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GRAND WATER & SEWER SERVICE AGENCY (GWSSA)

CULINARY WATER

IMPACT FEE ANALYSIS

JUNE 16, 2016

Prepared by:

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CERTIFICATION OF IMPACT FEE ANALYSIS BY CONSULTANT

In accordance with Utah Code Annotated, § 11-36a-306, Robert Worley, P.E., on behalf of Sunrise Engineering, Inc., makes the following certification:

I certify that the attached impact fee analysis:

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. Cost for 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;

3. Offsets costs with grants or other alternate sources of payment; and

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

Dated: 06/16/2016

Sunrise Engineering, Inc.

By: Robert Worley

1.0 Executive Summary

The Grand Water & Sewer Service Agency (GWSSA) commissioned this Impact Fee analysis to properly allocate the cost of culinary system improvements to new development. An impact fee is a fee imposed on new development to allocate the cost of expanding public infrastructure to accommodate the new development.

GWSSA provides culinary water and untreated agricultural water to the unincorporated area of Spanish Valley, south of the City of Moab in Grand County, Utah. The culinary water system serves several commercial, municipal, and industrial industries, and also supplies both indoor and outdoor water to approximately 4,000 people. Since 2008, the number of GWSSA residential connections has increased on average 1.58 percent per year; commercial connections have increased 1.18 percent per year on average over the same time period. Recent engineering studies have projected an average increase of 2 percent per year for the next 20 years based on planned developments which will spur more rapid growth.

Because new growth places an added burden on infrastructure and creates the need for new infrastructure, Utah law allows public water suppliers to charge an impact fee to new development.

Not all costs of system improvements are allocable to future growth. Some system improvements increase the level of service to existing customers. Only that portion of system improvements which is allocable to future growth may be considered in calculating a reasonable impact fee. Impact fees are assessed per Equivalent Residential Connection or ERC.

GWSSA plans to construct a number of improvements to its culinary water system. A portion of these system improvements will increase the level of service for existing customers. The balance is allocable to future growth.

After analyzing each of the projects, the estimated population growth, and determining an equivalent residential connection, this analysis proposes a $3,859.94 impact fee per ERC. GWSSA may choose to assess a lower impact fee, but may not assess an impact fee higher than that justified by this analysis.

2.0 Introduction

Impact Fees Overview

An impact fee is a fee imposed on new development to “mitigate the impact of the new development on public infrastructure.” Utah Code § 11-36a-102-8(a). Impact fees are subject to the

restrictions within the Fifth Amendment of the U.S. Constitution prohibiting the taking of private property for public use without just compensation. To comply with the U.S. Constitution requires only that there be an "essential nexus" between the fee imposed and the protected interest and that the fee imposed be "roughly proportional" to the burden created by the new development. See *Nollan v. California Coastal Commission*, 483 U.S. 825 (1987); and see *Dolan v. City of Tigard*, 512 U.S. 374 (1994).

The levy of impact fees in Utah is governed by the Utah Impact Fees Act codified as Utah Code § 11-36a and requires more specific analysis than that required by the U.S. Constitution. Before imposing an impact fee, a municipality or public service provider such as GWSSA must prepare a written analysis of each impact fee. An impact fee analysis is designed to proportionally allocate to new development that portion of the cost of new facilities that may be required or excess capacity of existing facilities. The impact fee analysis must:

(1) identify the anticipated impact on existing facilities by new development,

(2) identify the anticipated impact on system improvements by anticipated development,

(3) demonstrate how those impacts are reasonably related to the anticipated development,

(4) estimate the proportionate share of costs to be recouped by the impact fee, and

(5) identify how the impact fee was calculated. Id. at § 304.

Entities imposing impact fees must also prepare an impact fee facilities plan unless excepted by statute. An impact fee facilities plan is not required if the municipalities general plan under Utah Code 10-9a-401 contains the elements required by the Impact Fees Act. Id. at § 301. Municipalities serving less than 5,000 people and charging total impact fees of less than $250,000 annually are not required to prepare an impact fee facilities plan. However, they must ensure that the impact fees "are based upon a reasonable plan that otherwise complies with the common law and [the other sections of the Impact Fees Act]." Id. at § 301.

