MINUTES OF A COUNCIL MEETING
HELD IN THE COUNCIL CHAMBERS
JANUARY 4, 2017

The meeting was called to order by Mayor Kirk Hunsaker at 6:00 pm. Council Members attending: Keith Broadhead, David Hathaway, Mandy Jeffs, Nick Miller, and Marianne Stevenson.

Others attending: City Manager Benjamin Reeves, Assistant City Manager Dennis Marker, City Engineer Norm Beagley, Police Chief Rodney Hurst, Tracy Hurst, Officer Russ Woodland, Officer Mike Wall, Officer Matt Drussel, Officer Rich Glenn, Sgt. Jake Stika, Officer Nick Alvey, Recreation Program and Events Coordinator Amy Johnson, A & R Homes Representative Randy Hallem, Kris Johnson, Trish Johnson, David Wride, Rob Horlocker, Stephanie Akers, Catherine Holman and other unidentified individuals.

PLEDGE OF ALLEGIANCE
Council Member Stevenson led the Pledge of Allegiance.

INVOCATION/INSPIRATIONAL THOUGHT
City Manager Reeves Offered an Invocation.

DECLARATION OF ANY CONFLICT OF INTEREST
Council Member Broadhead indicated the company he works for has a payment on the register.

CONSENT AGENDA

Minutes:
December 14, 2016

Bills:
$469,900.06

Consent Action Items:
Approval of the 2017 City Council Meeting Schedule

Council Member Miller moved to approve the Consent Agenda. Council Member Hathaway seconded the motion. The vote was as follows:

Council Member Broadhead	Aye
Council Member Hathaway	Aye
Council Member Jeffs	Aye
Council Member Miller	Aye
Council Member Stevenson	Aye

The motion passed unanimously.

PUBLIC FORUM, BID OPENINGS, AWARDS, AND APPOINTMENTS
Mr. Wride reported he lives at 745 E 300 S and has an issue with the neighbor who has large vehicles on his property he uses for his business. (See attachment "A" for the written concerns of Mr. Wride)

Assistant City Manager Maker has approached the owner of the vehicles and was told the business is registered in another City. Mr. Marker will continue to have conversations with the property owner to help resolve the concerns of the neighbors.

Ms. Ackers indicates her home fills up with exhaust when the trucks idle in the yard.

Recognition Award – Retirement of Lt. Kris Johnson

Mayor Hunsaker expressed gratitude to Mr. Johnson for his service to the citizens of Santaquin and surrounding area. Mr. Johnson in turn thanked the Mayor and Council Members for their support. He indicated there will not be a night that he doesn't pray for the safety of all the Officers.

Recognition Award – Planning Commission Member Troy Peterson

Assistant City Manager Marker reported Troy Peterson has been serving on the Planning Commission for the past 4 years. The Mayor and Council Members extended their thanks and gratitude to Mr. Peterson. He was presented with a Service Award.

Appointment of Planning Commission Members – Kyle Francom, Trevor Wood

The Mayor and Council Members were told Kyle and Trevor have been serving on the Planning Commission and would like to continue. It was suggested repointing both of them for a term of 4 years each.

Council Member Broadhead moved to reappoint Kyle Francom and Trevor Wood to the Planning Commission for the tem of 4 years each. Council Member Stevenson seconded the motion. The vote was as follows:

Council Member Broadhead	Aye
Council Member Hathaway	Aye
Council Member Jeffs	Aye
Council Member Miller	Aye
Council Member Stevenson	Aye

The motion passed unanimously.

Payson Santaquin Area Chamber of Commerce – Business of the Month

There weren't any representatives in attendance.

FORMAL PUBLIC HEARING

Parks and Recreation Impact Fee Facility Plan and Impact Fee Analysis

Council Member Miller moved to enter into a Public Hearing with regard to Parks and Recreation Impact Fee Facility Plan and Impact Fee Analysis. Council Member Hathaway seconded the motion. The vote was as follows:

Council Member Broadhead	Aye
Council Member Hathaway	Aye
Council Member Jeffs	Aye
Council Member Miller	Aye
Council Member Stevenson	Aye

The motion passed unanimously.

Assistant City Manager reported a Public Hearing of the City Council is a requirement in order to adopt the Parks and Recreation Impact Fee (see attachment "B" for a copy of the study).

The Mayor and Council Members were told if there is an increase in the Impact Fee the increase would take effect after 90 days. During the 90 days the staff will gather information with regard to fees being charged by the surrounding Cities.

Council Member Broadhead moved to close the Public Hearing. Council Member Jeffs seconded the motion. The vote was as follows:

Council Member Broadhead	Aye
Council Member Hathaway	Aye
Council Member Jeffs	Aye
Council Member Miller	Aye
Council Member Stevenson	Aye

The motion passed unanimously.

Sewer Impact Fee Facility Plan and Impact Fee Analysis

Council Member Miller moved to enter into a Public Hearing with regard to Sewer Impact Fee Facility Plan and Impact Fee Analysis. Council Member Stevenson seconded the motion. The vote was as follows:

Council Member Broadhead	Aye
Council Member Hathaway	Aye
Council Member Jeffs	Aye
Council Member Miller	Aye
Council Member Stevenson	Aye

The motion passed unanimously.

Assistant City Manager Marker reviewed the Sewer Impact Fee Facility Plan (see attachment "C" for a copy of the study). If the Council Members are in favor of increasing the Impact Fee, it will be increased after the 90 day waiting period.

Ms. Holman indicated this is the Public Hearing and there isn't anyone here to discuss their concerns.

Council Member Miller moved to close the Public Hearing. Council Member Jeffs seconded the motion. The vote was as follows:

Council Member Broadhead	Aye
Council Member Hathaway	Aye
Council Member Jeffs	Aye
Council Member Miller	Aye
Council Member Stevenson	Aye

The motion passed unanimously.

BUSINESS LICENSES

There weren't any new Business Licenses to report.

NEW BUSINESS & ADOPTION OF ORDINANCES AND RESOLUTIONS

Discussion and Possible Action with Regard to Money In Lieu of Water Considerations

Assistant City Manager Marker indicated Administration, Engineering, Public Works staff and City Legal Counsel have formulated factors that the Council might find useful when considering requests to pay money in lieu of dedicating water. Recognizing that many circumstances might affect decisions regarding the best interest of the City, the attachment is neither a formalized list by Ordinance or Resolution, nor is it necessarily a complete list of appropriate factors, but may serve a s a general guide for the City's legislative Body when deliberating whether to grant any in lieu requests (see attachment "D").

City Engineer Beagley reported the culinary water is being drawn from the current wells as well as the canyon springs.

Council Member Hathaway voiced his concern with accepting money in lieu of water is the cost to purchase water in the future. He isn't in favor of accepting money.

Council Member Stevenson indicated she would feel better if the City could reduce the users of the culinary water as their secondary before accepting money in lieu of water.

Council Member Broadhead stated he would like to reserve some of the surplus for development that will bring business into the City.

A suggestion was made to allow up to 20% "buy in" and put it in ordinance draft.

Discussion and Possible Action with Regard to A&R Homes Request to Pay Money In Lieu of Water

Mr. Hallam addressed the Mayor and Council Members with regard to paying Money in Lieu. He indicated A & R is competing with the City to purchase water, which City Manager indicated was not an accurate comment. Mr. Hallam was told it isn't the City's obligation to supply the project with water. He indicated the City has water to spare which they should be able to use. City Manager Reeves cautioned the Council to be very clear as to their intent this evening when making promises or making a final decision.

Mayor Hunsaker polled the Council Members with regard to the percentage of water allocated to this particular development. Council Member Hathaway is against allocating with matching any water. Council Member Miller would like up to 40% for any issue. Council Member Broadhead would like 20% with a match. He believes there should be a reserve if needed. Council Member Jeffs agrees with Council Member Broadhead. Council Member Stevenson is in agreement of 20%. It was very clear that an agreement would be drafted which would allow the developer to "buy in" up to 20%/matching up to 100 acre feet for the entire development.

Council Member Broadhead moved to table the discussion with regard to A&R Homes Request to Pay Money In Lieu of Water. Council Member Hathaway seconded the motion. The vote was as follows:

Council Member Broadhead	Aye
Council Member Hathaway	Aye
Council Member Jeffs	Aye

Council Member Miller	Aye
Council Member Stevenson	Aye

The motion passed unanimously.

Resolution 01-01-2017, "A Resolution Approving a Right of Way Use Agreement with Mobilitie

Council Member Miller moved to table Resolution 01-01-2017, "A Resolution Approving a Right of Way Use Agreement with Mobilitie. Council Member Jeffs seconded the motion. The vote was as follows:

Council Member Broadhead	Aye
Council Member Hathaway	Aye
Council Member Jeffs	Aye
Council Member Miller	Aye
Council Member Stevenson	Aye

The motion passed unanimously.

Ordinance 01-01-2017, "An Ordinance Adopting an Amended Parks and Recreation Master Plan"

Council Member Broadhead questioned if the Cemetery really should be included in the Master Plan. He was told the cost for the enhancement could be deducted and the proposed Impact Fee could be decreased. A discussion was also held with regard to development of the corner of 400 East and Main. Council Member Broadhead suggested sending the plan back, removing the Cemetery and adding all the parks at Summit Ridge.

After the discussion, Council Member Miller moved to approve Ordinance 01-01-2017, "An Ordinance Adopting an Amended Parks and Recreation Master Plan". Council Member Hathaway seconded the motion. The vote was as follows:

Council Member Broadhead	Aye
Council Member Hathaway	Aye
Council Member Jeffs	Aye
Council Member Miller	Aye
Council Member Stevenson	Aye

The motion passed unanimously.

At 8:21 pm the Council Members took a 5 minute break.

The meeting resumed at 8:29 pm.

Ordinance 01-02-2017, "An Ordinance Adopting a Sewer Collection and Treatment Master Plan"

Council Member Stevenson moved to approve Ordinance 01-02-2017, "An Ordinance Adopting a Sewer Collection and Treatment Master Plan". Council Member Miller seconded the motion. The vote was as follows:

Council Member Broadhead	Aye
Council Member Hathaway	Aye
Council Member Jeffs	Aye
Council Member Miller	Aye
Council Member Stevenson	Aye

The motion passed unanimously.

Ordinance 01-03-2017, "An Ordinance Amending the City Parks and Recreation Impact Fee Facilities Plan and Parks and Recreation Impact Fee Analysis"

Council Member Broadhead moved to table Ordinance 01-03-2017, "An Ordinance Amending the City Parks and Recreation Impact Fee Facilities Plan and Parks and Recreation Impact Fee Analysis". Council Member Stevenson seconded the motion. The vote was as follows:

Council Member Broadhead	Aye
Council Member Hathaway	Aye
Council Member Jeffs	Aye
Council Member Miller	Aye
Council Member Stevenson	Aye

The motion passed unanimously.

Ordinance 01-04-2017, "An Ordinance Amending the City Sewer Impact Fee Facilities Plan and Sewer Impact Fee Analysis"

Council Member Miller moved to table Ordinance 01-04-2017, "An Ordinance Amending the City Sewer Impact Fee Facilities Plan and Sewer Impact Fee Analysis". Council Member Jeffs seconded the motion. The vote was as follows:

Council Member Broadhead	Aye
Council Member Hathaway	Aye
Council Member Jeffs	Aye
Council Member Miller	Aye
Council Member Stevenson	Aye

The motion passed unanimously.

Recreation Department Annual Report

Ms. Johnson reviewed the 2016 recreation participation and fees with the Mayor and Council. Jr. Jazz and Soccer are the 2 sports that have the most participants. It was also reported that the revenues for 2016 Santaquin Days was $79,629.58, the expenditures were $75,178.44 which netted $4,451.14 (see attachment "E" for the full graphing).

Council Member Miller recommended increasing the fee for each event by $1.

Discussion and Possible Action with Regard to the Prioritization of 2017-18 Parks Projects

Mayor Hunsaker indicated his 3 top priority would by rodeo grounds, Peter Rabbit Park, and Highland Drive trail. Council Member Broadhead's 3 top priority would be the 4 soccer fields,

Rodeo grounds and Peter Rabbit Park. Council Member Hathaway's priority rodeo ground, Peter Rabbit and a trail of some kind. Council Member Stevenson's propriety is the rodeo grounds, Highland Drive Trail and a soccer field. Council Member Jeffs priority is the Highland Drive Trail. Council Member Miller's priority is Farmers Land Trail, soccer fields, and the Highland Drive Trail.

The Council Members will be presented with phasing plans for each of the mentioned projects.

CONVENE OF THE COMMUNITY DEVELOPMENT BOARD
There wasn't a need to convene the Community Development Board.

CONVENE OF THE SPECIAL SERVICE DISTRICT FOR ROADS MAINTENANCE
There wasn't a need to convene the Special Service District for Road Maintenance Board.

CONVENE OF THE LOCAL BUILDING AUTHORITY OF SANTAQUIN CITY
There wasn't a need to convene the Local Building Authority Board.

PETITIONS AND COMMUNICATIONS
There weren't any Petitions or Communications to discuss.

REPORTS OF OFFICERS, STAFF, BOARDS, AND COMMITTEES

City Manager Reeves

City Manager Reeves reported the Payson/Santaquin Area Chamber of Commerce would like a formal agreement. He has received a draft agreement and returned it with some comments. The proposed agreement will be available for the Council review shortly.

The Dispatch Center ribbon/cutting open house is scheduled for January 12, 2017, 10 am to 1 pm.

The 360 Evaluations are due by Thursday by 5 pm and the results will be available as soon as they are compiled.

The Mayor/Council Retreat is scheduled for January 28th beginning at 8:00 am.

He reviewed the current contract for garbage services. There isn't a clause addressing the age of the trucks. However, the original RFP's did address that the trucks are required to have the load covered and be well maintained.

Assistant City Manager Marker

Assistant City Manager Marker reported the Music Festival Committee will be meeting @ 2 pm on Friday.

MUSCO Lighting would like to meet with the City with regard to providing lighting at the rodeo grounds either temporary and permanently. A meeting will be coordinated.

New snow tell site has been installed in the Santaquin meadows. At this point the snow pack is 9.8" of water.

REPORTS BY MAYOR AND COUNCIL MEMBERS

Mayor Hunsaker

Mayor Hunsaker didn't have any additional information to share with those in attendance.

Council Members

Council Member Hathaway met with Mr. Tuckett, Payson City Manager, with regard to lighting at the soccer fields. Indication was made that they were installed and paid for by the cell tower company. He was told Santaquin City is using lease fees to pay the payments on the ball field lighting at the Centennial Park.

Council Member Hathaway was told the trails planned are either asphalt or natural surface trails.

Council Member Jeffs was told the Mayor will be meeting with Mayor Allred on Tuesday evening with regard to the emergency access between Summit Ridge and Rocky Ridge.

Council Member Broadhead was told Mayor Hunsaker didn't know when the Summit Creek Stock Holder Meeting is.

Council Member Broadhead indicated the Sensus Meter Representatives will be here on January 23, at 8 am to meet with the Public Works Employees.

City Manager Reeves indicated he will be attending the Genola Town Hall meeting sometime this month to discuss the Police Contract.

Council Member Broadhead was told all future cul-de-sac's will be required to have a "snow load area".

EXECUTIVE SESSION (May be called to discuss the character, professional competence, or physical or mental health of an individual)
There wasn't a need to call an Executive Session to discuss the character, professional competence, or physical or mental health of an individual.

EXECUTIVE SESSION (May be called to discuss the pending or reasonably imminent litigation, and/or purchase, exchange, or lease of real property)
There wasn't a need to call an Executive Session to discuss the pending or reasonably imminent litigation and/or purchase, exchange, or lease of real property.

ADJOURNMENT

At 10:09 pm, Council Member Miller moved to adjourn. Council Member Stevenson seconded the motion. The vote was as follows:

Council Member Broadhead	aye
Council Member Hathaway	aye
Council Member Jeffs	aye
Council Member Miller	aye
Council Member Stevenson	aye

The motion passed unanimously.

Approved on January 18, 2017.

Kirk Hunsaker, Mayor

Susan B. Farnsworth, City Recorder

CITY COUNCIL 01-04-17
ATTACHMENT "A-1"

"A"

My name is David Wride and my family and I live at 745 East 300 South. I am here tonight to tell you about an issue with a neighbor who runs a home business that involves the use of heavy equipment.

About two years ago, new neighbors (the Durrants) moved in across the street. Mr. Durrant runs a landscaping business out of his home and parks his 2 full sized, triple axle dump trucks on his lot, in a large parking lot he has created next to his house. This parking lot is directly across from our home and drive way. There are three main concerns with this home business. First, the noise and exhaust from the trucks, second, concerns about property value, and finally, concerns about neighborhood safety.

Every morning until a few weeks ago when the snow got too deep, usually between 5:30 and 6:30 am, he starts up his dump truck, idles it for awhile, and then rumbles down the street. He employs another driver who also comes early in the morning in his own vehicle and starts up the second dump truck. So we have 2 dump trucks that go in and out of our neighborhood every day, early in the morning. We haven't needed alarm clocks for a long time. Our two youngest children have bedrooms in the front of our house, and they have woke up early all summer because of the noise. Our two closest neighbors have also been consistently wakened by the trucks. When Mr. Durrant decides to work on his dump trucks, which is generally on the weekend, sometimes our windows shake from the vibration and the exhaust and noise have made it next to impossible to enjoy our front yard or leave our windows open, especially on the weekend. He also occasionally uses his air brakes when he goes down the hill on 730 East.

Besides the noise and the exhaust, we are also concerned about our property value and the integrity of our residential neighborhood. For example, there is an empty lot next door to us that Ryan and Janelle Staheli own. The Stahelis could not be here tonight, but wanted us to be sure to mention their concerns. They had originally planned on building a new home on the lot, but since the dump trucks have arrived, they have decided to wait before they build. When we bought our lot and built our dream home 14 years ago, we didn't plan on living across the street from a truck stop. We have lived here for a long time, and are active in the community. We love Santaquin, but now we are seriously considering moving because of what's going on across the street. We are worried about selling out home and our property value, because who else wants to live across the street from two dump trucks??? The entire side yard of his house is a giant parking lot for his business that includes two dump trucks, two trailers, a tractor, and two diesel pick up trucks, among other things. Since he moved in two years ago, he has steadily added more and more business related equipment, and the expansion of his business is a huge concern to the neighborhood.

Finally, there are safety concerns as well. In the afternoon, both trucks rumble up the street when there are lots of kids playing outside. Several neighbors with young children who live on 730 East have mentioned their concern with the heavy equipment traffic. Each dump truck makes as many as 6 trips (back and forth) each day. In addition to these trips, Mr. Durrant often pulls one of the trucks out again in the late afternoon and parks it on the street so he can access a trailer or other business vehicle from his parking lot. Then he starts the truck up again, and backs it back into the

parking lot. We have had to wait several times to get into our own driveway because he blocks the road while he shuffles all of his equipment. We have seen kids stop and wait on the sidewalk because they aren't sure if they should keep walking on the sidewalk when the trucks start up, so they often run across the street and walk on our side. We have seen kids on bikes do the same thing. They are not sure what to do since the trucks pull out over the sidewalks and use the entire length of the road to back in and out.

We are hoping that a solution can be reached that will allow us to enjoy our home and neighborhood again. We used to sit in our front yard and play basketball with our boys, or watch our younger kids ride their bikes in the area in front of our home. We don't do this anymore, mostly because there is a lot going on across the street. We just want to enjoy a peaceful and quiet neighborhood.

Update: When we initially talked with Dennis Marker about this situation, and he did some research and found out that Mr. Durrant doesn't have a business license in Santaquin. Because he doesn't have a license, Dennis said that Mr. Durrant would get a letter from the city and would have to comply with city code regarding a home business. These regulations included having the dump trucks behind a fence (or not on the property at all), and not working on them on the property. He is also out of compliance because of the daily dust, noise, and exhaust and negative effect to property value. This phrase about dust, noise is found right on Santaquin city's home business application.

So we waited a few months, and then asked again if the letter had been sent, and Dennis told us that Mr. Durrant said he has a business license in Springville, so the rules about a home business do not apply to him. Does this make any sense? We have other neighbors who run day cares and hair salons out of their homes, and they have to comply with city code. These businesses do not bother anyone, but the owners still have to comply. And then our neighbor with the noise, exhaust, and heavy equipment can do whatever he wants because he says he has a business license in another city? This is why we are begging you to consider a parking ordinance in the city.

Thanks for your consideration in this matter.

Also stores other business equipment including 2 trailers to haul firewood, a tractor, and 2 diesel pick up trucks to pull the trailers. Shuffles all of this equipment around on a daily basis

CITY COUNCIL 01-04-17
ATTACHMENT "A-4"



Works on trucks and idles them for long periods regularly.

CITY COUNCIL 01-04-17
ATTACHMENT "A-3"



CITY COUNCIL 01-04-17
ATTACHMENT "A-2"



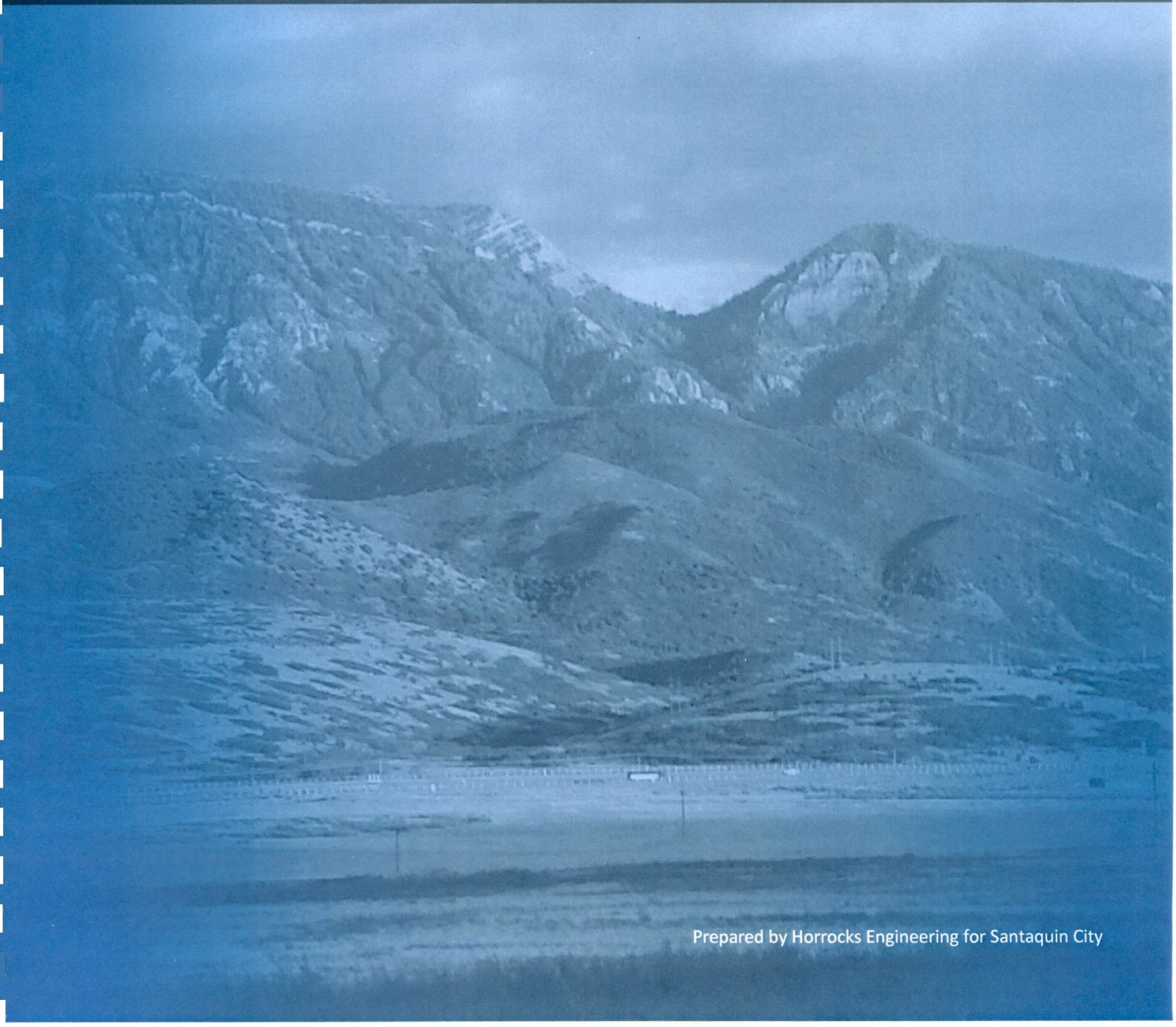
CITY COUNCIL 01-04-17
ATTACHMENT "B"

Santaquin
A Breath of Fresh Air

PARKS AND RECREATION IMPACT FEE FACILITIES PLAN & IMPACT FEE ANALYSIS

Santaquin City

NOVEMBER 2016



Prepared by Horrocks Engineering for Santaquin City

Impact Fee Facilities Plan Certification Page

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;

    d. existing deficiencies documented as such and not meant for inclusion in impact analysis.

2. Does not include:

    a. costs of operation and maintenance of public facilities;

    b. costs for qualifying public facilities that will raise the level of service for the facilities, through impact fees, above the level of service that is supported by existing residents;

    c. an expense for overhead, unless the expense is calculated pursuant to a methodology that is consistent with generally accepted cost accounting practices and the methodological standards set forth by the federal Office of Management and Budget for federal grant reimbursement; and

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

Brent R. Ventura, P.E.

Impact Fee Analysis Certification Page

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. costs of operation and maintenance of public facilities;

   b. costs for qualifying public facilities that will raise the level of service for the facilities, through impact fees, above the level of service that is supported by existing residents;

   c. an expense for overhead, unless the expense is calculated pursuant to a methodology that is consistent with generally accepted cost accounting practices and the methodological standards set forth by the federal Office of Management and Budget for federal grant reimbursement;

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.

Brent R. Ventura, P.E.

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Demographics

Demographics form the basis of the projections in each chapter of this study. Existing demographics information was obtained from the 2014 Sanitary Sewer Master Plan performed by JUB Engineers. Future population projections provide the basis for determining the needs of the city based upon the current Level of Service (LOS). Presently, Santaquin city has approximately 12,896 residents and is projected to grow to nearly 32,737 by the year 2045.

Parks and Recreation

This study identifies the existing parks and recreation facilities. Santaquin has previously provided $1,031,854 of parks and recreational facilities per 1,000 residents. In order to maintain this LOS, a conceptual plan for constructing future parks and recreation facilities for the City identifies $67.41 million (2016 dollars) of future projects.

Impact Fee Analysis

Impact fees have been calculated based on detailed analysis of the parks and recreation facility. The parks/recreation facilities are planned to service all residents. Therefore, impact fees are based upon one service area.

Although Santaquin is not required to enact impact fees exactly as outlined in this study, it may not impose fees higher than what is recommended. The following are the fees recommended to finance the required future infrastructure.

		City Wide Impact Fee
Parks and Recreation		
Single Family Dwelling	Dwelling Unit or Connection	$ 3,817
Multi-Family	Dwelling Unit or Connection	$ 3,095

*Definitions and explanations of development types can be found in the Appendix

Santaquin City is a growing community located in Utah County. Santaquin was established in 1851 and has approximately 12,896 residents. As growth continues in Utah County, Santaquin is projected to grow to approximately 32,737 by the year 2045 as discussed in the following chapter.

This Impact Fee Facilities Plan (IFFP) analyzes Santaquin's future parks and recreation projected needs as it grows. It contains separate chapters outlining the Impact Fee Facilities Plan and Impact Fee Analysis (IFA). These plans will provide a prioritized project schedule for construction, cost estimates (in planning year dollars) and recommended impact fee levels based upon the projects required to accommodate new growth in the next six years.

Proportionate Share

This document attempts to assign only a proportionate share of costs for future improvements due to growth from future developments. It is evident that the cost of much of the existing infrastructure in many of the elements cannot be assigned a legitimate dollar value per resident since very little information is available as to how existing infrastructure was financed, what share the City financed, what agency constructed the improvement, and how much the improvements actually cost. Therefore, in accordance with the Utah Impact Fees Act, Title 11, Chapter 36a, every effort has been made to evaluate impact fees considering only those costs that are attributable to future growth. As such, a current Level of Service (LOS) has been defined for each element and master planning performed to maintain the existing standards. Impact fees have been evaluated assigning the costs associated with maintaining these standards to future development as Santaquin City grows.

Impact Fee Adjustments

Santaquin City understands that future developments will each have individualized impacts on the City and therefore, in order to impose impact fees fairly, the City may adjust standard impact fees to meet unusual circumstances as allowed by State Code. Adjustments may be made for any of a number of reasons including studies or data submitted by the developer, land dedicated as a condition of development, and/or system improvements constructed by a new development.

The first step in updating any Impact Fee Facilities Plan is to evaluate the City's current demographics and future population projections. The following section discusses Santaquin City's population, growth trends, and projected build-out population.

2.1 Existing Conditions

Current Population

In April 2010, Santaquin's population was estimated by the US Census Bureau to be 9,128 residents. The current population is estimated to be approximately 12,896 residents. This information was taken from the 2014 sanitary sewer master plan performed by JUB Engineers.

Average Residents per Household

For purposes of this Impact Fee Facilities Plan (IFFP), the current average household density was estimated at 3.7 residents per household, per the 2010 Census.

2.2 Current & Future Growth

Current Growth Trends

Forecasting the City's future needs relies heavily upon projecting future population trends and economic growth. The future growth projections were taken from the 2014 sanitary sewer master plan update performed by JUB Engineers.

Future Growth Trends

Table 2-1 gives the overall projected growth patterns as projected for this impact fee facilities plan.

Table 2-1: Growth Projections for Santaquin City

Year	Population	Estimated Annual Growth Rate
2014	10,689	6.20%
2015	11,341	6.10%
2016	12,044	6.20%
2017	12,791	6.20%
2018	13,584	6.20%
2019	14,426	6.20%
2020	15,321	6.20%
2021	15,889	3.71%
2022	16,478	3.71%
2023	17,090	3.71%
2024	17,724	3.71%
2025	18,381	3.71%
2026	19,063	3.71%
2027	19,771	3.71%

2028	20,504	3.71%
2029	21,265	3.71%
2030	22,054	3.71%
2031	22,726	3.05%
2032	23,419	3.05%
2033	24,134	3.05%
2034	24,870	3.05%
2035	25,628	3.05%
2036	26,410	3.05%
2037	27,216	3.05%
2038	28,046	3.05%
2039	28,901	3.05%
2040	29,783	3.05%
2041	30,351	1.91%
2042	30,932	1.91%
2043	31,522	1.91%
2044	32,124	1.91%
2045	32,737	1.91%
2046	33,363	1.91%
2047	34,000	1.91%
2048	34,649	1.91%
2049	35,311	1.91%
2050	35,986	1.91%
2051	36,565	1.61%
2052	37,154	1.61%
2053	37,752	1.61%
2054	38,360	1.61%
2055	38,977	1.61%
2056	39,605	1.61%
2057	40,242	1.61%
2058	40,890	1.61%
2059	41,549	1.61%
2060	42,218	1.61%

Santaquin City provides high quality of life and health to the community through their parks and recreation facilities. To maintain this quality of life the city must continue to provide new parks and recreation facilities as the population grows.

3.1 Level of Service (LOS)

As Santaquin City has grown, it has become apparent that the City will need to provide its citizens with recreation facilities that are not all measurable by acreage. Therefore, Santaquin will define its level of service in terms of value. In the 2009 "Parks, Trails and Open Space Impact Fee Analysis, this measure was used.

Currently, the City provides approximately 118.4 acres of open space throughout the city. Of that acreage, the City has developed 52.09 acres of recreational space including 13 city parks, a rodeo facility, a baseball complex and 0.51 miles of developed trails. Therefore, Santaquin provides:

$$52.09 \text{ acres} / 7{,}713 \text{ residents} = 6.75 \text{ acres of per 1000 residents.}$$

Since parks are constructed on a large scale basis and not per person, and new development has increased rapidly in the past couple of years, Santaquin City has continued to construct recreational facilities. At each update of this document, the acreage per 1,000 residents that is currently available will depend on how recently a park was constructed, at times calculating to greater than or less than the current LOS.

The currently defined LOS is based on Santaquin's historic expenditures on recreation facilities. As defined in the 2009 IFA the impact fee eligible value of the existing parks and recreation facilities, their land, facilities and amenities is documented as $6,991,067.08. At that time, it was estimated that there were 7,713 residents in Santaquin. As a result, the historic LOS calculates to be:

$6,991,067.08 (previous facilities value)/ 7,713 (previous residents) = $906,401/1,000 residents

However Santaquin has exchanged density eligibility on development projects for land, which were turned into city parks. The city has also used non-impact fee money to increase the valve of some of its existing parks. The current value of existing parks and recreation facilities is $13,306,793.67. The current population of Santaquin is 12,896 residents. Therefore, the new LOS is calculated to be

$13,306,793.67 (current facilities value)/12,896(current residents) = $1,031,854/1,000 residents

3.2 Existing Facilities

Table 3-1 shows a current inventory of trails in Santaquin City and their present day value. Table 3-2 summarizes the current inventory of parks within the city as illustrated

in Figure 3-1. Cost estimates include land, infrastructure and amenities, but no operation, personnel or maintenance costs.

Table 3-1: Existing Trails Inventory

Trails	Area (acres)	2009 Value*	2016 Estimated Value
Trails	0.51	$32,462	38,761
TOTAL	**0.51**	**$32,462**	**$38,761**

Table 3-2: Existing Parks Inventory

Parks	Area (acres)	2009 Value*	2016 Estimated Value
Rodeo Arena	6.20	$1,055,694	$1,203,485
Santaquin Ball Complex	5.23	$702,189	$800,218
Centennial Park	6.25	$1,215,370	$1,381,210
Squash Head Park	0.85	$136,820	$171,048
City Center Park	3.50	$389,271	$446,137
Eastside Park	3.00	$556,405	$706,348
Orchard Lane (Cottonwood Park)	0.33	$91,830	$114,152
Orchard Hills (Santaquin Meadows)	3.81	$593,410	$673,323
Orchard Cove Park	3.19	$229,800	$846,585
Sunset Trails Park	2.79	$313,450	$761,510
Theodore Ahlin Park	16.94	$931,700	$1,259,456
City Cemetery	12.6	-	$1,952,496
Peter Rabbit Springs	32.64	-	$2,132,697
Stone Hollow Park	12.54	-	$819,363
400 East Park	0.5	-	$32,670
Highline Park	7.98	-	$521,413
TOTAL	**118.4**	**$6,215,939**	**$13,268,032**

*Note: Values for these facilities are based on 2009 cost estimates provided in the Parks, Trails and Open Space IFA prepared by Zion's Bank.

The 2016 values were calculated by Santaquin City. They include the land cost, improvement value, inflation and additional staff costs.

3.3 Future Facilities

This chapter analyzes the growth period of 2015 to 2045 when the projected population will be approximately 32,747. In order to maintain the existing LOS, Santaquin will need to continue to provide recreational facilities valuing approximately $1,031,854 per 1,000 residents. In other words, to provide the necessary facilities, Santaquin will need to construct facilities valuing approximately $33,790,134 (i.e. 32,747 x $1,031,854/1,000) to provide for the estimated 2045 population.

3.4 Capital Facilities Plan

The city already has plans to develop additional parks and trails to help maintain its unique position as a leader in recreational properties and activities. As Santaquin grows, it will need additional facilities like these to help meet the needs of a growing population. Figure 3-2, Table 3-3 and Table 3-4 illustrate a conceptual plan for developing the required future parks to maintain its current LOS.

Table 3-3 – Conceptual Parks Capital Facilities Estimates

Project	Area (acres)	Estimated Constr. Year	Cost (2015)
400 East Gateway	.5	2016	$571,593
Rodeo (Addition)	3.62	2017	$2,535,970
Peter Rabbit	6.42	2019	$1,968,882
Foothill Park	2.0	2019	$1,086,807
Summit Ridge 35	35	2020	$6,857,070
Stone Hollow	15.34	2021	$3,760,721
Theodore Ahlin Park	16.94	2023	$2,363,348
City Cemetery	12.6	2025	$1,093,859
Orchard Hills Park	7.35	2026	$3,377,207
Highline Park	7.69	2028	$1,768,601
Rec Center	31.33	2030+	$34,622,322
Total			**$60,006,380**

Table 3-4 – Conceptual Trails Capital Facilities Estimates

Project	Area (acres)	Estimated Constr. Year	Cost (2015)
Farmers Lane Trail	4.09	2016	$419,653
Highland Drive Trail (City)	4.16	2017	$943,117
Orchard Connector Trail	7.80	2018	$1,414,676
400 East Trail (North)	2.05	2019	$296,886
400 East Trail	1.05	2020	$220,765
9th Street Trail	.97	2020	$186,088
200 West Trail	.56	2021	$328,236
Summit 35 Trail	.71	2022	$162,660
Summit Ridge Parkway Trail (South-Match)	.62	2023	$6,670
Highland Drive Trail (Match)	3.52	2024	$55,811
Highway 6 Trail (Match)	1.21	2025	$56,265
500 West Trail	.61	2026	$175,988
100 South Trail	1.27	2027	$740,043
Stone Hollow Reservoir Trail	1.43	2028	$162,848
400 South Trail	.92	2029	$167,532
500 South Trail (East)	.59	2030	$172,391
500 South Trail (West)	1.78	2030+	$273,630
500 West Trail	.61	2030+	$221,244

198 Trail (Match)	4.13	2030+	$80,500
Center Street Trail	3.76	2030+	$815,342
Santaquin Canyon Urban Trail (City)	.45	2030+	$104,660
Santaquin Canyon Urban Trail (Match)	.12	2030+	$2,032
Santaquin Canyon Multi-Use Trail (city)	2.68	2030+	$375,382
Santaquin Canyon Multi-Use Trail (Match)	2.16	2030+	$21,208
Total			**$7,403,627**



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HORROCKS ENGINEERS

2162 West Gro
Suite 400
Pleasant Grove
(801) 763-5100

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HORROCKS ENGINEERS

2162 West Gro
Suite 400
Pleasant Grove
(801) 763-5100

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Impact fees provide communities with a legal means to obtain funds from new developments to finance the construction of infrastructure improvements that are needed to serve new growth. State law requires that impact fees be used only for projects made necessary by new growth and not for existing deficiencies. Throughout this study, existing conditions have been analyzed as well as future needs due to development and growth. This section defines the financial impact that new development will have on Santaquin City in the next six years and recommends impact fees for park and recreation element analyzed in this study. These fees will be needed to maintain the existing level of service throughout the City. It does not include existing deficiencies.

4.1 Parks and Recreation IFFP

Chapter 3 - Parks and Recreation Planning outlines the parks anticipated to be built throughout Santaquin to maintain its current level of service for parks and recreational facilities. Table 3-1 outlines the proposed projects and their costs in 2016 dollars. Projects that are projected to be constructed within the next six years and are eligible to be funded by impact fees total $20,753,124 are detailed below and summarized in Table 4-1. These projects and costs were taken from the Santaquin City Parks, Recreation, Trails and Open Space Master Plan prepared by Blu Line Designs from May 2016.

Eligible Projects

400 East Gateway – is a ½ acre park that is planned to be built. The need of this park is driven by development within the city.

Farmers Lane Trail – is a 4.09 acre trail that is planned to be built. The need of this trail is driven by development within the city.

Rodeo Grounds – is a 3.62 acre addition to the existing park that is planned to be built. This park will include grandstands, trailer parking, vendor booth areas, warm up pen, rodeo office, restrooms, a new barn, ticketing booth, and parking. The need of this addition is driven by development within the city.

Highland Drive Trail (City) – is a 4.16 acre trail that is planned to be built. The need of this trail is driven by development within the city.

Orchard Connector Trail – is a 7.80 acre trail that is planned to be built. The need of this trail is driven by development within the city.

Peter Rabbit – is a 6.42 acre park that is planned to be built. This park includes open space along with a playground as well as a pavilion. The need of this park is driven by development within the city

400 East Trail (North) – is a 2.05 acre trail that is planned to be built. The need of this trail is driven by development within the city.

Foothill Park – is a 2 acre park neighborhood park planned to be built. This park is development driven and will serve as an active recreation area to compliment the passive opportunities at Theodore L Ahlin Park.

Summit Ridge 35 – is a 35 acre park that is planned to be built. This park includes 6 championship size soccer fields and 2 baseball diamonds. The need of this park is driven by development within the city.

400 East Trail – is a 1.5 acre trail that is planned to be built. This need of this trail is driven by development within the city.

9th Street Trail – is a .97 acre trail that is planned to be built. The need of this trail is driven by development within the city.

Stone Hollow – is a 15.3 acre park that is planned to be built. This park includes multi-purpose fields, sport courts, large pavilion, restrooms, meandering paths and a playground. The need of this park is driven by development within the city.

200 West Trail – is a .56 acre trail that is planned to be built. The need of this trail is driven by development within the city.

Summit 35 Trail – is a .71 acre trail that is planned to be built. The need of this trail is driven by development within the city.

