257	$112,822
Woodside Tank Replacement	$4,200,000	82.79%	3.60%	13.61%	$3,477,180	$151,200	$571,620
C1.3 - Three Kings Pressure Zone Expansion - Woodside Transmission Line	$380,000	82.79%	3.60%	13.61%	$314,602	$13,680	$51,718
	$15,469,000				**$13,237,913**	**$493,795**	**$1,737,292**

[1]Costs do not include inflation.

Project Cost Attributable to Future Growth

To satisfy the requirements of state law, Table 9 provides a breakdown of the capital facility projects and the percentage of the project costs attributed to existing and future users. As defined in 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 needs in the facility. These percentages have been calculated based on flows in each facility as calculated in the hydraulic model. A few additional notes regarding specific projects are as follows:

- **Treatment Projects** – The Spiro Mine Tunnel are both level of service type of improvements that benefit all existing and future users equally. The percentage attributable to existing and future users has been divided proportionally based on use.
- **Three Kings Pressure Zone Expansion** – The 3 King's Pressure Zone expansion will primarily serve existing users by shifting operations to take care of storage for existing users such that the City can retire its aging Masonic Tank. Once the Woodside Tank is replaced, a portion of capacity of the tank will serve future users and the percentage to existing and future users has been divided accordingly.

Table 9 does not include bond costs related to paying for impact fee eligible improvements. These costs, if any, will be considered as part of the impact fee analysis.

Project Cost Attributable to 10-Year Growth

Included in Table 9 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 estimated based on past experience with projects of a similar nature both inside and outside of the City. Additional details are provided in the Water Master Plan.

ADDITIONAL CONSIDERATIONS

MANNER OF FINANCING - 11-36A-302(2)

The City 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 City has received for capital improvements without an obligation to repay. Grants and donations are not currently contemplated in this analysis. If grants become available for constructing facilities, impact fees will need to be recalculated and an appropriate credit given. Any existing infrastructure funded through past grants will be removed from the system value 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 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 different from 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 City. If the recognized value of the improvements/land dedicated is more than the development's impact fee liability, the City must reimburse the difference to the developer from impact fee revenues collected from other developments.

It should be emphasized that 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 - 11-36a-302(3)

According to State statute, impact fees cannot be used to correct deficiencies in the City'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. Additionally, any portion of projects being used to cure existing deficiencies that will be paid for through future user rates will be accounted for through an impact fee credit to be calculated as part of the impact fee analysis. 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.

IMPACT FEE CERTIFICATION 11-36A-306(1)

This IFFP has been prepared in accordance with Utah Code 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 City 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:
   - allowed under the Impact Fees Act; and
   - actually incurred; or
   - projected to be incurred or encumbered within six years after the day on which each impact fee is paid;
2. Does not include:
   - costs of operation and maintenance of public facilities; or
   - 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.

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