The Utah Supreme Court outlined a set of seven factors which may be considered in determining the reasonableness of an impact fee; these factors are now known as the "Banberry factors." Banberry Dev. Corp. v. S. Jordan City, 631 P.2d 899, 904 (Utah 1981). However, the Court has subsequently noted that these factors "were merely 'means to [an] end.' And the ultimate legal test is whether the impact fees relate to the cost of the benefits conferred on those paying the fees." Tooele Assoc. LTD. V. Tooele City Corp., 247 P.3d 371 (Utah 2011)(quoting Home Builders Ass'n of Utah v. City of American Fork, 973 P.2d 425, at ¶ 20 (Utah 1999). Nonetheless, this impact fee study will review each of the Banberry factors for each system impact fee. A brief analysis of the Banberry factors for each system is attached to this analysis as Exhibit "A."

Although the municipality may enact a lower impact fee than that justified by the Impact Fee Analysis, the municipality may not impose a fee higher than that justified in the analysis.

3.0 Purpose of this Impact Fee Analysis

The purpose of this Impact Fee Analysis is to proportionally allocate to new development the cost of several public facilities required to supply culinary water within the service area of GWSSA. Those system improvements include water rights analysis and actions required for new growth, construction of a new well, construction of a 500,000-gallon tank with booster station, installation of new and larger lines, as well as several other improvements. A complete list of proposed improvements with estimated cost is included in section 6.7 of this analysis.

This impact fee analysis calculates the highest proportionate share of the cost of these public facilities which may be reasonably allocated to new development. GWSSA is a public water supplier serving less than 5,000 people and charges impact fees less than $250,000 annually; thus, it is exempt from the requirement to provide an impact fee facilities plan.

In conjunction with calculating the reasonable impact fee for the future projects, this analysis will review and update the current impact fees and determine a total maximum reasonable impact fee for GWSSA's culinary system.

4.0 Methodology

The impact fee for culinary water facilities is derived primarily from a plan-based method for future planned development. However, this analysis also considers cost recovery for excess capacity of current systems. The portion of the impact fee analysis which focuses on planned development accounts for estimates of how the system projects will be financed. Should the actual financing of the project change from the estimated portion of grant versus debt, this analysis may require updating to ensure the impact fee assessed does not exceed the proportionate share of development's impact on the new facilities.

Impact fees may not be used for maintenance or repair of the existing system, or for system improvements that increase the level of service to existing system users, unless the improvement provides additional system capacity that directly supports new development. Impact fees may not be used to recoup more than the actual public facility costs incurred or those projected to be incurred "within six years after the day on which each impact fee is paid." Id. at § 306. Also, impact fees must include an offset

for grants or other alternative sources of payment and may not include expenses for operation and maintenance or for overhead unless such overhead expenses are calculated using a methodology consistent with generally accepted cost accounting practices and the standards accepted by the federal Office of Management and Budget for federal grant reimbursement. Id.

Accordingly, this analysis

(1) determines the actual cost incurred or to be incurred within six years of the date of this report,
(2) sets forth existing levels of service,
(3) does not include any general overhead expenditures or costs for operation of the facilities,
(4) offsets for potential grant for proposed projects,
(5) and includes an analysis of the prior completed projects which remain impact fee eligible.

To determine the proportionate share of the cost to new development, this analysis reviews current and past demographic trends and provides a projection for future growth within the GWSSA service area for the next twenty years. Capacity of the current system and excess capacity of each new system component that will be used in this analysis are based upon data provided by GWSSA, a recent Culinary Water Master Plan commissioned by GWSSA, and estimates calculated by Sunrise Engineering, Inc. Costs of the proposed public facilities are calculated based upon an engineer's opinion of probable cost.

Because water demands of multi-family, industrial, and commercial connections vary widely, excess capacity of system components is expressed in terms of equivalent residential connections (ERC's), sometimes referred to as estimated residential units (ERU's). An ERC is equivalent to what would be used by a typical single-family residence. ERCs are different for each type of public facility and are more particularly described section 6.2 of this analysis.

The determination of the existing Level of Service (LOS) of the current systems is based upon previous project design capacity as well as minimum standards required by current regulations.

5.0 Demographics and Projections of Future Demand

GWSSA provides culinary water and untreated agricultural water to the unincorporated area of Spanish Valley, south of the City of Moab in Grand County, Utah. The culinary water system supplies water to approximately 4,000 people, in addition to several commercial, municipal, and industrial entities. The

culinary water system supplies water for both indoor and outdoor use, although a secondary water system is available to a portion of the culinary water users for outdoor watering.

The most recent culinary water master plan and concurrent wastewater feasibility study project a population growth rate of 2 percent per year for the next 20 years. This impact fee analysis relies upon those growth projections to determine the number of future ERC's to be served by the proposed culinary system improvements. The same 20-year period is also used. Table 5.1 shows the 20-year population growth projection for the GWSSA service area.