Table 4-1: Parks and Recreation Impact Fee Facilities Estimates

Future Facility	2015 Estimate (Millions)	Projected Constr. Year	Funding Source
400 East Gateway	$571,593	2016	Impact Fees
Farmers Lane Trail	$419,653	2016	Impact Fees
Rodeo Grounds	$2,535,970	2017	Impact Fees
Highland Drive Trail (City)	$943,117	2017	Impact Fees
Orchard Connector Trail	$1,414,676	2018	Impact Fees
Peter Rabbit	$1,968,882	2019	Impact Fees
400 East Trail (North)	$296,886	2019	Impact Fees
Foothill Park	$1,086,807	2019	Impact Fees
Summit Ridge 35	$6,857,070	2020	Impact Fees
400 East Trail	$220,765	2020	Impact Fees
9th Street Trail	$186,088	2020	Impact Fees
Stone Hollow	$3,760,721	2021	Impact Fees
200 West Trail	$328,236	2021	Impact Fees
Summit 35 Trail	$162,660	2022	Impact Fees
Total	**$ 20,753,124**		

Impact fees charged for new development are based on the ERC generations of proposed developments. According to the current state law, impact fees must use a six year planning window to encumber the funds. Therefore, the calculations in this chapter consider only those projects that are planned to be constructed or encumbered within the next six years. Budgetary costs were evaluated in future dollars (proposed project planning year dollars), assuming an inflation rate of 6% per year. They consider and assume current and future projects can be financed by 10 year loans with a 4% interest rate.

5.1 Parks and Recreation Impact Fees

Chapter 4 - Parks and Recreation Planning outlines the parks anticipated to be built throughout Santaquin to maintain its current level of service for parks and recreational facilities.

As shown in Table 5-1, in the next six years, many parks will be constructed.

Table 5-1: Parks and Recreation Impact Fee Analysis Estimates

Future Facility	2015 Estimate (Millions)	Projected Constr. Year
400 East Gateway	$571,593	2016
Farmers Lane Trail	$419,653	2016
Rodeo Grounds	$2,535,970	2017
Highland Drive Trail (City)	$521,240	2017
Orchard Connector Trail	$1,414,676	2018
Peter Rabbit	$1,968,882	2019
400 East Trail (North)	$296,886	2019
Foothill Park	$1,086,807	2019
Summit Ridge 35	$6,857,070	2020
400 East Trail	$220,765	2020
9th Street Trail	$186,088	2020
Stone Hollow	$3,760,721	2021
200 West Trail	$328,236	2021
Summit 35 Trail	$162,660	2022
Total	**$ 20,753,124**	

Ultimately, new development will require $33,790,134. As calculated in Chapter 3, LOS for parks and recreation facilities is $1,031.85 of new recreation facilities per resident. Therefore, these planned facilities from table 4.1, will serve 20,112 new residents (i.e. $20,753,124 / $1,031.85).

Since the parks and recreation impact fees are calculated per resident and it is apparent that new types of development are coming to Santaquin, the following schedule of impact fees is currently recommended based on typical occupancy rates of different types of housing.

Single Family (3.7 residents/unit) = 3.7 x $1,031.85= **$3,817.86 (use 3,817)**

Multi-Family (3 residents/unit) = 3 x $1,031.85= **$3,095.56 (use 3,095)**

Since this impact fee is based upon the 2016 value of existing infrastructure, it is also recommended that the parks impact fee be adjusted on a yearly basis to reflect changes in the Construction Cost Index (CCI) published by the Engineering News-Record (ENR). The current CCR is 10092.

Appendix “A”

Demographics

Appendix “B”

Parks and Recreation

Appendix "C"

Applicable State Codes

Appendix "B"

Parks and Recreation

Density Eli	Facility	Acres	Land Cost (1.50/s.f.)	Improvement Value 2009	2009 improvement Value Inflated to 2016	Inflated Added Value since 2009	Total Improvement Value	Improvement Donation/Grant Value	Impact Fees Used
No	Centennial Park	6.25	$ 408,375.00	$ 871,620.00	$ 959,355.35	$ 7,500.00	$ 966,855.35	$ 4,426.59	$ 18,070.09
No	City Center	3.5	$ 228,690.00	$ 196,771.30	$ 217,447.66	$ -	$ 217,447.66	$ -	
Yes	Cottonwood Park (Orchard Lane)	0.33	$ 18,112.25	$ 64,330.00	$ 71,089.67	$ 22,095.77	$ 93,185.44	$ -	
No	Squash Head Park	0.85	$ 55,539.00	$ 90,070.00	$ 99,534.39	$ 10,604.52	$ 110,138.91	$ -	
Yes	Eastside Park	3	$ 196,020.00	$ 391,405.00	$ 432,533.10	$ 70,835.76	$ 503,368.86	$ 2,500.00	$ 583,853.83
Yes	Orchard Cove Park	3.19	$ 208,434.60	$ 135,750.00	$ 150,014.35	$ 459,907.89	$ 609,922.25	$ 5,424.38	$ 125,556.96
Yes	Peter Rabbit Springs	32.64	$ 2,132,697.60	$ -	$ -	$ -	$ -	$ -	
No	Rodeo Arena	6.2	$ 405,108.00	$ 714,694.00	$ 789,792.69	$ -	$ 789,792.69	$ 9,404.95	
No	Santaquin Ball Complex	5.23	$ 341,728.20	$ 414,538.63	$ 458,097.56	$ 178.07	$ 458,275.63	$ 4,884.13	$ 172.50
Yes	Santaquin Meadows (Orchard Hills)	3.81	$ 248,945.40	$ 384,025.03	$ 424,377.65	$ -	$ 424,377.65	$ -	
Yes	Stone Hollow Park	12.54	$ 819,363.60	$ -	$ -	$ -	$ -	$ -	
Yes	Sunset Trails	2.79	$ 182,298.60	$ 160,000.00	$ 176,812.50	$ 397,461.49	$ 574,273.99	$ -	$ 63,702.92
Yes	Theodore Ahlin	16.94	$ 1,106,859.60	$ -	$ -	$ 135,316.96	$ 135,316.96	$ 65,491.21	$ 69,825.75
No	400 East Park	0.5	$ 32,670.00						$ 9,005.00
Yes	Highline Canal Park	7.98	$ 521,413.20						$ 10,308.16
		105.8						**$ 92,131.26**	**$ 880,495.21**
No	City Cemetery	12.6	$ 823,284.00	$ -	$ -	$ 1,129,212.00	$ 1,129,212.00	$ -	
	Trails	0.51	$ 33,323.40						

Additional Staff Costs re: improvements (conservative estimate)	Total Replacement Value		2009 Inflation Factors								Improvement Inflation Factors						
		Annual Inflation	2009 -0.4%	2010 1.6%	2011 3.2%	2012 2.1%	2013 1.5%	2014 1.6%	2015 0.1%	CPI	2009 -0.4%	2010 1.6%	2011 3.2%	2012 2.1%	2013 1.5%	2014 1.6%	2015 0.1%
$ 5,980.04	$ 1,381,210.39		868133.5	882023.7	910248.4	929363.6	943304.1	958396.9	959355.3								7500
$ -	$ 446,137.66		196771.3	199919.6	206317.1	210649.7	213809.5	217230.4	217447.7								
$ 2,854.87	$ 114,152.56		64330	65359.28	67450.78	68867.24	69900.25	71018.66	71089.67					21405	21726.08	22073.69	22095.77
$ 5,370.55	$ 171,048.45		90070	91511.12	94439.48	96422.7	97869.05	99434.95	99534.39			0	0	10273	10427.1	10593.93	10604.52
$ 6,959.37	$ 706,348.23		391405	397667.5	410392.8	419011.1	425296.3	432101	432533.1			0	0	66197	67189.96	70764.99	70835.76
$ 28,228.19	$ 846,585.03		135750	137922	142335.5	145324.5	147504.4	149864.5	150014.4			0	0	391669	452213	459448.4	459907.9
	$ 2,132,697.60		0	0	0	0	0	0	0			0	0	0	0	0	0
$ 8,584.47	$ 1,203,485.16		714694	726129.1	749365.2	765101.9	776578.4	789003.7	789792.7			0	0	0	0	0	0
$ 214.59	$ 800,218.42		414538.6	421171.2	434648.7	443776.4	450433	457639.9	458097.6			0	0	172.5	175.0875	177.8889	178.0668
$ -	$ 673,323.05		384025	390169.4	402654.9	411110.6	417277.3	423953.7	424377.7			0	0	0	0	0	0
	$ 819,363.60		0	0	0	0	0	0	0			0	0	0	0	0	0
$ 4,937.54	$ 761,510.13		160000	162560	167761.9	171284.9	173854.2	176635.9	176812.5		301229	306048.7	315842.2	385035.9	390811.4	397064.4	397461.5
$ 17,279.84	$ 1,259,456.40		0	0	0	0	0	0	0								135317
	$ 32,670.00																
	$ 521,413.20																
$ 80,409.44	**$ 11,315,536.67**																
	$ 1,952,496.00			0	0	0	0	0	0					1725	1750.875	1778.889	1780.668

FIGURE 3.3 - 400 EAST GATEWAY PARK

Location: 400 East Main Street
Park Type: Pocket Park
Size: 0.50 Acres
Narrative:
Located along the entry into downtown Santaquin from I-15, the 400 East Gateway Park will serve as an announcement and welcome to Santaquin as well as a space for rest, gathering, and reflection on Santaquin's past. Key elements of the park will be planting that reflects the farming and orchard heritage of Santaquin; sculpture/monument features that commemorate those that came before; a Santaquin entry sign; architectural features that provide shade and that emphasize the connection to future development to the northeast; and lawn areas that can accommodate community events such as a farmers market.

Estimated Cost: $571,593 (see Appendix for full estimate)

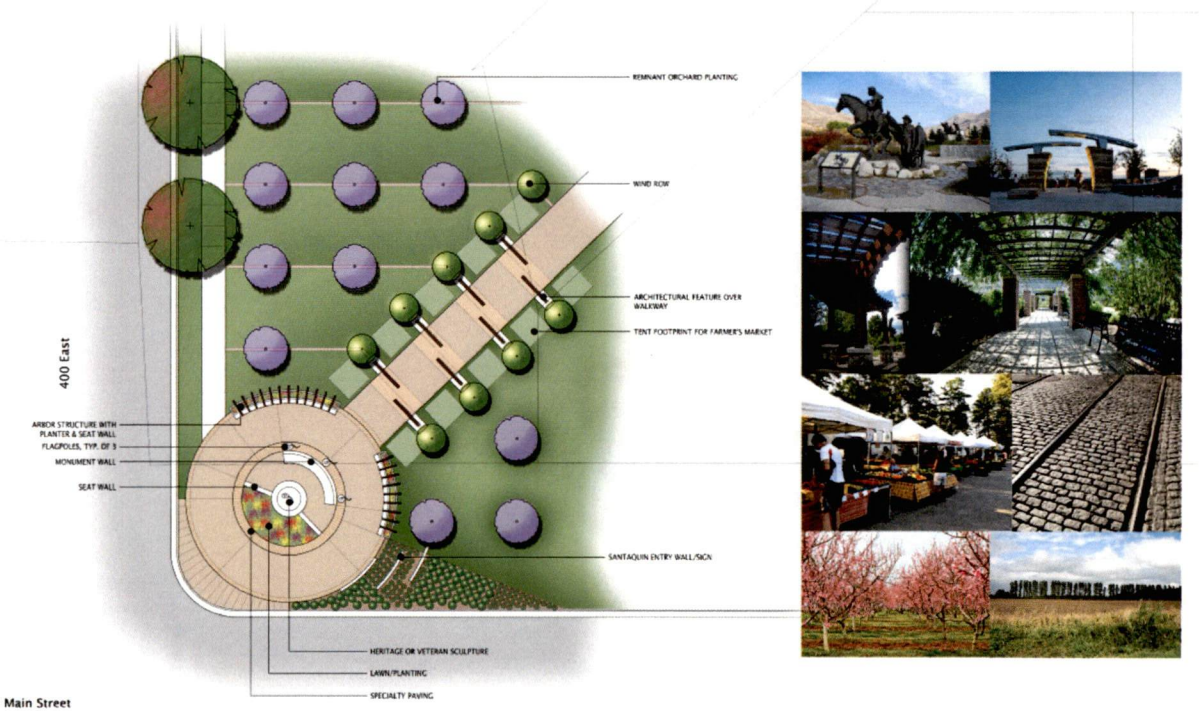


FIGURE 3.4 - CITY CEMETERY



Location: 100 East 300 South
Park Type: --
Size: 12.6 Acres
Narrative:
The existing cemetery is not completely built-out with the un-plotted acreage on the western third of the site being programmed for soccer games. This temporary use will quickly come to an end as the land will need to be utilized for cemetery plots. This plan proposes the expansion and completion of the cemetery into this western third including a monument entry and access road from Center Street, circulation roads, a plaza and connection to the existing Memorial Plaza at the end of this new access road, additional landscaping including proposed street trees around the perimeter of the site, and a new wrought iron fence that is more contextual to the cemetery than the existing chain link fence.

Estimated Cost: $1,093,859 (see Appendix for full estimate)

FIGURE 3.5 - HIGHLINE PARK

Location: Approx. Strawberry Canal Road & 5600 West
Park Type: Neighborhood Park
Size: 7.89 Acres
Narrative:
Adjacent to the new Public Works facility and with convenient access to the Highline Trail, Highline Park will be a neighborhood park with amenities supporting newer development on the north end of town. Proposed amenities of the park include an open multi-use field, a large pavilion with restroom, a playground, a basketball court, and a volleyball court based on specific input received from the community survey. Other unique features of the park may include a small off-leash dog park and a practice disc golf course. The proposed landscaping recommends bosques of ornamental trees reminiscent of the nearby orchards.

Estimated Cost: $1,768,601 (see Appendix for full estimate)



FIGURE 3.6 - ORCHARD HILLS PARK



Location: 168 East 610 South
Park Type: Community
Size: 7.35 Acres (addition)
Narrative:
This plan proposes adding an additional 7.35 acres and two additional softball fields to the existing Orchard Hills Park adjacent to Orchard Hills Elementary. This expansion will also include a scorers/concessions/restroom building, additional parking and access from 820 South, pedestrian connections to the surrounding neighborhood, a large pavilion with restroom, a playground, and sports courts.

Estimated Cost: $3,377,207 (see Appendix for full estimate)

FIGURE 3.7 - PETER RABBIT SPRINGS PARK

Location: Approx. 200 S Oak Summit Drive-
Park Type: Community Park
Size: 6.42 Acres
Narrative:
At the eastern edge of the City, Peter Rabbit Springs Park will serve as a transition between the urban and natural interface. The park will capitalize on its location by providing a playground nestled within existing vegetation, access to the regional trail system and existing natural trails in the foothills, vehicular access for both cars and equestrian trailers, a large overlook pavilion at the top of the hill to provide breathtaking views across the valley, and restrooms. The natural vegetation will be enhanced by selective turf areas to provide for informal play and relaxation.

Estimated Cost: $1,968,882 (see Appendix for full estimate)



FIGURE 3.8a - STONE HOLLOW PARK



Location: Approx. 14400 S Summit Ridge Parkway
Park Type: Community
Size: 166.68 Acres
Narrative:
This plan shows the design for a greater regional park development that extends from the Summit Ridge development on the south all the way to US 6 on the north. The full development of the park will be long term with the development of Phase I (see Figure 3.8b) a focus of this master plan document. In addition to the neighborhood park type amenities proposed in Phase I, the greater park will include miles of trails around the recharge basins, natural vegetation and potential amenities such as an off-leash dog park, a disc golf course, a bike skills course, an overlook structure, wetland boardwalks, parking, and an equestrian trailhead.

Estimated Cost: To be determined

FIGURE 3.8b - STONE HOLLOW PARK (PHASE I)

Location: Approx. 14400 S Summit Ridge Parkway
Park Type: Neighborhood
Size: 15.34 Acres
Narrative:
Phase I of the greater proposed Stone Hollow Park located at the northern end of Summit Ridge's existing development, this park will provide for existing and future residents with amenities such as a multi-purpose field, sport courts, a large pavilion with restroom, meandering paths, and a playground. The plan also proposes a more regional amenity of a skate park separated by parking from the more neighborhood type development. Dense bosques of ornamental trees are proposed along Summit Ridge Parkway to give the park a distinctive character consistent with Santaquin's heritage.

Estimated Cost: Phase I - $3,760,721 (see Appendix for full estimate)



FIGURE 3.9 - SUMMIT RIDGE 35 ACRE PARK



Location: Approx. 1300 Hillshire Drive
Park Type: Community
Size: 35 Acres
Narrative:
Coupling the need for additional sports fields with the requirement for the City to utilize this property within the next few years, the proposed plan includes up to 6 championship size soccer fields and two baseball fields. Understanding the long term potential for the property as it is located off of the rail line and at a potential UTA Frontrunner stop, the fields were laid out in a way to accommodate and anticipate a possible multi-use transit oriented development (TOD) (see inset below). As TOD development opportunities arise, the site could transition from sports fields to such uses as commercial, institutional, and multi-family housing.

Estimated Cost: $6,857,070 (see Appendix for full estimate)



Future TOD - Alternative Plan

FIGURE 3.10 - THEODORE AHLIN PARK

Location: Approx. 1125 S Pole Canyon Rd.
Park Type: Community Park
Size: 21.78 Acres
Narrative:
This plan proposes adding on the existing infrastructure and improvements that already exist - irrigation pond, fish cleaning station, and restroom. The plan proposes Theodore Ahlin Park to be further amenitized with elements such as a large pavilion, an adventure playground, meandering paths, picnicking opportunities, fishing docks, and a community amphitheater overlooking the pond and the valley to the east. With minimal irrigated turf areas, the plan proposes to capitalize on the beautiful natural setting with natural berming, materials, and landscaping.

Estimated Cost: $2,363,348 (see Appendix for full estimate)



FIGURE 3.11 - HIGH SCHOOL/RECREATION CENTER PARK



Location: Approx. 600 E 600 N
Park Type: Community
Size: 31.33 Acres
Narrative:
One of the largest desires voiced in the community survey was the need for a community recreation center/pool. This plan proposes a joint development with the Nebo School District in constructing a planned high school in conjunction with a community recreation center and pool. Further recognizing the need for additional sports fields, the plan also proposed 4 baseball/softball fields and one soccer field for City recreational use and programming. The screened back portion of the plan would be Nebo School District owned, constructed, operated, and maintained.

Estimated Cost: $34,622,322 (see Appendix for full estimate)

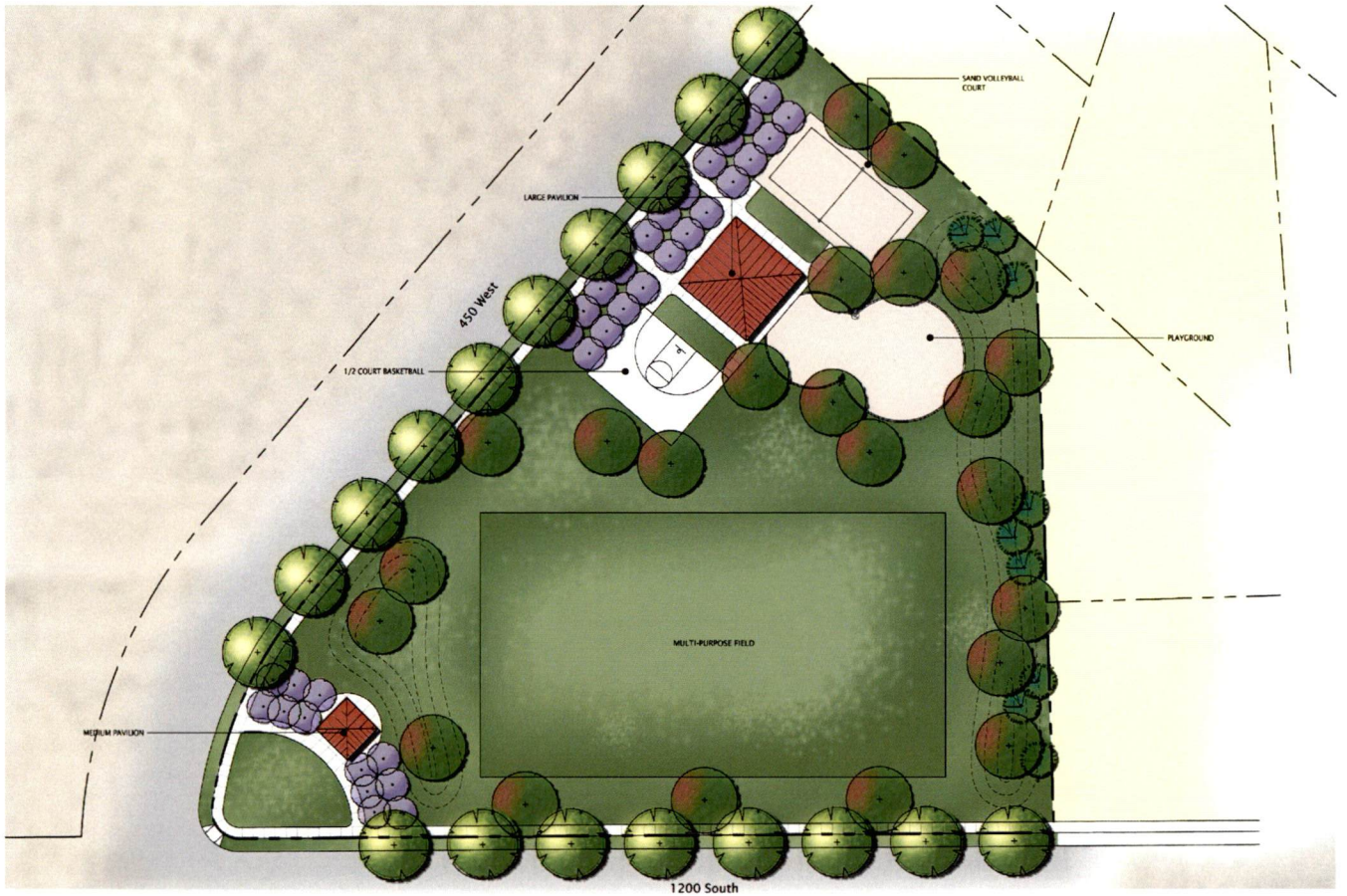
FIGURE 3.12 - RODEO GROUNDS

Location: 175 S 400 W
Park Type: Community Park
Size: 3.62 Acres (addition)
Narrative:
With the popularity and success of the rodeo and the relocation of the public works facility, the City has a need to expand and improve its rodeo facilities to compete with adjacent communities. This includes grandstand bleachers built into the existing grass berms; dedicated trailer parking near the arena; vendor booth areas; a warm up pen; the conversion of the existing public works building into a rodeo office and restrooms; a new barn structure; an entry ticketing and restroom structure; and parking lot to accommodate over 200 vehicles. This proposed expansion does eliminate the fields operated as the City Ball Complex. This expansion will need to be timed to allow for field development in other locations to mitigate the loss of fields at this location.

Estimated Cost: $2,535,970 (see Appendix for full estimate)



FIGURE 3.13 - FOOTHILL PARK



Location: 1200 South 450 West
Park Type: Neighborhood
Size: 2.0 Acres
Narrative:
Located within the proposed Foothill Village development, Foothill Park will sit just below Theodore Ahlin Park and the elk management areas of the State DWR. Foothill Park will be a neighborhood park with some small active recreation opportunities to compliment the nearby more passive Theodore Ahlin Park. Proposed park amenities may include a large pavilion, a medium pavilion, a half basketball court, a sand volleyball court,a totlot play area, sidewalk connections from the street, and a youth soccer field.

Estimated Cost: $1,086,807 (see Appendix for full estimate)

SANTAQUIN CITY

400 E. Gateway

Probable Construction Cost Estimate

07.06.16

Item	Item Description	Qty.	Units	Unit Price	Total
1	MOBILIZATION / DEMOBILIZATION	1	L.S.	$ 31,524.58	$ 31,524.58
2	SITE CLEARING AND GRUBBING	25,903	S.F.	$ 2.00	$ 51,806.00
3	SITE GRADING	25,903	S.F.	$ 0.25	$ 6,475.75
4	ADJUST EXISTING UTILITIES	1	L.S.	$ 10,000.00	$ 10,000.00
5	WATER SERVICE	1	L.S.	$ 5,000.00	$ 5,000.00
6	SEWER SERVICE	1	L.S.	$ -	$ -
7	STORM DRAINAGE	1	L.S.	$ 5,000.00	$ 5,000.00
8	LIGHTING/ELECTRICAL	1	L.S.	$ 35,000.00	$ 35,000.00
9	CONCRETE PAVEMENT	969	S.F.	$ 4.00	$ 3,876.00
10	SPECIALTY CONCRETE PAVEMENT	5,800	S.F.	$ 8.00	$ 46,400.00
11	ADA RAMPS	1	EA.	$ 1,600.00	$ 1,600.00
12	SCULPTURE/MONUMENT	1	L.S.	$ 50,000.00	$ 50,000.00
13	MONUMENT WALL	1	L.S.	$ 15,000.00	$ 15,000.00
14	OVERHEAD TRELLIS STRUCTURE	2	EA.	$ 10,000.00	$ 20,000.00
15	ARCHITECTURAL PROMENADE STRUCTURE	8	EA.	$ 7,500.00	$ 60,000.00
16	FLAG POLES	3	EA	$ 5,000.00	$ 15,000.00
17	BENCH WALLS	100	LF.	$ 100.00	$ 10,000.00
18	PLANTERS	160	LF.	$ 150.00	$ 24,000.00
19	SANTAQUIN ENTRY SIGNAGE	3	EA	$ 3,500.00	$ 10,500.00
20	DECIDUOUS TREE (2" CAL.)	12	EA.	$ 350.00	$ 4,200.00
21	EVERGREEN TREE (6' HT.)	0	EA.	$ 350.00	$ -
22	ORNAMENTAL TREE (2" CAL.)	12	EA.	$ 325.00	$ 3,900.00
23	SHRUB BED (PLANTS, 12" TOPSOIL, 3" MULCH)	1,434	S.F.	$ 4.00	$ 5,736.00
24	BLUEGRASS SOD (SOD, 6" TOPSOIL)	17,700	S.F.	$ 1.25	$ 22,125.00
25	IRRIGATION SYSTEM - DRIP	1,434	S.F.	$ 1.00	$ 1,434.00
26	IRRIGATION - SPRAY	17,700	S.F.	$ 0.75	$ 13,275.00
27	ENGINEERING AND DESIGN (10%)	1	L.S.	$ 45,185.23	$ 45,185.23
				SUB-TOTAL COST	**$ 497,037.56**
				15% Contingency	$ 74,555.63
				TOTAL ESTIMATED COST	**$ 571,593.20**

SANTAQUIN CITY

City Cemetery

Probable Construction Cost Estimate

07.06.16

Item	Item Description	Qty.	Units	Unit Price	Total
1	MOBILIZATION / DEMOBILIZATION	1	L.S.	$ 60,328.67	$ 60,328.67
2	SITE CLEARING AND GRUBBING	168,911	S.F.	$ 0.09	$ 15,201.99
3	DEMO EXISTING FENCE	3,112	L.F.	$ 10.00	$ 31,120.00
4	SITE GRADING	168,911	S.F.	$ 0.25	$ 42,227.75
5	WATER SERVICE (2 METERS)	2	EA.	$ 2,500.00	$ 5,000.00
6	SEWER SERVICE	1	L.S.	$ -	$ -
7	STORM DRAINAGE	1	L.S.	$ 2,500.00	$ 2,500.00
8	LIGHTING/ELECTRICAL	1	L.S.	$ 20,000.00	$ 20,000.00
9	ASPHALT ROADWAY	31,547	S.F.	$ 3.00	$ 94,641.00
10	CONCRETE CURB & GUTTER	600	L.F.	$ 35.00	$ 21,000.00
11	CONCRETE PAVEMENT	4,290	S.F.	$ 4.00	$ 17,160.00
12	SPECIALTY CONCRETE PAVEMENT	1,300	S.F.	$ 8.00	$ 10,400.00
13	ADA RAMPS	4	EA.	$ 1,600.00	$ 6,400.00
14	CONCRETE STEPS	288	L.F.	$ 30.00	$ 8,640.00
15	WROUGHT IRON FENCING	3,112	L.F.	$ 54.00	$ 168,048.00
16	ENTRY MONUMENTATION	2	EA.	$ 35,000.00	$ 70,000.00
17	PARK BENCH	6	EA.	$ 1,500.00	$ 9,000.00
18	DECIDUOUS TREE (2" CAL.)	69	EA.	$ 350.00	$ 24,150.00
19	EVERGREEN TREE (6' HT.)	20	EA.	$ 350.00	$ 7,000.00
20	ORNAMENTAL TREE (2" CAL.)	22	EA.	$ 325.00	$ 7,150.00
21	SHRUB BED (PLANTS, 12" TOPSOIL, 3" MULCH)	6,284	S.F.	$ 4.00	$ 25,136.00
22	BLUEGRASS SOD (SOD, 6" TOPSOIL)	125,490	S.F.	$ 1.25	$ 156,862.50
23	IRRIGATION - SPRAY	125,490	S.F.	$ 0.50	$ 62,745.00
24	ENGINEERING AND DESIGN (10%)	1	L.S.	$ 86,471.09	$ 86,471.09
				SUB-TOTAL COST	**$ 951,182.00**
				15% Contingency	$ 142,677.30
				TOTAL ESTIMATED COST	**$ 1,093,859.30**

SANTAQUIN CITY

Highline Park

Probable Construction Cost Estimate

07.06.16

Item	Item Description	Qty.	Units	Unit Price	Total
1	MOBILIZATION / DEMOBILIZATION	1	L.S.	$ 107,296.34	$ 107,296.34
2	SITE CLEARING AND GRUBBING	298,170	S.F.	$ 0.09	$ 26,835.30
3	SITE GRADING	298,170	S.F.	$ 0.25	$ 74,542.50
4	WATER SERVICE	1	L.S.	$ 12,500.00	$ 12,500.00
5	SEWER SERVICE	1	L.S.	$ 10,000.00	$ 10,000.00
6	STORM DRAINAGE	1	L.S.	$ 10,000.00	$ 10,000.00
7	LIGHTING/ELECTRICAL	1	L.S.	$ 35,000.00	$ 35,000.00
8	ASPHALT PARKING LOT	12,270	S.F.	$ 3.00	$ 36,810.00
9	CONCRETE CURB & GUTTER	756	L.F.	$ 35.00	$ 26,460.00
10	CONCRETE PAVEMENT	22,574	S.F.	$ 4.00	$ 90,296.00
11	SPECIALTY CONCRETE PAVEMENT	4,814	S.F.	$ 8.00	$ 38,512.00
12	BASKETBALL COURT	1	L.S.	$ 60,000.00	$ 60,000.00
13	VOLLEYBALL COURT	1	L.S.	$ 10,000.00	$ 10,000.00
14	DISC GOLF COURSE	1	L.S.	$ 5,000.00	$ 5,000.00
15	ADA RAMPS	5	EA.	$ 1,600.00	$ 8,000.00
16	DOG PARK FENCING	550	L.F.	$ 20.00	$ 11,000.00
17	GROUP PICNIC PAVILION/RESTROOM	1	EA.	$ 100,000.00	$ 100,000.00
18	TRASH ENCLOSURE	1	L.S.	$ 5,000.00	$ 5,000.00
19	PLAYGROUND	1	L.S.	$ 151,809.00	$ 151,809.00
20	PARK BENCH	14	EA.	$ 1,500.00	$ 21,000.00
21	PICNIC TABLE	20	EA.	$ 1,200.00	$ 24,000.00
22	BICYCLE RACK	1	EA.	$ 1,000.00	$ 1,000.00
23	PARK SIGNAGE	1	EA	$ 2,500.00	$ 2,500.00
24	PERIMETER FENCING	851	L.F.	$ 20.00	$ 17,020.00
25	DECIDUOUS TREE (2" CAL.)	57	EA.	$ 350.00	$ 19,950.00
26	EVERGREEN TREE (6' HT.)	12	EA.	$ 350.00	$ 4,200.00
27	ORNAMENTAL TREE (2" CAL.)	39	EA.	$ 325.00	$ 12,675.00
28	SHRUB BED (PLANTS, 12" TOPSOIL, 3" MULCH)	8,667	S.F.	$ 4.00	$ 34,668.00
29	BLUEGRASS SOD (SOD, 6" TOPSOIL)	200,069	S.F.	$ 1.25	$ 250,086.25
30	NATIVE SEED (SEED, 4" TOPSOIL)	37,373	S.F.	$ 0.40	$ 14,949.20
31	IRRIGATION SYSTEM - DRIP	8,667	S.F.	$ 1.00	$ 8,667.00
32	IRRIGATION - SPRAY	237,442	S.F.	$ 0.75	$ 178,081.50
33	ENGINEERING AND DESIGN (10%)	1	L.S.	$ 130,056.18	$ 130,056.18
				SUB-TOTAL COST	**$ 1,537,914.27**
				15% Contingency	$ 230,687.14
				TOTAL ESTIMATED COST	**$ 1,768,601.41**

SANTAQUIN CITY

Orchard Hills Park

Probable Construction Cost Estimate

07.06.16

Item	Item Description	Qty.	Units	Unit Price	Total
1	MOBILIZATION / DEMOBILIZATION	1	L.S.	$ 165,603.01	$ 165,603.01
2	SITE CLEARING AND GRUBBING	351,940	S.F.	$ 0.09	$ 31,674.60
3	SITE GRADING	351,940	S.F.	$ 0.25	$ 87,985.00
4	WATER SERVICE	1	L.S.	$ 15,000.00	$ 15,000.00
5	SEWER SERVICE	1	L.S.	$ 15,000.00	$ 15,000.00
6	STORM DRAINAGE	1	L.S.	$ 30,000.00	$ 30,000.00
7	LIGHTING/ELECTRICAL	1	L.S.	$ 35,000.00	$ 35,000.00
8	ASPHALT PARKING LOT	24,944	S.F.	$ 3.00	$ 74,832.00
9	CONCRETE CURB & GUTTER	1,306	L.F.	$ 35.00	$ 45,710.00
10	CONCRETE PAVEMENT	47,009	S.F.	$ 4.00	$ 188,036.00
11	SPECIALTY CONCRETE PAVEMENT	3,375	S.F.	$ 8.00	$ 27,000.00
12	TENNIS COURTS (NOT LIGHTED)	2	EA.	$ 125,000.00	$ 250,000.00
13	ADA RAMPS	6	EA.	$ 1,600.00	$ 9,600.00
14	IN FIELD MIX	22,297	S.F.	$ 2.50	$ 55,742.50
15	GRASS BALLFIELD (SOD, 6" TOPSOIL)	98,231	S.F.	$ 1.25	$ 122,788.75
16	BALLFIELD FENCING	1,820	L.F.	$ 30.00	$ 54,600.00
17	BACKSTOPS	2	EA.	$ 10,000.00	$ 20,000.00
18	PERIMETER NETTING	150	L.F.	$ 20.00	$ 3,000.00
19	DUGOUTS	4	EA.	$ 7,500.00	$ 30,000.00
20	LARGE GROUP PICNIC PAVILION/RESTROOM	1	EA.	$ 100,000.00	$ 100,000.00
21	CONCESSION/SCORE BOOTH/RESTROOM	1	L.S.	$ 352,800.00	$ 352,800.00
22	TRASH ENCLOSURE	1	L.S.	$ 5,000.00	$ 5,000.00
23	PLAYGROUND	1	L.S.	$ 140,078.00	$ 140,078.00
24	BLEACHERS	4	EA.	$ 4,000.00	$ 16,000.00
25	PARK BENCH	10	EA.	$ 1,500.00	$ 15,000.00
26	PICNIC TABLE	22	EA.	$ 1,200.00	$ 26,400.00
27	BICYCLE RACK	2	EA.	$ 1,000.00	$ 2,000.00
28	PARK SIGNAGE	2	EA	$ 2,500.00	$ 5,000.00
29	PERIMETER FENCING	2,144	L.F.	$ 20.00	$ 42,880.00
30	DECIDUOUS TREE (2" CAL.)	84	EA.	$ 350.00	$ 29,400.00
31	EVERGREEN TREE (6' HT.)	25	EA.	$ 350.00	$ 8,750.00
32	ORNAMENTAL TREE (2" CAL.)	24	EA.	$ 325.00	$ 7,800.00
33	SHRUB BED (PLANTS, 12" TOPSOIL, 3" MULCH)	4,658	S.F.	$ 4.00	$ 18,632.00
34	BLUEGRASS SOD (SOD, 6" TOPSOIL)	132,000	S.F.	$ 1.25	$ 165,000.00
35	IRRIGATION SYSTEM - DRIP	4,658	S.F.	$ 1.00	$ 4,658.00
36	IRRIGATION - SPRAY	230,231	S.F.	$ 0.75	$ 172,673.25
37	LAND ACQUISITION	7.48	AC.	$ 43,560.00	$ 325,695.00
38	ENGINEERING AND DESIGN (10%)	1	L.S.	$ 237,364.31	$ 237,364.31
				SUB-TOTAL COST	**$ 2,936,702.42**
				15% Contingency	$ 440,505.36
				TOTAL ESTIMATED COST	**$ 3,377,207.78**

SANTAQUIN CITY

Peter Rabbit Springs Park

Probable Construction Cost Estimate

07.06.16

Item	Item Description	Qty.	Units	Unit Price	Total
1	MOBILIZATION / DEMOBILIZATION	1	L.S.	$ 108,588.05	$ 108,588.05
2	SITE CLEARING AND GRUBBING	221,491	S.F.	$ 0.20	$ 44,298.20
3	SITE GRADING	221,491	S.F.	$ 1.20	$ 265,789.20
4	WATER SERVICE	1	L.S.	$ 15,000.00	$ 15,000.00
5	SEWER SERVICE	1	L.S.	$ 15,000.00	$ 15,000.00
6	STORM DRAINAGE	1	L.S.	$ 50,000.00	$ 50,000.00
7	LIGHTING/ELECTRICAL	1	L.S.	$ 50,000.00	$ 50,000.00
8	ASPHALT PARKING LOT/ROAD	55,051	S.F.	$ 3.00	$ 165,153.00
9	CONCRETE CURB & GUTTER	3,100	L.F.	$ 35.00	$ 108,500.00
10	CONCRETE PAVEMENT	14,591	S.F.	$ 4.00	$ 58,364.00
11	SOFT SURFACE PATH	10,772	S.F.	$ 2.00	$ 21,544.00
12	ADA RAMPS	4	EA.	$ 1,600.00	$ 6,400.00
13	40x80 GROUP PICNIC PAVILION	1	EA.	$ 75,000.00	$ 75,000.00
14	20x20 PICNIC PAVILION	1	EA.	$ 25,000.00	$ 25,000.00
15	RESTROOM	1	EA.	$ 100,000.00	$ 100,000.00
16	DRY RESTROOM	1	EA.	$ 50,000.00	$ 50,000.00
17	BOULDER WALL	1,200	F.F.	$ 40.00	$ 48,000.00
18	PLAYGROUND	1	L.S.	$ 62,699.00	$ 62,699.00
19	PARK BENCH	8	EA.	$ 1,500.00	$ 12,000.00
20	PICNIC TABLE	24	EA.	$ 1,200.00	$ 28,800.00
21	BICYCLE RACK	2	EA.	$ 1,000.00	$ 2,000.00
22	TRASH RECEPTACLES	5	EA.	$ 400.00	$ 2,000.00
23	PARK SIGNAGE	1	EA	$ 2,500.00	$ 2,500.00
24	GUARD RAILING	400	L.F.	$ 20.00	$ 8,000.00
25	PEDESTRIAN BRIDGE	1	L.S.	$ 15,000.00	$ 15,000.00
26	DECIDUOUS TREE (2" CAL.)	39	EA.	$ 350.00	$ 13,650.00
27	EVERGREEN TREE (6' HT.)	15	EA.	$ 350.00	$ 5,250.00
28	ORNAMENTAL TREE (2" CAL.)	38	EA.	$ 325.00	$ 12,350.00
29	SHRUB BED (PLANTS, 12" TOPSOIL, 3" MULCH)	7,066	S.F.	$ 4.00	$ 28,264.00
30	BLUEGRASS SOD (SOD, 6" TOPSOIL)	39,527	S.F.	$ 1.25	$ 49,408.75
31	NATIVE SEED (SEED, 4" TOPSOIL)	101,023	S.F.	$ 0.40	$ 40,409.20
32	BOULDERS	40	EA.	$ 300.00	$ 12,000.00
33	IRRIGATION SYSTEM - DRIP	7,066	S.F.	$ 1.00	$ 7,066.00
34	IRRIGATION - SPRAY	64,527	S.F.	$ 0.75	$ 48,395.25
35	ENGINEERING AND DESIGN (10%)	1	L.S.	$ 155,642.86	$ 155,642.86
				SUB-TOTAL COST	**$ 1,712,071.51**
				15% Contingency	$ 256,810.73
				TOTAL ESTIMATED COST	**$ 1,968,882.24**

