



SPRINGVILLE CITY, UTAH WATER RECLAMATION FACILITY

IFFP & IFA UPDATE

NOVEMBER 2025

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EXECUTIVE SUMMARY

An Impact Fee Facility Plan (IFFP) was published in October of 2024 as part of the Springville Water Reclamation Facility Master Plan (AQUA, 2024). Since then, the City has made a goal to regularly update impact fees to more accurately reflect planned (and actual) costs of eligible projects. Costs can change for many reasons including modifications to required project scopes; inflation; tariffs; and impacts on the local economy such as material costs, labor shortages/wages. This IFFP update reflects revised cost projections for impact fee eligible projects that are planned over the next 5-10 years and updates impact fees for projects projected to be completed within the next 6 years.

The existing and future capacity of the WRF and the impact each project has on capacity are quantified in terms of *equivalent residential units* (ERUs). A single ERU represents the average wastewater flow and constituent loading (such as solids and ammonia) from a typical single-family dwelling in the service area. The design basis for an ERU established in the 2024 Master Plan and used herein is 250 gallons per day (gpd) per ERU. This value is consistent with the sewer collection system IFFP (HAL, 2024). Impact fees are calculated based on the proportion of new versus existing ERUs that the project will serve.

The WRF will serve an estimated 20,520 ERUs by the end of 2025, including 3,400 ERUs dedicated to the Nestle/Stouffers (Nestle) industrial connection, and 17,120 residential, commercial, and other user/industrial ERUs. Connections are anticipated to increase by approximately 1,800 ERUs over the next 5 years, and by over 3,000 by 2035. Current and future users are compared against the available capacity of the WRF to establish remaining buy-in costs of past improvements and identify projects where additional capacity is needed to accommodate new connections. Impact fees are established from the remaining buy-in costs of past improvements as well as planned projects that increase capacity for new connections. Improvements that solely replace or improve aging infrastructure and equipment, or change the overall quality of treated water (known as the level of service) are generally *not* eligible for impact fees. A summary of the revised, estimated impact fee is provided in Table ES-1.

Table ES-1: WRF Impact Fee Summary.

Total WRF Impact Fee Summary		
Fee Source	Fee Amount	
	to 2030*	Post 2030
Past Projects	\$ 1,457.35	\$ 1,035.75
New Projects	\$ 232.06	\$ 232.06
Planning	\$ 24.93	\$ 24.93
Total Impact Fee	\$ 1,714.34	\$ 1,292.74

* Remaining 1,480 ERUs from the original 22,000 ERU facility are expected to be connected by 2030.

This IFFP only discusses impact fees for projects associated with the WRF. Sewer collections impact fees are addressed in a separate analysis published by Hansen Allen & Luce (HAL, 2024). Other projects recommended for the WRF that are not impact fee eligible are detailed in the 2024 WRF Master Plan.

CHAPTER 1 - INTRODUCTION

1.1 Background

The Springville Water Reclamation Facility (WRF) uses a series of mechanical and biological processes to treat wastewater to an acceptable standard permitted by the State of Utah Department of Water Quality. The facility is located at 700 North and 500 West in Springville City, Utah County, Utah (Figure 1-1). The facility incorporates mechanical bar screens, grit removal, primary clarifiers, trickling filters, aeration basins, secondary clarifiers, chemical addition (for phosphorous removal), sand filters, UV disinfection, anaerobic digestion, solids dewatering, and composting to treat wastewater and biosolids. Influent from the Nestle-Stouffers industrial connection is pre-treated with screens, a dissolved air floatation (DAF) process, and a roughing tower prior to mixing with main collection system wastewater ahead of the trickling filters. A plan of the existing WRF is provided in Figure 1-2.

Improvements at the WRF are funded with user fees collected from existing connections and impact fees from new connections. This IFFP update reviews the remaining capacity of the WRF against original installation costs along with proposed improvements that increase the capacity of the facility to calculate the appropriate impact fee for new connections.

1.2 Purpose

The City recognizes that the needs of the WRF and construction costs to address those needs can change. Project priorities and timelines must adjust as circumstances and issues occur, and costs must be frequently reviewed to adjust for more volatile market conditions. Accordingly, the City intends to regularly review and update the IFFP to ensure that impact fees reflect realistic costs and provide fair compensation to the City and existing users. This update reviews impact fee eligible projects to identify the portions of projects that will serve future users. Frequent review and updates of the IFFP will ensure that the City is collecting fair and accurate impact fees from new connections in compliance with the Utah Impact Fee Act. In other words, impact fees must accurately reflect the impact that new connections will have on the available capacity of the WRF.