Table 5.1

Year	Projected Population
2010	3,750
2015	4,140
2020	4,571
2025	5,047
2030	5,572
2035	6,152

GWSSA Population Growth through the Year 2035

6.0 Culinary Water Impact Fee Analysis

GWSSA has completed several culinary water projects in the past 20 years. GWSSA also has planned future projects with an estimated total cost of just over $7 million. This impact fee analysis will first determine what amount, if any, of the cost of the future projects may be allocable to future growth. Future growth for the next 20 years is converted to growth in equivalent residential connections (ERCs). Then the amount allocated to future growth can be divided by the number of new ERC's over the 20-year period to determine the maximum reasonable impact fee for those projects. This analysis will also review excess capacity related to prior culinary projects. The total maximum reasonable impact fee for culinary water is a combination of the amount allocable for future projects and the amount of excess capacity of current systems allocable to new growth.

It is recommended that this impact fee analysis be reviewed and updated every five years at a minimum. Impact fee calculations may also include the proportionate costs of existing facilities and components that currently have excess capacity.

The existing capacity of the current system and the excess capacity of each component that will be used in this Impact Fee Analysis will be based on the data provided by GWSSA's record of previous projects and associated project financing. Excess capacity of system components will be expressed in

terms of equivalent residential connections (ERC). The determination of the existing Level of Service (LOS) of the current distribution system will be based on the design capacity of both the current system and the planned projects.

6.1 Current System

As of year 2015 reporting, GWSSA's current culinary system served a total of 1846 connections, of which 1726 were domestic, 94 commercial, 9 industrial, and 17 institutional. GWSSA reported under the name Grand County Water Conservancy District. Reported water usage for 2015 was an annual total of 836.95 acre-feet of water. The Agency completed culinary projects in 1998 and 2000 which added two new wells and a new storage tank with capacity of 3,000,000 gallons. The current distribution system is insufficient to support the current population, which is why new projects have been proposed to bring the level of service for the current population up to state standards. The new projects will also provide additional capacity for future demand.

Over the next 20 years GWSSA must have water right sufficient to supply 2,856 acre-feet per year to meet future demand at current state minimum required water right guidelines. Currently, GWSSA owns the water right for a total of 1,672 acre-feet annually and thus has a deficit in required water right of 1,184 acre-feet for the planning period.

GWSSA currently charges an impact fee of $2,093 per ERC for culinary water.

6.2 Calculation of ERC

One ERC for the culinary system is defined as the amount of culinary water required by an average residential connection. Because an ERC relates to the amount of water required for the average residential connection, use of this term allows commercial, institutional, or other large water users to be equated to a residential connection. ERC's are factored into calculations for impact fees, user rates, and other analyses as required for design purposes.

The Utah Division of Drinking Water (DDW) requires that a system should have the storage capacity to provide an average of 400 gal/day/ERC for indoor water use. One ERC will normally represent an average use of 400 gal/day, (146,000 gallons per connection per year). Storage capacity must provide storage "to satisfy average day demands for water for indoor use and irrigation use." Utah Administrative Code Rule R309-510-8. Storage Sizing. It must also provide fire flow storage for fire suppression. Id.

A review of the water usage for each of the connection types that are currently on the system was performed to determine the equivalent ERC value to assign to each type of connection. Based on these records, the commercial connection group will be assigned an ERC multiplier value of 2.6, due to the fact that the average commercial connection on the system uses approximately 2.6 times the amount of water that the average residential connections use. The M&I connection group will be assigned an ERC multiplier of 3.5, and the MDU connection group will be assigned an ERC multiplier of 5, which is based on average ERC multipliers for the various meter sizes provided to MDU facilities.

Table 6.1 shows the number of connections for each of these categories along with its associated ERC values.

Table 6.1: ERC Equivalents per Connection Category

ERC's By Connection Type			
Category	**Conn.**	**ERC/Conn.**	**Current ERC's**
Residential	1,699	1.0	1699
MDU	13	5.0	65
Commercial	95	2.6	247
M&I	23	3.5	81
Total	**1,830**		**2092**

6.3 Projected Demand

The number of culinary water ERC's expected at the end of the planning period can be calculated using the compound interest formula and inserting the projected growth rate, the existing number of culinary water ERC's, and the 20 year planning period for culinary water improvements.

The projected number of residential ERC's for the 20 year planning period is calculated using the compound interest formula as follows: F = Connections x $(1 + \text{rate})^{20\ \text{years}}$ where F is the projected number of connections and the rate of growth is 2% per year.