SANTAQUIN CITY

Recreation Center Park

Probable Construction Cost Estimate

07.06.16

Item	Item Description	Qty.	Units	Unit Price	Total
1	MOBILIZATION / DEMOBILIZATION	1	L.S.	$ 1,908,543.40	$ 1,908,543.40
2	SITE CLEARING AND GRUBBING	1,465,147	S.F.	$ 0.09	$ 131,863.23
3	SITE GRADING	1,465,147	S.F.	$ 0.25	$ 366,286.75
4	WATER SERVICE	2	EA.	$ 15,000.00	$ 30,000.00
5	SEWER SERVICE	1	L.S.	$ 15,000.00	$ 15,000.00
6	STORM DRAINAGE	1	L.S.	$ 50,000.00	$ 50,000.00
7	LIGHTING/ELECTRICAL	1	L.S.	$ 470,000.00	$ 470,000.00
8	ASPHALT PARKING LOT/ROAD	348,021	S.F.	$ 3.00	$ 1,044,063.00
9	CONCRETE CURB & GUTTER	10,113	L.F.	$ 35.00	$ 353,955.00
10	CONCRETE PAVEMENT	85,413	S.F.	$ 4.00	$ 341,652.00
11	SPECIALTY CONCRETE PAVEMENT	59,435	S.F.	$ 8.00	$ 475,480.00
12	ADA RAMPS	20	EA.	$ 1,600.00	$ 32,000.00
13	IN FIELD MIX	44,518	S.F.	$ 2.50	$ 111,295.00
14	GRASS BALLFIELD (SOD, 6" TOPSOIL)	243,988	S.F.	$ 1.25	$ 304,985.00
15	BALLFIELD FENCING	4,128	L.F.	$ 20.00	$ 82,560.00
16	BACKSTOPS	4	EA.	$ 10,000.00	$ 40,000.00
17	DUGOUTS	8	EA.	$ 7,500.00	$ 60,000.00
18	30x60 GROUP PICNIC PAVILION	1	EA.	$ 100,000.00	$ 100,000.00
19	CONCESSION/SCORE BOOTH/RESTROOM	1	L.S.	$ 352,800.00	$ 352,800.00
20	RECREATION CENTER	96,372	S.F.	$ 200.00	$ 19,274,400.00
21	ENTRY ARCHITECTURAL FEATURE	1	L.S.	$ 35,000.00	$ 35,000.00
22	PLAYGROUND	1	L.S.	$ 147,209.00	$ 147,209.00
23	BLEACHERS	8	EA.	$ 4,000.00	$ 32,000.00
24	PARK BENCH	10	EA.	$ 1,500.00	$ 15,000.00
25	PICNIC TABLE	16	EA.	$ 1,200.00	$ 19,200.00
26	BICYCLE RACK	4	EA.	$ 1,000.00	$ 4,000.00
27	PARK SIGNAGE	3	EA	$ 2,500.00	$ 7,500.00
28	DECIDUOUS TREE (2" CAL.)	240	EA.	$ 350.00	$ 84,000.00
29	EVERGREEN TREE (6' HT.)	58	EA.	$ 350.00	$ 20,300.00
30	ORNAMENTAL TREE (2" CAL.)	102	EA.	$ 325.00	$ 33,150.00
31	SHRUB BED (PLANTS, 12" TOPSOIL, 3" MULCH)	56,433	S.F.	$ 4.00	$ 225,732.00
32	BLUEGRASS SOD (SOD, 6" TOPSOIL)	462,294	S.F.	$ 1.25	$ 577,867.50
33	NATIVE SEED (SEED, 4" TOPSOIL)	59,506	S.F.	$ 0.40	$ 23,802.40
34	IRRIGATION SYSTEM - DRIP	56,433	S.F.	$ 1.00	$ 56,433.00
35	IRRIGATION - SPRAY	706,282	S.F.	$ 0.75	$ 529,711.50
36	LAND ACQUISITION	22.60	AC.	$ 663.72	$ 15,000.07
37	ENGINEERING AND DESIGN (10%)	1	L.S.	$ 2,735,578.88	$ 2,735,578.88
				SUB-TOTAL COST	**$ 30,106,367.73**
				15% Contingency	$ 4,515,955.16
				TOTAL ESTIMATED COST	**$ 34,622,322.89**

SANTAQUIN CITY

Rodeo Grounds

Probable Construction Cost Estimate

07.06.16

Item	Item Description	Qty.	Units	Unit Price	Total
1	MOBILIZATION / DEMOBILIZATION	1	L.S.	$ 139,864.16	$ 139,864.16
2	SITE CLEARING AND GRUBBING	203,619	S.F.	$ 0.09	$ 18,325.71
3	SITE GRADING	203,619	S.F.	$ 0.25	$ 50,904.75
4	WATER SERVICE	1	L.S.	$ 15,000.00	$ 15,000.00
5	SEWER SERVICE	1	L.S.	$ 10,000.00	$ 10,000.00
6	STORM DRAINAGE	1	L.S.	$ 25,000.00	$ 25,000.00
7	LIGHTING/ELECTRICAL	1	L.S.	$ 35,000.00	$ 35,000.00
8	ASPHALT PARKING LOT/ROAD	97,637	S.F.	$ 3.00	$ 292,911.00
9	CONCRETE CURB & GUTTER	4,400	L.F.	$ 35.00	$ 154,000.00
10	CONCRETE PAVEMENT	8,321	S.F.	$ 4.00	$ 33,284.00
11	SPECIALTY CONCRETE PAVEMENT	4,492	S.F.	$ 8.00	$ 35,936.00
12	ENTRY/TICKETING/RESTROOM	1	L.S.	$ 350,000.00	$ 350,000.00
13	BARN	1	L.S.	$ 250,000.00	$ 250,000.00
14	ADA RAMPS	6	EA.	$ 1,600.00	$ 9,600.00
15	FENCING	1,820	L.F.	$ 20.00	$ 36,400.00
16	GRANDSTAND BLEACHERS	1	L.S.	$ 300,000.00	$ 300,000.00
17	BICYCLE RACK	1	EA.	$ 1,000.00	$ 1,000.00
18	PARK SIGNAGE	2	EA	$ 2,500.00	$ 5,000.00
19	DECIDUOUS TREE (2" CAL.)	40	EA.	$ 350.00	$ 14,000.00
20	EVERGREEN TREE (6' HT.)	9	EA.	$ 350.00	$ 3,150.00
21	ORNAMENTAL TREE (2" CAL.)	46	EA.	$ 325.00	$ 14,950.00
22	SHRUB BED (PLANTS, 12" TOPSOIL, 3" MULCH)	14,354	S.F.	$ 4.00	$ 57,416.00
23	BLUEGRASS SOD (SOD, 6" TOPSOIL)	56,455	S.F.	$ 1.25	$ 70,568.75
24	NATIVE GRASS (SEED, 4" TOPSOIL)	22,360	S.F.	$ 0.40	$ 8,944.00
25	IRRIGATION SYSTEM - DRIP	14,354	S.F.	$ 1.00	$ 14,354.00
26	IRRIGATION - SPRAY	78,815	S.F.	$ 0.75	$ 59,111.25
27	ENGINEERING AND DESIGN (10%)	1	L.S.	$ 200,471.96	$ 200,471.96
				SUB-TOTAL COST	**$ 2,205,191.58**
				15% Contingency	$ 330,778.74
				TOTAL ESTIMATED COST	**$ 2,535,970.32**

SANTAQUIN CITY

Stone Hollow Park - Phase I

Probable Construction Cost Estimate

07.06.16

Item	Item Description	Qty.	Units	Unit Price	Total
1	MOBILIZATION / DEMOBILIZATION	1	L.S.	$ 207,411.79	$ 207,411.79
2	SITE CLEARING AND GRUBBING	643,772	S.F.	$ 0.09	$ 57,939.48
3	SITE GRADING	643,772	S.F.	$ 0.75	$ 482,829.00
4	WATER SERVICE	1	L.S.	$ 15,000.00	$ 15,000.00
5	SEWER SERVICE	1	L.S.	$ 15,000.00	$ 15,000.00
6	STORM DRAINAGE	1	L.S.	$ 15,000.00	$ 15,000.00
7	LIGHTING/ELECTRICAL	1	L.S.	$ 38,000.00	$ 38,000.00
8	ASPHALT PARKING LOT/ROAD	54,016	S.F.	$ 3.00	$ 162,048.00
9	CONCRETE CURB & GUTTER	4,900	L.F.	$ 35.00	$ 171,500.00
10	CONCRETE PAVEMENT	45,096	S.F.	$ 4.00	$ 180,384.00
11	TENNIS COURTS	2	EA.	$ 125,000.00	$ 250,000.00
12	SKATE PARK	1	L.S.	$ 200,000.00	$ 200,000.00
13	ADA RAMPS	6	EA.	$ 1,600.00	$ 9,600.00
14	30x60 GROUP PICNIC PAVILION/RESTROOM	1	EA.	$ 100,000.00	$ 100,000.00
15	20x40 PAVILION	1	EA.	$ 40,000.00	$ 40,000.00
16	20x20 PAVILION	1	EA.	$ 25,000.00	$ 25,000.00
17	TRASH ENCLOSURE	1	L.S.	$ 5,000.00	$ 5,000.00
18	PLAYGROUND	1	L.S.	$ 111,445.00	$ 111,445.00
19	PARK BENCH	10	EA.	$ 1,500.00	$ 15,000.00
20	PICNIC TABLE	22	EA.	$ 1,200.00	$ 26,400.00
21	BICYCLE RACK	2	EA.	$ 1,000.00	$ 2,000.00
22	PARK SIGNAGE	1	EA	$ 2,500.00	$ 2,500.00
23	DECIDUOUS TREE (2" CAL.)	125	EA.	$ 350.00	$ 43,750.00
24	EVERGREEN TREE (6' HT.)	17	EA.	$ 350.00	$ 5,950.00
25	ORNAMENTAL TREE (2" CAL.)	151	EA.	$ 325.00	$ 49,075.00
26	SHRUB BED (PLANTS, 12" TOPSOIL, 3" MULCH)	3,200	S.F.	$ 4.00	$ 12,800.00
27	BLUEGRASS SOD (SOD, 6" TOPSOIL)	327,970	S.F.	$ 1.25	$ 409,962.50
28	NATIVE SEED (SEED, 4" TOPSOIL)	175,325	S.F.	$ 0.40	$ 70,130.00
29	IRRIGATION SYSTEM - DRIP	3,200	S.F.	$ 1.00	$ 3,200.00
30	IRRIGATION - SPRAY	327,970	S.F.	$ 0.75	$ 245,977.50
31	ENGINEERING AND DESIGN (10%)	1	L.S.	$ 297,290.23	$ 297,290.23
				SUB-TOTAL COST	**$ 3,270,192.49**
				15% Contingency	$ 490,528.87
				TOTAL ESTIMATED COST	**$ 3,760,721.37**

SANTAQUIN CITY

Theodore Ahlin Park

Probable Construction Cost Estimate

07.06.16

Item	Item Description	Qty.	Units	Unit Price	Total
1	MOBILIZATION / DEMOBILIZATION	1	L.S.	$ 130,343.69	$ 130,343.69
2	SITE CLEARING AND GRUBBING	395,819	S.F.	$ 0.09	$ 35,623.71
3	SITE GRADING	395,819	S.F.	$ 1.00	$ 395,819.00
4	WATER SERVICE	1	L.S.	$ 10,000.00	$ 10,000.00
5	STORM DRAINAGE	1	L.S.	$ 20,000.00	$ 20,000.00
6	LIGHTING/ELECTRICAL	1	L.S.	$ 35,000.00	$ 35,000.00
7	ASPHALT PARKING LOT	35,487	S.F.	$ 3.00	$ 106,461.00
8	CONCRETE CURB & GUTTER	1,687	L.F.	$ 35.00	$ 59,045.00
9	CONCRETE PAVEMENT	26,901	S.F.	$ 4.00	$ 107,604.00
10	SPECIALTY CONCRETE PAVEMENT	2,130	S.F.	$ 8.00	$ 17,040.00
11	SOFT SURFACE PATH	14,155	S.F.	$ 2.00	$ 28,310.00
12	ADA RAMPS	4	EA.	$ 1,600.00	$ 6,400.00
13	30x60 GROUP PICNIC PAVILION	1	EA.	$ 60,000.00	$ 60,000.00
14	PEDESTRIAN BRIDGE	1	L.S.	$ 80,000.00	$ 80,000.00
15	PLAYGROUND	1	L.S.	$ 172,788.00	$ 172,788.00
16	AMPHITHEATER	1	L.S.	$ 125,000.00	$ 125,000.00
17	DOCKS	1,240	S.F.	$ 25.00	$ 31,000.00
18	BOULDER WALL	400	F.F.	$ 20.00	$ 8,000.00
19	PARK BENCH	4	EA.	$ 1,500.00	$ 6,000.00
20	PICNIC TABLE	24	EA.	$ 1,200.00	$ 28,800.00
21	TRASH RECEPTACLE	5	EA.	$ 400.00	$ 2,000.00
22	BICYCLE RACK	1	EA.	$ 1,000.00	$ 1,000.00
23	PARK SIGNAGE	1	EA	$ 2,500.00	$ 2,500.00
24	DECIDUOUS TREE (2" CAL.)	97	EA.	$ 350.00	$ 33,950.00
25	EVERGREEN TREE (6' HT.)	30	EA.	$ 350.00	$ 10,500.00
26	ORNAMENTAL TREE (2" CAL.)	70	EA.	$ 325.00	$ 22,750.00
27	SHRUB BED (PLANTS, 12" TOPSOIL, 3" MULCH)	4,825	S.F.	$ 4.00	$ 19,300.00
28	BLUEGRASS SOD (SOD, 6" TOPSOIL)	78,608	S.F.	$ 1.25	$ 98,260.00
29	NATIVE SEED (SEED, 4" TOPSOIL)	233,241	S.F.	$ 0.40	$ 93,296.40
30	IRRIGATION PUMP	1	L.S.	$ 30,000.00	$ 30,000.00
31	IRRIGATION SYSTEM - DRIP	4,825	S.F.	$ 1.00	$ 4,825.00
32	IRRIGATION - SPRAY	115,525	S.F.	$ 0.75	$ 86,643.75
33	ENGINEERING AND DESIGN (10%)	1	L.S.	$ 186,825.95	$ 186,825.95
				SUB-TOTAL COST	**$ 2,055,085.50**
				15% Contingency	$ 308,262.83
				TOTAL ESTIMATED COST	**$ 2,363,348.33**

SANTAQUIN CITY

198 Trail (Match)

Probable Construction Cost Estimate

07.06.16

Item	Item Description	Qty.	Units	Unit Price	Total
1	MOBILIZATION / DEMOBILIZATION	1	L.S.	$ 63,425.69	$ 63,425.69
2	SITE CLEARING AND GRUBBING	264,940	S.F.	$ 0.20	$ 52,988.00
3	SITE GRADING	264,940	S.F.	$ 0.25	$ 66,235.00
4	WATER SERVICE	1	L.S.	$ 19,870.50	$ 19,870.50
5	STORM DRAINAGE	1	L.S.	$ 39,741.00	$ 39,741.00
6	ASPHALT TRAIL	132,470	S.F.	$ 3.00	$ 397,410.00
7	ADA RAMPS	38	EA.	$ 1,600.00	$ 60,557.71
8	TRAIL SIGNAGE	19	EA	$ 1,000.00	$ 19,000.00
9	TREE (2" CAL.)	88	EA.	$ 350.00	$ 30,909.67
10	SHRUB BED (PLANTS, 12" TOPSOIL, 3" MULCH)	0	S.F.	$ 4.00	$ -
11	BLUEGRASS SOD (SOD, 6" TOPSOIL)	66,235	S.F.	$ 1.25	$ 82,793.75
12	NATIVE SEED (SEED, 4" TOPSOIL)	66,235	S.F.	$ 0.40	$ 26,494.00
13	IRRIGATION SYSTEM - DRIP	0	S.F.	$ 1.00	$ -
14	IRRIGATION - SPRAY	66,235	S.F.	$ 0.75	$ 49,676.25
15	LAND ACQUISITION	0.00	AC.		
16	ENGINEERING AND DESIGN (10%)	1	L.S.	$ 90,910.16	$ 90,910.16
				SUB-TOTAL COST	**$ 1,000,011.73**
				15% Contingency	$ 150,001.76
				TOTAL ESTIMATED COST	**$ 1,150,013.49**
				SANTAQUIN PORTION	**$ 80,500.94**

SANTAQUIN CITY

200 West Trail

Probable Construction Cost Estimate

07.06.16

Item	Item Description	Qty.	Units	Unit Price	Total
1	MOBILIZATION / DEMOBILIZATION	1	L.S.	$ 18,102.94	$ 18,102.94
2	SITE CLEARING AND GRUBBING	49,160	S.F.	$ 0.20	$ 9,832.00
3	SITE GRADING	49,160	S.F.	$ 0.25	$ 12,290.00
4	WATER SERVICE	1	L.S.	$ 7,374.00	$ 7,374.00
5	STORM DRAINAGE	1	L.S.	$ 7,374.00	$ 7,374.00
6	CONCRETE TRAIL	24,580	S.F.	$ 5.00	$ 122,900.00
7	ADA RAMPS	7	EA.	$ 1,600.00	$ 11,236.57
8	TRAIL SIGNAGE	4	EA	$ 1,000.00	$ 4,000.00
9	TREE (2" CAL.)	49	EA.	$ 350.00	$ 17,206.00
10	SHRUB BED (PLANTS, 12" TOPSOIL, 3" MULCH)	0	S.F.	$ 4.00	$ -
11	BLUEGRASS SOD (SOD, 6" TOPSOIL)	24,580	S.F.	$ 1.25	$ 30,725.00
12	NATIVE SEED (SEED, 4" TOPSOIL)	0	S.F.	$ 0.40	$ -
13	IRRIGATION SYSTEM - DRIP	0	S.F.	$ 1.00	$ -
14	IRRIGATION - SPRAY	24,580	S.F.	$ 0.75	$ 18,435.00
15	LAND ACQUISITION	0.00	AC.		
16	ENGINEERING AND DESIGN (10%)	1	L.S.	$ 25,947.55	$ 25,947.55
				SUB-TOTAL COST	**$ 285,423.07**
				15% Contingency	$ 42,813.46
				TOTAL ESTIMATED COST	**$ 328,236.53**

SANTAQUIN CITY

400 East Trail (North)

Probable Construction Cost Estimate

07.06.16

Item	Item Description	Qty.	Units	Unit Price	Total
1	MOBILIZATION / DEMOBILIZATION	1	L.S.	$ 16,373.91	$ 16,373.91
2	SITE CLEARING AND GRUBBING	56,240	S.F.	$ 0.20	$ 11,248.00
3	SITE GRADING	56,240	S.F.	$ 0.25	$ 14,060.00
4	WATER SERVICE	1	L.S.	$ 8,436.00	$ 8,436.00
5	STORM DRAINAGE	1	L.S.	$ 8,436.00	$ 8,436.00
6	ASPHALT TRAIL	28,120	S.F.	$ 3.00	$ 84,360.00
7	ADA RAMPS	8	EA.	$ 1,600.00	$ 12,854.86
8	TRAIL SIGNAGE	3	EA	$ 1,000.00	$ 3,000.00
9	TREE (2" CAL.)	56	EA.	$ 350.00	$ 19,684.00
10	SHRUB BED (PLANTS, 12" TOPSOIL, 3" MULCH)	0	S.F.	$ 4.00	$ -
11	BLUEGRASS SOD (SOD, 6" TOPSOIL)	28,120	S.F.	$ 1.25	$ 35,150.00
12	NATIVE SEED (SEED, 4" TOPSOIL)	0	S.F.	$ 0.40	$ -
13	IRRIGATION SYSTEM - DRIP	0	S.F.	$ 1.00	$ -
14	IRRIGATION - SPRAY	28,120	S.F.	$ 0.75	$ 21,090.00
15	LAND ACQUISITION	0.00	AC.		
16	ENGINEERING AND DESIGN (10%)	1	L.S.	$ 23,469.28	$ 23,469.28
				SUB-TOTAL COST	**$ 258,162.05**
				15% Contingency	$ 38,724.31
				TOTAL ESTIMATED COST	**$ 296,886.36**

SANTAQUIN CITY

400 East Trail

Probable Construction Cost Estimate

07.06.16

Item	Item Description	Qty.	Units	Unit Price	Total
1	MOBILIZATION / DEMOBILIZATION	1	L.S.	$ 12,175.71	$ 12,175.71
2	SITE CLEARING AND GRUBBING	33,000	S.F.	$ 0.20	$ 6,600.00
3	SITE GRADING	33,000	S.F.	$ 0.25	$ 8,250.00
4	WATER SERVICE	1	L.S.	$ 4,950.00	$ 4,950.00
5	STORM DRAINAGE	1	L.S.	$ 4,950.00	$ 4,950.00
6	CONCRETE TRAIL	16,500	S.F.	$ 5.00	$ 82,500.00
7	ADA RAMPS	5	EA.	$ 1,600.00	$ 7,542.86
8	TRAIL SIGNAGE	3	EA	$ 1,000.00	$ 3,000.00
9	TREE (2" CAL.)	33	EA.	$ 350.00	$ 11,550.00
10	SHRUB BED (PLANTS, 12" TOPSOIL, 3" MULCH)	0	S.F.	$ 4.00	$ -
11	BLUEGRASS SOD (SOD, 6" TOPSOIL)	16,500	S.F.	$ 1.25	$ 20,625.00
12	NATIVE SEED (SEED, 4" TOPSOIL)	0	S.F.	$ 0.40	$ -
13	IRRIGATION SYSTEM - DRIP	0	S.F.	$ 1.00	$ -
14	IRRIGATION - SPRAY	16,500	S.F.	$ 0.75	$ 12,375.00
15	LAND ACQUISITION	0.00	AC.		
16	ENGINEERING AND DESIGN (10%)	1	L.S.	$ 17,451.86	$ 17,451.86
				SUB-TOTAL COST	**$ 191,970.43**
				15% Contingency	$ 28,795.56
				TOTAL ESTIMATED COST	**$ 220,765.99**

SANTAQUIN CITY

400 South Trail

Probable Construction Cost Estimate

07.06.16

Item	Item Description	Qty.	Units	Unit Price	Total
1	MOBILIZATION / DEMOBILIZATION	1	L.S.	$ 9,239.79	$ 9,239.79
2	SITE CLEARING AND GRUBBING	25,100	S.F.	$ 0.20	$ 5,020.00
3	SITE GRADING	25,100	S.F.	$ 0.25	$ 6,275.00
4	WATER SERVICE	1	L.S.	$ 3,765.00	$ 3,765.00
5	STORM DRAINAGE	1	L.S.	$ 3,765.00	$ 3,765.00
6	CONCRETE TRAIL	12,550	S.F.	$ 5.00	$ 62,750.00
7	ADA RAMPS	4	EA.	$ 1,600.00	$ 5,737.14
8	TRAIL SIGNAGE	2	EA	$ 1,000.00	$ 2,000.00
9	TREE (2" CAL.)	25	EA.	$ 350.00	$ 8,785.00
10	SHRUB BED (PLANTS, 12" TOPSOIL, 3" MULCH)	0	S.F.	$ 4.00	$ -
11	BLUEGRASS SOD (SOD, 6" TOPSOIL)	12,550	S.F.	$ 1.25	$ 15,687.50
12	NATIVE SEED (SEED, 4" TOPSOIL)	0	S.F.	$ 0.40	$ -
13	IRRIGATION SYSTEM - DRIP	0	S.F.	$ 1.00	$ -
14	IRRIGATION - SPRAY	12,550	S.F.	$ 0.75	$ 9,412.50
15	LAND ACQUISITION	0.00	AC.		
16	ENGINEERING AND DESIGN (10%)	1	L.S.	$ 13,243.69	$ 13,243.69
				SUB-TOTAL COST	**$ 145,680.62**
				15% Contingency	$ 21,852.09
				TOTAL ESTIMATED COST	**$ 167,532.71**

SANTAQUIN CITY

500 South Trail (East)

Probable Construction Cost Estimate

07.06.16

Item	Item Description	Qty.	Units	Unit Price	Total
1	MOBILIZATION / DEMOBILIZATION	1	L.S.	$ 9,507.77	$ 9,507.77
2	SITE CLEARING AND GRUBBING	25,840	S.F.	$ 0.20	$ 5,168.00
3	SITE GRADING	25,840	S.F.	$ 0.25	$ 6,460.00
4	WATER SERVICE	1	L.S.	$ 3,876.00	$ 3,876.00
5	STORM DRAINAGE	1	L.S.	$ 3,876.00	$ 3,876.00
6	CONCRETE TRAIL	12,920	S.F.	$ 5.00	$ 64,600.00
7	ADA RAMPS	4	EA.	$ 1,600.00	$ 5,906.29
8	TRAIL SIGNAGE	2	EA	$ 1,000.00	$ 2,000.00
9	TREE (2" CAL.)	26	EA.	$ 350.00	$ 9,044.00
10	SHRUB BED (PLANTS, 12" TOPSOIL, 3" MULCH)	0	S.F.	$ 4.00	$ -
11	BLUEGRASS SOD (SOD, 6" TOPSOIL)	12,920	S.F.	$ 1.25	$ 16,150.00
12	NATIVE SEED (SEED, 4" TOPSOIL)	0	S.F.	$ 0.40	$ -
13	IRRIGATION SYSTEM - DRIP	0	S.F.	$ 1.00	$ -
14	IRRIGATION - SPRAY	12,920	S.F.	$ 0.75	$ 9,690.00
15	LAND ACQUISITION	0.00	AC.		
16	ENGINEERING AND DESIGN (10%)	1	L.S.	$ 13,627.81	$ 13,627.81
				SUB-TOTAL COST	**$ 149,905.86**
				15% Contingency	$ 22,485.88
				TOTAL ESTIMATED COST	**$ 172,391.74**

SANTAQUIN CITY

500 South Trail (West)

Probable Construction Cost Estimate

07.06.16

Item	Item Description	Qty.	Units	Unit Price	Total
1	MOBILIZATION / DEMOBILIZATION	1	L.S.	$ 15,091.29	$ 15,091.29
2	SITE CLEARING AND GRUBBING	77,600	S.F.	$ 0.20	$ 15,520.00
3	SITE GRADING	77,600	S.F.	$ 0.25	$ 19,400.00
4	WATER SERVICE	1	L.S.	$ -	$ -
5	STORM DRAINAGE	1	L.S.	$ 11,640.00	$ 11,640.00
6	ASPHALT TRAIL	38,800	S.F.	$ 3.00	$ 116,400.00
7	ADA RAMPS	11	EA.	$ 1,600.00	$ 17,737.14
8	TRAIL SIGNAGE	5	EA	$ 1,000.00	$ 5,000.00
9	TREE (2" CAL.)	0	EA.	$ 350.00	$ -
10	SHRUB BED (PLANTS, 12" TOPSOIL, 3" MULCH)	0	S.F.	$ 4.00	$ -
11	BLUEGRASS SOD (SOD, 6" TOPSOIL)	0	S.F.	$ 1.25	$ -
12	NATIVE SEED (SEED, 4" TOPSOIL)	38,800	S.F.	$ 0.40	$ 15,520.00
13	IRRIGATION SYSTEM - DRIP	0	S.F.	$ 1.00	$ -
14	IRRIGATION - SPRAY	0	S.F.	$ 0.75	$ -
15	LAND ACQUISITION	0.00	AC.		
16	ENGINEERING AND DESIGN (10%)	1	L.S.	$ 21,630.84	$ 21,630.84
				SUB-TOTAL COST	**$ 237,939.27**
				15% Contingency	$ 35,690.89
				TOTAL ESTIMATED COST	**$ 273,630.16**

SANTAQUIN CITY

500 West Trail

Probable Construction Cost Estimate

07.06.16

Item	Item Description	Qty.	Units	Unit Price	Total
1	MOBILIZATION / DEMOBILIZATION	1	L.S.	$ 12,202.11	$ 12,202.11
2	SITE CLEARING AND GRUBBING	33,280	S.F.	$ 0.20	$ 6,656.00
3	SITE GRADING	33,280	S.F.	$ 0.25	$ 8,320.00
4	WATER SERVICE	1	L.S.	$ 4,992.00	$ 4,992.00
5	STORM DRAINAGE	1	L.S.	$ 4,992.00	$ 4,992.00
6	CONCRETE TRAIL	16,640	S.F.	$ 5.00	$ 83,200.00
7	ADA RAMPS	5	EA.	$ 1,600.00	$ 7,606.86
8	TRAIL SIGNAGE	2	EA	$ 1,000.00	$ 2,000.00
9	TREE (2" CAL.)	33	EA.	$ 350.00	$ 11,648.00
10	SHRUB BED (PLANTS, 12" TOPSOIL, 3" MULCH)	0	S.F.	$ 4.00	$ -
11	BLUEGRASS SOD (SOD, 6" TOPSOIL)	16,640	S.F.	$ 1.25	$ 20,800.00
12	NATIVE SEED (SEED, 4" TOPSOIL)	0	S.F.	$ 0.40	$ -
13	IRRIGATION SYSTEM - DRIP	0	S.F.	$ 1.00	$ -
14	IRRIGATION - SPRAY	16,640	S.F.	$ 0.75	$ 12,480.00
15	LAND ACQUISITION	0.00	AC.		
16	ENGINEERING AND DESIGN (10%)	1	L.S.	$ 17,489.70	$ 17,489.70
				SUB-TOTAL COST	**$ 192,386.67**
				15% Contingency	$ 28,858.00
				TOTAL ESTIMATED COST	**$ 221,244.67**

SANTAQUIN CITY

9th Street Trail

Probable Construction Cost Estimate

07.06.16

Item	Item Description	Qty.	Units	Unit Price	Total
1	MOBILIZATION / DEMOBILIZATION	1	L.S.	$ 10,263.17	$ 10,263.17
2	SITE CLEARING AND GRUBBING	35,220	S.F.	$ 0.20	$ 7,044.00
3	SITE GRADING	35,220	S.F.	$ 0.25	$ 8,805.00
4	WATER SERVICE	1	L.S.	$ 5,283.00	$ 5,283.00
5	STORM DRAINAGE	1	L.S.	$ 5,283.00	$ 5,283.00
6	ASPHALT TRAIL	17,610	S.F.	$ 3.00	$ 52,830.00
7	ADA RAMPS	5	EA.	$ 1,600.00	$ 8,050.29
8	TRAIL SIGNAGE	2	EA	$ 1,000.00	$ 2,000.00
9	TREE (2" CAL.)	35	EA.	$ 350.00	$ 12,327.00
10	SHRUB BED (PLANTS, 12" TOPSOIL, 3" MULCH)	0	S.F.	$ 4.00	$ -
11	BLUEGRASS SOD (SOD, 6" TOPSOIL)	17,610	S.F.	$ 1.25	$ 22,012.50
12	NATIVE SEED (SEED, 4" TOPSOIL)	0	S.F.	$ 0.40	$ -
13	IRRIGATION SYSTEM - DRIP	0	S.F.	$ 1.00	$ -
14	IRRIGATION - SPRAY	17,610	S.F.	$ 0.75	$ 13,207.50
15	LAND ACQUISITION	0.00	AC.		
16	ENGINEERING AND DESIGN (10%)	1	L.S.	$ 14,710.55	$ 14,710.55
				SUB-TOTAL COST	**$ 161,816.00**
				15% Contingency	$ 24,272.40
				TOTAL ESTIMATED COST	**$ 186,088.40**

SANTAQUIN CITY

Center Street Trail

Probable Construction Cost Estimate

07.06.16

Item	Item Description	Qty.	Units	Unit Price	Total
1	MOBILIZATION / DEMOBILIZATION	1	L.S.	$ 44,967.85	$ 44,967.85
2	SITE CLEARING AND GRUBBING	163,824	S.F.	$ 0.20	$ 32,764.80
3	SITE GRADING	163,824	S.F.	$ 0.25	$ 40,956.00
4	WATER SERVICE	1	L.S.	$ 20,478.00	$ 20,478.00
5	STORM DRAINAGE	1	L.S.	$ 20,478.00	$ 20,478.00
6	ASPHALT TRAIL	68,260	S.F.	$ 3.00	$ 204,780.00
7	ADA RAMPS	20	EA.	$ 1,600.00	$ 31,204.57
8	TRAIL SIGNAGE	10	EA	$ 1,000.00	$ 10,000.00
9	TREE (2" CAL.)	137	EA.	$ 350.00	$ 47,782.00
10	SHRUB BED (PLANTS, 12" TOPSOIL, 3" MULCH)	0	S.F.	$ 4.00	$ -
11	BLUEGRASS SOD (SOD, 6" TOPSOIL)	95,564	S.F.	$ 1.25	$ 119,455.00
12	NATIVE SEED (SEED, 4" TOPSOIL)	0	S.F.	$ 0.40	$ -
13	IRRIGATION SYSTEM - DRIP	0	S.F.	$ 1.00	$ -
14	IRRIGATION - SPRAY	95,564	S.F.	$ 0.75	$ 71,673.00
15	LAND ACQUISITION	0.00	AC.		
16	ENGINEERING AND DESIGN (10%)	1	L.S.	$ 64,453.92	$ 64,453.92
				SUB-TOTAL COST	**$ 708,993.15**
				15% Contingency	$ 106,348.97
				TOTAL ESTIMATED COST	**$ 815,342.12**

SANTAQUIN CITY

Farmers Lane Trail

Probable Construction Cost Estimate

07.06.16

Item	Item Description	Qty.	Units	Unit Price	Total
1	MOBILIZATION / DEMOBILIZATION	1	L.S.	$ 23,144.74	$ 23,144.74
2	SITE CLEARING AND GRUBBING	118,880	S.F.	$ 0.20	$ 23,776.00
3	SITE GRADING	118,880	S.F.	$ 0.25	$ 29,720.00
4	WATER SERVICE	1	L.S.	$ -	$ -
5	STORM DRAINAGE	1	L.S.	$ 17,832.00	$ 17,832.00
6	ASPHALT TRAIL	59,440	S.F.	$ 3.00	$ 178,320.00
7	ADA RAMPS	17	EA.	$ 1,600.00	$ 27,172.57
8	TRAIL SIGNAGE	8	EA	$ 1,000.00	$ 8,000.00
9	TREE (2" CAL.)	0	EA.	$ 350.00	$ -
10	SHRUB BED (PLANTS, 12" TOPSOIL, 3" MULCH)	0	S.F.	$ 4.00	$ -
11	BLUEGRASS SOD (SOD, 6" TOPSOIL)	0	S.F.	$ 1.25	$ -
12	NATIVE SEED (SEED, 4" TOPSOIL)	59,440	S.F.	$ 0.40	$ 23,776.00
13	IRRIGATION SYSTEM - DRIP	0	S.F.	$ 1.00	$ -
14	IRRIGATION - SPRAY	0	S.F.	$ 0.75	$ -
15	LAND ACQUISITION	0.00	AC.		
16	ENGINEERING AND DESIGN (10%)	1	L.S.	$ 33,174.13	$ 33,174.13
				SUB-TOTAL COST	**$ 364,915.45**
				15% Contingency	$ 54,737.32
				TOTAL ESTIMATED COST	**$ 419,652.76**

SANTAQUIN CITY

Highland Drive Trail (City)

Probable Construction Cost Estimate

11.11.16

Item	Item Description	Qty.	Units	Unit Price	Total
1	MOBILIZATION / DEMOBILIZATION	1	L.S.	$ 52,014.94	$ 52,014.94
2	SITE CLEARING AND GRUBBING	180,852	S.F.	$ 0.20	$ 36,170.40
3	SITE GRADING	180,852	S.F.	$ 0.25	$ 45,213.00
4	WATER SERVICE	1	L.S.	$ 25,836.00	$ 25,836.00
5	STORM DRAINAGE	1	L.S.	$ 25,836.00	$ 25,836.00
6	ASPHALT TRAIL	86,120	S.F.	$ 3.00	$ 258,360.00
7	ADA RAMPS	25	EA.	$ 1,600.00	$ 39,369.14
8	TRAIL SIGNAGE	13	EA	$ 1,000.00	$ 13,000.00
9	TREE (2" CAL.)	172	EA.	$ 350.00	$ 60,284.00
10	SHRUB BED (PLANTS, 12" TOPSOIL, 3" MULCH)	0	S.F.	$ 4.00	$ -
11	BLUEGRASS SOD (SOD, 6" TOPSOIL)	94,732	S.F.	$ 1.25	$ 118,415.00
12	NATIVE SEED (SEED, 4" TOPSOIL)	0	S.F.	$ 0.40	$ -
13	IRRIGATION SYSTEM - DRIP	0	S.F.	$ 1.00	$ -
14	IRRIGATION - SPRAY	94,732	S.F.	$ 0.75	$ 71,049.00
15	LAND ACQUISITION	0.00	AC.		
16	ENGINEERING AND DESIGN (10%)	1	L.S.	$ 74,554.75	$ 74,554.75
				SUB-TOTAL COST	**$ 820,102.23**
				15% Contingency	$ 123,015.33
				TOTAL ESTIMATED COST	**$ 943,117.57**

SANTAQUIN CITY

Highway 6 Trail (Match)

Probable Construction Cost Estimate

07.06.16

Item	Item Description	Qty.	Units	Unit Price	Total
1	MOBILIZATION / DEMOBILIZATION	1	L.S.	$ 44,331.26	$ 44,331.26
2	SITE CLEARING AND GRUBBING	281,520	S.F.	$ 0.20	$ 56,304.00
3	SITE GRADING	281,520	S.F.	$ 0.25	$ 70,380.00
4	WATER SERVICE	1	L.S.	$ -	$ -
5	STORM DRAINAGE	1	L.S.	$ 42,228.00	$ 42,228.00
6	SOFT SURFACE TRAIL	140,760	S.F.	$ 2.00	$ 281,520.00
7	ADA RAMPS	40	EA.	$ 1,600.00	$ 64,347.43
8	TRAIL SIGNAGE	20	EA	$ 1,000.00	$ 20,000.00
9	TREE (2" CAL.)	0	EA.	$ 350.00	$ -
10	SHRUB BED (PLANTS, 12" TOPSOIL, 3" MULCH)	0	S.F.	$ 4.00	$ -
11	BLUEGRASS SOD (SOD, 6" TOPSOIL)	0	S.F.	$ 1.25	$ -
12	NATIVE SEED (SEED, 4" TOPSOIL)	140,760	S.F.	$ 0.40	$ 56,304.00
13	IRRIGATION SYSTEM - DRIP	0	S.F.	$ 1.00	$ -
14	IRRIGATION - SPRAY	0	S.F.	$ 0.75	$ -
15	LAND ACQUISITION	0.00	AC.		
16	ENGINEERING AND DESIGN (10%)	1	L.S.	$ 63,541.47	$ 63,541.47
				SUB-TOTAL COST	**$ 698,956.15**
				15% Contingency	$ 104,843.42
				TOTAL ESTIMATED COST	**$ 803,799.58**
				SANTAQUIN PORTION	**$ 56,265.97**

SANTAQUIN CITY

Orchard Connector Trail

Probable Construction Cost Estimate

07.06.16

Item	Item Description	Qty.	Units	Unit Price	Total
1	MOBILIZATION / DEMOBILIZATION	1	L.S.	$ 78,022.41	$ 78,022.41
2	SITE CLEARING AND GRUBBING	212,340	S.F.	$ 0.20	$ 42,468.00
3	SITE GRADING	212,340	S.F.	$ 0.25	$ 53,085.00
4	WATER SERVICE	1	L.S.	$ 31,851.00	$ 31,851.00
5	STORM DRAINAGE	1	L.S.	$ 31,851.00	$ 31,851.00
6	CONCRETE TRAIL	106,170	S.F.	$ 5.00	$ 530,850.00
7	ADA RAMPS	30	EA.	$ 1,600.00	$ 48,534.86
8	TRAIL SIGNAGE	15	EA	$ 1,000.00	$ 15,000.00
9	TREE (2" CAL.)	212	EA.	$ 350.00	$ 74,319.00
10	SHRUB BED (PLANTS, 12" TOPSOIL, 3" MULCH)	0	S.F.	$ 4.00	$ -
11	BLUEGRASS SOD (SOD, 6" TOPSOIL)	106,170	S.F.	$ 1.25	$ 132,712.50
12	NATIVE SEED (SEED, 4" TOPSOIL)	0	S.F.	$ 0.40	$ -
13	IRRIGATION SYSTEM - DRIP	0	S.F.	$ 1.00	$ -
14	IRRIGATION - SPRAY	106,170	S.F.	$ 0.75	$ 79,627.50
15	LAND ACQUISITION	0.00	AC.		
16	ENGINEERING AND DESIGN (10%)	1	L.S.	$ 111,832.13	$ 111,832.13
				SUB-TOTAL COST	**$ 1,230,153.40**
				15% Contingency	$ 184,523.01
				TOTAL ESTIMATED COST	**$ 1,414,676.41**

SANTAQUIN CITY

Santaquin Canyon Multi-Use Trail (City)

Probable Construction Cost Estimate

07.06.16

Item	Item Description	Qty.	Units	Unit Price	Total
1	MOBILIZATION / DEMOBILIZATION	1	L.S.	$ 20,703.15	$ 20,703.15
2	SITE CLEARING AND GRUBBING	116,540	S.F.	$ 0.20	$ 23,308.00
3	SITE GRADING	116,540	S.F.	$ 0.25	$ 29,135.00
4	WATER SERVICE	1	L.S.	$ -	$ -
5	STORM DRAINAGE	1	L.S.	$ 17,481.00	$ 17,481.00
6	ASPHALT TRAIL	58,270	S.F.	$ 3.00	$ 174,810.00
7	ADA RAMPS	0	EA.	$ 1,600.00	$ -
8	TRAIL SIGNAGE	8	EA	$ 1,000.00	$ 8,000.00
9	TREE (2" CAL.)	0	EA.	$ 350.00	$ -
10	SHRUB BED (PLANTS, 12" TOPSOIL, 3" MULCH)	0	S.F.	$ 4.00	$ -
11	BLUEGRASS SOD (SOD, 6" TOPSOIL)	0	S.F.	$ 1.25	$ -
12	NATIVE SEED (SEED, 4" TOPSOIL)	58,270	S.F.	$ 0.40	$ 23,308.00
13	IRRIGATION SYSTEM - DRIP	0	S.F.	$ 1.00	$ -
14	IRRIGATION - SPRAY	0	S.F.	$ 0.75	$ -
15	LAND ACQUISITION	0.00	AC.		
16	ENGINEERING AND DESIGN (10%)	1	L.S.	$ 29,674.52	$ 29,674.52
				SUB-TOTAL COST	**$ 326,419.67**
				15% Contingency	$ 48,962.95
				TOTAL ESTIMATED COST	**$ 375,382.61**