1.3 WRF Master Plan

Impact fee eligible projects represent only a portion of the upgrades and improvements recommended in the 2024 Master Plan. Many projects identified therein are not deemed impact fee eligible as their purpose is to replace or rehabilitate existing structures/equipment that are aging and are beyond their reliable service life. Projects for which impact fees are appropriate must increase the capacity of the plant (either hydraulically or biologically) to accommodate additional ERUs. The need for these projects is discussed briefly in this document; more detail is available in the 2024 Master Plan. Impact fees are also collected for the proportional cost of the past improvements which new connections will be utilizing.

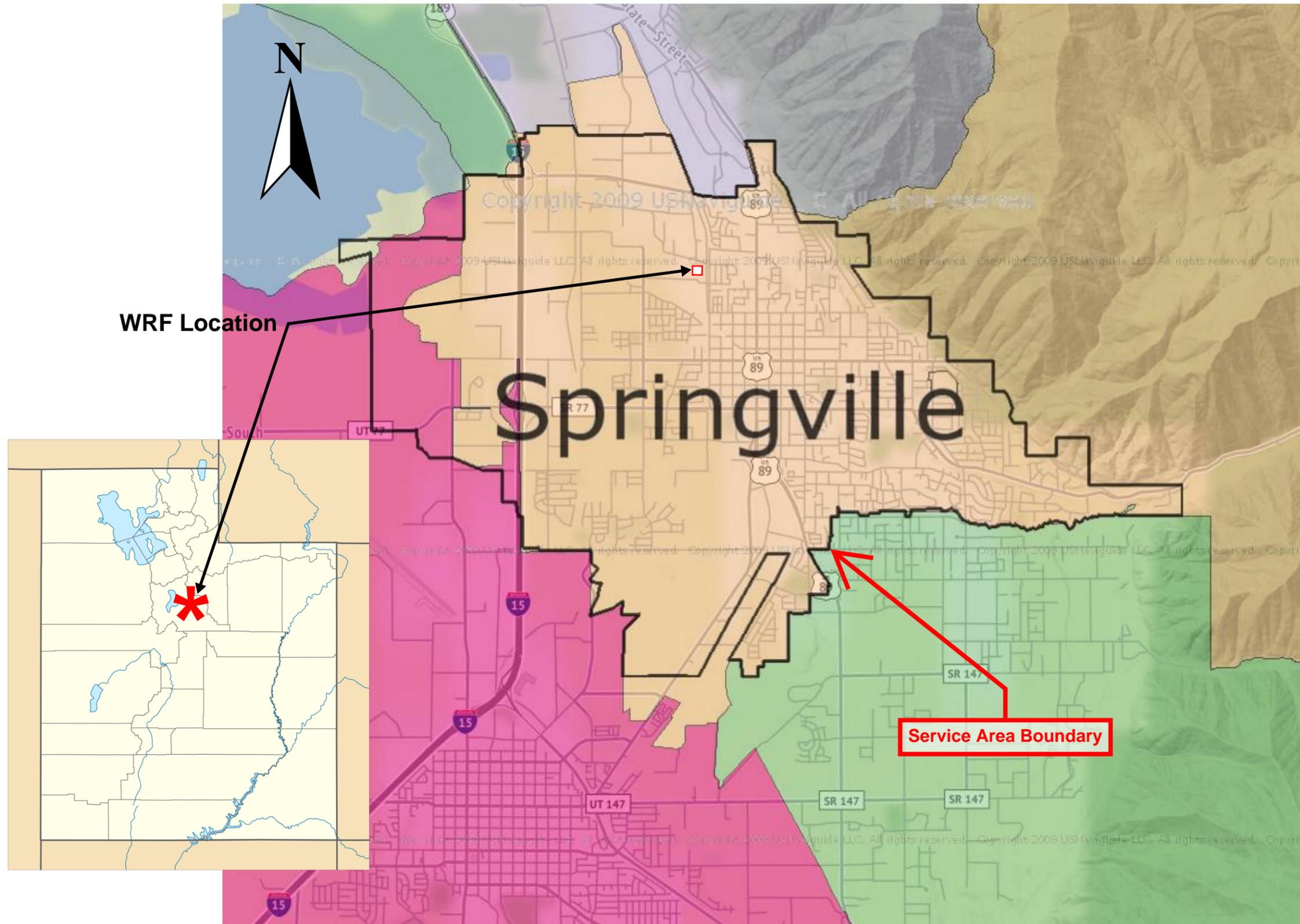


Figure 1-1: Springville WRF Location and service area boundary.