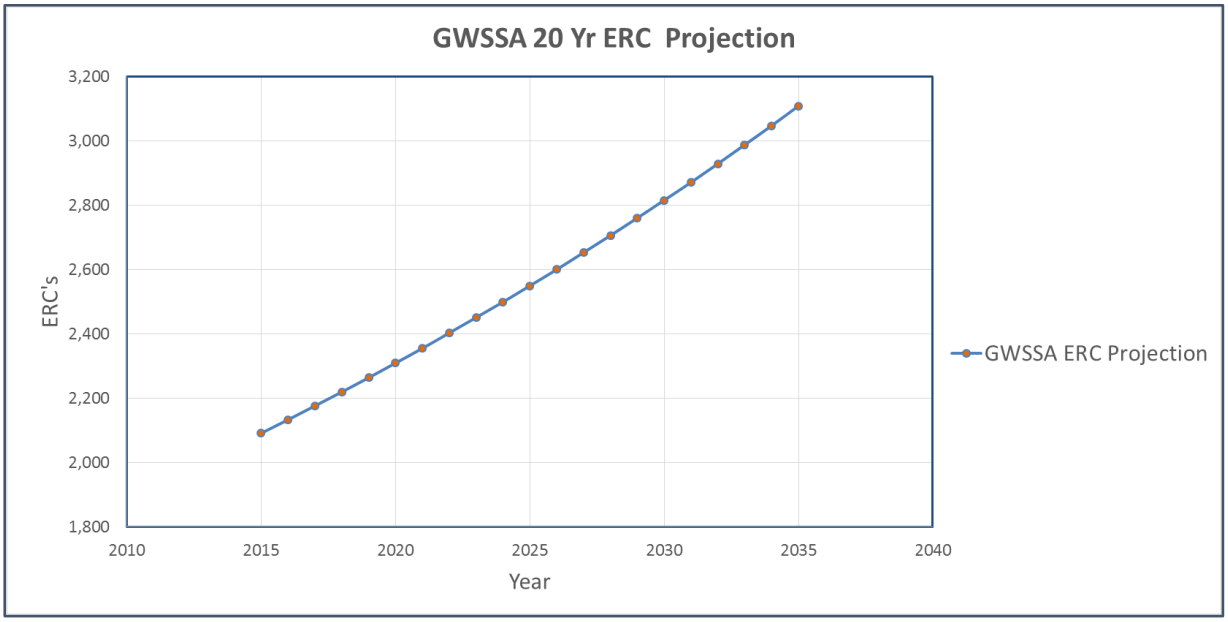
Total ERC's: $F = 2{,}092\ \text{ERC's} \times (1 + 0.02)^{20} = 3{,}109\ \text{ERC's}$

At the end of the planning period, GWSSA is expected to have 3,109 ERC's; thus, new growth within the 20-year period is the difference between the 20-year projection and current ERC's, or 1017 ERCs. The projected number of ERC's for each category are shown in Table 6.3.1 and Figure 6.3.1.

Table 6.3.1: Projected ERC's by Category

20 Yr. Projected ERC's			
Category	**Conn.**	**ERC/Conn.**	**Total ERC's**
Residential	2,525	1.0	2,525
MDU	19	5.0	97
Commercial	141	2.6	367
M&I	34	3.5	120
		Total	**3,109**

Figure 6.3.1: Projected Growth by ERC's



6.4 Excess Capacity

Culinary projects completed in 2000 and 2001 had excess capacity allocable to future growth. These projects included the construction of a 3-million-gallon concrete storage tank and the construction of two wells, the Chapman and Spanish Valley wells. These projects had excess capacity at the time of construction and continue to have excess capacity fully allocated to future growth.

At the time of construction, GWSSA had adequate storage for existing demand. The 3-million-gallon tank was added to provide excess capacity for growth; therefore, all of the excess storage capacity of the tank is allocable to future growth. The tank has a total capacity of serving 1,985 ERCs.

The additional wells had capacity to serve 934 ERCs. At the time of construction, GWSSA had capacity to serve current residents; thus the full 934 ERC capacity of the additional wells was impact fee eligible. These wells have remaining excess capacity. Until the wells are serving the full capacity, the cost of the wells remains impact fee eligible. The cost allocation of these projects to ERCs is calculated in section 6.6 of this analysis.

6.5 New Near-term Projects

GWSSA plans to commission culinary water projects at a total estimated cost of $7,237,715. Of those projects, one is 100 percent allocable to future growth. A portion of the remaining projects is allocable to new growth.

First, GWSSA plans to complete water rights projects at a budgeted cost of $50,000. These water rights projects are to ensure that GWSSA has water rights adequate for future demand and the cost of these projects is 100 percent allocable to future growth.