SANTAQUIN CITY

Santaquin Canyon Multi-Use Trail (Match)

Probable Construction Cost Estimate

07.06.16

Item	Item Description	Qty.	Units	Unit Price	Total
1	MOBILIZATION / DEMOBILIZATION	1	L.S.	$ 16,709.85	$ 16,709.85
2	SITE CLEARING AND GRUBBING	94,260	S.F.	$ 0.20	$ 18,852.00
3	SITE GRADING	94,260	S.F.	$ 0.25	$ 23,565.00
4	WATER SERVICE	1	L.S.	$ -	$ -
5	STORM DRAINAGE	1	L.S.	$ 14,139.00	$ 14,139.00
6	ASPHALT TRAIL	47,130	S.F.	$ 3.00	$ 141,390.00
7	ADA RAMPS	0	EA.	$ 1,600.00	$ -
8	TRAIL SIGNAGE	6	EA	$ 1,000.00	$ 6,000.00
9	TREE (2" CAL.)	0	EA.	$ 350.00	$ -
10	SHRUB BED (PLANTS, 12" TOPSOIL, 3" MULCH)	0	S.F.	$ 4.00	$ -
11	BLUEGRASS SOD (SOD, 6" TOPSOIL)	0	S.F.	$ 1.25	$ -
12	NATIVE SEED (SEED, 4" TOPSOIL)	47,130	S.F.	$ 0.40	$ 18,852.00
13	IRRIGATION SYSTEM - DRIP	0	S.F.	$ 1.00	$ -
14	IRRIGATION - SPRAY	0	S.F.	$ 0.75	$ -
15	LAND ACQUISITION	0.00	AC.		
16	ENGINEERING AND DESIGN (10%)	1	L.S.	$ 23,950.79	$ 23,950.79
				SUB-TOTAL COST	**$ 263,458.64**
				15% Contingency	$ 39,518.80
				TOTAL ESTIMATED COST	**$ 302,977.43**
				SANTAQUIN PORTION	**$ 21,208.42**

SANTAQUIN CITY

Santaquin Canyon Urban Trail (City)

Probable Construction Cost Estimate

07.06.16

Item	Item Description	Qty.	Units	Unit Price	Total
1	MOBILIZATION / DEMOBILIZATION	1	L.S.	$ 5,772.26	$ 5,772.26
2	SITE CLEARING AND GRUBBING	19,580	S.F.	$ 0.20	$ 3,916.00
3	SITE GRADING	19,580	S.F.	$ 0.25	$ 4,895.00
4	WATER SERVICE	1	L.S.	$ 2,937.00	$ 2,937.00
5	STORM DRAINAGE	1	L.S.	$ 2,937.00	$ 2,937.00
6	ASPHALT TRAIL	9,790	S.F.	$ 3.00	$ 29,370.00
7	ADA RAMPS	3	EA.	$ 1,600.00	$ 4,475.43
8	TRAIL SIGNAGE	2	EA	$ 1,000.00	$ 2,000.00
9	TREE (2" CAL.)	20	EA.	$ 350.00	$ 6,853.00
10	SHRUB BED (PLANTS, 12" TOPSOIL, 3" MULCH)	0	S.F.	$ 4.00	$ -
11	BLUEGRASS SOD (SOD, 6" TOPSOIL)	9,790	S.F.	$ 1.25	$ 12,237.50
12	NATIVE SEED (SEED, 4" TOPSOIL)	0	S.F.	$ 0.40	$ -
13	IRRIGATION SYSTEM - DRIP	0	S.F.	$ 1.00	$ -
14	IRRIGATION - SPRAY	9,790	S.F.	$ 0.75	$ 7,342.50
15	LAND ACQUISITION	0.00	AC.		
16	ENGINEERING AND DESIGN (10%)	1	L.S.	$ 8,273.57	$ 8,273.57
				SUB-TOTAL COST	**$ 91,009.25**
				15% Contingency	$ 13,651.39
				TOTAL ESTIMATED COST	**$ 104,660.64**

SANTAQUIN CITY

Santaquin Canyon Urban Trail (Match)

Probable Construction Cost Estimate

07.06.16

Item	Item Description	Qty.	Units	Unit Price	Total
1	MOBILIZATION / DEMOBILIZATION	1	L.S.	$ 1,601.14	$ 1,601.14
2	SITE CLEARING AND GRUBBING	5,200	S.F.	$ 0.20	$ 1,040.00
3	SITE GRADING	5,200	S.F.	$ 0.25	$ 1,300.00
4	WATER SERVICE	1	L.S.	$ 1,000.00	$ 1,000.00
5	STORM DRAINAGE	1	L.S.	$ 1,000.00	$ 1,000.00
6	ASPHALT TRAIL	2,600	S.F.	$ 3.00	$ 7,800.00
7	ADA RAMPS	1	EA.	$ 1,600.00	$ 1,188.57
8	TRAIL SIGNAGE	1	EA	$ 1,000.00	$ 1,000.00
9	TREE (2" CAL.)	5	EA.	$ 350.00	$ 1,820.00
10	SHRUB BED (PLANTS, 12" TOPSOIL, 3" MULCH)	0	S.F.	$ 4.00	$ -
11	BLUEGRASS SOD (SOD, 6" TOPSOIL)	2,600	S.F.	$ 1.25	$ 3,250.00
12	NATIVE SEED (SEED, 4" TOPSOIL)	0	S.F.	$ 0.40	$ -
13	IRRIGATION SYSTEM - DRIP	0	S.F.	$ 1.00	$ -
14	IRRIGATION - SPRAY	2,600	S.F.	$ 0.75	$ 1,950.00
15	LAND ACQUISITION	0.00	AC.		
16	ENGINEERING AND DESIGN (10%)	1	L.S.	$ 2,294.97	$ 2,294.97
				SUB-TOTAL COST	**$ 25,244.69**
				15% Contingency	$ 3,786.70
				TOTAL ESTIMATED COST	**$ 29,031.39**
				SANTAQUIN PORTION	**$ 2,032.20**

SANTAQUIN CITY

Stone Hollow Reservoir Trail

Probable Construction Cost Estimate

07.06.16

Item	Item Description	Qty.	Units	Unit Price	Total
1	MOBILIZATION / DEMOBILIZATION	1	L.S.	$ 8,981.44	$ 8,981.44
2	SITE CLEARING AND GRUBBING	62,280	S.F.	$ 0.20	$ 12,456.00
3	SITE GRADING	62,280	S.F.	$ 0.25	$ 15,570.00
4	WATER SERVICE	1	L.S.	$ -	$ -
5	STORM DRAINAGE	1	L.S.	$ 9,342.00	$ 9,342.00
6	SOFT SURFACE TRAIL	31,140	S.F.	$ 2.00	$ 62,280.00
7	ADA RAMPS	2	EA.	$ 1,600.00	$ 3,200.00
8	TRAIL SIGNAGE	4	EA	$ 1,000.00	$ 4,448.57
9	TREE (2" CAL.)	0	EA.	$ 350.00	$ -
10	SHRUB BED (PLANTS, 12" TOPSOIL, 3" MULCH)	0	S.F.	$ 4.00	$ -
11	BLUEGRASS SOD (SOD, 6" TOPSOIL)	0	S.F.	$ 1.25	$ -
12	NATIVE SEED (SEED, 4" TOPSOIL)	31,140	S.F.	$ 0.40	$ 12,456.00
13	IRRIGATION SYSTEM - DRIP	0	S.F.	$ 1.00	$ -
14	IRRIGATION - SPRAY	0	S.F.	$ 0.75	$ -
15	LAND ACQUISITION	0.00	AC.		
16	ENGINEERING AND DESIGN (10%)	1	L.S.	$ 12,873.40	$ 12,873.40
				SUB-TOTAL COST	**$ 141,607.42**
				15% Contingency	$ 21,241.11
				TOTAL ESTIMATED COST	**$ 162,848.53**

SANTAQUIN CITY

Summit 35 Trail

Probable Construction Cost Estimate

07.06.16

Item	Item Description	Qty.	Units	Unit Price	Total
1	MOBILIZATION / DEMOBILIZATION	1	L.S.	$ 8,971.03	$ 8,971.03
2	SITE CLEARING AND GRUBBING	30,720	S.F.	$ 0.20	$ 6,144.00
3	SITE GRADING	30,720	S.F.	$ 0.25	$ 7,680.00
4	WATER SERVICE	1	L.S.	$ 4,608.00	$ 4,608.00
5	STORM DRAINAGE	1	L.S.	$ 4,608.00	$ 4,608.00
6	ASPHALT TRAIL	15,360	S.F.	$ 3.00	$ 46,080.00
7	ADA RAMPS	4	EA.	$ 1,600.00	$ 7,021.71
8	TRAIL SIGNAGE	2	EA	$ 1,000.00	$ 2,000.00
9	TREE (2" CAL.)	31	EA.	$ 350.00	$ 10,752.00
10	SHRUB BED (PLANTS, 12" TOPSOIL, 3" MULCH)	0	S.F.	$ 4.00	$ -
11	BLUEGRASS SOD (SOD, 6" TOPSOIL)	15,360	S.F.	$ 1.25	$ 19,200.00
12	NATIVE SEED (SEED, 4" TOPSOIL)	0	S.F.	$ 0.40	$ -
13	IRRIGATION SYSTEM - DRIP	0	S.F.	$ 1.00	$ -
14	IRRIGATION - SPRAY	15,360	S.F.	$ 0.75	$ 11,520.00
15	LAND ACQUISITION	0.00	AC.		
16	ENGINEERING AND DESIGN (10%)	1	L.S.	$ 12,858.47	$ 12,858.47
				SUB-TOTAL COST	**$ 141,443.22**
				15% Contingency	$ 21,216.48
				TOTAL ESTIMATED COST	**$ 162,659.70**

SANTAQUIN CITY

Summit Ridge Parkway Trail (South - Match)

Probable Construction Cost Estimate

07.06.16

Item	Item Description	Qty.	Units	Unit Price	Total
1	MOBILIZATION / DEMOBILIZATION	1	L.S.	$ 5,255.19	$ 5,255.19
2	SITE CLEARING AND GRUBBING	26,920	S.F.	$ 0.20	$ 5,384.00
3	SITE GRADING	26,920	S.F.	$ 0.25	$ 6,730.00
4	WATER SERVICE	1	L.S.	$ -	$ -
5	STORM DRAINAGE	1	L.S.	$ 4,038.00	$ 4,038.00
6	ASPHALT TRAIL	13,460	S.F.	$ 3.00	$ 40,380.00
7	ADA RAMPS	4	EA.	$ 1,600.00	$ 6,153.14
8	TRAIL SIGNAGE	2	EA	$ 1,000.00	$ 2,000.00
9	TREE (2" CAL.)	0	EA.	$ 350.00	$ -
10	SHRUB BED (PLANTS, 12" TOPSOIL, 3" MULCH)	0	S.F.	$ 4.00	$ -
11	BLUEGRASS SOD (SOD, 6" TOPSOIL)	0	S.F.	$ 1.25	$ -
12	NATIVE SEED (SEED, 4" TOPSOIL)	13,460	S.F.	$ 0.40	$ 5,384.00
13	IRRIGATION SYSTEM - DRIP	0	S.F.	$ 1.00	$ -
14	IRRIGATION - SPRAY	0	S.F.	$ 0.75	$ -
15	LAND ACQUISITION	0.00	AC.		
16	ENGINEERING AND DESIGN (10%)	1	L.S.	$ 7,532.43	$ 7,532.43
				SUB-TOTAL COST	**$ 82,856.76**
				15% Contingency	$ 12,428.51
				TOTAL ESTIMATED COST	**$ 95,285.28**
				SANTQUIN PORTION	**$ 6,669.97**

Appendix "C"

Applicable State Codes

11-36a-101. Title.

This chapter is known as the "Impact Fees Act."

Enacted by Chapter 47, 2011 General Session

11-36a-102. Definitions.

As used in this chapter:

(1) (a) "Affected entity" means each county, municipality, local district under Title 17B, Limited Purpose Local Government Entities - Local Districts, special service district under Title 17D, Chapter 1, Special Service District Act, school district, interlocal cooperation entity established under Chapter 13, Interlocal Cooperation Act, and specified public utility:

(i) whose services or facilities are likely to require expansion or significant modification because of the facilities proposed in the proposed impact fee facilities plan; or

(ii) that has filed with the local political subdivision or private entity a copy of the general or long-range plan of the county, municipality, local district, special service district, school district, interlocal cooperation entity, or specified public utility.

(b) "Affected entity" does not include the local political subdivision or private entity that is required under Section 11-36a-501 to provide notice.

(2) "Charter school" includes:

(a) an operating charter school;

(b) an applicant for a charter school whose application has been approved by a chartering entity as provided in Title 53A, Chapter 1a, Part 5, The Utah Charter Schools Act; and

(c) an entity that is working on behalf of a charter school or approved charter applicant to develop or construct a charter school building.

(3) "Development activity" means any construction or expansion of a building, structure, or use, any change in use of a building or structure, or any changes in the use of land that creates additional demand and need for public facilities.

(4) "Development approval" means:

(a) except as provided in Subsection (4)(b), any written authorization from a local political subdivision that authorizes the commencement of development activity;

(b) development activity, for a public entity that may develop without written authorization from a local political subdivision;

(c) a written authorization from a public water supplier, as defined in Section 73-1-4, or a private water company:

(i) to reserve or provide:

(A) a water right;

(B) a system capacity; or

(C) a distribution facility; or

(ii) to deliver for a development activity:

(A) culinary water; or

(B) irrigation water; or

(d) a written authorization from a sanitary sewer authority, as defined in Section 10-9a-103:

(i) to reserve or provide:

(A) sewer collection capacity; or

(B) treatment capacity; or

(ii) to provide sewer service for a development activity.

(5) "Enactment" means:

(a) a municipal ordinance, for a municipality;

(b) a county ordinance, for a county; and

(c) a governing board resolution, for a local district, special service district, or private entity.

(6) "Encumber" means:

(a) a pledge to retire a debt; or

(b) an allocation to a current purchase order or contract.

(7) "Hookup fee" means a fee for the installation and inspection of any pipe, line, meter, or appurtenance to connect to a gas, water, sewer, storm water, power, or other utility system of a municipality, county, local district, special service district, or private entity.

(8) (a) "Impact fee" means a payment of money imposed upon new development activity as a condition of development approval to mitigate the impact of the new development on public infrastructure.

(b) "Impact fee" does not mean a tax, a special assessment, a building permit fee, a hookup fee, a fee for project improvements, or other reasonable permit or application fee.

(9) "Impact fee analysis" means the written analysis of each impact fee required by Section 11-36a-303.

(10) "Impact fee facilities plan" means the plan required by Section 11-36a-301.

(11) "Level of service" means the defined performance standard or unit of demand for each capital component of a public facility within a service area.

(12) (a) "Local political subdivision" means a county, a municipality, a local district under Title 17B, Limited Purpose Local Government Entities - Local Districts, or a special service district under Title 17D, Chapter 1, Special Service District Act.

(b) "Local political subdivision" does not mean a school district, whose impact fee activity is governed by Section 53A-20-100.5.

(13) "Private entity" means an entity in private ownership with at least 100 individual shareholders, customers, or connections, that is located in a first, second, third, or fourth class county and provides water to an applicant for development approval who is required to obtain water from the private entity either as a:

(a) specific condition of development approval by a local political subdivision acting pursuant to a prior agreement, whether written or unwritten, with the private entity; or

(b) functional condition of development approval because the private entity:

(i) has no reasonably equivalent competition in the immediate market; and

(ii) is the only realistic source of water for the applicant's development.

(14) (a) "Project improvements" means site improvements and facilities that are:

(i) planned and designed to provide service for development resulting from a development activity;

(ii) necessary for the use and convenience of the occupants or users of development resulting from a development activity; and

(iii) not identified or reimbursed as a system improvement.

(b) "Project improvements" does not mean system improvements.

(15) "Proportionate share" means the cost of public facility improvements that are roughly proportionate and reasonably related to the service demands and needs of any development activity.

(16) "Public facilities" means only the following impact fee facilities that have a life expectancy of 10 or more years and are owned or operated by or on behalf of a local political subdivision or private entity:

(a) water rights and water supply, treatment, storage, and distribution facilities;

(b) wastewater collection and treatment facilities;

(c) storm water, drainage, and flood control facilities;

(d) municipal power facilities;

(e) roadway facilities;

(f) parks, recreation facilities, open space, and trails;

(g) public safety facilities; or

(h) environmental mitigation as provided in Section 11-36a-205.

(17) (a) "Public safety facility" means:

(i) a building constructed or leased to house police, fire, or other public safety entities; or

(ii) a fire suppression vehicle costing in excess of $500,000.

(b) "Public safety facility" does not mean a jail, prison, or other place of involuntary incarceration.

(18) (a) "Roadway facilities" means a street or road that has been designated on an officially adopted subdivision plat, roadway plan, or general plan of a political subdivision, together with all necessary appurtenances.

(b) "Roadway facilities" includes associated improvements to a federal or state roadway only when the associated improvements:

(i) are necessitated by the new development; and

(ii) are not funded by the state or federal government.

(c) "Roadway facilities" does not mean federal or state roadways.

(19) (a) "Service area" means a geographic area designated by an entity that imposes an impact fee on the basis of sound planning or engineering principles in which a public facility, or a defined set of public facilities, provides service within the area.

(b) "Service area" may include the entire local political subdivision or an entire area served by a private entity.

(20) "Specified public agency" means:

(a) the state;

(b) a school district; or

(c) a charter school.

(21) (a) "System improvements" means:

(i) existing public facilities that are:

(A) identified in the impact fee analysis under Section 11-36a-304; and

(B) designed to provide services to service areas within the community at large; and

(ii) future public facilities identified in the impact fee analysis under Section 11-36a-304 that are intended to provide services to service areas within the community at large.

(b) "System improvements" does not mean project improvements.

Amended by Chapter 200, 2013 General Session

11-36a-201. Impact fees.

(1) A local political subdivision or private entity shall ensure that any imposed impact fees comply with the requirements of this chapter.

(2) A local political subdivision and private entity may establish impact fees only for those public facilities defined in Section 11-36a-102.

(3) Nothing in this chapter may be construed to repeal or otherwise eliminate an impact fee in effect on the effective date of this chapter that is pledged as a source of revenues to pay bonded indebtedness that was incurred before the effective date of this chapter.

Enacted by Chapter 47, 2011 General Session

11-36a-202. Prohibitions on impact fees.

(1) A local political subdivision or private entity may not:

(a) impose an impact fee to:

(i) cure deficiencies in a public facility serving existing development;

(ii) raise the established level of service of a public facility serving existing development;

(iii) recoup more than the local political subdivision's or private entity's costs actually incurred for excess capacity in an existing system improvement; or

(iv) include an expense for overhead, unless the expense is calculated pursuant to a methodology that is consistent with:

(A) generally accepted cost accounting practices; and

(B) the methodological standards set forth by the federal Office of Management and Budget for federal grant reimbursement;

(b) delay the construction of a school or charter school because of a dispute with the school or charter school over impact fees; or

(c) impose or charge any other fees as a condition of development approval unless those fees are a reasonable charge for the service provided.

(2) (a) Notwithstanding any other provision of this chapter, a political subdivision or private entity may not impose an impact fee:

(i) on residential components of development to pay for a public safety facility that is a fire suppression vehicle;

(ii) on a school district or charter school for a park, recreation facility, open space, or trail;

(iii) on a school district or charter school unless:

(A) the development resulting from the school district's or charter school's development activity directly results in a need for additional system improvements for which the impact fee is imposed; and

(B) the impact fee is calculated to cover only the school district's or charter school's proportionate share of the cost of those additional system improvements; or

(iv) to the extent that the impact fee includes a component for a law enforcement facility, on development activity for:

(A) the Utah National Guard;

(B) the Utah Highway Patrol; or

(C) a state institution of higher education that has its own police force.

(b) (i) Notwithstanding any other provision of this chapter, a political subdivision or private entity may not impose an impact fee on development activity that consists of the construction of a school, whether by a school district or a charter school, if:

(A) the school is intended to replace another school, whether on the same or a different parcel;

(B) the new school creates no greater demand or need for public facilities than the school or school facilities, including any portable or modular classrooms that are on the site of the replaced school at the time that the new school is proposed; and

(C) the new school and the school being replaced are both within the boundary of the local political subdivision or the jurisdiction of the private entity.

(ii) If the imposition of an impact fee on a new school is not prohibited under Subsection (2)(b)(i) because the new school creates a greater demand or need for public facilities than the school being replaced, the impact fee shall be based only on the demand or need that the new school creates for public facilities that exceeds the demand or need that the school being replaced creates for those public facilities.

(c) Notwithstanding any other provision of this chapter, a political subdivision or private entity may impose an impact fee for a road facility on the state only if and to the extent that:

(i) the state's development causes an impact on the road facility; and

(ii) the portion of the road facility related to an impact fee is not funded by the state or by the federal government.

(3) Notwithstanding any other provision of this chapter, a local political subdivision may impose and collect impact fees on behalf of a school district if authorized by Section 53A-20-100.5.

Enacted by Chapter 47, 2011 General Session

11-36a-203. Private entity assessment of impact fees -- Charges for water rights, physical infrastructure -- Notice -- Audit.

(1) A private entity:

(a) shall comply with the requirements of this chapter before imposing an impact fee; and

(b) except as otherwise specified in this chapter, is subject to the same requirements of this chapter as a local political subdivision.

(2) A private entity may only impose a charge for water rights or physical infrastructure necessary to provide water or sewer facilities by imposing an impact fee.

(3) Where notice and hearing requirements are specified, a private entity shall comply with the notice and hearing requirements for local districts.

(4) A private entity that assesses an impact fee under this chapter is subject to the audit requirements of Title 51, Chapter 2a, Accounting Reports from Political Subdivisions, Interlocal Organizations, and Other Local Entities Act.

Enacted by Chapter 47, 2011 General Session

11-36a-204. Other names for impact fees.

(1) A fee that meets the definition of impact fee under Section 11-36a-102 is an impact fee subject to this chapter, regardless of what term the local political subdivision or private entity uses to refer to the fee.
(2) A local political subdivision or private entity may not avoid application of this chapter to a fee that meets the definition of an impact fee under Section 11-36a-102 by referring to the fee by another name.

Enacted by Chapter 47, 2011 General Session

11-36a-205. Environmental mitigation impact fees.

Notwithstanding the requirements and prohibitions of this chapter, a local political subdivision may impose and assess an impact fee for environmental mitigation when:
(1) the local political subdivision has formally agreed to fund a Habitat Conservation Plan to resolve conflicts with the Endangered Species Act of 1973, 16 U.S.C. Sec. 1531, et seq. or other state or federal environmental law or regulation;
(2) the impact fee bears a reasonable relationship to the environmental mitigation required by the Habitat Conservation Plan; and
(3) the legislative body of the local political subdivision adopts an ordinance or resolution:
  (a) declaring that an impact fee is required to finance the Habitat Conservation Plan;
  (b) establishing periodic sunset dates for the impact fee; and
  (c) requiring the legislative body to:
    (i) review the impact fee on those sunset dates;
    (ii) determine whether or not the impact fee is still required to finance the Habitat Conservation Plan; and
    (iii) affirmatively reauthorize the impact fee if the legislative body finds that the impact fee must remain in effect.

Enacted by Chapter 47, 2011 General Session

11-36a-301. Impact fee facilities plan.

(1) Before imposing an impact fee, each local political subdivision or private entity shall, except as provided in Subsection (3), prepare an impact fee facilities plan to determine the public facilities required to serve development resulting from new development activity.
(2) A municipality or county need not prepare a separate impact fee facilities plan if the general plan required by Section 10-9a-401 or 17-27a-401, respectively, contains the elements required by Section 11-36a-302.
(3) A local political subdivision or a private entity with a population, or serving a population, of less than 5,000 as of the last federal census that charges impact fees of less than $250,000 annually need not comply with the impact fee facilities plan requirements of this part, but shall ensure that:
  (a) the impact fees that the local political subdivision or private entity imposes are based upon a reasonable plan that otherwise complies with the common law and this chapter; and
  (b) each applicable notice required by this chapter is given.

Amended by Chapter 200, 2013 General Session

11-36a-302. Impact fee facilities plan requirements -- Limitations -- School district or charter school.

(1) (a) An impact fee facilities plan shall:

(i) identify the existing level of service;

(ii) subject to Subsection (1)(c), establish a proposed level of service;

(iii) identify any excess capacity to accommodate future growth at the proposed level of service;

(iv) identify demands placed upon existing public facilities by new development activity at the proposed level of service; and

(v) identify the means by which the political subdivision or private entity will meet those growth demands.

(b) A proposed level of service may diminish or equal the existing level of service.

(c) A proposed level of service may:

(i) exceed the existing level of service if, independent of the use of impact fees, the political subdivision or private entity provides, implements, and maintains the means to increase the existing level of service for existing demand within six years of the date on which new growth is charged for the proposed level of service; or

(ii) establish a new public facility if, independent of the use of impact fees, the political subdivision or private entity provides, implements, and maintains the means to increase the existing level of service for existing demand within six years of the date on which new growth is charged for the proposed level of service.

(2) In preparing an impact fee facilities plan, each local political subdivision shall generally consider all revenue sources to finance the impacts on system improvements, including:

(a) grants;

(b) bonds;

(c) interfund loans;

(d) impact fees; and

(e) anticipated or accepted dedications of system improvements.

(3) A local political subdivision or private entity may only impose impact fees on development activities when the local political subdivision's or private entity's plan for financing system improvements establishes that impact fees are necessary to maintain a proposed level of service that complies with Subsection (1)(b) or (c).

(4) (a) Subject to Subsection (4)(c), the impact fee facilities plan shall include a public facility for which an impact fee may be charged or required for a school district or charter school if the local political subdivision is aware of the planned location of the school district facility or charter school:

(i) through the planning process; or

(ii) after receiving a written request from a school district or charter school that the public facility be included in the impact fee facilities plan.

(b) If necessary, a local political subdivision or private entity shall amend the impact fee facilities plan to reflect a public facility described in Subsection (4)(a).

(c) (i) In accordance with Subsections 10-9a-305(3) and 17-27a-305(3), a local political subdivision may not require a school district or charter school to participate in the cost of any roadway or sidewalk.

(ii) Notwithstanding Subsection (4)(c)(i), if a school district or charter school agrees to build a roadway or sidewalk, the roadway or sidewalk shall be included in the impact fee facilities plan if the local jurisdiction has an impact fee facilities plan for roads and sidewalks.

Amended by Chapter 200, 2013 General Session

11-36a-303. Impact fee analysis.

(1) Subject to the notice requirements of Section 11-36a-504, each local political subdivision or private entity intending to impose an impact fee shall prepare a written analysis of each impact fee.

(2) Each local political subdivision or private entity that prepares an impact fee analysis under Subsection (1) shall also prepare a summary of the impact fee analysis designed to be understood by a lay person.

Enacted by Chapter 47, 2011 General Session

11-36a-304. Impact fee analysis requirements.

(1) An impact fee analysis shall:

(a) identify the anticipated impact on or consumption of any existing capacity of a public facility by the anticipated development activity;

(b) identify the anticipated impact on system improvements required by the anticipated development activity to maintain the established level of service for each public facility;

(c) subject to Subsection (2), demonstrate how the anticipated impacts described in Subsections (1)(a) and (b) are reasonably related to the anticipated development activity;

(d) estimate the proportionate share of:

(i) the costs for existing capacity that will be recouped; and

(ii) the costs of impacts on system improvements that are reasonably related to the new development activity; and

(e) based on the requirements of this chapter, identify how the impact fee was calculated.

(2) In analyzing whether or not the proportionate share of the costs of public facilities are reasonably related to the new development activity, the local political subdivision or private entity, as the case may be, shall identify, if applicable:

(a) the cost of each existing public facility that has excess capacity to serve the anticipated development resulting from the new development activity;

(b) the cost of system improvements for each public facility;

(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;

(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;

(e) the relative extent to which development activity will contribute to the cost of existing public facilities and system improvements in the future;

(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;

(g) extraordinary costs, if any, in servicing the newly developed properties; and

(h) the time-price differential inherent in fair comparisons of amounts paid at different times.

Enacted by Chapter 47, 2011 General Session

11-36a-304. Impact fee analysis requirements.

(1) An impact fee analysis shall:

(a) identify the anticipated impact on or consumption of any existing capacity of a public facility by the anticipated development activity;

(b) identify the anticipated impact on system improvements required by the anticipated development activity to maintain the established level of service for each public facility;

(c) subject to Subsection (2), demonstrate how the anticipated impacts described in Subsections (1)(a) and (b) are reasonably related to the anticipated development activity;

(d) estimate the proportionate share of:

(i) the costs for existing capacity that will be recouped; and

(ii) the costs of impacts on system improvements that are reasonably related to the new development activity; and

(e) based on the requirements of this chapter, identify how the impact fee was calculated.

(2) In analyzing whether or not the proportionate share of the costs of public facilities are reasonably related to the new development activity, the local political subdivision or private entity, as the case may be, shall identify, if applicable:

(a) the cost of each existing public facility that has excess capacity to serve the anticipated development resulting from the new development activity;

(b) the cost of system improvements for each public facility;

(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;

(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;

(e) the relative extent to which development activity will contribute to the cost of existing public facilities and system improvements in the future;

(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;

(g) extraordinary costs, if any, in servicing the newly developed properties; and

(h) the time-price differential inherent in fair comparisons of amounts paid at different times.

Enacted by Chapter 47, 2011 General Session

11-36a-305. Calculating impact fees.

(1) In calculating an impact fee, a local political subdivision or private entity may include:

(a) the construction contract price;

(b) the cost of acquiring land, improvements, materials, and fixtures;

(c) the cost for planning, surveying, and engineering fees for services provided for and directly related to the construction of the system improvements; and

(d) for a political subdivision, debt service charges, if the political subdivision might use impact fees as a revenue stream to pay the principal and interest on bonds, notes, or other obligations issued to finance the costs of the system improvements.

(2) In calculating an impact fee, each local political subdivision or private entity shall base amounts calculated under Subsection (1) on realistic estimates, and the assumptions underlying those estimates shall be disclosed in the impact fee analysis.

Enacted by Chapter 47, 2011 General Session

11-36a-306. Certification of impact fee analysis.

(1) An impact fee facilities plan shall include a written certification from the person or entity that prepares the impact fee facilities plan that states the following:

"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."

(2) An impact fee analysis shall include a written certification from the person or entity that prepares the impact fee analysis which states as follows:

"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. 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;
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."

Amended by Chapter 278, 2013 General Session

11-36a-401. Impact fee enactment.

(1) (a) A local political subdivision or private entity wishing to impose impact fees shall pass an impact fee enactment in accordance with Section 11-36a-402.

(b) An impact fee imposed by an impact fee enactment may not exceed the highest fee justified by the impact fee analysis.

(2) An impact fee enactment may not take effect until 90 days after the day on which the impact fee enactment is approved.

Enacted by Chapter 47, 2011 General Session

11-36a-402. Required provisions of impact fee enactment.

(1) A local political subdivision or private entity shall ensure, in addition to the requirements described in Subsections (2) and (3), that an impact fee enactment contains:

(a) a provision establishing one or more service areas within which the local political subdivision or private entity calculates and imposes impact fees for various land use categories;

(b) (i) a schedule of impact fees for each type of development activity that specifies the amount of the impact fee to be imposed for each type of system improvement; or

(ii) the formula that the local political subdivision or private entity, as the case may be, will use to calculate each impact fee;

(c) a provision authorizing the local political subdivision or private entity, as the case may be, to adjust the standard impact fee at the time the fee is charged to:

(i) respond to:

(A) unusual circumstances in specific cases; or

(B) a request for a prompt and individualized impact fee review for the development activity of the state, a school district, or a charter school and an offset or credit for a public facility for which an impact fee has been or will be collected; and

(ii) ensure that the impact fees are imposed fairly; and

(d) a provision governing calculation of the amount of the impact fee to be imposed on a particular development that permits adjustment of the amount of the impact fee based upon studies and data submitted by the developer.

(2) A local political subdivision or private entity shall ensure that an impact fee enactment allows a developer, including a school district or a charter school, to receive a credit against or proportionate reimbursement of an impact fee if the developer:

(a) dedicates land for a system improvement;

(b) builds and dedicates some or all of a system improvement; or

(c) dedicates a public facility that the local political subdivision or private entity and the developer agree will reduce the need for a system improvement.

(3) A local political subdivision or private entity shall include a provision in an impact fee enactment that requires a credit against impact fees for any dedication of land for, improvement to, or new construction of, any system improvements provided by the developer if the facilities:

(a) are system improvements; or

(b) (i) are dedicated to the public; and

(ii) offset the need for an identified system improvement.

Enacted by Chapter 47, 2011 General Session

11-36a-403. Other provisions of impact fee enactment.

(1) A local political subdivision or private entity may include a provision in an impact fee enactment that:

(a) provides an impact fee exemption for:

(i) development activity attributable to:

(A) low income housing;

(B) the state;

(C) subject to Subsection (2), a school district; or

(D) subject to Subsection (2), a charter school; or

(ii) other development activity with a broad public purpose; and

(b) except for an exemption under Subsection (1)(a)(i)(A), establishes one or more sources of funds other than impact fees to pay for that development activity.

(2) An impact fee enactment that provides an impact fee exemption for development activity attributable to a school district or charter school shall allow either a school district or a charter school to qualify for the exemption on the same basis.
(3) An impact fee enactment that repeals or suspends the collection of impact fees is exempt from the notice requirements of Section 11-36a-504.

Enacted by Chapter 47, 2011 General Session

11-36a-501. Notice of intent to prepare an impact fee facilities plan.
(1) Before preparing or amending an impact fee facilities plan, a local political subdivision or private entity shall provide written notice of its intent to prepare or amend an impact fee facilities plan.
(2) A notice required under Subsection (1) shall:
(a) indicate that the local political subdivision or private entity intends to prepare or amend an impact fee facilities plan;
(b) describe or provide a map of the geographic area where the proposed impact fee facilities will be located; and
(c) subject to Subsection (3), be posted on the Utah Public Notice Website created under Section 63F-1-701.
(3) Fo a private entity required to post notice on the Utah Public Notice Website under Subsection (2)(c):
(a) the private entity shall give notice to the general purpose local government in which the private entity's private business office is located; and
(b) the general purpose local government described in Subsection (3)(a) shall post the notice on the Utah Public Notice Website.

Enacted by Chapter 47, 2011 General Session

11-36a-502. Notice to adopt or amend an impact fee facilities plan.
(1) If a local political subdivision chooses to prepare an independent impact fee facilities plan rather than include an impact fee facilities element in the general plan in accordance with Section 11-36a-301, the local political subdivision shall, before adopting or amending the impact fee facilities plan:
(a) give public notice, in accordance with Subsection (2), of the plan or amendment at least 10 days before the day on which the public hearing described in Subsection (1)(d) is scheduled;
(b) make a copy of the plan or amendment, together with a summary designed to be understood by a lay person, available to the public;
(c) place a copy of the plan or amendment and summary in each public library within the local political subdivision; and
(d) hold a public hearing to hear public comment on the plan or amendment.
(2) With respect to the public notice required under Subsection (1)(a):
(a) each municipality shall comply with the notice and hearing requirements of, and, except as provided in Subsection 11-36a-701(3)(b)(ii), receive the protections of Sections 10-9a-205 and 10-9a-801 and Subsection 10-9a-502(2);
(b) each county shall comply with the notice and hearing requirements of, and, except as provided in Subsection 11-36a-701(3)(b)(ii), receive the protections of Sections 17-27a-205 and 17-27a-801 and Subsection 17-27a-502(2); and
(c) each local district, special service district, and private entity shall comply with the notice and hearing requirements of, and receive the protections of, Section 17B-1-111.
(3) Nothing contained in this section or Section 11-36a-503 may be construed to require involvement by a planning commission in the impact fee facilities planning process.

Enacted by Chapter 47, 2011 General Session

11-36a-503. Notice of preparation of an impact fee analysis.

(1) Before preparing or contracting to prepare an impact fee analysis, each local political subdivision or, subject to Subsection (2), private entity shall post a public notice on the Utah Public Notice Website created under Section 63F-1-701.

(2) For a private entity required to post notice on the Utah Public Notice Website under Subsection (1):

(a) the private entity shall give notice to the general purpose local government in which the private entity's primary business is located; and

(b) the general purpose local government described in Subsection (2)(a) shall post the notice on the Utah Public Notice Website.

Enacted by Chapter 47, 2011 General Session

11-36a-504. Notice of intent to adopt impact fee enactment -- Hearing -- Protections.

(1) Before adopting an impact fee enactment:

(a) a municipality legislative body shall:

(i) comply with the notice requirements of Section 10-9a-205 as if the impact fee enactment were a land use ordinance;

(ii) hold a hearing in accordance with Section 10-9a-502 as if the impact fee enactment were a land use ordinance; and

(iii) except as provided in Subsection 11-36a-701(3)(b)(ii), receive the protections of Section 10-9a-801 as if the impact fee were a land use ordinance;

(b) a county legislative body shall:

(i) comply with the notice requirements of Section 17-27a-205 as if the impact fee enactment were a land use ordinance;

(ii) hold a hearing in accordance with Section 17-27a-502 as if the impact fee enactment were a land use ordinance; and

(iii) except as provided in Subsection 11-36a-701(3)(b)(ii), receive the protections of Section 17-27a-801 as if the impact fee were a land use ordinance;

(c) a local district or special service district shall:

(i) comply with the notice and hearing requirements of Section 17B-1-111; and

(ii) receive the protections of Section 17B-1-111;

(d) a local political subdivision shall at least 10 days before the day on which a public hearing is scheduled in accordance with this section:

(i) make a copy of the impact fee enactment available to the public; and

(ii) post notice of the local political subdivision's intent to enact or modify the impact fee, specifying the type of impact fee being enacted or modified, on the Utah Public Notice Website created under Section 63F-1-701; and

(e) a local political subdivision shall submit a copy of the impact fee analysis and a copy of the summary of the impact fee analysis prepared in accordance with Section 11-36a-303 on its website or to each public library within the local political subdivision.

(2) Subsection (1)(a) or (b) may not be construed to require involvement by a planning commission in the impact fee enactment process.

Enacted by Chapter 47, 2011 General Session

11-36a-601. Accounting of impact fees.

A local political subdivision that collects an impact fee shall:

(1) establish a separate interest bearing ledger account for each type of public facility for which an impact fee is collected;

(2) deposit a receipt for an impact fee in the appropriate ledger account established under Subsection (1);

(3) retain the interest earned on each fund or ledger account in the fund or ledger account;

(4) at the end of each fiscal year, prepare a report on each fund or ledger account showing:
(a) the source and amount of all money collected, earned, and received by the fund or ledger account; and
(b) each expenditure from the fund or ledger account; and
(5) produce a report that:
(a) identifies impact fee funds by the year in which they were received, the project from which the funds were collected, the impact fee projects for which the funds were budgeted, and the projected schedule for expenditure;
(b) is in a format developed by the state auditor;
(c) is certified by the local political subdivision's chief financial officer; and
(d) is transmitted annually to the state auditor.

Enacted by Chapter 47, 2011 General Session

11-36a-602. Expenditure of impact fees.
(1) A local political subdivision may expend impact fees only for a system improvement:
(a) identified in the impact fee facilities plan; and
(b) for the specific public facility type for which the fee was collected.
(2) (a) Except as provided in Subsection (2)(b), a local political subdivision shall expend or encumber the impact fees for a permissible use within six years of their receipt.
(b) A local political subdivision may hold the fees for longer than six years if it identifies, in writing:
(i) an extraordinary and compelling reason why the fees should be held longer than six years; and
(ii) an absolute date by which the fees will be expended.

Enacted by Chapter 47, 2011 General Session

11-36a-603. Refunds.
A local political subdivision shall refund any impact fee paid by a developer, plus interest earned, when:
(1) the developer does not proceed with the development activity and has filed a written request for a refund;
(2) the fee has not been spent or encumbered; and
(3) no impact has resulted.

Enacted by Chapter 47, 2011 General Session

11-36a-701. Impact fee challenge.
(1) A person or an entity residing in or owning property within a service area, or an organization, association, or a corporation representing the interests of persons or entities owning property within a service area, has standing to file a declaratory judgment action challenging the validity of an impact fee.
(2) (a) A person or an entity required to pay an impact fee who believes the impact fee does not meet the requirements of law may file a written request for information with the local political subdivision who established the impact fee.
(b) Within two weeks after the receipt of the request for information under Subsection (2)(a), the local political subdivision shall provide the person or entity with the impact fee analysis, the impact fee facilities plan, and any other relevant information relating to the impact fee.
(3) (a) Subject to the time limitations described in Section 11-36a-702 and procedures set forth in Section 11-36a-703, a person or an entity that has paid an impact fee that was imposed by a local political subdivision may challenge:
(i) if the impact fee enactment was adopted on or after July 1, 2000:
(A) subject to Subsection (3)(b)(i) and except as provided in Subsection (3)(b)(ii), whether the local political subdivision complied with the notice requirements of this chapter with respect to the imposition of the impact fee; and
(B) whether the local political subdivision complied with other procedural requirements of this chapter for imposing the impact fee; and

(ii) except as limited by Subsection (3)(c), the impact fee.

(b) (i) The sole remedy for a challenge under Subsection (3)(a)(i)(A) is the equitable remedy of requiring the local political subdivision to correct the defective notice and repeat the process.