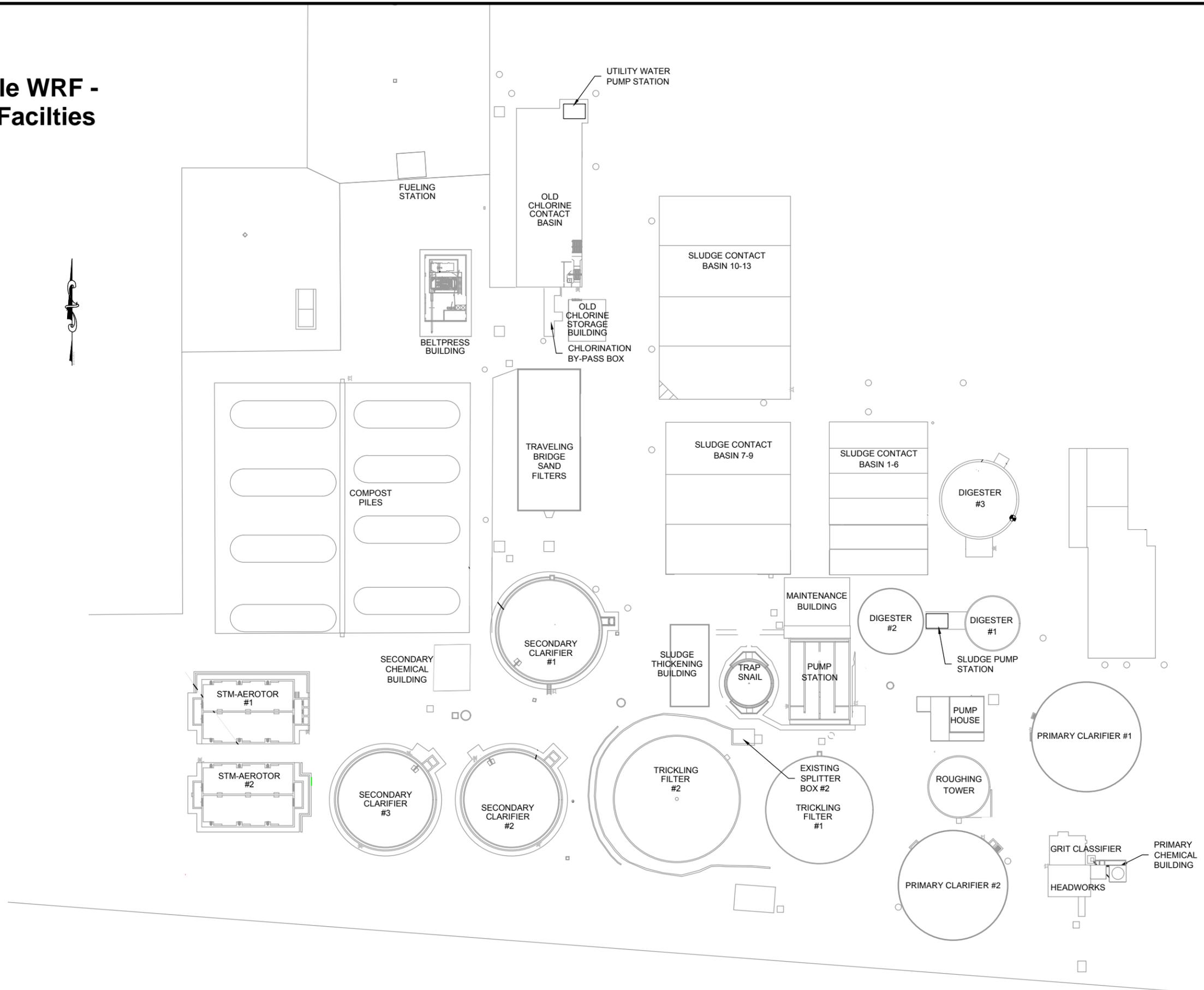
DRAWING IS TO SCALE
 IF BAR MEASURES:
 1" = FULL SCALE
 1/2" = HALF SCALE

SPRINGVILLE CITY
 700 NORTH 500 WEST, SPRINGVILLE, UT



FIGURE 1-1

Springville WRF - Existing Facilities



DRAWING IS TO SCALE
 IF BAR MEASURES:
 1" = FULL SCALE
 1/2" = HALF SCALE

SPRINGVILLE CITY
 700 NORTH 500 WEST, SPRINGVILLE, UT



FIGURE 1-2

SITE PLAN
 SCALE: 1"=40'

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CHAPTER 2 - EXISTING WRF CAPACITY

2.1 ERUs and Existing Level of Service

The 2024 Master Plan established the following criteria for a single ERU:

- 250 gallons per day (same as the sewer collection IFFP)
- 0.46 lbs. BOD/day (at 0.20 lbs. BOD/day per person)
- 0.35 lbs. TSS/day (at 0.156 lbs. TSS /day per person)
- 0.072 lbs. TKN/day (at an influent concentration of 45 mg/L)
- 0.013 lbs. Phosphorus/day (at an influent concentration of 6.5 mg/L)

These values represent the average expecting loading from a typical, single-family dwelling. In this manner, the WRF capacity is evaluated in terms of ERUs to determine remaining capacity of existing facilities. Each impact fee eligible projects is also analyzed in terms of its impact on capacity in terms of ERUs to determine which proportion will serve new connections.

Non-typical connections from larger commercial or industrial interests may be analyzed in terms of their flow and/or biological loading to determine an appropriate ERU value for the connection. For example, a large commercial connection may discharge 12,000 gallons per day, equal to 48 ERUs. Another industrial connection may have small flow, but larger biological loading. Another example, an industrial connection may contribute 2,500 gpd (equal to 10 ERUs hydraulically), while discharging 23 pounds of BOD per day, equivalent to 50 ERUs for BOD loading. In this case, the connection should be assigned 50 ERUs as that represents the most significant, equivalent impact that connection will have on the WRF.