A portion of the remaining projected project cost of $7,187,715 will increase the level of service for existing customers. The balance is allocable to future growth. A comprehensive list of proposed new projects, allocable costs, ERC's served, and cost per ERC is included in Table 6.7.1

6.6 Allocable Costs

Only costs allocable to future growth may be included in an impact fee. As stated in section 6.4, prior completed projects remain impact fee eligible due to remaining capacity. The total impact fee eligible (non-grant financed) cost of these past improvements was $2,005,022. This cost was allocable to future growth. The capacity of the storage tank was 1,985 ERCs. The total impact fee eligible cost of the storage tank was $1,132.755. The capacity of the wells was 934 ERCs. The total impact fee eligible cost of the wells was $996,161.

As stated in section 6.5 above, all of the contemplated water rights projects will serve future growth. Thus, the cost of the water rights portion of the project is 100 percent allocable to future growth. Several of the planned projects are entirely for repair or maintaining existing level of service for current residents. Those projects represent $728,025 of the total planned for future projects and are not impact fee eligible.

The remaining improvements will provide an increased level of service for a portion of the existing ERCs, as well as providing additional system capacity to support growth over the 20 year planning period. A hydraulic analysis of the system was performed in conjunction with the culinary water master plan that was commissioned by GWSSA in 2015. The hydraulic analysis showed that of the 2,092 existing ERC's, 1,338 ERC's had insufficient pressures and/or fire flow capacity. The near future system improvements will increase the level of service to these 1,338 ERC's by providing sufficient system pressures and fire flow capacity, in addition to providing adequate system capacity to the 1,017 future ERC's that are anticipated during the 20 year planning period. Therefore, the total ERC's served by the improvements (existing and future) are 2,355 ERC, of which 43% are represented by future growth and are therefore impact fee eligible. This leaves a total of $2,827,666.43 of the future planned projects and $2,005,022 of prior projects eligible for impact fee assessment. These calculations are shown in Table 6.7.2.

6.7 Impact Fee Calculation

The impact fee calculation, before considering any credits, is calculated simply by dividing the total allocable cost by the total number of ERCs served by the particular project.

For the past projects including the tank and wells, the total allocable cost is $2,005,022. The number of ERCs served by the projects is not the same because the capacity of each project was different. The storage tank has capacity for 1985 ERCs at a total impact fee eligible cost of $1,132,755—the cost per ERC being $570.66. The wells have capacity to serve 934 ERCs at a total impact fee eligible cost of $996,161—the cost per ERC being $1,066.55.

The total impact fee for these past projects with excess capacity is $1,637.21 as shown in Table 6.7.1.

Table 6.7.1

Past Improvements with Excess Capacity	Cost	Total Capacity	Cost per ERC
3M Gallon Concrete Storage Tank	$1,132,755	1985	$570.66
Chapman and Spanish Valley Wells	$996,161	934	$1,066.55
TOTAL	**$2,005,022**		**$1,637.21**

For planned projects, the calculation is the same except for the fact that a percentage of the projects will increase or maintain level of service for existing customers so only a portion of those projects' costs are impact fee eligible.

Table 6.7.2 shows each of the planned projects, the percent allocable to future growth, the number of ERC's served by each project, the cost of each improvement, grant portion for each improvement, principal and interest payments for each improvement, and the impact fee per ERC for that portion of the project. The total impact fee for planned culinary projects is **$2,436.73.**

The maximum impact fee that GWSSA may reasonably assess to new ERCs is the total of the past project eligible cost per ERC plus the total of the future project eligible cost per ERC which equals $4,073.94 per ERC.