(ii) The protections given to a municipality under Section 10-9a-801 and to a county under Section 17-27a-801 do not apply in a challenge under Subsection (3)(a)(i)(A).

(c) The sole remedy for a challenge under Subsection (3)(a)(ii) is a refund of the difference between what the person or entity paid as an impact fee and the amount the impact fee should have been if it had been correctly calculated.

(4) (a) Subject to Subsection (4)(d), if an impact fee that is the subject of an advisory opinion under Section 13-43-205 is listed as a cause of action in litigation, and that cause of action is litigated on the same facts and circumstances and is resolved consistent with the advisory opinion:

(i) the substantially prevailing party on that cause of action:

(A) may collect reasonable attorney fees and court costs pertaining to the development of that cause of action from the date of the delivery of the advisory opinion to the date of the court's resolution; and

(B) shall be refunded an impact fee held to be in violation of this chapter, based on the difference between the impact fee paid and what the impact fee should have been if the government entity had correctly calculated the impact fee; and

(ii) in accordance with Section 13-43-206, a government entity shall refund an impact fee held to be in violation of this chapter to the person who was in record title of the property on the day on which the impact fee for the property was paid if:

(A) the impact fee was paid on or after the day on which the advisory opinion on the impact fee was issued but before the day on which the final court ruling on the impact fee is issued; and

(B) the person described in Subsection (3)(a)(ii) requests the impact fee refund from the government entity within 30 days after the day on which the court issued the final ruling on the impact fee.

(b) A government entity subject to Subsection (3)(a)(ii) shall refund the impact fee based on the difference between the impact fee paid and what the impact fee should have been if the government entity had correctly calculated the impact fee.

(c) Subsection (4) may not be construed to create a new cause of action under land use law.

(d) Subsection (3)(a) does not apply unless the resolution described in Subsection (3)(a) is final.

Enacted by Chapter 47, 2011 General Session

11-36a-702. Time limitations.

(1) A person or an entity that initiates a challenge under Subsection 11-36a-701(3)(a) may not initiate that challenge unless it is initiated within:

(a) for a challenge under Subsection 11-36a-701(3)(a)(i)(A), 30 days after the day on which the person or entity pays the impact fee;

(b) for a challenge under Subsection 11-36a-701(3)(a)(i)(B), 180 days after the day on which the person or entity pays the impact fee; or

(c) for a challenge under Subsection 11-36a-701(3)(a)(ii), one year after the day on which the person or entity pays the impact fee.

(2) The deadline to file an action in district court is tolled from the date that a challenge is filed using an administrative appeals procedure described in Section 11-36a-703 until 30 days after the day on which a final decision is rendered in the administrative appeals procedure.

Enacted by Chapter 47, 2011 General Session

11-36a-703. Procedures for challenging an impact fee.

(1) (a) A local political subdivision may establish, by ordinance or resolution, or a private entity may establish by prior written policy, an administrative appeals procedure to consider and decide a challenge to an impact fee.

(b) If the local political subdivision or private entity establishes an administrative appeals procedure, the local political subdivision shall ensure that the procedure includes a requirement that the local political subdivision make its decision no later than 30 days after the day on which the challenge to the impact fee is filed.

(2) A challenge under Subsection 11-36a-701(3)(a) is initiated by filing:

(a) if the local political subdivision or private entity has established an administrative appeals procedure under Subsection (1), the necessary document, under the administrative appeals procedure, for initiating the administrative appeal;

(b) a request for arbitration as provided in Section 11-36a-705; or

(c) an action in district court.

(3) The sole remedy for a successful challenge under Subsection 11-36a-701(1), which determines that an impact fee process was invalid, or an impact fee is in excess of the fee allowed under this act, is a declaration that, until the local political subdivision or private entity enacts a new impact fee study, from the date of the decision forward, the entity may charge an impact fee only as the court has determined would have been appropriate if it had been properly enacted.

(4) Subsections (2), (3), 11-36a-701(3), and 11-36a-702(1) may not be construed as requiring a person or an entity to exhaust administrative remedies with the local political subdivision before filing an action in district court under Subsections (2), (3), 11-36a-701(3), and 11-36a-702(1).

(5) The judge may award reasonable attorney fees and costs to the prevailing party in an action brought under this section.

(6) This chapter may not be construed as restricting or limiting any rights to challenge impact fees that were paid before the effective date of this chapter.

Amended by Chapter 200, 2013 General Session

11-36a-704. Mediation.

(1) In addition to the methods of challenging an impact fee under Section 11-36a-701, a specified public agency may require a local political subdivision or private entity to participate in mediation of any applicable impact fee.

(2) To require mediation, the specified public agency shall submit a written request for mediation to the local political subdivision or private entity.

(3) The specified public agency may submit a request for mediation under this section at any time, but no later than 30 days after the day on which an impact fee is paid.

(4) Upon the submission of a request for mediation under this section, the local political subdivision or private entity shall:

(a) cooperate with the specified public agency to select a mediator; and

(b) participate in the mediation process.

Enacted by Chapter 47, 2011 General Session

11-36a-705. Arbitration.

(1) A person or entity intending to challenge an impact fee under Section 11-36a-703 shall file a written request for arbitration with the local political subdivision within the time limitation described in Section 11-36a-702 for the applicable type of challenge.

(2) If a person or an entity files a written request for arbitration under Subsection (1), an arbitrator or arbitration panel shall be selected as follows:

(a) the local political subdivision and the person or entity filing the request may agree on a single arbitrator within 10 days after the day on which the request for arbitration is filed; or

(b) if a single arbitrator is not agreed to in accordance with Subsection (2)(a), an arbitration panel shall be created with the following members:

(i) each party shall select an arbitrator within 20 days after the date the request is filed; and
(ii) the arbitrators selected under Subsection (2)(b)(i) shall select a third arbitrator.

(3) The arbitration panel shall hold a hearing on the challenge no later than 30 days after the day on which:
(a) the single arbitrator is agreed on under Subsection (2)(a); or
(b) the two arbitrators are selected under Subsection (2)(b)(i).

(4) The arbitrator or arbitration panel shall issue a decision in writing no later than 10 days after the day on which the hearing described in Subsection (3) is completed.

(5) Except as provided in this section, each arbitration shall be governed by Title 78B, Chapter 11, Utah Uniform Arbitration Act.

(6) The parties may agree to:
(a) binding arbitration;
(b) formal, nonbinding arbitration; or
(c) informal, nonbinding arbitration.

(7) If the parties agree in writing to binding arbitration:
(a) the arbitration shall be binding;
(b) the decision of the arbitration panel shall be final;
(c) neither party may appeal the decision of the arbitration panel; and
(d) notwithstanding Subsection (10), the person or entity challenging the impact fee may not also challenge the impact fee under Subsection 11-36a-701(1) or Subsection 11-36a-703(2)(a) or (2)(c).

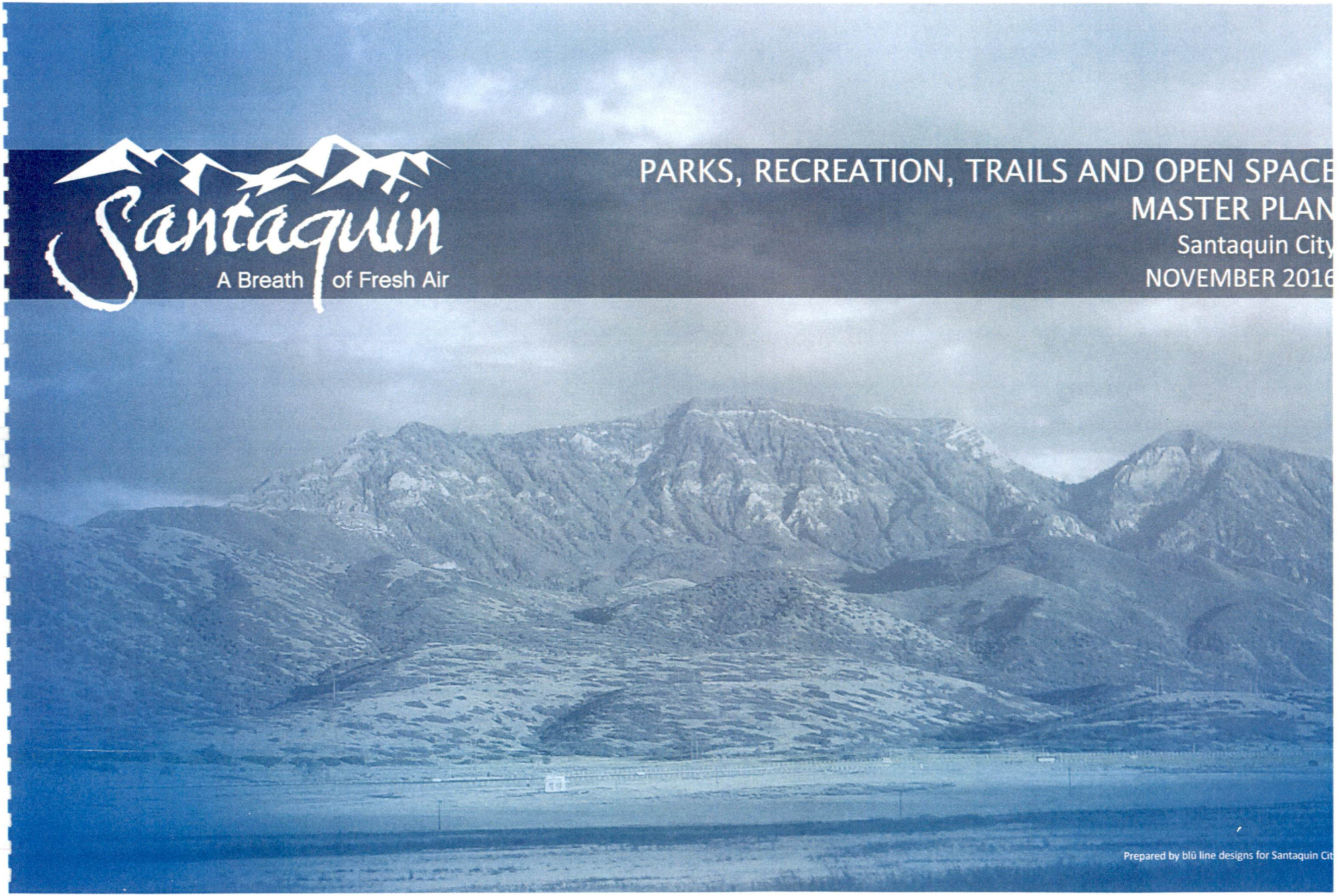
(8) (a) Except as provided in Subsection (8)(b), if the parties agree to formal, nonbinding arbitration, the arbitration shall be governed by the provisions of Title 63G, Chapter 4, Administrative Procedures Act.
(b) For purposes of applying Title 63G, Chapter 4, Administrative Procedures Act, to a formal, nonbinding arbitration under this section, notwithstanding Section 63G-4-502, "agency" means a local political subdivision.

(9) (a) An appeal from a decision in an informal, nonbinding arbitration may be filed with the district court in which the local political subdivision is located.
(b) An appeal under Subsection (9)(a) shall be filed within 30 days after the day on which the arbitration panel issues a decision under Subsection (4).
(c) The district court shall consider de novo each appeal filed under this Subsection (9).
(d) Notwithstanding Subsection (10), a person or entity that files an appeal under this Subsection (9) may not also challenge the impact fee under Subsection 11-36a-701(1) or Subsection 11-36a-703(2)(a) or (2)(c).

(10) (a) Except as provided in Subsections (7)(d) and (9)(d), this section may not be construed to prohibit a person or entity from challenging an impact fee as provided in Subsection 11-36a-701(1) or Subsection 11-36a-703(2)(a) or (2)(c).
(b) The filing of a written request for arbitration within the required time in accordance with Subsection (1) tolls all time limitations under Section 11-36a-702 until the day on which the arbitration panel issues a decision.

(11) The person or entity filing a request for arbitration and the local political subdivision shall equally share all costs of an arbitration proceeding under this section.

Enacted by Chapter 47, 2011 General Session


Santaquin
A Breath of Fresh Air
PARKS, RECREATION, TRAILS AND OPEN SPACE
MASTER PLAN
Santaquin City
NOVEMBER 2016
Prepared by blū line designs for Santaquin Cit

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acknowledgements

Mayor
Kirk Hunsaker

City Manager
Ben Reeves

City Council
Nicholas Miller
Keith Broadhead
Amanda Jeffs
David Hathaway
Marianne Stevenson

Planning Commission
Troy Peterson
Adam Beesley
Elizabeth Montoya
Brian Rowley
Kyle Francom
Trevor Wood
Nanette Shepherd
Kylie Lance

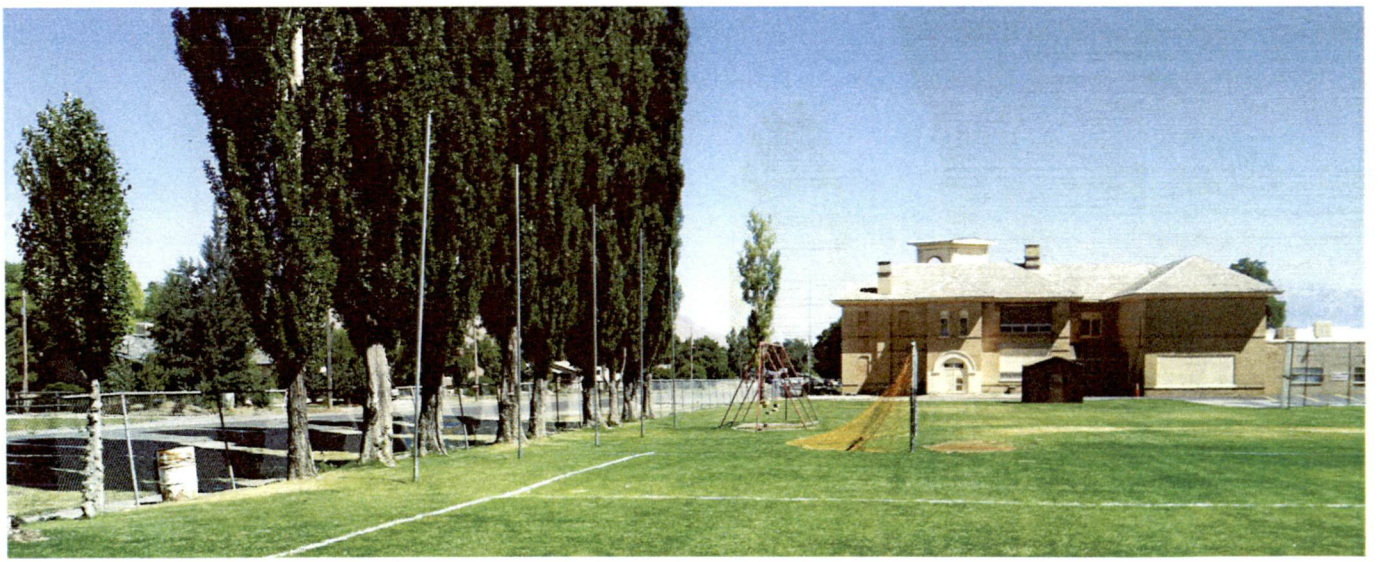
Recreation Board
Jennifer Teemant
Joe Anderson
Jackie Larsen
Aaron Bezzant
Shanna Stilson
Cassidy Ashmore

Santaquin City Staff

Dennis Marker	Asst. City Manager
Norm Beagley	City Engineer
Wade Eva	Public Works Director
Jon Lundell	EIT/Planning Tech
Amy Johnson	Program/Events Manager

Consultant Team

blu line designs	Planning
Horrocks Engineers	GIS | Impact Fee



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CHAPTER ONE | INTRODUCTION & PURPOSE

1.1 - INTRODUCTION & PURPOSE

At the base of Santaquin Peak, between the southern Wasatch Mountain Range and the East Tintic Mountain Range, and just south of Utah Lake, Santaquin is well situated in a inherently rich recreational environment. Santaquin City is dedicated to capitalizing on this opportunity and enhancing this environment by providing significant and meaningful recreational opportunities to its existing and future residents. These needs will be met through a combination of City-provided, regional, and natural recreational amenities and features including parks, recreational facilities and programs, trails, and open space. To this end, Santaquin most recently completed a Parks, Recreation, Trails and Open Space Facility Plan and associated Impact Fee Analysis in 2008. The City has a need and desire to update the Plan and have an Impact Fee Facility Plan and Impact Fee Analysis prepared accordingly.

The City's current General Plan that was adopted in 2014 also addresses many of the parks and recreational needs of the City but does so in a general manner. This *Parks, Recreation, Trails and Open Space Master Plan* document will further the recommendations of the 2014 General Plan and the 2008 Plan by providing specific direction and designs based on the needs analysis and community involvement process performed. Other documents that were reviewed and considered as part of this process included the City's Area Specific Master Plans: Northeast Neighborhood Plan, East Bench Neighborhood Plan, Core Area Neighborhood Plan, North Orchards Neighborhood Plan, and South Interchange Neighborhood Plan.

1.2 - EXISTING GOALS & POLICIES

The Parks, Recreation and Trails Goals and Policies that are included in the 2014 General Plan's Public Facilities and Services Element and are considered part of this planning document include:

GOAL 1 - TO ESTABLISH MINIMUM LEVELS OF SERVICE (LOS) FOR PARKS, RECREATION FACILITIES, OPEN SPACES AND PATHS IN ORDER TO PROVIDE RECREATION OPPORTUNITIES FOR ALL TYPES OF RECREATIONISTS.

Policy 1: The City should maintain a Level of Service (LOS) of at least 7.5 acres of developed park for every 1,000 residents and at least the number and type of facilities as suggested by the NRPA.

Policy 2: The City shall adopt and maintain a 5-year Parks and Recreation Capital Facilities Plan. The plan should be reviewed and amended annually in order to maintain the adopted LOS.

Policy 3: The City shall establish or amend its land development regulations and policies to require parks, open space and paths or access to such, to be dedicated to the public as part of every development.

Policy 4: Every Santaquin City resident should have a public park within 2,000 feet of their residence.

GOAL 2 - TO ESTABLISH A PATH SYSTEM THAT WILL MEET THE NEEDS OF LOCAL AND REGIONAL RECREATIONISTS, PROVIDE CONNECTIVITY BETWEEN PARKS AND OTHER OPEN SPACES, AND HAVE STRATEGICALLY LOCATED PATH HEADS FOR ACCESS ONTO AND ALONG SUCH TRAILS, ESPECIALLY THOSE LEADING TO THE MOUNTAINS OR OTHER CRITICAL OPEN SPACES.

Policy 1: The City should seek public participation when planning the type, number and locations of paths.

Policy 2: The City shall coordinate in the planning and implementation of regional path plans that may serve to link Santaquin with other communities in Utah County or statewide systems such as the Bonneville Shoreline or Goshen Valley Rail Trail.

Policy 3: The City shall adhere to the trails and recreation plan as shown on the recreation element map, which identifies the general locations of urban and equestrian trails.

Policy 4: The City shall make every attempt to educate residents, property owners and trail users of potential trail use conflicts through signage, public information meetings and publications regarding path use and City regulations.

GOAL 3 - TO ENCOURAGE CITYWIDE BEAUTIFICATION OF BOTH PUBLIC AND PRIVATE OPEN SPACES AND NEIGHBORHOODS.

Policy 1: The City shall enforce nuisance ordinances and require property owners to maintain their property free of weeds, abandoned vehicles an equipment, unsightly buildings, trash and debri

Policy 2: The City should adopt an urban forestry schem and seek "Tree City, USA" status.

Policy 3: The City should work closely with volunteer organizations, businesses and other agencies to coordinate beautification activities and funding opportunities for beautification projects.

GOAL 4 - TO PROMOTE GROWTH PATTERNS THAT ENCOURAGE THE DEVELOPMENT OF PARKS AND RECREATION FACILITIES ANC PRESERVE OPEN SPACE.

Policy 1: The City shall enact land development regulations that may allow flexible lot sizes and

clustering of residential units or densities; dedication of open spaces; establishment of urban and rural path systems; transfer of development rights or other techniques used to set aside open space or parks.

Policy 2: The City shall, to the maximum extent possible, prohibit residential development to occur without making adequate provisions for the creation of parks and recreation facilities to serve the minimum LOS needs of the residents of such development.

Policy 3: The City shall take advantage of development opportunities by partnering with developers for the creation of parks, open space and path facilities.

Policy 4: The City should enact programs to encourage the preservation of agricultural areas as open space. Such programs could include purchase, land trusts, transfer of development rights, clustering or density bonuses in exchange for preservation of agricultural lands.

Policy 5: The City shall provide in their land development regulations for the opportunity for developers to negotiate potential development credits in exchange for open spaces, trails, or parks within their projects. Such a program may provide economic or other benefit to the developers in exchange for increased open space and construction of recreation facilities. Density credits should be in accordance with the residential density plans established by the Land Use Element of the General Plan.

GOAL 5 - TO OPTIMIZE EXISTING AND FUTURE PARK FACILITIES, SCHOOLS, OR OTHER OPEN SPACES AND CORRIDORS TO MEET THE CITY'S RECREATIONAL NEEDS.

GOAL 6 - TO PROVIDE FUNDS FOR THE CONSTRUCTION OF FUTURE PARKS AND RECREATION IMPROVEMENTS WITH THE CITY.

GOAL 7 - BUILD A NEW SENIOR CITIZEN CENTER AND PROVIDE ADDITIONAL FACILITIES AND OPPORTUNITIES FOR SENIOR CITIZENS.

GOAL 8 - PROVIDE FOR THE FUTURE EXPANSION OF THE CEMETERY TO MEET FUTURE NEEDS.

1.3 -EXECUTIVE SUMMARY

In summary, the Parks, Recreation, Trails and Open Space Master Plan documents the analysis/assessment component of the project, recommends proposed improvements based on that analysis, and identifies potential funding opportunities and strategies to implement those improvements.

1.3.1 - EXISTING CONDITIONS, NEEDS ASSESSMENT & LEVEL OF SERVICE ANALYSIS

EXISTING CONDITIONS ANALYSIS

Existing parks and recreation facilities are identified and generally inventoried. Improvements made based on recommendations from the 2008 Parks, Recreation, Trails and Open Space Facilities Plan are recognized. This section also defines City standard park and trail types.

NEEDS ASSESSMENT

A multi-faceted approach was taken to identify the future needs of the City's parks and recreation facilities. These include identifying deficiencies in the City's current distribution of parks and recreation facilities through a Service Radius Study; through consideration of non-City facilities; through comparing existing facilities to National Park and Recreation Association recommendations; and finally through public input via a community survey.

LEVEL OF SERVICE (LOS) ANALYSIS

This document identifies the City's existing level of service (LOS) and adopted LOS. Historically, the City has identified the City's (LOS) in regards to parks and recreation facilities in an acreage per 1,000 residents. For purposes of this document, that methodology is maintained. However, the companion Impact Fee Facilities Plan and Impact Fee Analysis discuss LOS in dollars per 1,000 residents. It is recognized that the adopted planning LOS is not equivalent to the established impact fee LOS due to the City's desire to provide improvements above and beyond a historic level and beyond what can be paid for legally through impact fees. UC11-36-202(1)(a)(ii).

1.3.2 - PROPOSED IMPROVEMENTS

PARKS AND OPEN SPACE

Based on the needs identified, future park locations and improvements are identified. Preliminary conceptual designs and estimates are also included. These include:

- 400 E. Gateway Park
- City Cemetery Expansion
- Highline Park
- Orchard Hills Park
- Peter Rabbit Springs Park
- Stone Hollow Park
- Summit Ridge 35 Acre Park
- Theodore Ahlin Park

RECREATION FACILITIES

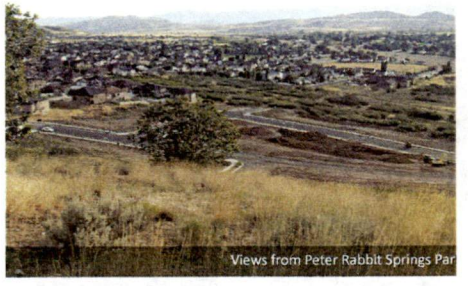
This section includes the improvement to the Rodeo Grounds based on its popularity and usage and the development of a new recreation center and park in conjunction with the proposed High School site.

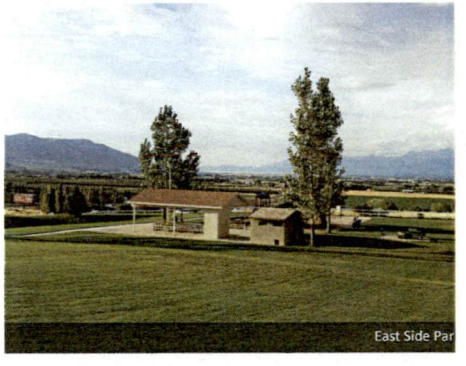
TRAILS

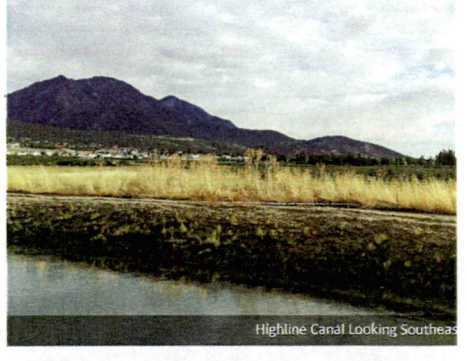
The City has a very extensive long term plan for the City-wide trail system. This section identifies trails that are proposed within the horizon of this plan and beyond.

1.3.3 - FUNDING OPPORTUNITIES

As recognized above, the City's desired LOS exceeds what may be paid for through future collection of impact fees. Because of this, there is a need to fund future parks and recreation improvements through alternative funding sources. This section outlines possible funding opportunities and strategies to implement those improvements.

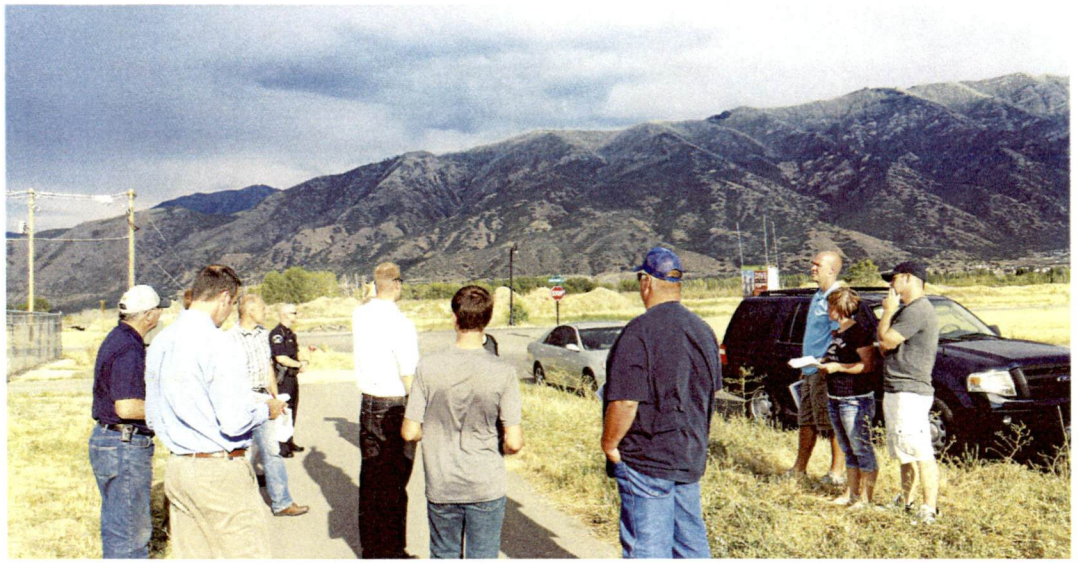

Views from Peter Rabbit Springs Par


East Side Par


Highline Canal Looking Southeas

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CHAPTER TWO | EXISTING CONDITIONS, NEEDS ASSESSMENT, & LEVEL OF SERVICE ANALYSIS

TO ESTABLISH A VISION AND DETERMINE A CLEAR DIRECTION FOR THE FUTURE OF THE SANTAQUIN PARKS AND RECREATION SYSTEM A MULTI-STEP ANALYSIS WAS CONDUCTED TO UNDERSTAND THE EXISTING SYSTEM AND FACILITIES, TO UNDERSTAND THE DESIRES AND NEEDS OF THE CITIZENS, AND TO UNDERSTAND HOW SANTAQUIN'S LEVEL OF SERVICE (LOS) COMPARES TO OTHER SIMILAR COMMUNITIES AND NATIONAL STANDARDS.

2.1 - EXISTING CONDITIONS ANALYSIS

2.1.1 - EXISTING PARKS

Santaquin's current parks and recreation system includes a diversity of facilities and amenities ranging from small pocket parks and neighborhood parks to larger sports field facilities and the rodeo grounds. Currently the City has approximately 70.90 acres in developed parks (*see Table 2.1 - Existing Parks and Recreation Inventory and Figure 2.1 - Existing Parks and Trails System*).

Summaries of the existing park and recreation facilities, organized by park type, are within this section.

TABLE 2.1 - EXISTING PARKS INVENTORY

EXISTING PARK INVENTORY		
NAME	**TYPE**	**SIZE**
Centennial Park	Community	6.25 ac
City Ball Complex	Community	5.23 ac
City Cemetery	--	12.6 ac
City Center Park	Community	3.50 ac
East Side Park	Neighborhood	3.0 ac
Orchard Cove Park	Neighborhood	3.19 ac
Orchard Hills Park	Community	3.81 ac
Orchard Lane Park	Pocket	0.33 ac
Rodeo Grounds	Community	7.50 ac
Squash Head Park	Pocket	0.85 ac
Sunset Trails Park	Neighborhood	2.79 ac
Theodore Ahlin Park	Community	21.78 ac
	Total =	70.83 ac

FIGURE 2.1 - EXISTING PARKS & TRAILS SYSTEM

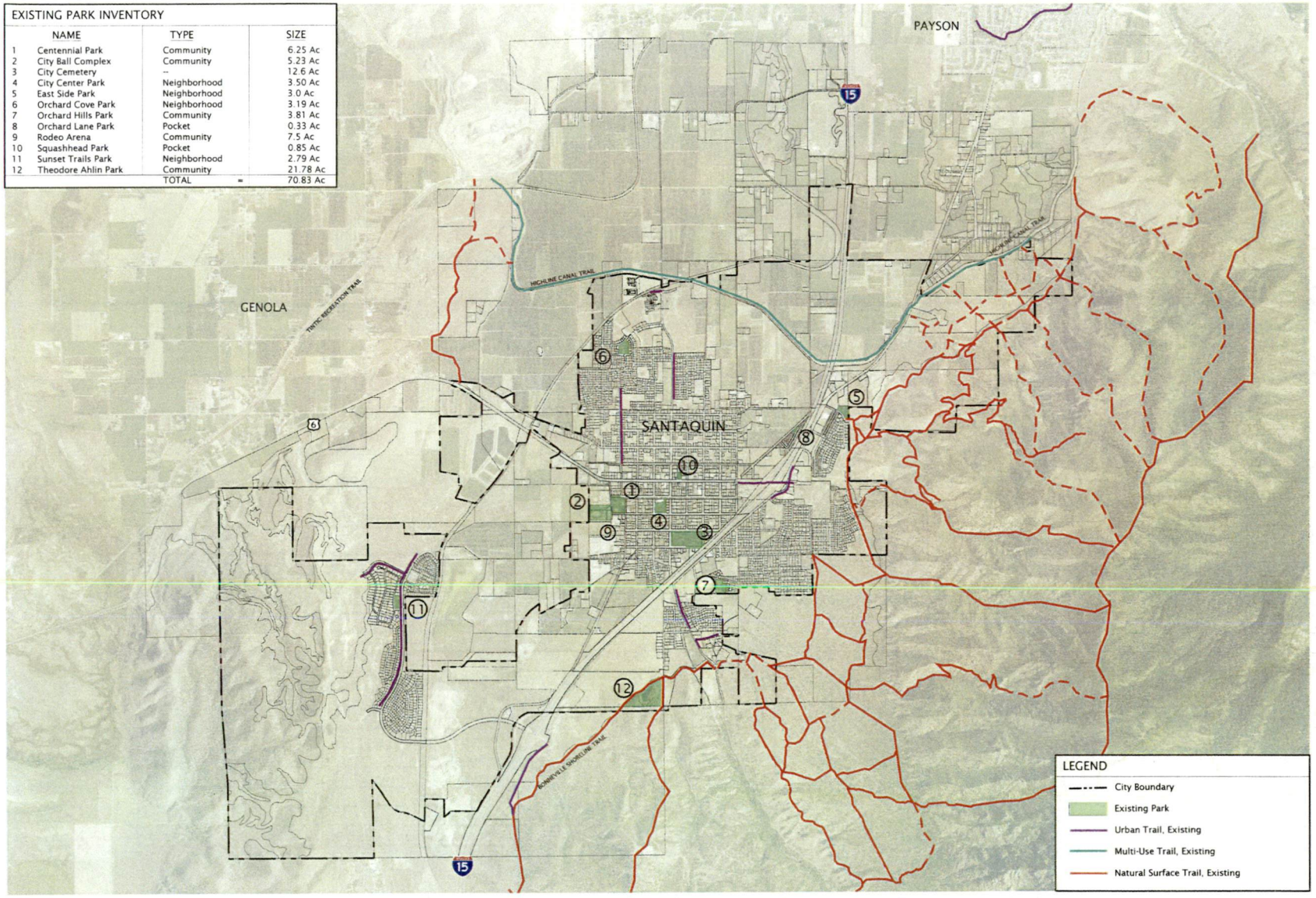
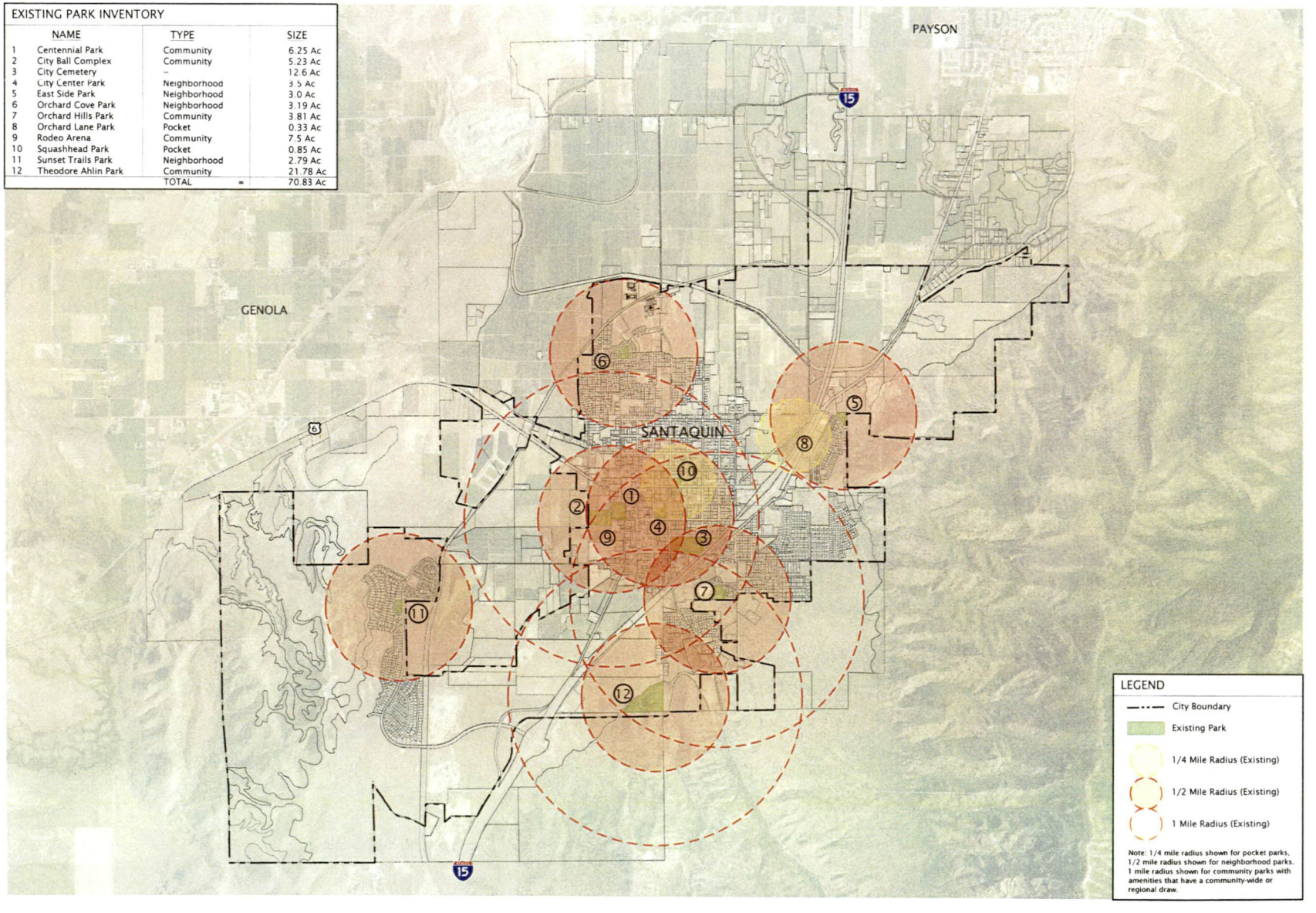


FIGURE 2.2 - EXISTING PARK DISTRIBUTION SERVICE ANALY

EXISTING PARK INVENTORY

	NAME	TYPE	SIZE
1	Centennial Park	Community	6.25 Ac
2	City Ball Complex	Community	5.23 Ac
3	City Cemetery	--	12.6 Ac
4	City Center Park	Neighborhood	3.5 Ac
5	East Side Park	Neighborhood	3.0 Ac
6	Orchard Cove Park	Neighborhood	3.19 Ac
7	Orchard Hills Park	Community	3.81 Ac
8	Orchard Lane Park	Pocket	0.33 Ac
9	Rodeo Arena	Community	7.5 Ac
10	Squashhead Park	Pocket	0.85 Ac
11	Sunset Trails Park	Neighborhood	2.79 Ac
12	Theodore Ahlin Park	Community	21.78 Ac
		TOTAL =	70.83 Ac



POCKET PARKS

Pocket Parks are generally less than one (1) acre in size, often located between buildings or homes in areas with few other places for people to gather, relax, or to enjoy the outdoors. They are small-scale open spaces that provide a safe and inviting environment for surrounding community members. They also may have specific historic or cultural significance. Due to size, amenities may be limited and generally passive in use.

ORCHARD LANE PARK:



Location: 310 North 700 East
Park Type: Pocket Park
Size: 0.33 Acres
Amenities: Small Bowery, Basketball Court, Picnic Tables, Garbage Cans, Drinking Fountain, and Park Light

Improvements Since 2009: Light Foundations, New Trees, Street Light

SQUASH HEAD PARK:



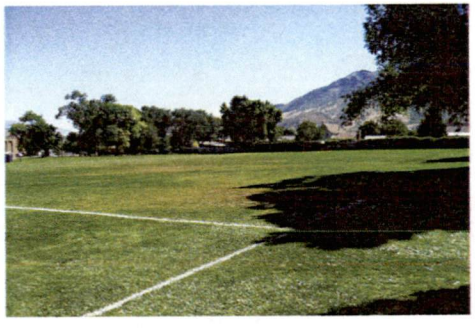
Location: 50 East Main Street
Park Type: Pocket Park
Size: 0.85 Acres
Amenities: Small Bowery, Benches, Picnic Tables, Drinking Fountain, and Two Historical Monuments

Improvements Since 2009: Additional Concrete

NEIGHBORHOOD PARKS

Neighborhood Parks are generally a minimum of 2 1/2 acres and less than 10 acres in size and located to provide easy and convenient access from surrounding residential development. Typical amenities may include playground equipment, small sports/tennis courts, picnic tables, and walking paths.

CITY CENTER PARK:



Location: 45 West 100 South
Park Type: Neighborhood Park
Size: 3.50 Acres
Amenities: Basketball Hoops, Multi-use Grass Field, Soccer Goals, Backstop, and Swing Set

EAST SIDE PARK:



Location: 398 North Cherry Lane
Park Type: Neighborhood Park
Size: 3.0 Acres
Amenities: Bowery, Restroom, Fire Pit and Playground Improvements

Since 2009: Restroom, Sewer and Culinary, Curbing

ORCHARD COVE PARK:



Location: 750 North 280 West
Park Type: Neighborhood Park
Size: 3.19 Acres
Amenities: Large Bowery, Tennis Courts, Basketball Court, Picnic Tables, Picnic Pavilions, Drinking Fountain, Restroom, Multi-use Play Field, and Garbage Cans

Improvements Since 2009: Tennis Courts, Fencing, Mow Strip, Concrete, Electrical, Basketball Court, Bathroom, Bowery, Landscape, Irrigation

COMMUNITY PARKS

Community Parks are generally ten (10) acres in size and may include ball fields, pavilions, formal and semi-formal landscaping, sport courts, lighting for playing fields and along pedestrian paths and other community-wide recreational amenities. These parks are developed based on the City's overall community recreation needs according to citizen input, National Parks and Recreation Association (NRPA) standards, funding opportunities, and periodic adjustments to the General Plan. These parks often become central gathering spaces for a community where festivals, markets, outdoor entertainment, and sport tournaments are conducted. To maintain a central gathering place within the City, these parks should be enhanced and retrofitted to serve not only recreation needs but also the social and cultural needs of the City.