The existing level of service represents the treatment standard of the current WRF process. Projects that change the level of service are not typically eligible for impact fees. Thus, future projects are only assessed for impact fees if they increase the capacity of the WRF at its current treatment standard.

2.2 WRF Existing Capacity and Growth Projections

The WRF has a design capacity of 6.6 MGD or 26,400 ERUs. Table 2-1 shows that a total of 20,520 ERUs are expected by the end of 2025, including 3,400 ERUs dedicated to Nestle. Thus, the WRF has capacity for an additional 5,880 ERUs. The total ERUs served by 2035 is anticipated to be 23,632 (an increase of 3,112).

Table 2-1: Current and projected growth in the WRF service area.

Year	Population	Residential & Other ERUs	Nestle ERUs	Total ERUs
2022	36,772	16,156	3,400	19,556
2025	38,966	17,120	3,400	20,520
2030	42,915	18,855	3,400	22,255
2035	46,902	20,223	3,400	23,623
2040	49,365	21,689	3,400	25,089
2043	50,875	22,353	3,400	25,753
2045	51,909	22,807	3,400	26,207
2050	54,585	23,982	3,400	27,382
2055	56,448	24,802	3,400	28,202
2060	58,378	25,650	3,400	29,050

Past improvements and capital costs are proportioned based on the number of existing versus future connections they will serve. Likewise, projects that increase the existing capacity of a given facility or process are proportioned between the number of existing versus new ERUs they accommodate. Impact fees are based on the portion of the design capacity dedicated to the municipal collection system as costs and terms for Nestle’s 3,400 ERUs have been negotiated separately. Certain processes, such as the headworks and primary clarifiers, do not treat flow from Nestle and are therefore associated entirely with the municipal collection system. In this case, 100% of the costs are divided between existing and new connections. Other processes, such as the trickling filters, aeration basins, secondary clarifiers, disinfection, solids handling, etc., treat the combined flow from the City and Nestle. In this case, impact from Nestle’s 3,400 ERUs (roughly 13% of the total WRF capacity) are excluded from the impact fee calculation. In other words, the remaining 87% of the total costs are divided between new and existing ERUs.