Table 6.7.2

RECOMMENDED IMPROVEMENTS - IMPACT FEE ELIGIBLE	Cost	Grant	Principal + Interest	w/in 6 years	% Eligible	Eligible Cost	ERC's Served	$/ERC
8" LINE - WEST DESERT RD	$158,666	$71,400	$139,054	Y	43%	$59,793.41	1017	$58.79
500,000 GAL CONCRETE TANK W/BOOSTER ST	$1,588,992	$715,047	$1,392,588	Y	43%	$598,813.04	1017	$588.80
12" LINE - LEMON LANE TO ANGEL ROCK TO HWY 191	$531,631	$239,234	$465,920	Y	43%	$200,345.41	1017	$197.00
10" LINE - DESERT HILLS	$312,530	$140,639	$273,901	Y	43%	$117,777.25	1017	$115.81
BOOSTER ST. - GEORGE WHITE RD	$259,985	$116,993	$227,850	Y	43%	$97,975.37	1017	$96.34
10" LINE - SPANISH VALLEY DR	$1,315,288	$591,880	$1,152,715	Y	43%	$495,667.47	1017	$487.38
INSTALL PRV - SPANISH VALLEY DR & HEAVEN AVE	$103,445	$46,550	$90,659	Y	43%	$38,983.34	1017	$38.33
12" LINE SPANISH VALLEY DR TO CHAPMAN	$260,876	$117,394	$228,631	Y	43%	$98,311.43	1017	$96.67
WATER RIGHTS ANALYSIS & ACTIONS	$50,000	$22,500	$43,820	Y	100%	$43,819.86	1017	$43.09
WESTWATER DR IMPROVEMENTS	$368,849	$165,982	$323,258	Y	43%	$139,000.94	1017	$136.68
8" LINE - STARBUCKS LN	$58,479	$26,316	$51,251	Y	43%	$22,037.99	1017	$21.67
10" LINE - HWY 191	$215,945	$97,175	$189,254	Y	43%	$81,379.01	1017	$80.02
8" LINE - CINEMA CT - ORCHARD WAY	$379,207	$170,643	$332,336	Y	43%	$142,904.44	1017	$140.52
8" LINE - SKYLINE/KALINA	$317,195	$142,738	$277,989	Y	43%	$119,535.12	1017	$117.54
8" LINE - MARSHALL DR	$64,173	$28,878	$56,241	Y	43%	$24,183.63	1017	$23.78
8" LINE - KNUTSON KORNER	$54,809	$24,664	$48,035	Y	43%	$20,654.97	1017	$20.31

8" LINE - HWY 191/BOULDER AVE	$267,187	$120,234	$234,162	Y	43%	$100,689.72	1017	$99.01
8" LINE - ROBERTS RD	$125,739	$56,583	$110,197	Y	43%	$47,384.92	1017	$46.59
8" LINE - LANCE AVE	$76,692	$34,511	$67,213	Y	43%	$28,901.44	1017	$28.42
REPLACE DYSFUNCTIONAL VALVES ON EXIST. LINES	$295,998	$133,199	$259,412	Y	0%	$0.00		$0.00
INSTALL NEW HYDRANTS ON EXISTING LINES	$203,049	$91,372	$177,951	Y	0%	$0.00		$0.00
REPLACE EXISTING PRV STATIONS	$228,978	$103,040	$200,676	Y	0%	$0.00		$0.00
TOTAL	**$7,237,715**					**$2,478,158.75**		**$2,436.73**

6.8 Credits

Because a portion of monthly usage rates may be used to service debt payments for current infrastructure, a reasonable impact fee may account for the portion paid by new users to past debt service payments. To calculate the per ERC credit requires a calculation of average contribution per ERC to the debt service payments or project cost over the course of the project life or payment term for the system.

In past impact fee analyses, GWSSA planned to service the portion of debt and bond payments allocable to future growth through the collection of impact fees. The prior analysis provided no credit for any portion of monthly user rates that may go toward such payments. As such, it is assumed that GWSSA currently services the portion of debt payments allocable to future growth fully from the impact fee collected and no credit should be given for past projects.

However, for planned projects, GWSSA will pursue loans to fund a portion of the project. SEI estimates that a portion of the project may be grant eligible. The remainder will be financed through a USDA Rural Development Loan with new annual debt service payments of $158,577.80 over 40 years. The full details of estimated funding are provided in Exhibit B. As new ERC's are added to the system, the portion of user fees allocated to debt-service payments will decrease. On average, new ERCs will contribute to debt-service payments for 8.84 years.

To calculate a reasonable credit SEI took the total project cost multiplied by the percentage of the costs that were impact fee eligible. The result being that 39 percent of the total project cost is impact fee eligible and may be offset by a credit for the portion of annual service payments used for annual debt service. Thirty-nine percent of the $158,577.80 annual debt service payment is $61,953.97.

SEI then divided the impact fee eligible portion by the number of ERCs served for each year through 2036. The average portion of user fees being used for debt service on impact fee eligible projects over the life of the loan is $24 annually. The credit is then calculated by multiplying the average portion of annual user fees by the average years an ERC will pay user fees. Thus, $24 x 8.84 years = a credit of $214 per ERC. The calculation for this credit is detailed further in Exhibit "C" to this analysis.