CENTENNIAL PARK:



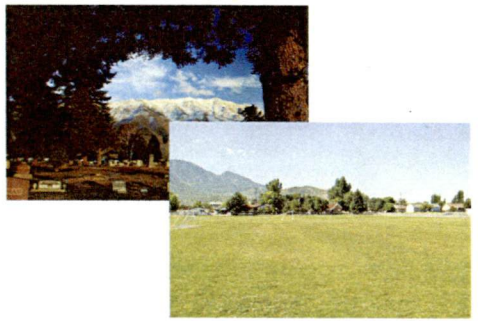
Location: 300 West 100 South
Park Type: Community Park
Size: 6.25 Acres
Amenities: Baseball Field, Bleachers, Bowery, Restrooms, Playground, Picnic Tables, Benches, Garbage Cans, Sand Volleyball Court, and Two Horseshoe Pits

CITY BALL COMPLEX:



Location: 175 South 400 West
Park Type: Community Park
Size: 5.23 Acres
Amenities: Four Little League Fields, Five Soccer Fields, Flag Football Field, Batting Cage, Restrooms, Snack Shack, Picnic Tables, Bleachers, Drinking Fountain, and Garbage Cans
Improvements Since 2009: Shade Tree

CITY CEMETERY:



Location: 100 East 300 South
Park Type: Community Park
Size: 12.6 Acres
Amenities: Cemetery, Veterans Memorial Field
Improvements Since 2009: Shade Trees

ORCHARD HILLS PARK:



Location: 168 East 610 South
Park Type: Community Park
Size: 3.81 Acres
Amenities: Two Softball Fields, Two Soccer Fields, Restrooms, and Snack Shack

RODEO ARENA:



Location: 175 South 400 West
Park Type: Community Park
Size: 7.5 Acres
Amenities: Rodeo Arena, Hillside Seating, Bucking Chutes, Roping Chute, Catch Pens, Announcer Stand, Arena Lights

SUNSET TRAILS PARK:



Location: 729 Sunset Drive
Park Type: Community Park
Size: 2.79 Acres
Amenities: Medium Bowery, Picnic Pavilions, Restroom, Picnic Tables, Drinking Fountain, Playground, Splash Park, Basketball Court, and Garbage Cans
Improvements Since 2009: Bathroom, Culinary and Sewer

THEODORE AHLIN PARK:



Location: Pole Canyon Road
Park Type: Community Park
Size: 21.78 Acres
Amenities: Pavilion, Fish Cleaning Station, Bathroom, and Reservoir
Improvements Since 2009: Pavilion, Fish Cleaning Station, Bathroom

OTHER PARK TYPES:

MULTI-USE PARKS
Multi-use Parks are generally less than four (4) acres in size and may be created by City storm drainage detention basins. These facilities will also have path linkages to one another in the City's overall trails plan. They may contain recreation facilities such as picnic areas, ball fields or other amenities as funding opportunities allow.

NATURAL OPEN SPACE PARKS
Open Space "Parks" are intended for the enjoyment and awareness of the natural habitat and wildlife that exists in the non-developed areas of the City, though minimal development may occur to facilitate access and provide convenience. They serve as recreation and learning opportunities with typical uses such as picnic areas, hiking and biking trails, trailheads, interpretive signage, and general low-impact recreation. The location of these parks can be used to limit the development impacts on wildlife corridors and critical habitat. These parks may also be strategically located to preserve view corridors, mitigate geologic hazards around developments or limit impacts to wetlands. These open space parks can often be developed with the partnership of other government entities and funds.

2.2 - NEEDS ASSESSMENT

A multi-faceted approach was taken to identify the future needs of the City's parks and recreation facilities. These included identifying deficiencies in the City's current distribution of parks and recreation facilities through a Service Radius Study; through consideration of non-City facilities; through comparing existing facilities to National Park and Recreation Association recommendations; and finally through public input via a community survey.

2.2.1 - EXISTING PARK DISTRIBUTION

As shown on the Existing Park Distribution Service Analysis map (*Figure 2.2*) there are deficiencies in the coverage of the existing parks system. Per the goals and policies presented earlier, Santaquin would like to have a public park facility within 2,000 feet of every residence. The proposed park facilities and improvements shown on this map and as described in *Chapter 3 - Proposed Improvements* begin to better satisfy this goal, but still fall a little short. Specifically, the area along 400 North between the Core Area Neighborhood and the North Orchards Neighborhood; and the area in the East Bench Neighborhood near Ridge Road and 300 South are lacking in public park facilities. There is a private park with limited public access, however, at approximately 580 East 300 South that contains a large bowery, a sand volleyball court, and a baseball backstop. Based upon the current City boundary, there are other gaps in service, but these are in less developed areas with minimal or no residences. As these areas develop and homes are built, park facilities will need to be provided.

2.2.2 - EXISTING TRAILS

Existing trails are shown on *Figure 2.1 -Existing Parks & Trails System*. There are three types of trails within the Santaquin trail system (*see City Standard Details*):

- Natural Surface
- Urban
- Multi-use
- Equestrian

NATURAL SURFACE TRAILS
This type of trail is a more narrow soft surface or natural trail for equestrian and non-motorized use in mountainous, open space, and/or natural areas where the need for a paved trail is not needed nor appropriate. This type of trail would include the Bonneville Shoreline Trail, a planned regional facility that links most of the Wasatch Front along the east bench area of the mountain ranges running from Nephi to Ogden.

URBAN
This type of trail would typically consist of an asphalt or concrete path wide enough to accommodate bicyclists, joggers and other non-motorized recreationists. These trails run through the more urban and developed neighborhoods of Santaquin and serve to enhance the connectivity of residents to City parks, conduct recreationists toward less developed/natural areas of the City, and provide safe and enhanced walking routes along roadways within the City's urban core.

MULTI-USE
This type of trail would typically consist of an asphalt or natural path wide enough to accommodate bicyclists, joggers and other non-motorized recreationists. These trails occur on the periphery of Santaquin and provide connections between the City's urban core to less developed areas, natural areas, and regional trails/ amenities outside of the City boundaries.

EQUESTRIAN
This type of trail typically occurs as a companion to the urban and multi-use trails described above that provides a separate and parallel trail of natural or soft surface construction for equestrian riders.

The City has a good start at a framework of trails but has many more planned that will provide better connectivity within the City and to the surrounding existing and planned recreational amenities.

2.2.3 - NON-CITY PARK AND RECREATION FACILITIES

There are many recreation opportunities around Santaquin that its residents have access to, including state, regional and community provided facilities. State and regional attractions which are in close proximity to Santaquin or accessed through Santaquin include Utah Lake, Mona Reservoir, Little Sahara Recreation Area, the historic Tintic mining area, the Nebo Scenic Byway, BLM State Lands, State Trust Lands, and Uinta National Forest. Due to the lack of a local recreation center and/or pool, Santaquin residents travel to the Payson Community Pool for that use.

2.2.4 - NATIONAL RECREATION AND PARKS ASSOCIATION (NRPA) STANDARDS

The National Recreation and Parks Association (NRPA) has historically recommended at least 5 to 8 acres of developed park per 1,000 residents. Today the NRPA recommends that park space and recreation facilities should be provided based upon a formula of estimated use (persons per day), availability of the park space (# of days per year that the park is open and available for use), and the total population served.

The NRPA also provides standards for the type of park facilities needed at certain population levels. Using these standards, deficiencies in Santaquin's current parks facilities can be identified (*see Table 2.2.4 - NRPA Standards Comparison*).

Though the City is meeting the needs of the current population in many categories and in overall park acreage based on NRPA standards, the City's population will quickly outpace the City's ability to fund and construct recreation facilities. Based on this comparison, most notable deficiencies are in tennis courts and trails. The City's short and long term capital facilities plans should begin to account for those facilities which will be the most expensive and most desired in the near future. Future development plans and current development agreements will likely determine the final timing and location for desired facilities.

2.2.5 - COMMUNITY INPUT SURVEY

Santaquin's public was engaged to provide feedback and input as to the current state of the parks and recreation system and to its desired future. This was done through a community survey asking a variety of questions (*see Figure 2.2.5 - Community Survey Questionnaire*). Responses were solicited and collected via the internet (Survey Monkey) and in person at various community events. Basic responses are shown to the right of each question in the Survey Questionnaire. Detailed survey results are included in *Appendix A*. In total, approximately 355 survey responses were collected. General observations based on the survey responses are included in this section.

GENERAL OBSERVATIONS
Overall the opinion of Santaquin's park system and facilities was good (44%) though condition, lack of trails, and lack of amenities are concerns. Playgrounds are what people like most about the existing parks. The biggest response was from 19-40 year old females with children in the home. Children are the primary users of the parks system. Geographically, the largest response was from those living east of I-15.

- MOST NEEDED TYPES OF PARKS AND FACILITIES
Trails and trailheads were identified as the most needed type of park facility (26.04%) with regional parks coming in second (25.15%). By far, the highest specific park improvement desired was an indoor pool/recreation center (71.92%). An outdoor pool and splash pad tied for second (41.55% each). It is clear that a pool and recreation center in some fashion are a high priority for Santaquin's public. Trails/walking paths and restroom facilities were other specific improvements that ranked high on the list.

SPORTS FIELDS/ COURTS
Santaquin has a shortage of multi-use recreational fields. This wa supported by the survey results with both baseball and soccer fields being ranked priorities (38.61% and 36.08% respectively). It was basketball courts, however, that ranked as the most needed sports field/court (41.77%).

TRAILS
As identified above, there is a strong desire for additional trails/ walking paths in Santaquin. With that said, parks and trails are nc regularly being used in exercise or fitness routines. This may be a result of a lack of trails/ walking paths to use. Based on survey results, it appears that Santaquin residents walk/run more often for exercise than bike for exercise. Over 50% of the respondents walk or hike in the foothills or mountains at least 1-2 times per month.

RECREATIONAL ACTIVITES/PROGRAMS
Youth sports activities ranked highest in participation and interes level (soccer, baseball/softball, and basketball) but movies in the park, reading, and running races also ranked high as priorities.

AREAS OF IMPROVEMENT
In addition to the desired park and recreational facilities identified above, survey responses also emphasized that upkeep and maintenance of existing facilities needs to be addressed - specifically the condition of existing baseball fields. As the City continues to grow and develop new facilities, it is important that adequate funding and attention is given to maintain and operate these existing facilities.

TABLE 2.2.4 - NRPA STANDARDS COMPARISON

TYPE OF RECREATIONAL FACILITY	NATIONAL STANDARD	CURRENT EXISTING	CURRENT POP. 11,341	NEED @ 20,000 POP.	NEED @ 30,000 POP.
Baseball Field, Little League	1/5,000	4	2.27	4	6
Baseball Field, Standard	1/30,000	1	0.38	0.67	1
Softball Field	1/5,000	2	2.27	4	6
Soccer Field	1/10,000	8	1.13	2	3
Football Field	1/20,000	0	0.57	1	1.5
Track - 1/4 mile	1/20,000	0	0.57	1	1.5
Basketball Court, Outdoor	1/5,000	4	2.27	4	6
Tennis Court	1/2,000	2	5.67	10	15
Volleyball/Badminton	1/5,000	1	2.27	4	6
Recreation Center	1/25,000	0	0.45	0.8	1.2
Swimming Pool	1/20,000	0	0.57	1	1.5
Trails - Miles	1/2 / 1,000	2.5	5.67	10	15
Playground	1/2,000	4	5.67	10	15
Picnic Pavilion	1/2,000	14	5.67	10	15
Total Acres per City LOS	5/1,000	70.9	56.71	100	150

Santaquin City Parks and Recreation Community Survey

1. What is your overall opinion of Santaquin City's Parks?

- ☐ Excellent (5.14%)
- ☐ Very Good (22.86%)
- ☐ Good (44.29%)
- ☐ Fair (22.00%)
- ☐ Poor (4.29%)
- ☐ No Opinion (1.43%)

2. Please prioritize the following reasons for having recreational facilities in Santaquin (from 1 to 5, with 1 being the highest priority):

- ☐ To have a quiet place to relax (1 - 12.83%)
- ☐ To have a way to enjoy nature (1 - 6.96%)
- ☐ To have a safe place for children to play (1 - 57.73%)
- ☐ To have a convenient place to exercise (1 - 10.79%)
- ☐ To have quality facilities for competitive sports (1 - 18.40%)

3. Which Santaquin City park does your household use the most often? (mark one)

- ☐ Baseball Complex (Santaquin Elementary) (18.73%)
- ☐ Centennial Park (100 South 300 West) (24.78%)
- ☐ City Cemetery (300 South 100 East) (1.44%)
- ☐ Eastside Park (400 North 1000 East) (6.05%)
- ☐ Orchard Cove Park (750 North 300 West) (21.33%)
- ☐ Orchard Lane Park (300 North Orchard Lane) (2.02%)
- ☐ Santaquin Rodeo Grounds (4.03%)
- ☐ Softball Complex (Orchard Hills Elementary) (2.88%)
- ☐ Sunset Trails Park (750 South Summit Ridge Parkway) (15.85%)
- ☐ Theodore Ahlin Park (Pole Canyon Park & Urban Fishery) (2.88%)

4. What is it that you like most about current parks within the City? (mark one)

- ☐ Amenities (bbqs, benches, tables, restrooms) (12.28%)
- ☐ Playgrounds (34.80%)
- ☐ Proximity/Location (31.87%)
- ☐ Safety (3.51%)
- ☐ Sports Fields/Courts (9.94%)
- ☐ Trails (2.63%)
- ☐ Other: _____ (4.97%)

5. If you do NOT use Santaquin City parks, please tell us why? (check all that apply)

- ☐ Lack of Amenities (29.58%)
- ☐ Lack of Playgrounds (10.56%)
- ☐ Lack of Proximity (16.20%)
- ☐ Lack of Safety (4.93%)
- ☐ Lack of Sports Fields/Courts (16.20%)
- ☐ Lack of Trails (35.21%)
- ☐ Lack of Interest (19.01%)
- ☐ Other: _____ (17.61%)

6. What type of parks does Santaquin most need?

- ☐ Nature Preserve – (large expanse of open space with limited improvements) (4.14%)
- ☐ Neighborhood Parks – (smaller parks serving the area immediately surrounding the park) (16.27%)
- ☐ Regional Parks – (larger destination parks servicing a greater area with an array of amenities) (25.15%)
- ☐ Specialty Parks – (Dog Park, Skate Park, Rodeo Grounds, Urban Fishery, Etc.) (16.86%)
- ☐ Trails and Trail Heads (26.04%)
- ☐ Other: _____ (11.54%)

7. What specific park improvements would best meet your recreation needs? (select five)

- ☐ Accessibility (ADA) (3.15%)
- ☐ Amphitheater (11.46%)
- ☐ BMX Course (4.30%)
- ☐ Community Garden (4.58%)
- ☐ Disc Golf (10.03%)
- ☐ Dog Park (9.46%)
- ☐ Drinking Fountains (22.06%)
- ☐ Fitness Equipment/ Circuit (20.92%)
- ☐ Gardens and Flowers (Horticulture) (7.16%)
- ☐ Indoor Pool/Recreation Center (71.92%)
- ☐ Outdoor Pool (41.55%)
- ☐ Interpretive Amenities/ Signage/ Wayfinding (0.29%)
- ☐ Lighting (12.61%)
- ☐ Maintenance (7.16%)
- ☐ Mountain Bike Course (10.03%)
- ☐ Natural Areas/Wildlife Habitat (13.18%)
- ☐ Natural Playground (8.31%)
- ☐ Picnic Shelters - Large (15.76%)
- ☐ Picnic Shelters - Small (9.74%)
- ☐ Playground Equipment (26.07%)
- ☐ Restroom Facilities (36.10%)
- ☐ Site Furnishings (Benches & Tables) (9.74%)
- ☐ Safety (10.32%)
- ☐ Skate Park (10.03%)
- ☐ Splash Pad (41.55%)
- ☐ Sports Fields/Courts (24.36%)
- ☐ Trails/ Walking Paths (40.69%)
- ☐ Trash Receptacles (5.73%)
- ☐ Trees (28.37%)
- ☐ Other: _____ (5.44%)

FIGURE 2.2.5 - COMMUNITY SURVEY QUESTIONNAIRE

8. Of the priorities in the previous question, which one is your TOP priority?

Pool/Recreation Center

9. What type of sports fields/courts are most needed in Santaquin? (select three)

- ☐ Baseball (38.61%)
- ☐ Basketball (41.77%)
- ☐ Disc Golf (16.14%)
- ☐ Football (27.53%)
- ☐ Horse Shoes (7.28%)
- ☐ Lacrosse (1.90%)
- ☐ Pickle Ball (6.96%)
- ☐ Soccer (36.08%)
- ☐ Softball (17.09%)
- ☐ Tennis (21.20%)
- ☐ Volleyball (29.75%)
- ☐ Other: _____ (10.13%)

10. How often do you visit a City park or trail as a part of your exercise or fitness routine?

- ☐ 3+ times per week (11.43%)
- ☐ 1-2 times per week (18.29%)
- ☐ 1-2 times per month (31.43%)
- ☐ Never (38.86%)

11. How often do you bike for exercise?

- ☐ Daily (5.48%)
- ☐ 1-2 times per week (15.27%)
- ☐ 1-2 times per month (27.95%)
- ☐ Never (51.30%)

12. How often do you walk/run for exercise?

- ☐ Daily (28.24%)
- ☐ 1-2 times per week (39.19%)
- ☐ 1-2 times per month (20.46%)
- ☐ Never (12.10%)

13. How often do you walk or hike in the foothills or mountains?

- ☐ 1-2 times per week (18.68%)
- ☐ 1-2 times per month (35.63%)
- ☐ 1-2 times per year (27.87%)
- ☐ Never (17.82%)

14. Which organized activities/programs do you or your household participate in, or have interest participating in? (check all that apply)

- ☐ 5k, 10k, triathlon (34.62%)
- ☐ ACT/SAT Test Prep (8.58%)
- ☐ Adult Basketball (15.98%)
- ☐ Adult Disc Golf (8.28%)
- ☐ Adult Kickball (9.47%)
- ☐ Adult Racquetball (13.31%)
- ☐ Adult Softball (24.85%)
- ☐ Adult Soccer (7.69%)
- ☐ Adult Tennis (10.95%)
- ☐ Adult Ultimate Frisbee (5.92%)
- ☐ Adult Volleyball (16.57%)
- ☐ Arts and Crafts (23.67%)
- ☐ Computer Classes (12.43%)
- ☐ Cooking Classes (25.15%)
- ☐ Fishing Club (12.43%)
- ☐ Movies in the Park (45.86%)
- ☐ Reading (31.36%)
- ☐ Youth Basketball (38.76%)
- ☐ Youth Baseball/Softball (47.34%)
- ☐ Youth Football (29.29%)
- ☐ Youth Karate (16.27%)
- ☐ Youth Lacrosse (2.96%)
- ☐ Youth Soccer (48.22%)
- ☐ Youth Tennis (11.24%)
- ☐ Youth Volleyball (19.23%)
- ☐ Youth Wrestling (13.91%)
- ☐ Not Interested (2.07%)
- ☐ Other: _____ (10.65%)

15. How frequently do you travel to another City for recreation needs?

- ☐ Daily (13.91%)
- ☐ 1-2 times per week (32.46%)
- ☐ 1-2 times per month (37.97%)
- ☐ 1-2 times per year (8.70%)
- ☐ Never (6.96%)

16. To what recreational facility or type of event do you travel to in other cities? (check all that apply)

- ☐ Celebration Events (35.93%)
- ☐ Commercial Gyms (26.35%)
- ☐ Concerts (32.63%)
- ☐ Pools (82.04%)
- ☐ Recreational Programs (36.23%)
- ☐ Recreation Centers (48.20%)
- ☐ Sports Fields (35.93%)
- ☐ Trails (47.31%)
- ☐ Other: _____ (8.38%)

17. What is your age? (2.85%)

- ☐ 18 and under (19.94%)
- ☐ 19-30 (53.28%)
- ☐ 31-40 (15.67%)
- ☐ 41-50 (2.85%)
- ☐ 51-60 (5.41%)
- ☐ 61 and older

18. What is your gender?

- ☐ Female (73.64%)
- ☐ Male (26.36%)

FIGURE 2.2.5 - COMMUNITY SURVEY QUESTIONNA

19. If any, what are the ages of the children in your household? (check all that apply)

- ☐ 0-5 years (57.26%)
- ☐ 6-10 years (62.11%)
- ☐ 11-15 years (41.60%)
- ☐ 16-18 years (16.52%)
- ☐ Not Applicable (13.68%)

20. In which part of Santaquin do you approximately live? (check only one)

- ☐ North of 400 North and west of I-15 (25.85%)
- ☐ East of I-15 (30.97%)
- ☐ Core Area (23.58%)
- ☐ Summit Ridge (13.35%)
- ☐ Non-resident (6.25%)



Views from Summit Ridge 3S to Dry Mountain & Loafer Mountain

2.3 - LEVEL OF SERVICE ANALYSIS

The City's historic Level of Service (LOS) per the 2009 Impact Fee Analysis is 6.65 acres of developed parks per 1000 residents. The Impact Fee Facilities Plan and Impact Fee Analysis completed in association with this master plan establishes the City's park impact fee LOS as $1,031,854 per 1,000 residents. The City's adopted or planned LOS for developed park space is 7.5 acres of developed parks per 1,000 residents (2014 General Plan). It is recognized that this planned LOS is higher than the impact fee LOS and therefore all proposed park improvements that exceed the impact fee LOS will need to be funded by alternative sources other than collected impact fees.

Current projections, based on recent developments and agreements by the City, show that Santaquin will need approximately 115 acres of developed parks by 2020 (estimated population of 15,321) and 165 acres by 2030 (estimated population of 22,054) to meet the desired LOS. As referenced above, the NRPA has historically recommended at least 5 to 8 acres of developed park per 1,000 residents. Santaquin's adopted LOS falls within this guideline. Based on the City's existing park acreage, the City will need to develop an additional 44 acres of park land by 2020 and an additional 94 acres of park land by 2030.

Santaquin's adopted LOS was also compared to other similar municipalities along the Wasatch Front (*see Table 2.3 - Level of Service Comparison*). Overall the average LOS of the considered municipalities is 7.41 acres of park per 1,000 residents. Santaquin's planned LOS of 7.5 acres of developed parks per 1,000 residents is on par with this average.

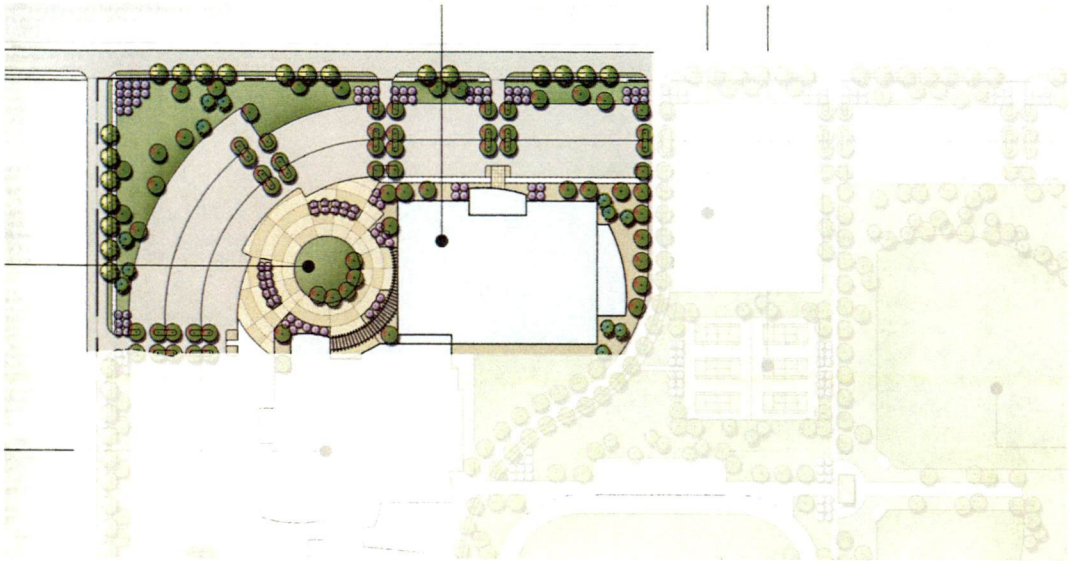
TABLE 2.3 - LEVEL OF SERVICE COMPARISON

CITY	POPULATION*	ACRES/1000	NOTES
Bluffdale	9,887	6	From Bluffdale General Plan - 2014
Centerville	16,819	15.26/3.24 developed	From Centerville General Plan
Clinton	21,104	6.5	From Clinton General Plan - 2013
Farmington	22,159	10	From Farmington General Plan
Highland	17,456	4.87	From Highland General Plan - 2009
Hurricane	15,032	6	From 2009 State of City Address
Lindon	10,723	4	From Lindon Parks, Trails, & Recreation Master Plan - 2008
Mapleton	9,071	8.4	From Mapleton Impact Fee Report - 2012
North Logan	9,874	7.9	From North Logan Parks & Recreation Master Plan
North Ogden	18,172	8.9	From North Ogden General Plan - 2015
North Salt Lake	19,193	6.74	From North Salt Lake Parks, Trails, & Recreation Master Plan - 2005
Payson	19,331	7.09	
Riverdale	8,592	6-8	From Riverdale City General Plan
Santaquin	10,106	7.5**	From Santaquin City General Plan - 2014
Saratoga Springs	24,356	5.93	From Saratoga Springs Parks, Recreation, Trails, and Open Space MP - 2011
Smithfield	11,014	8.8	From North Logan Parks & Recreation Master Plan
South Ogden	16,852	8	From North Logan Parks & Recreation Master Plan
South Salt Lake	24,748	1.6	From South Salt Lake Park and Recreation Master Plan - 2015
Vernal	10,844	10.3	From Vernal General Plan - 2009
	Average =	7.41	

*All population data are 2014 estimates from US Census Bureau
** 2009 Impact Fee Analysis sets LOS at 6.65 acres/1000

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CHAPTER THREE | PROPOSED IMPROVEMENTS

BASED ON THE EXISTING SYSTEM, THE NEEDS ASSESSMENT, AND THE CITY'S DESIRED LEVEL OF SERVICE (LOS) THIS CHAPTER PRESENTS PROPOSED IMPROVEMENTS AND ADDITIONS TO THE CITY'S PARKS, RECREATION, AND TRAIL FACILITIES. IN ADDITION TO IDENTIFYING THESE IMPROVEMENTS, CONCEPTUAL PLANS ARE PROVIDED. SEE FIGURE 3.2 - PARKS, RECREATION, AND TRAILS MASTER PLAN SHOWING BOTH EXISTING AND PROPOSED PARKS, RECREATION, AND TRAIL FACILITIES.

3.1 - PARKS AND OPEN SPACE

To enhance the existing system and to address deficiencies in the City's current coverage, improvements to the City Cemetery (*Figure 3.4*), Orchard Hills Park (*Figure 3.6*), and Theodore Ahlin Park (*Figure 3.10*) are identified and five other new park facilities are proposed. These include:

- 400 East Gateway Park (*Figure 3.3*)
- Foothill Park (*Figure 3.13*)
- Highline Park (*Figure 3.5*)
- Peter Rabbit Springs Park (*Figure 3.7*)
- Stone Hollow Park (*Figure 3.8*)
- Summit Ridge 35 Acre Park (*Figure 3.9*)

The addition of these parks better meets the City's desire to have a developed public park facility within 2,000 feet of every residence (*see Figure 3.1 - Proposed Park Distribution Service Analysis*). These improvements and proposed facilities are described below with conceptual plans.

3.2 - RECREATION FACILITIES

As noted from the Community Survey results, Santaquin has a tremendous need and desire for a recreation center and pool. Currently Santaquin residents need to travel to Payson to enjoy such a facility. This section proposes the construction of a new recreation center, pool, and park in association with the development and construction of a new high school by Nebo School District (*see Figure 3.11*). Enhancements and expansion to the existing Rodeo Grounds are also presented (*see Figure 3.12*).

3.3 - TRAILS

Trails and shared use paths are an essential recreation and open space amenity since they have the potential to provide connectivity between parks, access to regional facilities, and potential access to hillside and mountain recreation opportunities. Trails were identified as one of the highest priorities in the Community Survey. The *Parks, Recreation, Trails and Open Space Master Plan (Figure 3.2)* identifies proposed trails to be built as part of this plan. These include new natural surface, urban, multi-use, and equestrian trails. Some land acquisition may be required as these trails are developed, but generally they will occur within existing or future right-of-way.

NATURAL SURFACE TRAILS

This includes the Bonneville Shoreline Trail with approximately 5.5 miles of unconstructed trails within the plan area. The City will need to cooperate with the Uinta National Forest to complete portions of the trail near Santaquin. Other natural surface trails are shown to extend into the Uinta National Forest and also into the open spaces around Summit Ridge. Trails within the National Forest will need to be coordinated through the Uinta National Forest. These trails are intended for low-impact recreationists including equestrian riders, backpackers or hikers. They will generally be constructed from native materials.

URBAN

These trails will run through the more urban and developed neighborhoods of Santaquin and serve to enhance the connectivity of residents to City parks, conduct recreationists toward larger recreation opportunities within the City, and provide safe and enhanced walking routes along roadways within the City's urban core.

MULTI-USE

One of these trail segments follows the current Tintic Rail Corridor. This corridor has been abandoned by the Union Pacific Railroad (UPPR) and the County has asphalted over it at many crossing places. It is the City's desire to work with UPPR and the Rails to Trails organization to convert this rail bed into a regional trail that would extend out to the historic Tintic mining area as well as an opportunity to interact with federally controlled wetlands at the southern end of Utah Lake.

These trails have also been planned along the fringe of Santaquin urban areas as a means to connect equestrian riders as well as non-motorized recreationists with the open space lands on both sides of the City. These trails have also been planned along the corridors already utilized by equestrian riders in and out of Santaquin City.

3.4 - RESULTS/RECOMMENDATIONS

Recommendations of this plan include an additional 16+ miles of trails and over 100 acres in additional park land. If developed these improvements will satisfy the City's desired Level of Service and also meet the NRPA standards in the majority of cases with an additional six courts, eight baseball/softball fields, eight soccer fields, five bathrooms, eight pavilions, six playgrounds, and a recreation center/pool. Potential deficiencies may still exist in the number of softball/baseball fields, tennis courts, volleyball courts and playgrounds. The demand for additional softball/baseball fields should be monitored by the City. The City should also look for opportunities to strategically locate additional playgrounds as possible.

FIGURE 3.1 - PROPOSED PARK DISTRIBUTION SERVICE ANALYSIS

EXISTING PARK INVENTORY

	NAME	TYPE	SIZE
1	Centennial Park	Community	6.25 Ac
2	City Ball Complex	Community	5.23 Ac
3	City Cemetery	--	12.6 Ac
4	City Center Park	Neighborhood	3.5 Ac
5	East Side Park	Neighborhood	3.0 Ac
6	Orchard Cove Park	Neighborhood	3.19 Ac
7	Orchard Hills Park	Community	3.81 Ac
8	Orchard Lane Park	Pocket	0.33 Ac
9	Rodeo Arena	Community	7.5 Ac
10	Squashhead Park	Pocket	0.85 Ac
11	Sunset Trails Park	Neighborhood	2.79 Ac
12	Theodore Ahlin Park	Community	21.78 Ac
		TOTAL =	70.83 Ac

PROPOSED PARK INVENTORY

	NAME	TYPE	SIZE
13	400 East Gateway	Pocket	0.5 Ac
14	Highline Park	Neighborhood	7.89 Ac
	Orchard Hills Park (add)	Community	7.35 Ac
15	Peter Rabbit Springs	Community	6.42 Ac
16	Recreation Center Park	Community	31.33 Ac
	Rodeo Grounds (add)	Community	3.62 Ac
17	Stone Hollow Park	Community	15.34 Ac
18	Summit Ridge 35 Park	Community	35.0 Ac
19	Foothill Park	Neighborhood	2.0 Ac
		TOTAL =	104.22 Ac*

*New park total includes a 5.23 ac. deduct as the City Ball Complex will be replaced with the Rodeo Grounds expansion.

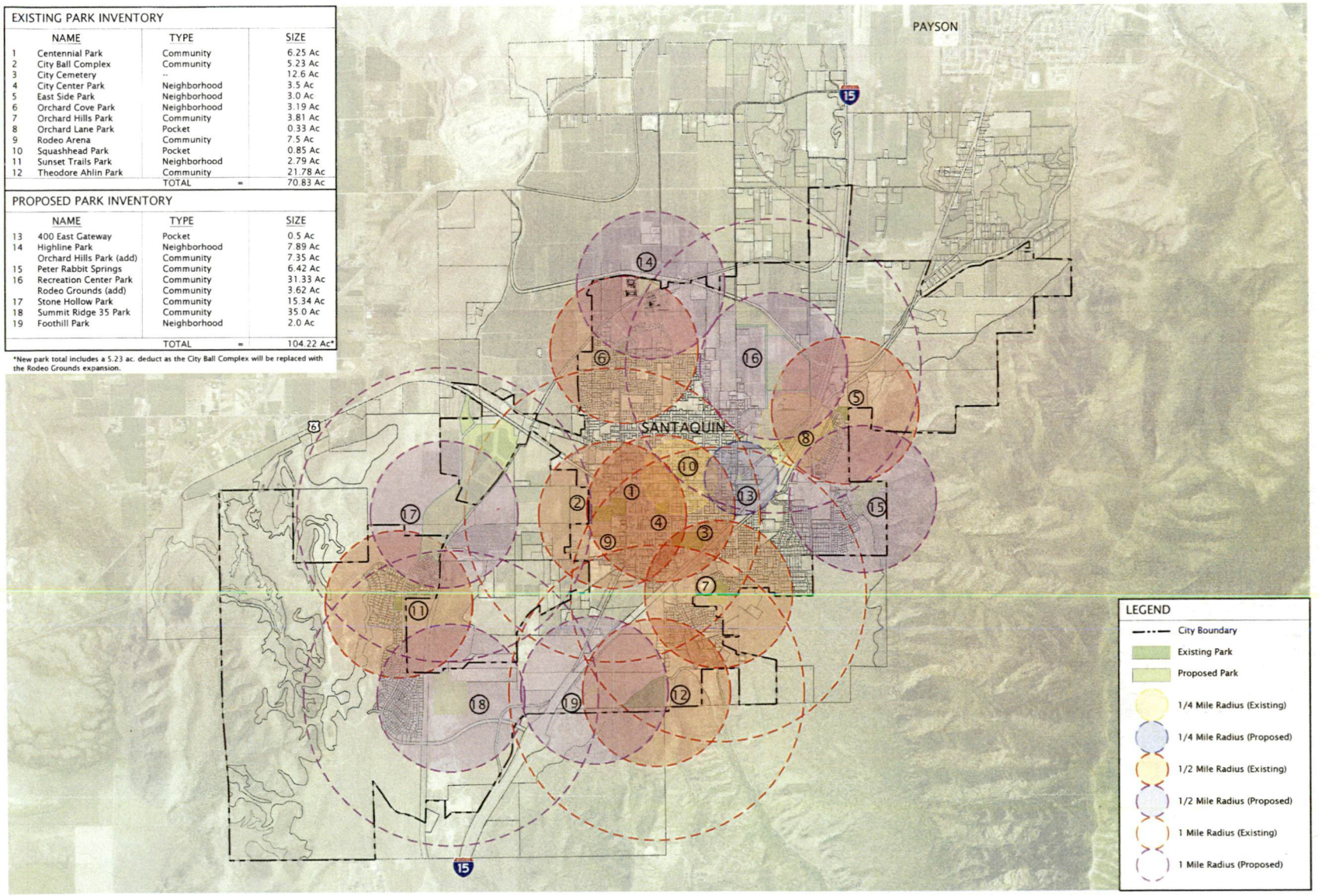


FIGURE 3.2 - PARKS, RECREATION, TRAILS & OPEN SPACE MASTER PL

EXISTING PARK INVENTORY

	NAME	TYPE	SIZE
1	Centennial Park	Community	6.25 Ac
2	City Ball Complex	Community	5.23 Ac
3	City Cemetery	--	12.6 Ac
4	City Center Park	Neighborhood	3.5 Ac
5	East Side Park	Neighborhood	3.0 Ac
6	Orchard Cove Park	Neighborhood	3.19 Ac
7	Orchard Hills Park	Community	3.81 Ac
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16	Recreation Center Park	Community	31.33 Ac
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17	Stone Hollow Park	Community	15.34 Ac
18	Summit Ridge 35 Park	Community	35 Ac
		TOTAL =	102.22 Ac*

*New park total includes a 5.23 ac. deduct as the City Ball Complex will be replaced with the Rodeo Grounds expansion.

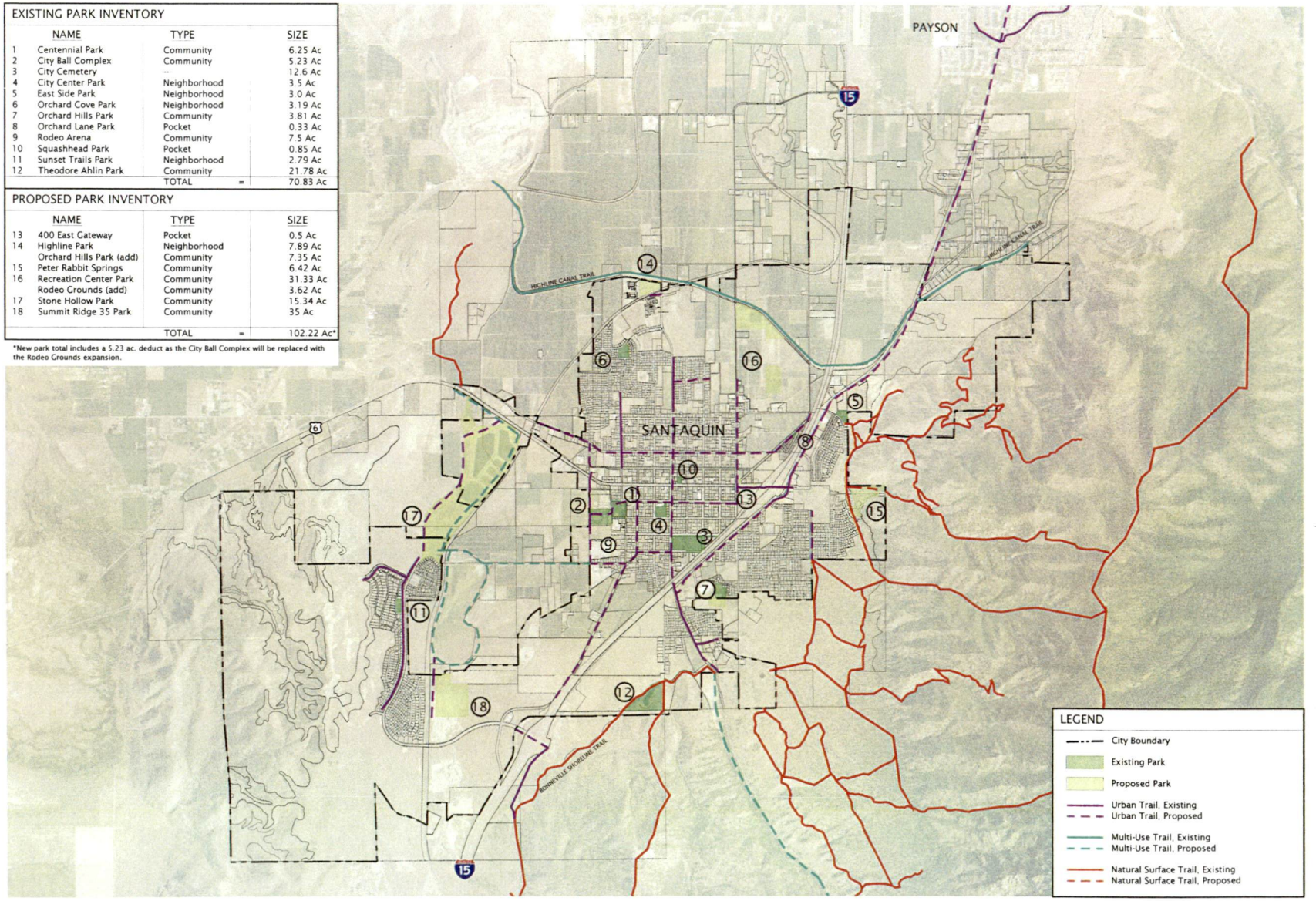


FIGURE 3.3 - 400 EAST GATEWAY PARK

Location: 400 East Main Street
Park Type: Pocket Park
Size: 0.50 Acres
Narrative:
Located along the entry into downtown Santaquin from I-15, the 400 East Gateway Park will serve as an announcement and welcome to Santaquin as well as a space for rest, gathering, and reflection on Santaquin's past. Key elements of the park will be planting that reflects the farming and orchard heritage of Santaquin; sculpture/monument features that commemorate those that came before; a Santaquin entry sign; architectural features that provide shade and that emphasize the connection to future development to the northeast; and lawn areas that can accommodate community events such as a farmers market.