2.3 Buy-in from Past Improvements

A breakdown of past expansion and improvement projects that are eligible for impact fees is provided in Table 2-2. These costs include the initial construction of the WRF, the major process

and upgrade expansions from 2010-2011, and additional smaller projects that have capacity to serve new connections that have been completed through the present. Note that a significant portion of the 2010 expansion was to add biological capacity to the WRF for ammonia and BOD removal from new connections. Thus, a higher proportion of this project cost is assigned to new connections as more of the new aeration basin’s capacity is dedicated for new/future wastewater loading. Details of this distinction are discussed in the 2024 Master Plan. Finally, the “initial plant” was originally based on a 5.5 MGD (22,000 ERU) facility, and impact fees for these improvements are designated accordingly in Table 2-2.

Table 2-2: Summary of existing WRF capacity and estimated impact fees.

Springville WRF - Past Improvements Impact Fee Summary						
Project	Existing ERUs Served	Nestle ERUs Served	New ERUs Served	% Impact Fee Eligible	Impact Fee Eligible	Impact Fee (per ERU)
Initial Plant - Alle ERUs¹	17,120	3,400	1,480	6.73%	\$ 623,961.49	\$ 421.60
2010 WRF Upgrade & Expansion²	17,120	3,400	5,880	52.36% ²	\$ 5,604,391.28	\$ 953.13
Post 2010 Plant Upgrades	17,120	3,400	5,880	22.27%	\$ 485,824.62	\$ 82.62
SUBTOTAL OF IMPACT FEES FROM PREVIOUS IMPROVEMENTS					\$ 6,714,177.39	\$1,457.35³

- 1 Original plant design and buy-in was based on 5.5 MGD capacity (22,000 ERUs).
- 2 2010 Expansion provides ammonia polishing for existing connections and full ammonia and full BOD removal for new connections, resulting in a net 52.36% of the expanded capacity remaining for future connections.
- 3 Impact fee for past improvements will reduce by \$421.60 once the remaining 1,480 ERUs from the original plant are connected.

CHAPTER 3 - IMPACT FEES

3.1 Planned Projects

While many projects are planned to address aging infrastructure and equipment at the WRF, only three projects scheduled over the next 5-6 years are identified as eligible for impact fees. These projects include the headworks expansion and upgrade, the standby generator, and sludge dewatering expansion. A summary of the calculated impact fees for these projects is provided in Table 3-1. A breakdown of the cost estimates for each of these projects is provided in the appendix.

Table 3-1: Impact fees for proposed projects.

IMPACT FEE PROJECTS - SEPTEMBER 2025						
Springville WRF - Proposed Projects Impact Fee Summary						
Project Description	Existing ERUs Served	Nestle ERUs Served	New ERUs Served	% Impact Fee Eligible	Estimated Total Cost	Impact Fee Eligible
Headworks Upgrades	17,120	-0-	5,880	25.57%	\$ 2,697,177.77	\$ 689,539.36
Standby Generator	17,120	3,400	5,880	22.27%	\$ 922,906.46	\$ 205,556.44
Sludge Dewatering Upgrades	17,120	3,400	5,880	22.27%	\$ 2,107,505.40	\$ 469,398.93
IMPACT FEE FOR PROPOSED PROJECTS					\$5,727,589.62	\$1,364,494.73
					IMPACT FEE PER ERU	\$ 232.06

3.1.1 Headworks Expansion

Improvements recommended for the headworks increase its total capacity and will allow the WRF to provide the existing level of service for existing and future ERU connections. Wastewater from Nestle does not pass through the influent flow measurement flume or the headworks. Upgrades to influent flow measurement and replacing major equipment such as screens, washer/compactors, and grit removal, will serve existing and new connections. Likewise other improvements to the headworks building (i.e. HVAC improvements) ensure the facility's longevity and reliability. These improvements will serve the estimated 17,120 existing ERUs and 5,880 future ERUs. In other words, 74.43% of the improvements serve existing connections, with the remaining 25.57% serving future connections, meaning 25.57% of the total estimated costs (\$2,697,177) are considered eligible for impact fees. This yields a total estimated impact fee basis of \$689,539.36.