6.9 Recommended Culinary Water Impact Fee

The total impact fee allowable for culinary water is the sum of the allocable costs for excess system capacity and new projects less any credits. In this case, the sum of the impact fees for culinary projects equals $4,073.94 less the credit of $214 **for a recommended impact fee of $3,859.94.**

Table 6.8.1

Culinary Water Impact Fee Calculation	
Past Improvement Impact Fee	$ 1,637.21
Planned Projects Impact Fee	$ 2,436.73
Annual Service Payments Credit	$ (214.00)
Total Culinary Water Impact Fee	**$ 3,859.94**

7.0 Conclusion & Recommendations

Sunrise Engineering recommends the maximum reasonable impact fees for GWSSA's culinary system be no more than $3,859.94 assessed per ERC.

Before enacting the actual impact fees, GWSSA should take into consideration the relationship between impact fees and future growth because an impact fee can influence the growth in a community.

The impact fee that is adopted based on this impact fee analysis should be charged to new connections until any of the following events occur:

1. New system improvements (other than those included in this analysis) are anticipated within six years, therefore becoming eligible for inclusion in the impact fee calculation;
2. The calculated excess capacity of the existing system facilities included in this analysis is expended, at which time they will no longer be eligible for inclusion in the impact fee calculation; or
3. The impact fee analysis is otherwise reviewed and updated. It is recommended that it be updated every five years at a minimum.

GWSSA has experienced steady growth over the past two decades and continual growth is expected. In addition to residential growth, GWSSA should also anticipate commercial and industrial growth which may place additional demands on the culinary water system. This impact fee analysis will help the Agency apportion the costs of system improvements and expansion to the new growth that the improvements will serve. Additionally, as the population served by GWSSA grows, GWSSA should be aware that in the future it may be required to complete a facilities plan to accompany future impact fee analyses.

APPENDIX A:

ANALYSIS OF BANBERRY FACTORS

Banberry Factors Analysis

Utah Code Ann. 11-36a-304(2) requires that the following factors, also known as the Banberry Factors be considered as applicable in order to verify that the proportionate share of the costs of public facilities are reasonably related to the new development activity.

a) *The cost of each existing public facility that has excess capacity to serve the anticipated development resulting from the new development activity:*
   The cost of each existing public facility that has excess capacity to serve the anticipated development resulting from new development activity is discussed in Section 6.5 for GWSSA's culinary system.

b) *The cost of system improvements for each public facility:*
   The costs of projected system improvements for the GWSSA's culinary water system are discussed in the same section as the cost of facilities with excess capacity.

c) *Other than impact fees, the manner of financing for each public facility, such as user charges, special assessments, bonded indebtedness, general taxes, or federal grants:*
   Each public facility with excess capacity has been funded in part by loans, part by self-funding, and another portion by grant. This analysis only included debt and self-funding of projects in calculating the impact fees.

d) *The relative extent to which development activity will contribute to financing the excess capacity of and system improvements for each existing public facility, by such means as user charges, special assessments, or payment from the proceeds of general taxes:*
   Currently, only assessed impact fees are used to finance the excess capacity of system improvements. A credit is calculated for future projects based on an estimated funding plan. The credit analysis may be found in section 6.8 of this analysis and the funding plan may be found in Exhibit B. It is again noted that this impact fee analysis should be reviewed and updated regularly to ensure that the fees remain applicable and fair.

e) *The relative extent to which development activity will contribute to the cost of existing public facilities and system improvements in the future:*
   It is not currently anticipated that development activity will contribute to the cost of existing public facilities and future system improvements outside of the allocable costs of current excess capacity and future projects as discussed within this analysis.

f) *The extent to which the development activity is entitled to a credit against impact fees because the development activity will dedicate system improvements or public facilities that will offset the demand for system improvements, inside or outside the proposed development:*
New development activity should be allowed a credit against impact fees to the extent that the development activity dedicates system improvements or public facilities that offset the demand for system improvements. However, no such dedications have been proposed and none are currently planned. GWSSA must address this issue if and when a developer proposes to dedicate new system improvements to offset the demand for the Agency to provide those improvements.

g) *Extraordinary costs, if any, in servicing the newly developed properties:*
This factor is not currently applicable to this impact fee analysis.

h) *The time-price differential inherent in fair comparisons of amounts paid at different times:*
The time-price differential of amounts paid at different times related to the impact fee is influenced not only by inflation, but also by the amount that is paid towards the system costs through user fees over time. For this purpose, a user fee credit is recommended in Sections 6.8 if any portion of user fees is used to service debt/bond payments. It is not considered feasible to update the impact fee on an annual basis to account for the time price differential of amounts paid at different times. In order to ensure that the time-price differential associated with impact fees paid at different times is limited, GWSSA should review and update this impact fee analysis at least once every five years.