Estimated Cost: $571,593 (see Appendix for full estimate)

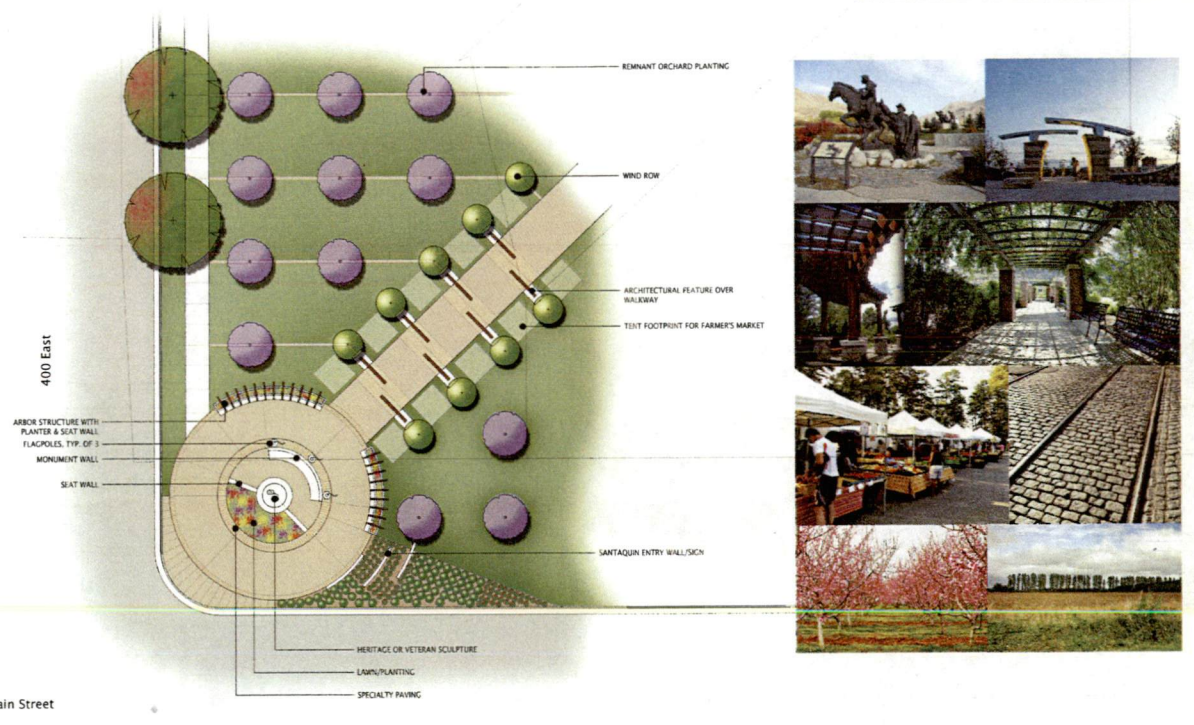
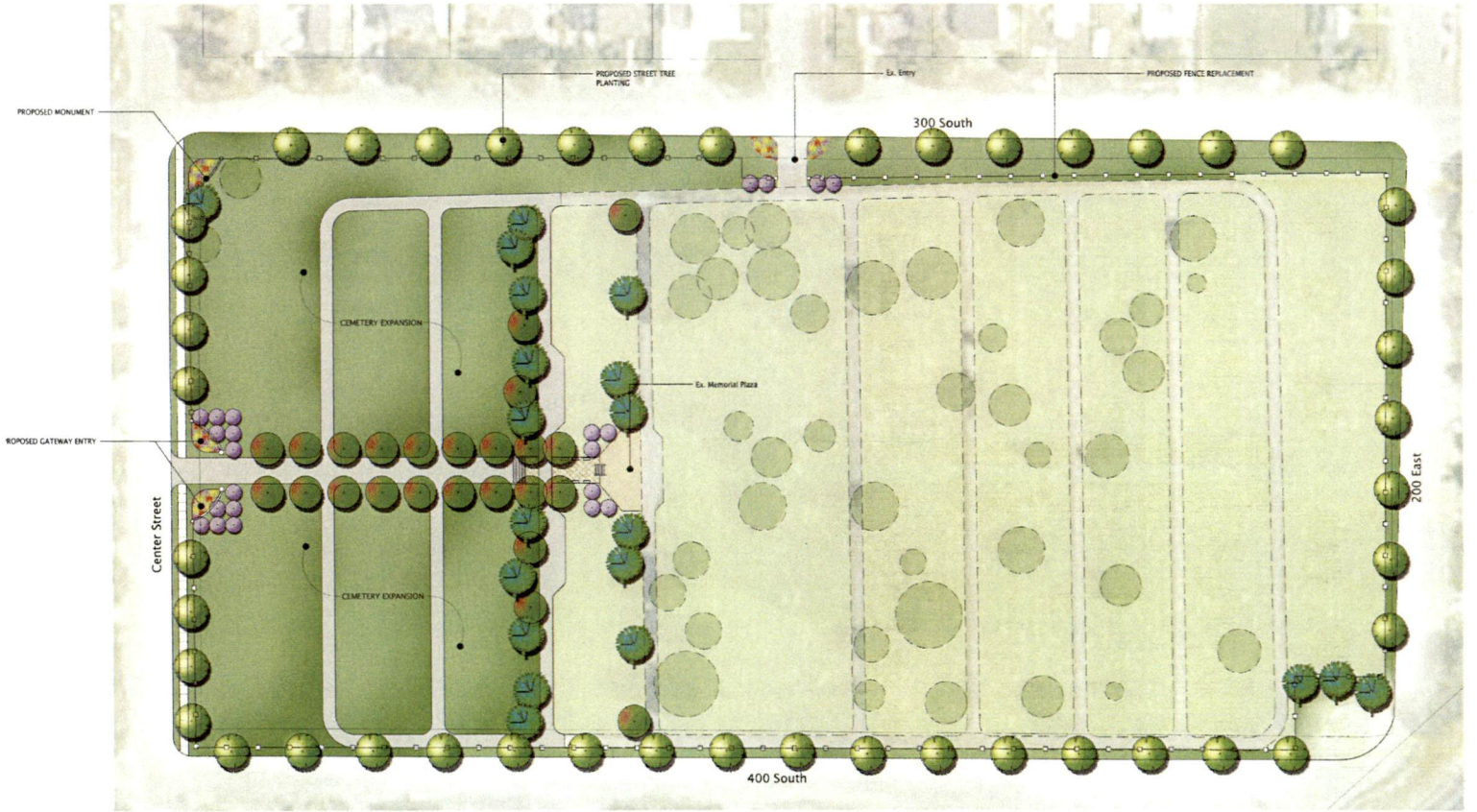


FIGURE 3.4 - CITY CEMETE



Location: 100 East 300 South
Park Type: ---
Size: 12.6 Acres
Narrative:
The existing cemetery is not completely built-out with the un-plotted acreage on the wester third of the site being programmed for soccer games. This temporary use will quickly come to an end as the land will need to be utilized for cemetery plots. This plan proposes the expansion and completion of the cemetery into this western third including a monument entry and access road from Center Street, circulation roads, a plaza and connection to th existing Memorial Plaza at the end of this new access road, additional landscaping including proposed street trees around the perimeter of the site, and a new wrought iron fence that is more contextual to the cemetery than the existing chain link fence.

Estimated Cost: $1,093,859 (see Appendix for full estimate)

FIGURE 3.5 - HIGHLINE PARK

Location: Approx. Strawberry Canal Road & 5600 West
Park Type: Neighborhood Park
Size: 7.89 Acres
Narrative:
Adjacent to the new Public Works facility and with convenient access to the Highline Trail, Highline Park will be a neighborhood park with amenities supporting newer development on the north end of town. Proposed amenities of the park include an open multi-use field, a large pavilion with restroom, a playground, a basketball court, and a volleyball court based on specific input received from the community survey. Other unique features of the park may include a small off-leash dog park and a practice disc golf course. The proposed landscaping recommends bosques of ornamental trees reminiscent of the nearby orchards.

Estimated Cost: $1,768,601 (see Appendix for full estimate)

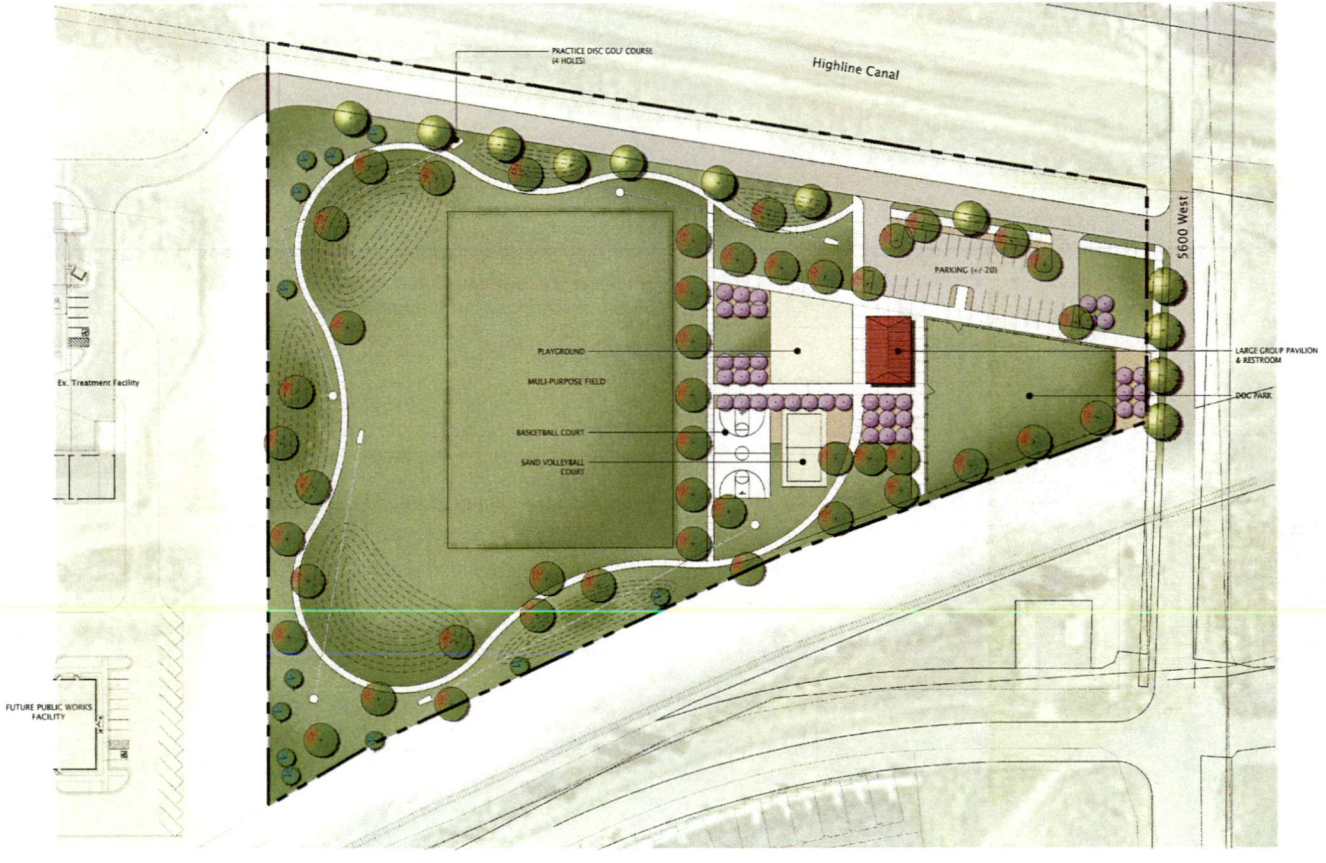


FIGURE 3.6 - ORCHARD HILLS PA



Location: 168 East 610 South
Park Type: Community
Size: 7.35 Acres (addition)
Narrative:
This plan proposes adding an additional 7.35 acres and two additional softball fields to the existing Orchard Hills Park adjacent to Orchard Hills Elementary. This expansion will also include a scorers/concessions/restroom building, additional parking and access from 820 South, pedestrian connections to the surrounding neighborhood, a large pavilion with restroom, a playground, and sports court.

Estimated Cost: $3,377,207 (see Appendix for full estimate)

FIGURE 3.7 - PETER RABBIT SPRINGS PARK

Location: Approx. 200 S Oak Summit Drive-
Park Type: Community Park
Size: 6.42 Acres
Narrative:
At the eastern edge of the City, Peter Rabbit Springs Park will serve as a transition between the urban and natural interface. The park will capitalize on its location by providing a playground nestled within existing vegetation, access to the regional trail system and existing natural trails in the foothills, vehicular access for both cars and equestrian trailers, a large overlook pavilion at the top of the hill to provide breathtaking views across the valley, and restrooms. The natural vegetation will be enhanced by selective turf areas to provide for informal play and relaxation.

Estimated Cost: $1,968,882 (see Appendix for full estimate)



FIGURE 3.8a - STONE HOLLOW PA



Location: Approx. 14400 S Summit Ridge Parkway
Park Type: Community
Size: 166.68 Acres
Narrative:
This plan shows the design for a greater regional park development that extends from the Summit Ridge development on the south all the way to US 6 on the north. The full development of the park will be long term with the development of Phase I (see Figure 3.8b) a focus of this master plan document. In addition to the neighborhood park type amenities proposed in Phase I, the greater park will include miles of trails around the recharge basins, natural vegetation and potential amenities such as an off-leash dog park, a disc golf course, a bike skills course, an overlook structure, wetland boardwalks, parking, and an equestrian trailhead.

Estimated Cost: To be determined

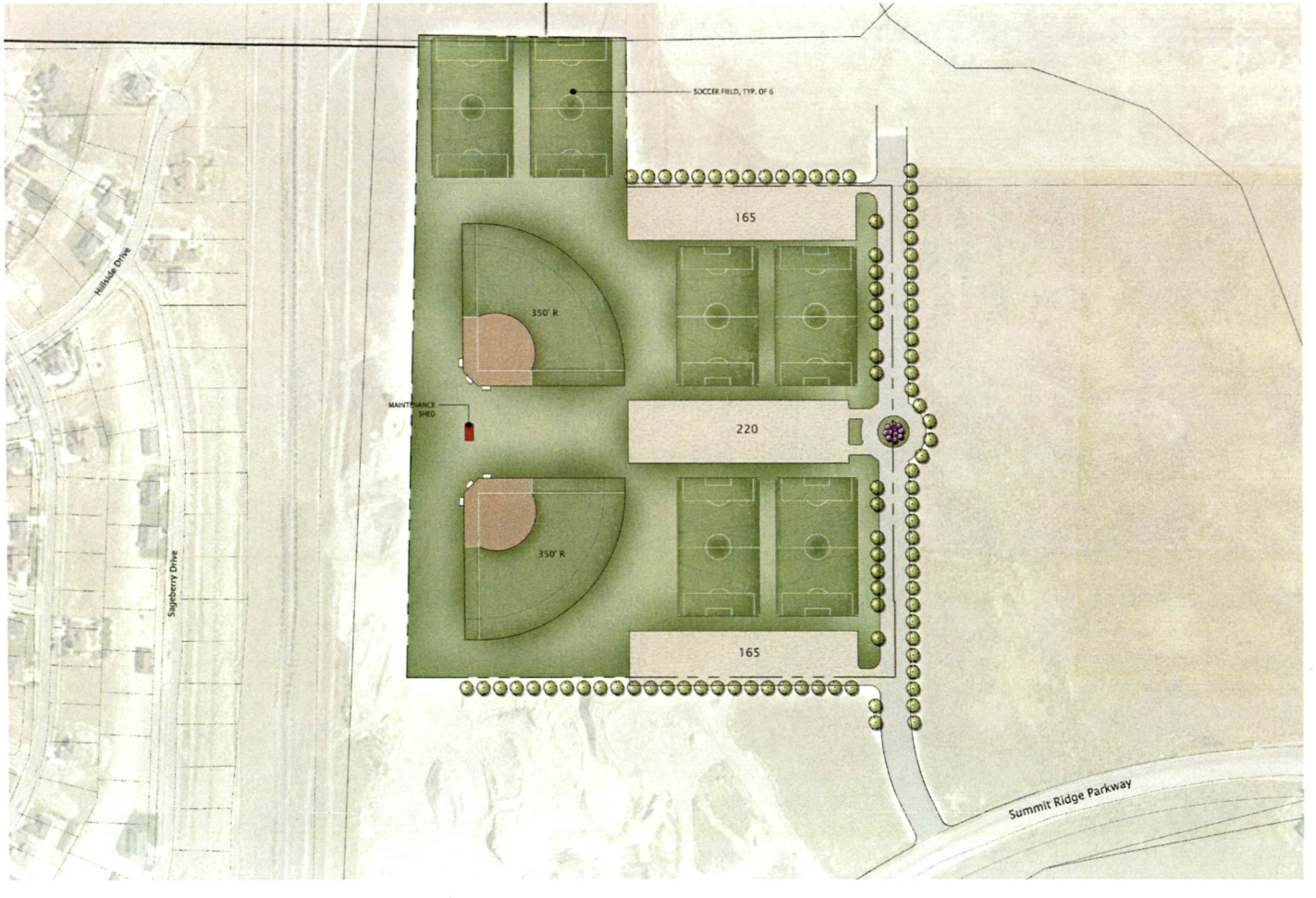
FIGURE 3.8b - STONE HOLLOW PARK (PHASE I)

Location: Approx. 14400 S Summit Ridge Parkway
Park Type: Neighborhood
Size: 15.34 Acres
Narrative:
Phase I of the greater proposed Stone Hollow Park located at the northern end of Summit Ridge's existing development, this park will provide for existing and future residents with amenities such as a multi-purpose field, sport courts, a large pavilion with restroom, meandering paths, and a playground. The plan also proposes a more regional amenity of a skate park separated by parking from the more neighborhood type development. Dense bosques of ornamental trees are proposed along Summit Ridge Parkway to give the park a distinctive character consistent with Santaquin's heritage.

Estimated Cost: Phase I - $3,760,721 (see Appendix for full estimate)

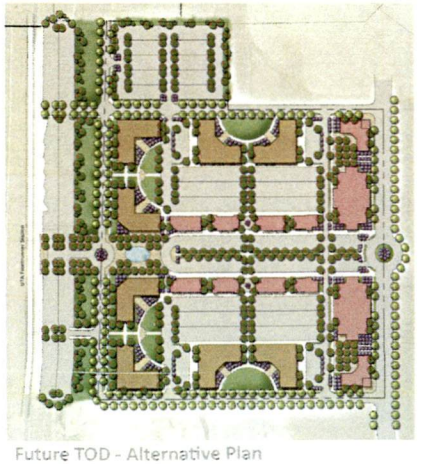


FIGURE 3.9 - SUMMIT RIDGE 35 ACRE PA



Location: Approx. 1300 Hillshire Drive
Park Type: Community
Size: 35 Acres
Narrative:
Coupling the need for additional sports fields with the requirement for the City to utilize this property within the next few years, the proposed plan includes up to 6 championship size soccer fields and two baseball fields. Understanding the long term potential for the property as it is located off of the rail line and at a potential UTA Frontrunner stop, the fields were laid out in a way to accommodate and anticipate a possible multi-use transit oriented development (TOD) (see inset below). As TOD development opportunities arise, the site could transition from sports fields to such uses as commercial, institutional, and multi-family housing.

Estimated Cost: $6,857,070 (see Appendix for full estimate)



Future TOD - Alternative Plan

FIGURE 3.10 - THEODORE AHLIN PARK

Location: Approx. 1125 S Pole Canyon Rd.
Park Type: Community Park
Size: 21.78 Acres
Narrative:
This plan proposes adding on the existing infrastructure and improvements that already exist - irrigation pond, fish cleaning station, and restroom. The plan proposes Theodore Ahlin Park to be further amenitized with elements such as a large pavilion, an adventure playground, meandering paths, picnicking opportunities, fishing docks, and a community amphitheater overlooking the pond and the valley to the east. With minimal irrigated turf areas, the plan proposes to capitalize on the beautiful natural setting with natural berming, materials, and landscaping.

Estimated Cost: $2,363,348 (see Appendix for full estimate)



FIGURE 3.11 - HIGH SCHOOL/RECREATION CENTER PA



Location: Approx. 600 E 600 N
Park Type: Community
Size: 31.33 Acres
Narrative:
One of the largest desires voiced in the community survey was the need for a community recreation center/pool. This plan proposes a joint development with the Nebo School District in constructing a planned high school in conjunction with a community recreation center and pool. Further recognizing the need for additional sports fields, the plan also proposed 4 baseball/softball fields and one soccer field for City recreational use and programming. The screened back portion of the plan would be Nebo School District owned, constructed, operated, and maintained.

Estimated Cost: $34,622,322 (see Appendix fo full estimate)

FIGURE 3.12 - RODEO GROUNDS

Location: 175 S 400 W
Park Type: Community Park
Size: 3.62 Acres (addition)
Narrative:
With the popularity and success of the rodeo and the relocation of the public works facility, the City has a need to expand and improve its rodeo facilities to compete with adjacent communities. This includes grandstand bleachers built into the existing grass berms; dedicated trailer parking near the arena; vendor booth areas; a warm up pen; the conversion of the existing public works building into a rodeo office and restrooms; a new barn structure; an entry ticketing and restroom structure; and parking lot to accommodate over 200 vehicles. This proposed expansion does eliminate the fields operated as the City Ball Complex. This expansion will need to be timed to allow for field development in other locations to mitigate the loss of fields at this location.

Estimated Cost: $1,968,882 (see Appendix for full estimate)

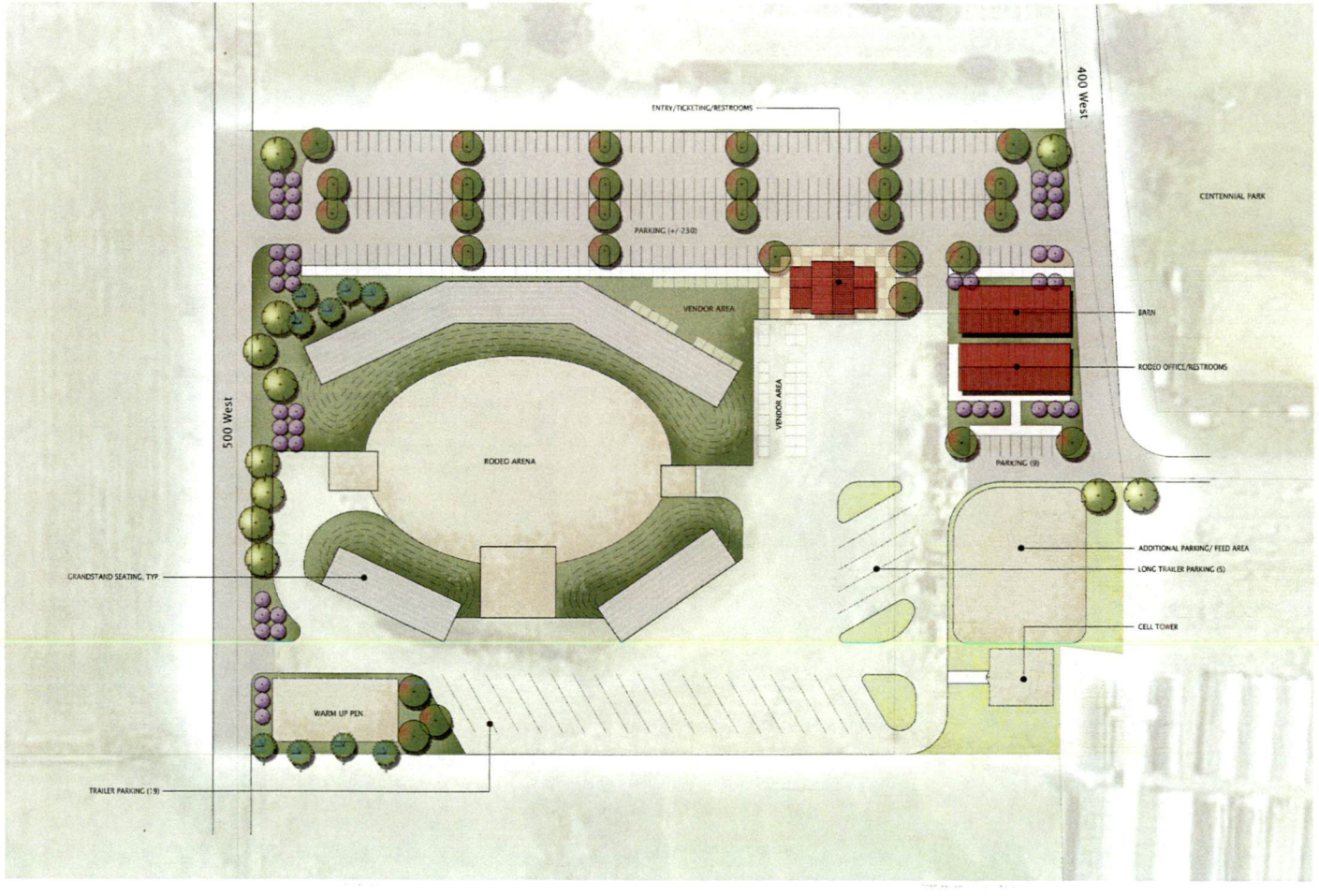
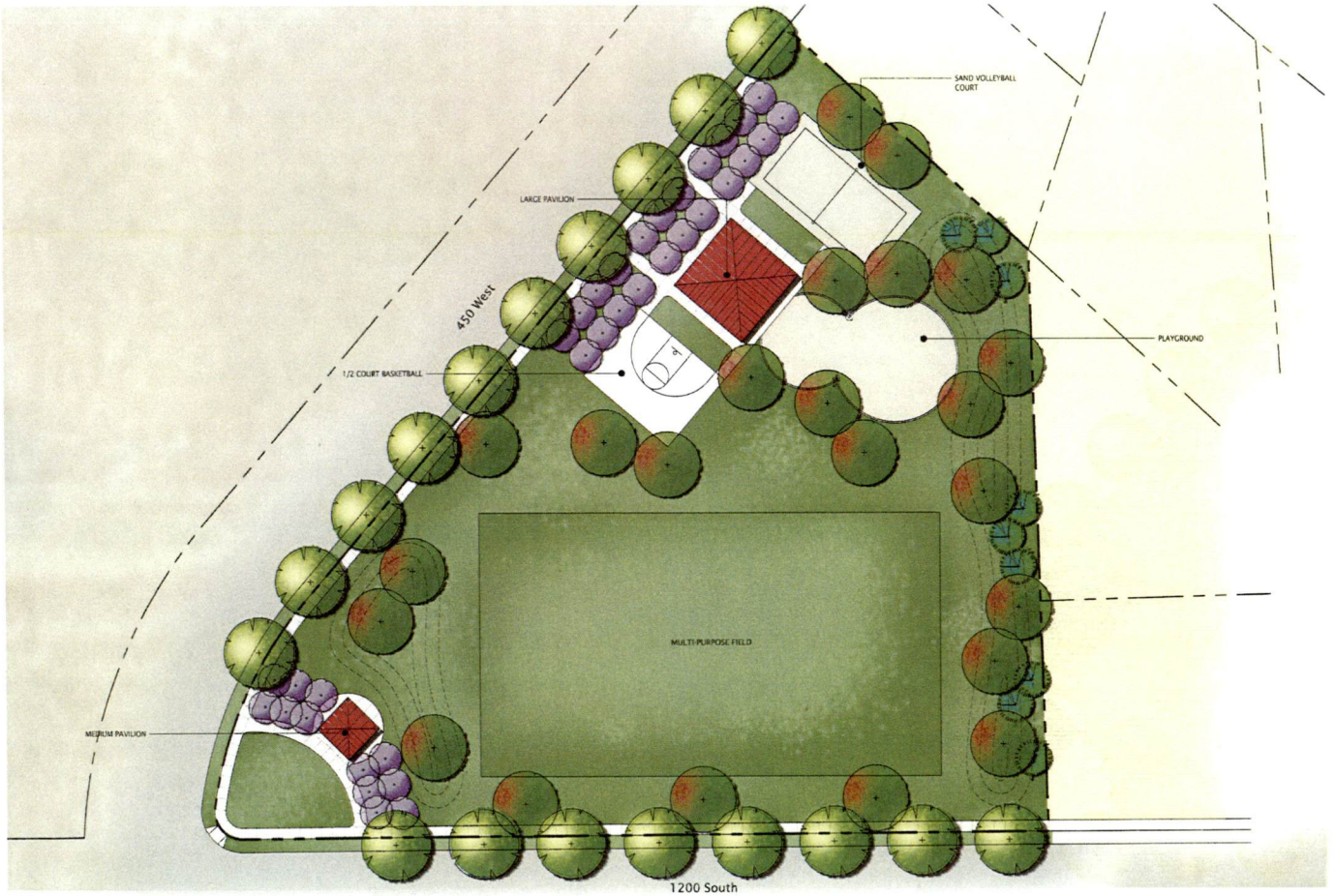


FIGURE 3.13 - FOOTHILL PA



Location: 1200 South 450 West
Park Type: Neighborhood
Size: 2.0 Acres
Narrative:
Located within the proposed Foothill Village development, Foothill Park will sit just below Theodore Ahlin Park and the elk management areas of the State DWR. Foothill Park will be a neighborhood park with some small active recreation opportunities to compliment the nearby more passive Theodore Ahlin Park. Proposed park amenities may include a large pavilion, a medium pavilion, a half basketball court, a sand volleyball court,a totlot play area sidewalk connections from the street, and a youth soccer field.

Estimated Cost: $1,086,807 (see Appendix for full estimate)

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CHAPTER FOUR | FUNDING OPPORTUNITIES

RECOGNIZING THE DISCREPANCY BETWEEN THE CITY'S ADOPTED LEVEL OF SERVICE (LOS) AND THE ESTABLISHED IMPACT FEE LEVEL OF SERVICE, THERE IS A NEED FOR ALTERNATIVE FUNDING SOURCES OTHER THAN IMPACT FEES TO PAY FOR THE PARKS, RECREATION, TRAILS, AND OPEN SPACE IMPROVEMENTS CONTAINED IN THIS MASTER PLAN DOCUMENT. THIS SECTION OUTLINES POSSIBLE FUNDING OPPORTUNITIES AND STRATEGIES TO IMPLEMENT THE PROPOSED IMPROVEMENTS IN ADDITION TO IMPACT FEES.

4.1 - IMPACT FEES

Impact fees are collected with new development projects to help pay for the costs of providing public services to new development. The collection and use of impact fees are governed by Utah law - UC11-36-202(1)(a)(ii). For purposes of this plan and document the established allowable impact fee is $1,031,854 per 1,000 residents (see ***Parks and Recreation Impact Fee Facilities Plan and Impact Fee Analysis***).

Proposed parks and recreation facilities that exceed this impact fee level of service may not be paid for by collected impact fees. Neither can ongoing annual maintenance and operational costs for existing parks and the expanded parks system be funded with impact fees.

4.2 - BONDS

General Obligation Bonds (G.O. Bonds) are a low interest financing option for local government projects. Though low interest, this option is sometimes unpopular because it represents an additional tax burden on the City's residents. These bonds would need to be approved by the public through a G.O. Bond election and are therefore subject to success or failure based on the popularity of the proposed project.

Like Impact Fees, G.O. Bond funding may only be used for a project's capital expenditures and may not be used for on-going maintenance and operational costs. Other bond alternatives include Sales Tax Revenue Bonds and Lease Revenue Bonds.

4.3 - SPECIAL TAXES

Special taxes such as the Zoo, Arts & Parks (ZAP) tax or the Recreation, Arts & Parks (RAP) tax have been initiated and voted on by multiple Utah communities. These have successfully provided millions of dollars of improvements across the state. However this funding option is again voted on and approved by the public with an increased tax burden. Other special taxes may be utilized for parks and recreation development, but again would need to be approved by Santaquin's citizens.

4.4 - USER FEES

The City may elect, particularly in the case of a large facility with significant operational costs - such as a recreation center or swimming pool complex - to collect a fee from users of such facilities. These funds may be used to either retire obligations resulting from the construction of the facilities or on-going operations and maintenance. This funding alternative relies upon the success of the specific facility and its popularity. Without significant use, the facility will not be able to pay back its initial capital costs and will need to be continually subsidized by other City funds in order to stay open.

4.5 - FEDERAL & STATE FUNDING/GRANTS

There are many types of federal and state grants that may be utilized for parks and recreation facilities but are often minimal in nature and difficult to acquire. Some of these include:

- Community Development Block Grants (CDBG): funding provided and used in low and moderate income areas. Certain restrictions and guidelines apply to how these funds are utilized.
- Land and Water Conservation Fund
- Utah Trails and Pathways / Non-motorized Trails Program
- Federal Recreation Trails Program
- UDOT Transportation Alternatives Program (MAP-21)
- Historic Preservation Funds

4.6 - SERVICE DISTRICTS

The City or a collection of municipalities within a common region may create a Special Recreation District that provides recreational services to residents of the coverage area (such as the Uintah Recreation District). The established District levies a property tax assessment on citizens of the coverage area to pay for both improvements and on-going maintenance and operations. Such a district may be created by Santaquin to construct specific facilities such as a recreation center or pool.

4.7 - PUBLIC/PRIVATE PARTNERSHIPS

Santaquin may partner with other public entities or private groups/developers on facilities that service the public but are also attractive and beneficial to the private partner. This will result in a shared cost, thus reducing the up front burden carried by the City but may result in a pay-to-use facility that is not free to public use.

4.8 - DEVELOPMENT AGREEMENTS

Establishing development agreements with new developments within Santaquin is an established way to receive dedication of park land and in some cases developed park land and/or trails for public use. The City may elect to exchange the donation of park land and/or recreation facilities for developer concessions or negotiated considerations. Such considerations may include, but are not limited to: increased densities, reduced lot sizes, impact fee credits, future reimbursements for oversized facilities or credi for multi-use facilities such as storm drainage and park space. This practice is beneficial to the City and the developer.

4.9 - PRIVATE DONATIONS/FUNDRAISING

The potential for local investment and interest in parks and recreation projects that are important to special interest groups,

neighborhoods, businesses, or even individuals and/or families should not be overlooked. This interest may result in focused fundraising efforts or at least in the donation of time and services. However, this type of funding usually requires a significant time and focused effort by municipal staff.


Rodeo Arena


Peter Rabbit Springs Park

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blu line designs

land planning | landscape architecture | urban design

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Sandy Utah 84070

phone: 801.913.7993

CITY COUNCIL 01-04-17
ATTACHMENT "D"

Memorandum

To: Mayor Hunsaker and City Council

From: Dennis L. Marker, Assistant City Manager

Date: December 29, 2016

Re: Money In Lieu of Water Request by A&R Homes

The Request

A&R Homes is seeking to pay money in lieu of dedicating water for a 134.5 acre development. The ground is currently "dry" with no water rights specifically attached to it.

City Ordinance

1. City Code requires 3 acre feet of water per acre of development. This amount may be adjusted depending on the type of development being proposed (e.g. commercial, multi-family, industrial, etc.) and is reviewed by the City Engineer on a case-by-case basis.
2. Determinations by the City to grant a request for money-in-lieu of water must be handled as part of a Preliminary Plat Approval process, which would include defined uses for the development.

Recommendation

The applicant is currently trying to ascertain the types of uses that will be within their development. It is anticipated that there will be a mix of single family, multi-family, storage, and open spaces. Because the development plan is still in flux, a total possible adjustment, per the City Engineer, for the amount of water needing to be dedicated cannot be determined at this time. **Having no preliminary plat to consider, city staff are reluctant to formulate a recommendation on a possible adjustment to the amount of water needed or accepting money-in-lieu of such.**

Considerations for Granting Requests to Pay Money in Lieu of Dedicating Water

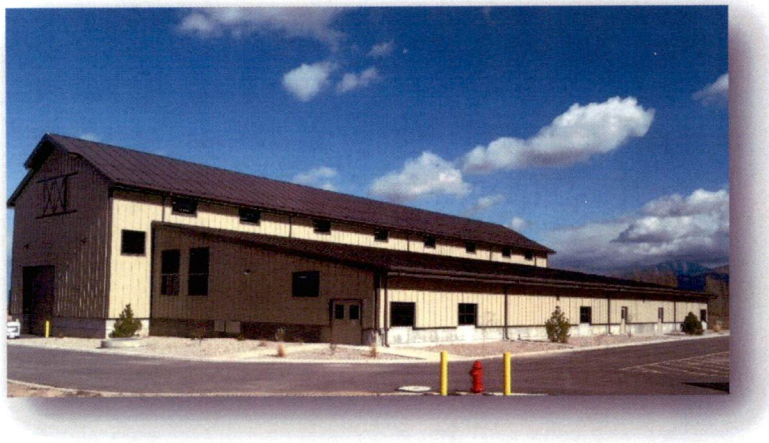
Administration, Engineering and Public Works staff as well as City Legal Counsel have formulated the following criteria for considering requests to pay money in lieu of dedicating water. This is not a formalized list by ordinance or resolution, but may serve as a guide for the City's Legislative Body when deliberating whether to grant any in lieu request.

Factor		Description of Related Issues
1	Available Buy-in Capacity	The city's two water systems (culinary & pressure irrigation) have differing amounts of available "buy-in" capacity. The city's water master plans indicate the city has roughly 90% of the water rights needed for the culinary system at buildout. The City barely has what we currently need for pressure irrigation purposes. As such, City staff recommend that no more than 40% of total required water amounts be accepted as buy-in (aka money-in-lieu of water). This 40% should be sufficient to allow for culinary water rights buy in and would likely cover most indoor water needs for the future.
2	Supply Source	Until the City has a completed water system with full connectivity of all sources being available for all pressure zones, careful consideration needs to be given to the effects of allowing development in pressure zones where pumping or storage capacity may be limited. (E.g.) The two east side pressure zones and the entire Summit Ridge area pressure irrigation needs are covered by pumping water through the culinary system.)
3	Historic Supply	Because water rights are not tied to property in Santaquin, it is difficult to require water dedication solely on the basis that property may have been previously irrigated (AKA "wet") prior to development requests. However, knowing that a property was irrigated may indicate that water could be available for purchase and thence possible for dedication to the city. Similarly, knowing that a property is "dry" should probably not be an automatic point for considering allowing money to be paid to suffice for water dedication. The City's Public Works Director notes that the City should be more concerned about getting water for dry property than historically wet property. "At least we know that water was (historically) available and could be delivered to that wet property."
4	Economic Benefit	• Requiring water dedication when there is a scarcity of water in the market could impede major economic development from occurring. • Allowing money in lieu of water could speed up review and development processes. • The City may leverage the buy-in capacity of the culinary system to help incentivize desired economic development activities
5	Buffer Standard	The City's water master plans are best calculated estimates based on reasonably assumed scenarios. Requiring some dedication of water allows the city to hedge current rights against the averages in the plans.
6	Development Readiness	When the Council authorizes money-in-lieu of water payments, it carves off a portion of the "surplus" or buy-in capacity of the systems. If a development gets approval but will not build for several years or cannot finish a development, then that portion of allowed buy-in may be prematurely reserved or encumbered. Other developments may be more shovel ready and provide greater benefit to the city. Possibly a time limit should be set for money in lieu of decisions made by the Council to allow for unused surplus capacity to become again available if not used within a certain time frame.
7	Market Conditions	At some point in the future, it may be that water is just not available on the open market and buy-in capacity is the only means to enable further development within the city.
8	Infrastructure Needs	It is reasonable to view some of the "money in lieu of water" funds as reimbursement to the City for water rights already acquired. While the current intent is to reserve all money-in-lieu of water funds for purchasing of additional water rights/shares, discussions about the buy-in fee included the possibility of using some of these funds to help cash flow major capital improvement projects. Granted, some developments have been approved to pay money in lieu of water for more than just buy-in capacity and so some of the funds must be reserved solely for water purchasing, but, in the future, if the city only accepts money as buy-in and requires dedication of wet water where system supply is needed, then collected funds are truly usable for purposes for more than buying water.

CITY COUNCIL 01-04-17
ATTACHMENT "C"

SANTAQUIN CITY

2016 SANITARY SEWER SYSTEM MASTER PLAN and CAPITAL FACILITIES PLAN



Prepared by:

SANTAQUIN CITY

AND

J-U-B ENGINEERS, INC.

Adopted by Santaquin City Council

on January 4, 2017

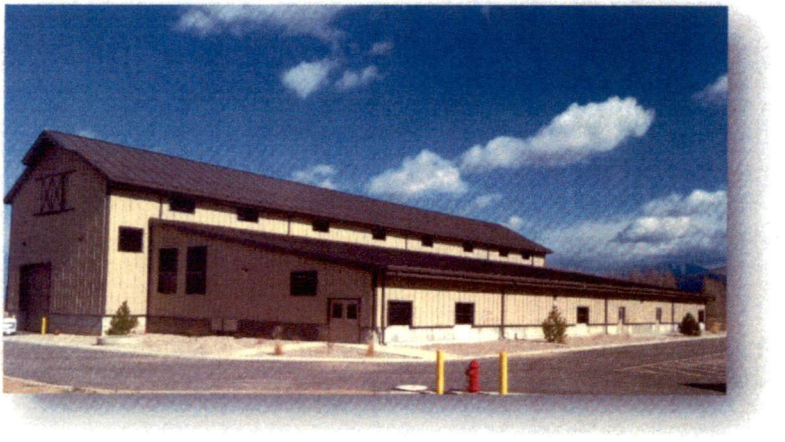
Santaquin

J-U-B

J-U-B ENGINEERS, INC.

SANTAQUIN CITY

2016 SANITARY SEWER SYSTEM MASTER PLAN and CAPITAL FACILITIES PLAN



Prepared by:

SANTAQUIN CITY

AND

J-U-B ENGINEERS, INC.

REGISTERED PROFESSIONAL ENGINEER
MARK L. CHRISTENSEN
1/6/17
No. 186311
STATE OF UTAH

Adopted by Santaquin City Council

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J-U-B

J-U-B ENGINEERS, INC.