3.1.2 Solids & Biogas Handling

The solids handling processes includes sludge pumping (primary and waste activated sludge), WAS thickening, three (3) anaerobic digester tanks, heat exchangers, sludge heating/recirculation pumping systems, hot water recirculation systems, biogas handling (condensation and flaring), digested sludge dewatering/drying, and composting. Recommended projects include replacing worn piping/pumps, updating the sludge heating/recirculation system (including boilers and heat exchangers), rehabilitating digester tanks and lids, replacing worn biogas handling appurtenances such as condensate traps and flame traps, and expanding the sludge dewatering equipment capacity. Each of these processes are sized and intended to service existing (domestic and Nestle) and future connections. Rehabilitation of the digester tanks, biogas handling system, and heating/recirculation system will not increase the capacity of the WRF and, accordingly, costs for these upgrade projects are excluded from impact fee consideration.

The proposed sludge dewatering upgrades will increase the capacity of solids handling operation and are therefore portioned between existing domestic connections, Nestle, and future ERUs. This expansion will serve the estimated 17,120 existing ERUs, the 3,400 ERU's assigned to Nestle, and the projected 5,880 future ERUs. Thus, of the estimated \$2,107,505 project cost, \$469,398.93 (22.27%) is eligible for impact fees.

3.1.3 Standby Generator

Many structures and electrical components of the WRF were originally commissioned in the 1960s, 70s, and 80s. Accordingly, much of the gear and electrical components are past their reliable service life, incompatible with modern monitoring systems, and/or difficult to maintain and repair. As with most of the plant, this electrical gear serves Nestle, existing, and future connections. However, these improvements are mostly considered replacement/maintenance items and do not directly increase the WRF's capacity. In contrast, the proposed standby generator would serve existing and future connections and is a new, critical addition to the WRF the cost of which should be shared between new and future connections. Similar to the sludge dewatering cost breakdown described in Section 3.1.2, 22.27% of the total cost is impact fee eligible, equivalent to \$205,556.44.

3.2 Planning Costs

Planning services are required to support growth and maintain IFFP and Master Plans. The City intends to update the WRF Master Plan every 5 years, with annual or biannual updates to the impact fee studies. With this schedule and past consulting costs in mind, planning expenses and impact fees for the next 10 years are calculated (Table 3-2) assuming annual 3% inflation on costs.

Table 3-2: Planning expense of impact fees.

Springville WRF - Planning/Consulting Expenses						
Project Description	Existing ERUs Served	New ERUs 2025-2035	% Impact Fee Eligible	Estimated Total Cost	Impact Fee Eligible	Impact Fee (per ERU)
Master Plans (x2)	17,120	3,103	15.34%	\$ 110,531.50	\$ 16,959.86	\$ 5.47
IFFP & IFA Updates (x4)	0	3,103	100.00%	\$ 60,400.00	\$ 60,400.00	\$ 19.47
Total				\$ 170,931.50	\$ 77,359.86	\$ 24.93

3.3 Impact Fee Calculation

The total WRF impact fee is calculated by combining the buy-in costs, proportionate future projects costs, and planning/consulting costs (Table 3-3). Note that after the capacity of the initial WRF is met (at 22,000 residential ERUs), impact fees for that item should no longer be collected.

Table 3-3: Impact fee calculation summary for Single 3/4" and 1" ERU Connections

Total WRF Impact Fee Summary		
Fee Source	Fee Amount	
	to 2030*	Post 2030
Past Projects	\$ 1,457.35	\$ 1,035.75
New Projects	\$ 232.06	\$ 232.06
Planning	\$ 24.93	\$ 24.93
Total Impact Fee	\$ 1,714.34	\$ 1,292.74

* Remaining 1,480 ERUs on original 22,000 ERU facility are expected to be connected by 2030.

The impact fees shown in Table 3-3 are for a single, 3/4" or 1" connections. As other, larger connection sizes are commonly utilized, prorated impact fees based on drinking water meter sizes are calculated by multiplying the base impact fee rate by the relative flow capacity for larger connections. This is the same method established in the collection system impact fee study (HAL, 2024). Table 3-4 summarizes impact fees based on meter connection size.

Table 3-4: Impact fee summary for common drinking water meter sizes.