APPENDIX B:

TOTAL PROJECT FUNDING ESTIMATE

GWSSA Proposed Water Project

Proposed Funding Plan - Total Project

6/8/2016

Total Project Cost		**$**	**7,237,715.00**
Proposed Funding:	% of Project		
Self Participation	0%		-
Rural Development Grant	45%		3,256,971.75
Rural Development Loan	55%		3,980,743.25
Total Project Funding		**$**	**7,237,715.00**
Annual Expenses: (Current)			
Annual O&M Expenses			700,483.00
*See Appendix C for summary of expenses			
Total Operation and Maintenance			700,483.00
Existing Debt Service:			
SVW&SID Water RD, 4.5%, Matures 2040			21,792.00
SVW&SID Water DDW, 5.35%, Matures 2020			122,889.00
SVW&SID Water DDW, 5.35%, matures 2022			13,804.00
Total Existing Debt Service			158,485.00
New Debt Service:			
USDA-RD Loan	2.5% for 40 Yrs; Loan Amount: 3,980,743.25		$158,577.80
10% Debt Reserve			$15,857.78
Total Estimated New Debt Service			$174,435.58
Income Applicable			
Impact Fee Average			$20,931.00
Interest on Debt Reserve			
Total Annual Income Required			**$1,012,472.58**
Annual Income:			
Total Number of Active ERC's Billed			2,092
Total Annual Income Required			1,012,472.58
Total Annual Income Required w/ 1.25% debt service coverage			1,095,702.73
Average Monthly Water User Rate		**$**	**43.65**
Average Monthly Total Water User Rate		**$**	**43.65**
Median Adjusted Gross Income (2013 MAGI)			31,141.00
1.75% of MHI Per Month		**$**	**45.41**

APPENDIX C:

ANNUAL USER FEE CREDIT CALCULATIONS

Calculation of User Fee Credit

CALCULATION OF THE AVERAGE YEARS THAT NEW CONNECTIONS WILL PAY USER FEES WITHIN THE 20 YEAR PLANNIND PERIOD				
Year	**ERC's**	**New ERC's**	**Years Remaining in Planning Period**	**Total Years (Years Remaining x New ERC's)**
2016	**2092**	0	20	0
2017	2134	42	19	795
2018	2177	43	18	768
2019	2220	44	17	740
2020	2264	44	16	710
2021	2310	45	15	679
2022	2356	46	14	647
2023	2403	47	13	613
2024	2451	48	12	577
2025	2500	49	11	539
2026	2550	50	10	500
2027	2601	51	9	459
2028	2653	52	8	416
2029	2706	53	7	371
2030	2760	54	6	325
2031	2816	55	5	276
2032	2872	56	4	225
2033	2929	57	3	172
2034	2988	59	2	117
2035	3048	60	1	60
2036	3109	61	0	0
		1017	**Total Years**	**8990**

		Average Years (Total Years ÷ New ERC's)	**8.84**

CALCULATION OF THE AVERAGE ANNUAL PORTION OF THE USER FEE PAID TO PLANNED PROJECTS AND THE USER FEE CREDIT			
Year	**ERC's**	**Annual Eligible Project Debt Service**	**Portion of User Fee to Planned Projects**
2016	2092	$ 61,953.97	$ 29.61
2017	2134	$ 61,953.97	$ 29.03
2018	2177	$ 61,953.97	$ 28.46
2019	2220	$ 61,953.97	$ 27.91
2020	2264	$ 61,953.97	$ 27.36
2021	2310	$ 61,953.97	$ 26.82
2022	2356	$ 61,953.97	$ 26.30
2023	2403	$ 61,953.97	$ 25.78
2024	2451	$ 61,953.97	$ 25.28
2025	2500	$ 61,953.97	$ 24.78
2026	2550	$ 61,953.97	$ 24.29
2027	2601	$ 61,953.97	$ 23.82
2028	2653	$ 61,953.97	$ 23.35
2029	2706	$ 61,953.97	$ 22.89
2030	2760	$ 61,953.97	$ 22.44
2031	2816	$ 61,953.97	$ 22.00
2032	2872	$ 61,953.97	$ 21.57
2033	2929	$ 61,953.97	$ 21.15
2034	2988	$ 61,953.97	$ 20.74
2035	3048	$ 61,953.97	$ 20.33
2036	3109	$ 61,953.97	$ 19.93
(A) Average Portion of Annual User Fee to Planned Projects			$ 24.00
	(B) Average Years of Payment		**8.84**

User Fee Credit	**$ 214.00**