Impact Fee Based on Water Meter Size			
Meter Size	ERU Basis	Fee Amount	
		to 2030*	Post 2030
3/4" or 1"	1	\$ 1,714.34	\$ 1,292.74
1-1/2"	3.33	\$ 5,708.75	\$ 4,304.82
2"	5.33	\$ 9,137.43	\$ 6,890.30

3.4 Project Funding

Several funding options are available for the improvements and expansion required at the WRF. To date, the City has used a combination of fees, impact fees, and contributions from industries to finance the majority of improvements to the WRF. Funding will likely continue to be sourced from user rate increases, bonds, impact fees, or other sources.

Funding for improvements of existing connections will likely come from bonding that will be repaid with increased user rates. As improvements to accommodate growth must be planned and constructed before any of the new connections they serve are in place, the most likely funding source for larger improvements is also bonding. Impact fees from future connections then pay back these bonds. Accordingly, Springville City finds it is necessary to impose an impact fee on development activities to maintain the exiting level of service for new connections.

EXHIBIT A

Certification of Impact Fee Facility Plan by Consultant

In accordance with Utah Code Annotated, 11-36a-306(2), Eric Sahm on behalf of AQUA Engineering, 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;

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; or

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 in each and every relevant respect with the Impact Fees Act.

Eric Sahm, P.E.
Principal Engineer
AQUA Engineering

REFERENCES

AQUA Engineering, 2024; *Springville Water Reclamation Facility Master Plan and Impact Fee Facility Plan*; (AQUA, 2024)

Hansen Allen & Luce, Inc. Engineers, 2024; *Springville Wastewater Collection System Impact Fee Facility Plan and Impact Fee Analysis*; (HAL, 2024).

Zions Public Finance, Inc., 2024; *Water Reclamation Facility Impact Fee Analysis*; (Zion, 2024).

APPENDIX A

Proposed Project Budget Tables

- Headworks Expansion
- Solids and Biogas Handling
- Standby Generator

Influent & Headworks Upgrades	
Item	Cost
Additional Level Sensor for Influent Flume	\$ 18,000.00
Influent Piping/Vaults Rehabilitation	\$ 68,750.00
Influent Screens & Washpactors	\$ 777,056.26
Remove Grit Chamber Piping	\$ 23,000.00
Aeration Grit Chamber Rehabilitation	\$ 275,000.00
HVAC	\$ 90,000.00
Mechanical/Piping & Installation	\$ 375,541.88
Headworks Building Modifications & Repairs	\$ 238,500.00
New Electrical Room	\$ 45,000.00
Site/Civil Work	\$ 58,700.00
Electrical, Controls & Instrumentation (20%)	\$ 393,909.63
Subtotal	\$ 2,363,457.77
Engineering & CM	\$ 148,320.00
Construction Management	\$ 129,780.00
Legal & Administrative	\$ 55,620.00
TOTAL	\$ 2,697,177.77

Sludge Dewatering Upgrades	
Item	Cost
8-Skid Rotary Press	\$ 893,750.00
Demolition/Removal of 1M Press	\$ 47,500.00
Building HVAC Upgrades	\$ 109,375.00
Screw Conveyor Upgrades	\$ 106,250.00
Mechanical Installation	\$ 347,062.50
Platform Modifications	\$ 31,250.00
Electrical, Controls & Instrumentation (20%)	\$ 307,037.50
Subtotal	\$ 1,842,225.00
Contingency (25%)	
Engineering & Design (8%)	\$ 117,902.40
Construction Management (7%)	\$ 103,164.60
Legal & Administrative (3%)	\$ 44,213.40
TOTAL	\$ 2,107,505.40

Standby Generator	
Item	Cost
1.25 KW Generators & ATS	\$ 352,646.20
1600 AMP ATS	\$ 38,186.67
Docking Station (1600 AMP)	\$ 62,700.00
Conduit, Wire, Concrete Pads	\$ 178,900.00
Generator & Switch Installation	\$ 158,736.50
Startup & Commissioning	\$ 34,500.00
Integration	\$ 18,900.00
Subtotal	\$ 844,569.37
Engineering & Design	\$ 28,000.00
Construction Management	\$ 25,000.00
Legal & Administrative	\$ 25,337.08
Standby Generators Subtotal	\$ 922,906.46