EXECUTIVE SUMMARY

This 2016 Santaquin City Sanitary Sewer Master Plan and Capital Facilities Plan (the Plan) is intended to replace the 2009 Santaquin City Sanitary Sewer Master Plan and Capital Facilities Plan prepared by J-U-B Engineers and adopted by the Santaquin City Council in May of 2009. The Plan also provides the foundation for collection of sanitary sewer impact fees in accordance with Utah State Code, §11-36a.

The Plan utilizes 2014 data including telemetry data, flow measurements, GIS data, and land use to create an existing system. Using this 2014 existing system as a base, we predict demand and identify future infrastructure improvements needed for the sanitary sewer system at 2024 and buildout of the City. Using these models, we can reasonably interpolate demands for other years.

The current level of service is consistent with standards of the State of Utah and sound engineering best practices. Any existing sanitary sewer system deficiencies are noted in this Plan but do not impair the overall system functionality.

It is recognized that with the anticipated growth, Santaquin City will need to increase capacity within the treatment facility, as well as make several strategic collection system tie-in connections. While these facilities will likely be installed by Santaquin City, improvement standards for new developments can help reduce the cost of these improvements. Ultimately the timing of anticipated improvements will be driven by specific developments with consideration being given to available funding, bonding, impacts fee reimbursements, or public private partnership opportunities.

The following recommendations are made as part of this Plan:

1. Establish impact fees to fund projects to meet future needs
2. Recommend creating a plan that addresses replacement of aging or inadequate infrastructure
3. Update the Master Plan/Capital Facilities Plan at least every 5 years, or when significant changes to planned land use, development or water use occur.
4. Periodically review and update user rates.

SANITARY SEWER MASTER PLAN AND CAPITAL FACILITIES PLAN

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I. INTRODUCTION

A. Purpose

This 2016 Santaquin City Sanitary Sewer Master Plan and Capital Facilities Plan is intended to replace the 2009 Santaquin City Sanitary Sewer Master Plan and Capital Facilities Plan prepared by J-U-B Engineers and adopted by the Santaquin City Council in May of 2009. Since the 2009 plan adoption, new impact fee regulation in the Utah State Code (§11-36a) was adopted. Also, Santaquin constructed a sanitary sewer reclamation facility (WRF) and related infrastructure to replace their lagoon system, as well as completed new secondary water and culinary water master plans. Because of these developments, Santaquin City decided that creating a new sanitary sewer master plan that correlated all of these items and would be more beneficial than simply a plan update.

The Plan will have the following goals:

1) Replace the 2009 Plan which integrated a master plan and capital facilities plan for Santaquin City's sanitary sewer system with key differences and objectives;

A. Develop a plan that provides the foundation for collection of sanitary sewer impact fees in accordance with the revised Utah State Code, §11-36a.
B. Consider the impacts of the WRF rather than the old lagoon system
C. Organization would be similar to the secondary water and culinary water plans.

2) Identify the City's current sanitary sewer system infrastructure and facilities;

3) Identify current and future infrastructure needs along with an estimated time frame for construction and associated planning level cost estimates. Future projects will be determined through buildout (year 2060); and

4) Provide direction for system development and level of service maintenance as growth occurs.

B. Background

The Santaquin City sanitary sewer collection and treatment system has evolved over the last 20 plus years. The first "citywide" sewer collection system as well as lagoon treatment facilities were built in 1993-1994 when the City's population was around 2,500[1]. Initial discharge of effluent was done by land application during the summer months with effluent storage during the non-irrigation season. In 2003-2004 an additional, larger winter storage pond was constructed at the lagoon site to accommodate additional winter storage needs due to annual city growth rates close to 11% since the system was constructed. In 2011, facing treatment capacity concerns, Santaquin began the process to retire the treatment lagoons and construct a 1.4 MGD Membrane Bio-Reactor (MBR). The MBR was completed in 2013 and returns a Type I water quality effluent suitable for human contact. Rather than dispose of the effluent by land

[1] www.census.gov

application, Santaquin City now uses the Type I water within the City's public irrigation system to supplement citywide irrigation needs.

While the sewer system has grown, Santaquin's general plan and zoning regulations have also evolved. Previous plans indicated a uniformity of continuous, sprawling development through the Plan area. Current planning, which has received numerous APA Planning awards, indicates preservation of open, agriculture areas but increased clustering of density around service nodes and activity centers. This change in planning emphasis raises issues with loading centers and peak flow concentrations

C. Scope

The Plan includes a discussion of system modeling and evaluation efforts and summary results as well as capital facilities planning for the City's sanitary sewer system to an anticipated buildout in 2060. The area of consideration includes the current sewer system extent and those areas anticipated to be developed by 2060. Additional areas are included in the City's annexation and general plan, but will need to be evaluated with future updates.

Furthermore, in an effort to maximize efficiency in the modeling process, future improvements were categorized according to their function as either "Project improvements" or "System improvements" with the Plan being focused on System Improvements.

Project improvements were determined to be facilities that are either:

1. Minimum improvements which all developers are required (by City and or State Codes) to provide, (i.e. in the case of sanitary sewer lines this is an 8" minimum pipe size); or
2. Those improvements in excess of that listed above that are needed solely to accommodate new users within a specific development.

System Improvements are those improvements which exceed Project improvement classification and which are necessary to accommodate a larger segment of the community than will be within a specific development. System improvements may include an existing improvement that has reserve capacity to accommodate future growth or a future improvement needed to accommodate growth.

While this Plan provides some direction for the City as future growth occurs, and the included capital facilities plan provides an organized approach for construction of sanitary sewer system improvements to serve the residents of Santaquin City, land could be developed in ways not currently anticipated (time, location, or type). It is expected that this Plan will be revisited and updated again in five years or after the next significant system improvement, whichever is sooner.

D. Objectives

The objectives of this Sanitary Sewer System Master Plan & Capital Facilities Plan are listed below:

1. Model and evaluate the existing (2014 end of year) sanitary sewer system
2. Establish system levels of service

3. Identify improvements needed to meet existing system deficiencies, if any
4. Model the future system required to serve projected buildout conditions based on the City's current General Plan
5. Identify improvements needed to meet future demand through buildout
6. Prioritize improvement projects
7. Estimate the cost of improvements
8. Identify potential sources of funding for needed improvements
9. Make recommendations for implementation of system improvements

II. APPROACH

A. Existing Conditions

The existing conditions are considered to be 2014 (end of year), which includes population, general plan land use, GIS data, and meter reads.

1. Existing Sewer System

Santaquin City's sanitary sewer system consists of: a citywide sanitary sewer collection system that accommodates nearly all existing homes, businesses, institutions and City facilities, with only a few exceptions; a recently constructed state of the art Water Reclamation Facility (WRF); one lift station; and several large winter storage ponds. Figure A-1 "Existing System" in Appendix A shows the existing sanitary sewer system extents.

2. Existing Land Use and Sewer System Connections

As indicated previously, nearly all of residential, business, institutional and City facilities are connected to the sanitary sewer system. The exceptions are a few private sewer systems that are typically more than 300 feet from an existing sewer line. The existing (2014) system has about 2,835 sewer system Equivalent Residential Units (ERU's) that provide service for sanitary sewer collection and treatment. There are approximately two dozen private sewer systems that are not serviced by the existing system. These private sewer systems are directed to individual septic systems authorized and administered through the Utah County Health Department.

3. Existing Population

From 2000 to 2010 Santaquin City experienced tremendous growth. The City's population nearly doubled from 5,183 in 2000 to 9,128 in 2010, according to US Census data. The 2014 census estimated population is 10,689 residents.

According to the 2010 US Census, the average household size in Santaquin was 3.93 persons per household. For evaluation purposes we rounded to 3.9 persons per household.

4. Existing Level of Service (LOS)

Santaquin City is required to operate under the treatment and collection standards set by the State of Utah Department of Environment Quality (See Section III for more discussion on the determined level of service (LOS)).

B. Future Conditions

This report identifies two different future time periods for planning purposes – 2024 and 2060. Year 2024 was selected to forecast which capital projects are approaching in the near future, while the 2060 was selected to forecast capital projects needed beyond 2024 with a buildout population. Our analysis provides a basis for fairly accurate estimations (by interpolation) of demand and ERUs in any year between 2014 and 2060. Because the

existing 2014 model is based on actual data, the closer you are to 2014 the more reliable the estimates will be. This means a new impact fee facilities plan and impact fee analyses can be created without updating the master plan each time because the modeling basis has already been completed and the numbers can be determined through interpolation. Because the reliability of estimates decreases the further away from actual data you get, we recommend updating the master plan at least every 5 years or if planned land uses change significantly.

This report identifies at what number of equivalent residential units (ERUs) each future capital project will be needed. Based upon growth projections it also predicts the approximate year that each project will be needed.

In order for the City to provide new users with the levels of service indicated herein, the sanitary sewer system will need improvements described in this document.

1. Future Land Use

   The study area boundary does not coincide with the current Santaquin City boundary nor its full annexation plan extent. Currently there are approximately 6,700 acres of land within the City limits with an additional 6200 in the City's annexation policy. Most of the lands yet to be annexed are shown in the general plan as agriculture preservation areas or very minimal development potential within the plan horizon. Based on this, the study area boundary includes the current and anticipated future sanitary sewer service areas with significant development potential. The study area boundary includes 8,444 acres of land. Of these 8,444 acres, 766 acres is land that will not contribute to future sewer system demand (street right of way, rail road, open space etc.).

   Figure A-2 "Future Land Use" in Appendix A shows the current Santaquin City boundary, the study area boundary, and the anticipated future land uses provided by the Santaquin City Planning Department.

2. Future Population

   Santaquin City bases future growth projections on the 2010 US Census and annual growth rates projected by the State of Utah's Governor's Office of Planning and Budget, which consistently trend with past actual growth rates in Santaquin City. Table 1 shows anticipated growth projections for the City from 2010 to 2060 (which is considered the buildout population year).

Table 1: Santaquin City Growth Projections

Year	Population	Estimated Population Annual Growth Rate	ERUs[1]
2010	9,128	4.03%	
2011	9,495	4.03%	
2012	9,878	4.03%	
2013	10,275	4.03%	
2014	10,689	6.20%	2,835
2015	11,352	6.10%	3,013
2016	12,044	6.20%	3,199
2017	12,791	6.20%	3,400
2018	13,584	6.20%	3,613
2019	14,426	6.20%	3,840
2020	15,321	3.71%	4,081
2021	15,889	3.71%	4,235
2022	16,479	3.71%	4,394
2023	17,090	3.71%	4,559
2024	17,724	3.71%	4,730
2025	18,382	3.71%	4,977
2026	19,064	3.71%	5,238
2027	19,771	3.71%	5,512
2028	20,504	3.71%	5,800
2029	21,265	3.71%	6,103
2030	22,054	3.05%	6,422
2031	22,727	3.05%	6,699
2032	23,420	3.05%	6,987
2033	24,134	3.05%	7,287
2034	24,870	3.05%	7,600
2035	25,629	3.05%	7,927
2036	26,410	3.05%	8,268
2037	27,216	3.05%	8,623
2038	28,046	3.05%	8,994
2039	28,901	3.05%	9,381
2040	29,783	3.05%	9,784
2041	30,691	1.91%	10,205
2042	31,278	1.91%	10,479
2043	31,875	1.91%	10,762
2044	32,484	1.91%	11,051
2045	33,104	1.91%	11,349
2046	33,736	1.91%	11,654
2047	34,381	1.91%	11,968
2048	35,037	1.91%	12,290
2049	35,707	1.91%	12,621
2050	36,389	1.91%	12,961
2051	37,084	1.61%	13,310
2052	37,681	1.61%	13,612
2053	38,287	1.61%	13,921
2054	38,904	1.61%	14,237
2055	39,530	1.61%	14,560
2056	40,167	1.61%	14,891
2057	40,813	1.61%	15,228
2058	41,470	1.61%	15,574
2059	42,138	1.61%	15,928
2060	42,817	1.61%	16,289

[1] ERU growth rates are not the same as population growth rates due to commercial and industrial development.

The Santaquin City Planning Department estimates that the majority of the growth between 2014 and 2024 will be primarily in the three areas listed below and that the growth would be distributed among the three areas as indicated:

a. North of 400 North (45%)
b. Summit Ridge (40%)
c. East Bench (15%)

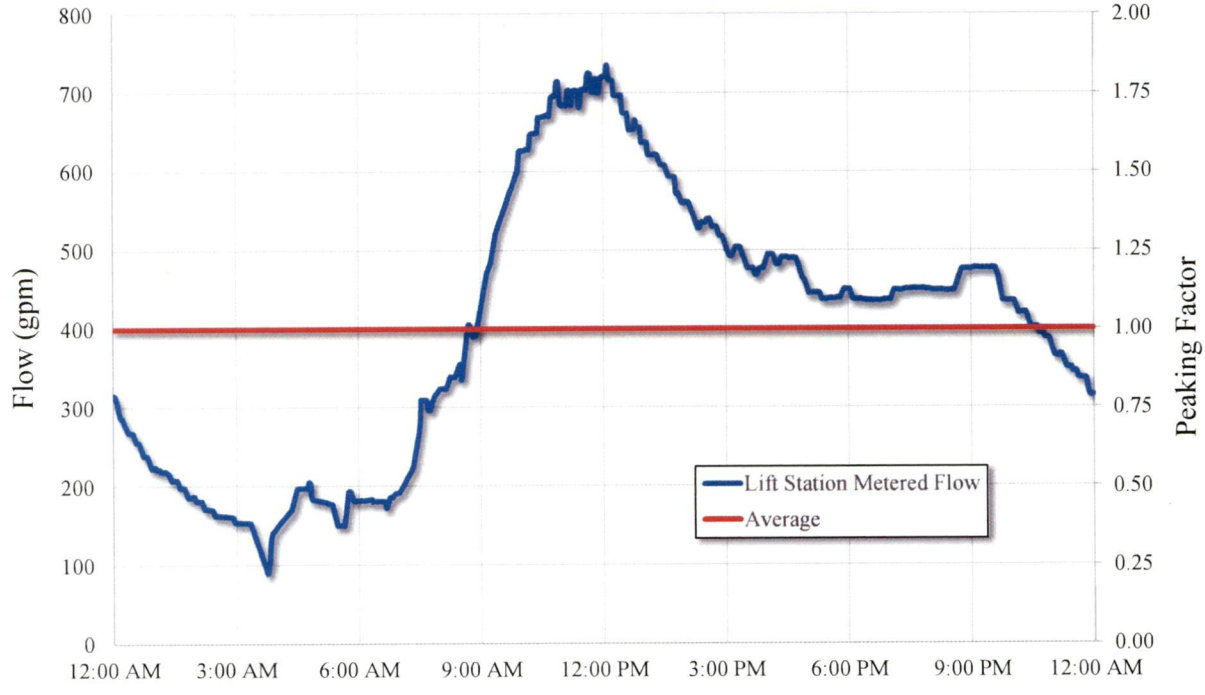
Level of Service (LOS)

Santaquin City is required to operate under the treatment and collection standards set by the State of Utah Department of Environment Quality. Santaquin anticipates continued compliance with these standards and acknowledges that the standards will likely change as environmental and sanitary sewer treatment regulations become more strict. This potential was realized, in part, when the State of Utah and the EPA began limiting Type II water disposal into Utah Lake in 2014, which negatively affected all public sanitary sewer treatment facilities in Utah County, except Santaquin's due to their reuse authorization. (See section III for more discussion on system LOS.)

C. Existing (2014) System Demand

Existing average day, peak day, and peak hour demands were determined by evaluating the sanitary sewer lift station outflow meter records for 2014. A sample diurnal curve is shown in Figure 1.

Figure 1: Sample Lift Station Meter Data from 2014



The existing system demand and peaking factors are shown in Table 2.

Table 2: Existing (2014) System Demand

	GPM	MGD	Peaking Factor	Cumulative
Average Day	371	0.534		
Peak Month	401	0.578	1.08	1.08
Peak Day	474	0.683	1.18	1.28
Peak Hour	750	1.080	1.58	2.02

The existing ERUs and average day demand by land use are shown in Table 3.

Table 3: Existing (2014) Land Use, ERUs, and Demand

General Plan Land Use			Existing (2014)[1]	
Code	Description	Land Area (acres)	ERUS	Average Day Demand (Gallons)
A1	Agricultural	1,215	61	11,505
A2	Very Low Residential	584	3	566
A3	Agribusiness	5	10	1,886
C	Commercial	452	163	30,742
CR	Commuter Rail Corridor	45	0	0
ID	Industrial	543	7	1,320
MU-C	Commerical Mixed Use	96	75	14,145
MU-R	Residential Mixed Use	123	96	18,106
OS-N	Open Space - Natural	697	0	0
OS-P	Open Space - Park	710	19	3,583
OS-W	Open Space - Wetlands	2	0	0
P	Public	404	57	10,750
PO	Professional Office	65	30.25	5,705
R1	Medium Residential	1,207	1485.25	280,118
R1A	Low Residential	616	14	2,640
R2	High Residential	742	766	144,468
RM	Multi-Family Residential	174	48.5	9,147
ROW	Public Right-of-Way	717	0	0
ROW - P	Private Right-of-Way	0.31	0	0
RR	Railroad Corridor	46	0	0
	Total	**8,443**	**2,835**	**534,681**

[1]Based on 2014 metered demand of 188.55 gpd/ERU

D. Future Demand

Future demand was estimated by adding existing demand to demand resulting from future growth. Average day demand from future growth were estimated to be 200 gallons per day per ERU. Existing (2014), additional growth, and buildout demands are shown in Table 4.

Table 4: Future Land Use, ERUs and Demand

General Plan Land Use			Existing (2014)[1]		Additional Growth[2]		Buildout[3]	
Code	Description	Land Area (acres)	ERUs	Average Day Demand (Gallons)	ERUs	Average Day Demand (Gallons)	ERUs	Average Day Demand (Gallons)
A1	Agricultural	1,215	61	11,505	2,292	458,400	2,353	469,905
A2	Very Low Residential	584	3	566	759	151,800	762	152,366
A3	Agribusiness	5	10	1,886	7	1,400	17	3,286
C	Commercial	452	163	30,742	543	108,600	706	139,342
CR	Commuter Rail Corridor	45	0	0	3	600	3	600
ID	Industrial	543	7	1,320	1,155	231,000	1,162	232,320
MU-C	Commerical Mixed Use	96	75	14,145	488	97,600	563	111,745
MU-R	Residential Mixed Use	123	96	18,106	519	103,800	615	121,906
OS-N	Open Space - Natural	697	0	0	1	200	1	200
OS-P	Open Space - Park	710	19	3,583	47	9,400	66	12,983
OS-W	Open Space - Wetlands	2	0	0	0	0	0	0
P	Public	404	57	10,750	461	92,200	518	102,950
PO	Professional Office	65	30	5,705	192	38,350	222	44,055
R1	Medium Residential	1,207	1485	280,118	1,975	394,950	3,460	675,068
R1A	Low Residential	616	14	2,640	1,108	221,600	1,122	224,240
R2	High Residential	742	766	144,468	2,309	461,800	3,075	606,268
RM	Multi-Family Residential	174	49	9,147	1,596	319,100	1,644	328,247
ROW	Public Right-of-Way	717	0	0	0	0	0	0
ROW - P	Private Right-of-Way	0.31	0	0	0	0	0	0
RR	Railroad Corridor	46	0	0	0	0	0	0
	Total	8,443	2,835	534,681	13,454	2,690,800	16,289	3,225,481

[1] Based on 2014 demand of 188.6 gpd/ERU

[2] Additional ERUs through buildout have a demand of 200 gpd/ERU

[3] Buildout demand equals existing plus additional growth

The Existing (2014), 2024, and Buildout scenario demand is shown in Table 5. Note that the same peaking factors used in the existing system were used for the buildout scenario.

Table 5: Existing (2014), 2024, and Buildout System Demand

	Year	ERUs	Average Day Demand / ERU (gpd)[1]	Average Day Demand		Maximum Day Demand[1]		Peak Hour Demand		Max Day to Peak Hour Factor
				gpd	gpm	gpd	gpm	gpd	gpm	
Existing	2014	2,835	188.6	534,400	371	682,508	474	1,080,000	750	1.58
	2024	4,730	188.6 / 200 [1]	913,681	635	1,166,905	810	1,846,510	1,282	1.58
Buildout	2060	16,289	188.6 / 200 [1]	3,225,481	2,240	4,119,414	2,861	6,518,557	4,527	1.58

[1] Based on 2014 demand of 188.6 gpd/ERU and 200 gpd/ERU for additional ERUs through buildout

E. Model

For the 2009 Santaquin City Sanitary Sewer Collection System Capital Facilities Plan, J-U-B Engineers Inc. (J-U-B) developed a computer model for the system using InfoWater®, a graphically-based water modeling software that runs within ArcGIS®. This model was updated by J-U-B Engineers using 2014 end-of-year conditions.

The model uses essential hydraulic data input to simulate the effect that input data has on the system under a specified scenario (i.e. peak day, peak instantaneous, average day, etc.). The data used for the model include the graphical layout and connectivity of the system, pipe lengths, pipe diameter, pipe roughness (a Hazen-Williams roughness coefficient of either 130 or 140 was used for all pipes in the model), demand at each node, and elevation of each node (provided by the City). Given the required data, the model determines the flow through each pipe and at each node that will result when the system meets a given demand at each node. The layout and connectivity of the system is shown in Figure A-1 in Appendix A. The model was calibrated using 2014 lift station meter readings provided by the City. Appendix G contains model loading region data and associated figure.

F. Capital Improvements

Capital improvements needed to correct existing (2014) deficiencies, if any, and to meet future needs are identified from the modeling and evaluation results. This Plan identifies these as individual capital improvement projects and includes associated opinions of probable cost (see Section VI "Capital Improvements").

III. LEVEL OF SERVICE

This Plan identifies the specific level of service provided by the system. The necessary system improvements listed in this Plan will allow the City to provide new users with the same level of service that currently exists.

A. System Improvements vs. Project Improvements

Improvements are categorized according to their function as either system improvements or project improvements. All improvements, both existing and future, are intended to be either system improvements or project improvements, but not both.

Project improvements are existing or future facilities necessary to provide service to occupants or users resulting from a specific development activity or development proposal.

System improvements are existing or future facilities not fitting the definition of a project improvement that are identified as such in this master plan and in the associated impact fee facility plan.

B. Level of Service Categories and Magnitude

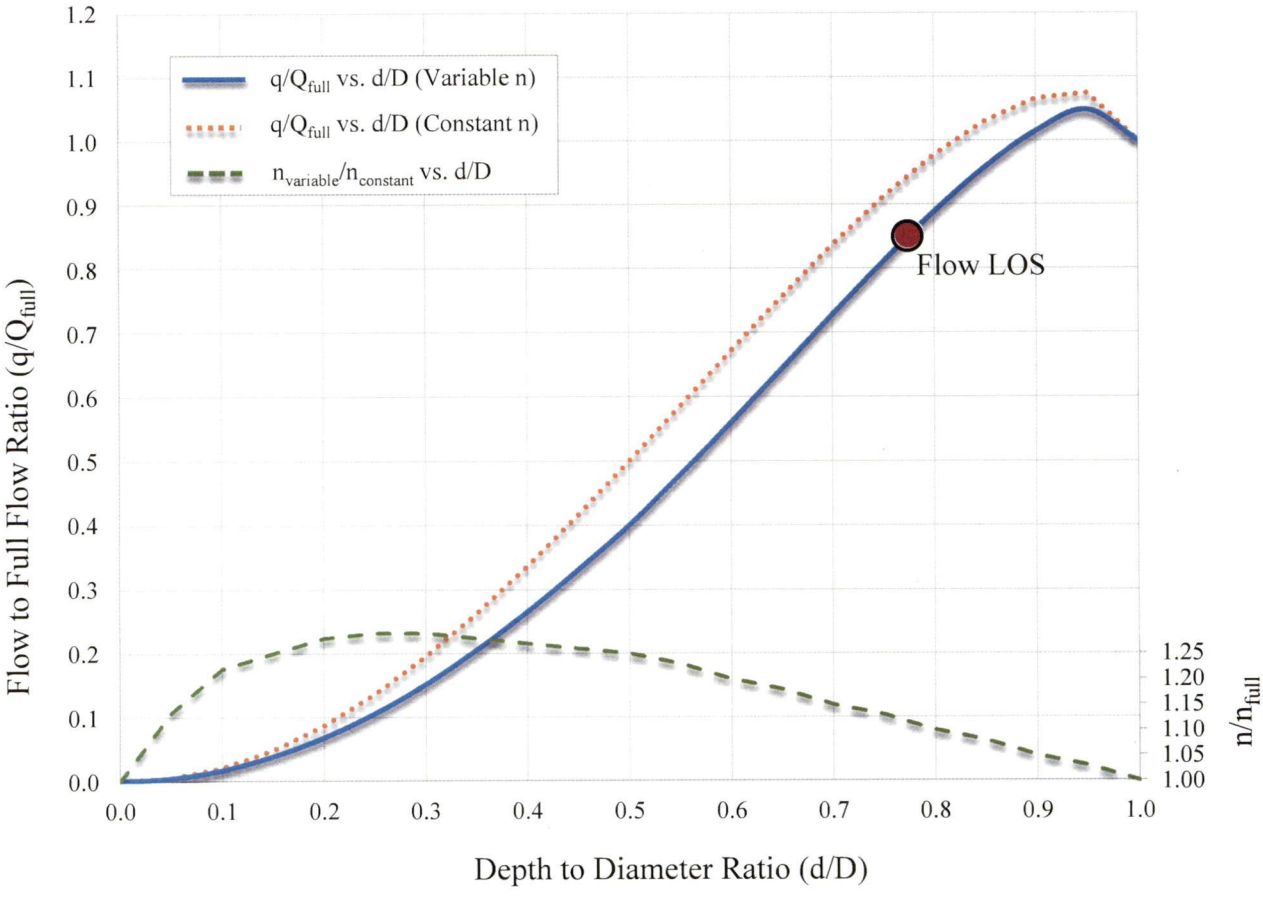
The level of service criterion for the sanitary sewer system is defined as follows:

3. Collection/Transmission

Pipe capacity is typically calculated by Manning's equation, which was primarily developed for flow in open channels with rectangular, trapezoidal, and similar cross-sections. The equation has also been applied to pipe flow. However, as early as the mid-twentieth century, it had been observed that measured flow rates in partially full pipe flow do not agree with values calculated with the typical Manning's equation. The typical Manning's equation utilizes a constant n-value no matter the depth of pipe flow, e.g. 0.013 for concrete, 0.011 for PVC. T.R. Camp developed a method for improving the agreement between measured values of partially full pipe flow rate and values calculated with the Manning equation. He did this by using a variation in Manning roughness coefficient with depth of flow in the pipe as a fraction of the pipe diameter. We developed Figure 2 from T.R. Camp's equations for a varying Manning roughness coefficient.

Santaquin City has chosen the following level of service: peak instantaneous variable "n" value flow (or "q") divided by full flow (or "Qfull") of less than or equal to 85%, which corresponds to a flow depth of about 78%. That depth is desirable because it provides a degree of protection against surcharging which causes overflows and lateral backups, and contributes to odors and hydrogen sulfide generation. If a pipe is located in an area without basements, then a peak instantaneous flow level of service of up to 95% may be acceptable.

Figure 2: Variable vs Constant Manning's n for Pipe Flow



4. Lift Station Facilities

   The sewer lift station level of service relates to pump capacity and operation:

   - Pumps must have a capacity to pump at least 115% of peak hour flow rate while maintaining a standby pump.
   - The lift stations (excluding temporary ones) must have flow metering, backup power, variable frequency drive (VFD) motors if beneficial, and SCADA.

5. Treatment

   The level of service for treatment is for each component of the Water Reclamation Facility to have capacity to provide at least 115% of peak day or average day flow, as applicable.

6. Storage

The level of service for storage is to maintain sufficient storage capacity to store Type 1 water discharged from the Water Reclamation Facility until it can be pumped into the City's pressure irrigation system. The storage facilities shall have capacity to provide at least 115% of the total demand during the non-irrigation season. This could be accomplished through above ground storage ponds or through infiltration for later reuse.

IV. EXISTING (2014) SANITARY SEWER SYSTEM

A. Overview

The Santaquin City sanitary sewer system consists of treatment facilities, storage facilities, pumping facilities and collection lines. Existing supply, existing demand, existing deficiencies and reserve capacity of system improvements for each category of improvements is described later in this report.

1. General System Description

The overall sanitary sewer system consists of approximately 54 miles of pipelines, 1127 manholes, one lift station, the 1.4 MGD WRF treatment facility and roughly 70 acres of winter storage ponds (with a capacity of 178 million gallons).

2. Operations

Currently, one hundred percent (100%) of the City's sanitary sewer gravity flows to an existing lift station located at the intersection of Center Street and Ginger Gold Road (1100 North). Flow is then pumped from this lift station to the WRF. The WRF treats the sanitary sewer to a Type 1 quality effluent.

From the WRF, the Type 1 effluent is pumped approximately 8,000 feet through a pipeline to the City's two winter storage ponds (formerly lagoon treatment and winter storage ponds).

During the irrigation season, the stored Type 1 effluent is pumped into the pressure irrigation system for outdoor watering needs.

3. Historic Projects

Santaquin City has design and or so called "as built" plans for some historic projects constructed as part of the sanitary sewer system. See Appendix B "Historic Projects" for a list of projects that the City currently has record plans and details for.

4. Maintenance

Santaquin City works with an outside contracting company to flush and clean all collection lines, manholes and the lift station over a rotating three year period. This practice results in very few breaks or backups within the collection system and is a critical component of long term system integrity. In support of this effort, Santaquin owns a vac-truck, which also helps in emergency situations.

B. Rights

1. Existing Water Rights

A complete evaluation of the City's water rights is outside the scope of this study. Therefore, no detailed discussion about overall water rights is included herein.

Santaquin City recently had a detailed evaluation of their water rights prepared by J-U-B Engineers. Additional detailed water right information can be found in that January 2015 evaluation report, titled "Santaquin City Water Rights Summary".

For purposes of this plan only, two specific water rights held by Santaquin City are discussed herein since they pertain directly to the sanitary sewer system with respect to reuse of Type 1 water and groundwater recharge, which are both regulated by the State of Utah.

First, Santaquin City holds reuse water right number NS015 in the State of Utah. This water right allows for reuse of up to 5302.7 ac-ft of Type 1 effluent produced at the WRF. As discussed previously, this Type 1 water is pumped into the City's pressure irrigation system during the irrigation season to be used for outdoor watering needs.

Second, the State Division of Water Rights recently (December 7, 2015) approved water right number RC007. This water right allows for groundwater recharge (although not recovery) of up to 550 acre feet of Type 1 reclaimed water annually. Additional discussion about recharge is included in Section E below.

C. Existing (2014) Collection

1. Existing Collection Facilities

The collection and transmission portions of the sanitary sewer system contains approximately 54 miles of pipe and 1,127 manholes. The pipe sizes vary from 4 inches to 18 inches in diameter. All of the pipes are PVC pipe. The collection and transmission part of the system also includes one lift station. Table 6 includes a summary of pipes 6 inches and larger, and a 4-inch lateral that serves the City's Theodore Ahlin Park at the south end of the City. Other 4-inch pipes are omitted because they are private service laterals.

Table 6: Existing (2014) Sanitary Sewer Collection/Transmission Pipe Summary

Pipe Diameter [in]	Pipe Length [ft]		% of Total
	Feet	Miles	
4"[1]	656	0.12	0.2%
6"[2]	689	0.13	0.2%
8"	234,897	44.49	83.0%
10"	13,772	2.61	4.9%
10" FM	9,260	1.75	3.3%
12"	4,419	0.84	1.6%
15"	7,153	1.35	2.5%
18"	12,170	2.30	4.3%
Total	283,017	53.60	100%

Note: Data is from the City's GIS database (2014 data).

[1]Only includes fish pond lateral. No private laterals included.

[2]All are joint private laterals serving more than one sstem user

2. Demand on Existing Collection Facilities

   The q/Qfull model results are shown in Figure A-3 in Appendix A

3. Existing Collection System Deficiencies

   As shown in Figure A-3, there are no existing deficiencies.

D. Existing (2014) Treatment

1. Existing Treatment Facilities

   Santaquin City treats one hundred percent (100%) of its sanitary sewer at their new Water Reclamation Facility (WRF). The WRF was constructed in 2012 and 2013 and was commissioned in November of 2013. The WRF treats the collected sanitary sewer to a "Type 1" water quality level effluent using a Membrane Bio Reactor (MBR) filtration system. Type 1 quality is a standard of treatment designated by the State of Utah where "human contact of the effluent is likely".

   The City currently has the capacity to treat all of the existing flows to the WRF. The current treatment capacity at the WRF is 0.67 MGD. The WRF can treat up to 1.4 MGD and was constructed for ease of expansion in the future to 1.72 MGD, which will handle an estimated 8,609 ERUs. Because the expected flow from buildout ERUs is higher than the expansion capacity, expansion of the WRF structure will be required. We included the first major WRF expansion project in the capital facilities plan (needed at 8,609 ERUs). Any WRF projects beyond that point are not discussed in this document but will need to be evaluated/addressed in future planning efforts.

   A LOS summary document for the WRF is in Appendix H.

2. Demand on Existing Treatment Facilities

   The 2014 data indicates that average flow to the WRF is 0.534 MGD.

3. Existing Treatment Facility Deficiencies

   There are no existing treatment facilities deficiencies.

E. Existing (2014) Storage

1. Existing Storage

   The City stores the Type 1 effluent in two large winter storage ponds (formerly lagoon winter storage ponds).

   A listing of the current sanitary sewer storage facilities with capacity of each is shown in Table 7.

Table 7: Existing (2014) Storage

Storage Facility	Capacity (MG)	ERUs
Pond #1	52	1,461
Pond #2	126	3,539
Total Available Storage[1]	**178**	**5,000**

[1]Santaquin is currently approved for an additional 179 MG of recharge storage, but infrastructure for this capability is yet to be built

2. Demand on Existing Storage

The City's water storage facilities have approximately 178 million gallons of total capacity. At current treatment levels (about 534,000 gallons per day), this means there is capacity to store roughly 290 treatment days of water. With stored water being pumped out of the ponds during a typical 165 day irrigation season, there is currently ample storage space for the remaining calendar days of treatment.

Santaquin also has approval, through Water Right RC007, to store up to 179.2 million gallons in the local aquifer. Although the approval has been given, to date, no facilities have been constructed to take advantage of this storage capability (see Future Storage Needs below).

The current sanitary sewer storage demand was determined using the 2014 number of ERU's, and the established level of service. Table 8 shows the 2014 sanitary sewer storage demand.

Table 8: Existing (2014) Storage Demand

		Storage Capacity		Remaining Capacity	
2014 ERUs	Average Day Demand (MG)	ERUs	Average Day Demand (MG)	ERUs	Average Day Demand (MG)
2,835	0.53	5,000	0.99	2,165	0.45

3. Existing Storage Deficiencies

There are no existing storage deficiencies in the sanitary sewer system.

V. FUTURE SANITARY SEWER SYSTEM AT BUILDOUT

A. Overview

1. General System Description

Figure C-1 "Buildout System" in Appendix C shows the anticipated sanitary sewer system at buildout. The sanitary sewer system at buildout will be comprised of the entire existing system infrastructure along with the new improvements identified within this Plan. Note that only the system improvements are illustrated, which does not include service laterals or project specific improvements.

2. Operations

It is anticipated that the sanitary sewer system at buildout will be operated much the same as it is currently operated. Additional infrastructure identified in the Plan may require operational changes or additional operations.

B. Collection

1. Future Demand on Collection

At buildout the collection system is estimated to serve 16,289 ERUs and have an average day demand of 3.23 MG.

Figure C1 in Appendix C shows the buildout system model results before improvements. Figure C-2 in Appendix C shows the buildout sanitary sewer system with improvements to resolve deficiencies shown in Figure C-1. Table C-1 in Appendix C shows the existing (2014), 2024, and future demand q/Qfull of all pipes within the collection system.

2. Future Collection Needs

As shown on Figure C-2, there are several pipe segments that do not meet the LOS of 85% q/Qfull at buildout. The majority of those segments are along or near 14000 South.

It is anticipated that most of the pipes in the collection system will be built by land developers to serve future development as it occurs. The minimum pipe size required by State code is 8" in diameter. Some of the future pipes to collect and transmit sanitary sewer from areas of future development will need to be larger than the minimum pipe size. Some existing pipes will not meet buildout demand and need to be upsized. This upsizing will likely be paid for with impact fees.

3. Solutions to Future Collection Needs

Figure C-1 in Appendix C shows the buildout system pipes that satisfy the established level of service for the future conditions. As is evident in the figure, these pipe sizes address the level of service needs with regard to capacity in the buildout condition. Table 11 contains improvement projects to resolve the deficiencies as well as provide for future growth.

Since we expect that the future pipes will be built by land developers, Santaquin City will need to require that the developers install the size of lines shown in Figure C-1. The developer would be responsible for installing an 8-inch line, and Santaquin City will be responsible for paying for the incremental cost difference between the required size and an 8-inch line. As such, these costs are not identified as discrete projects, but as a series of pipe segments for which the City will incur financial obligation when a developer installs them. Tables F-2 and F-3 in Appendix F contain tabulations of estimated typical pipe installation and upsizing costs.

In order to estimate the upsizing costs that Santaquin City might incur by 2024, we used 2014 data and growth projections to calculate the q/Qfull in each future pipe segment in the year 2024, as well as at buildout. A tabulation of these demands are shown in Table C-1 "Future Collection Pipe Flows Tabulation" in Appendix C. We have calculated the total length and weighted average flow for each pipe size at both the year 2024 and at buildout. Table 9 also shows the percentage of buildout pipe capacity that will be needed by 2024.

Table 9: q/Qfull Summary for 2014, 2024, and Buildout Pipe Upsizing

	Pipe Size			
	10"	12"	15"	18"
Total Length at Buildout (ft)	20,662	3,867	7,738	14,210
Existing Weighted Average q/Qfull	20%	2%	6%	7%
2024 Weighted Average q/Qfull	11% [1]	10%	12%	13%
Buildout Weighted Average q/Qfull	21%	69%	15%	43%
Percent of Buildout Pipe Capacity Needed in 2024:	9.7%	11.0%	27.4%	14.4%

[1] The q/Qfull for 10-inch pipes in 2024 are lower due to re-routing through new 8-inch pipes.

C. Treatment

1. Future Demand on Treatment

As growth occurs there will be an associated increase of sanitary sewer flows that will require increased treatment capacity at the WRF and increased pumping capacity from the WRF to the winter storage ponds.

2. Future Treatment Needs

Appendix H contains a WRF LOS document that shows future treatment capacity needs as growth occurs.

3. Solutions to Future Treatment Needs

Additional infrastructure will be installed at the WRF in order to increase treatment capacity. The projects will affect: biological treatment, pumping, filters, solids handling, etc. As shown in Table 11, different processes within the WRF treatment facility will need upgrading at different times in order to increase overall capacity.

Note that the WRF reclaimed water force main improvement project (Project #26) could be delayed significantly if the aquifer recharge ponds (Project #35) can be relocated closer to, or on the WRF property. Less distance to pump would increase the effective capacity of the existing pumps.

D. Storage

1. Future Demand on Storage

As growth continues to occur, additional non-irrigation season storage will be required in order to provide the established level of service standards. Table 10 shows future demand on Type 1 water storage.

2. Future Storage Needs

We estimate non-irrigation demand to exceed the storage LOS in year 2021.

3. Solutions to Future Storage Needs

Future additional storage capacity needs could be met in a number of ways. These may include additional storage ponds and/or additional recharge and recovery of Type 1 water into the groundwater aquifer.

As mentioned previously, Water Right RC007 allows for up to 550 acre feet of groundwater recharge of Type 1 water, but not recovery of that water. In order to make full use of WR RC007, the City would need to construct three (3) recharge/infiltration basins (spreading ponds) or trenches as well as various pipeline work and metering devices in order to keep accurate records as to the amount of water recharged. A recovery well could also be necessary in order to recover the recharged water. Because Santaquin has not yet been able to obtain a recovery permit from the State, the recharge and recovery project is shown only as an alternative project in Table 11.

Santaquin City has a great need to use as much of the Type 1 water as possible. As the State of Utah has not yet issued a recovery permit for recharged Type 1 water, any recharged water will not be available, by water right, to be recovered by the City. Therefore, the City will need to construct additional storage pond facilities in order to store and then make the best use of Type 1 water. This new storage pond will increase the overall costs for storing Type 1 water which is a larger burden that will be placed on future growth/development.

Since these new storage facilities are needed to accommodate future growth, impact fees may be used to fund design and construction of such.

Table 11 identifies two projects needed to accommodate Santaquin's future storage needs. Santaquin City recommended Project 37's location. It was a previously planned pressure irrigation pond site and the City expects to be able to trade for this property with property in the south part of town they already own. As this particular project draws nearer, Santaquin City will re-evaluate the project's feasibility compared to other alternatives. Due to changes in usage, policies, and State requirements, storage needs beyond those two projects will be evaluated in future master planning efforts.

Table 10: Sanitary Sewer Storage Demand Tabulation

Table Row		Storage (MG)	
Existing Storage			
a	Pond #1 Storage	52	
b	Pond #2 Storage	126	
c	Total Existing Storage	178	= a + b
2014 Storage Needs			
d	2014 Storage Demand	96	
e	115% of 2014 Storage Demand[1]	111	= d * 1.15
f	Remaining Storage	67	= c - f
g	% of Pond #1 Used	100%	
h	% of Pond #2 Used	46.5%	= (e - a) / b
2024 Storage Needs			
i	2024 Storage Demand	164	
j	115% of 2024 Storage Demand	189	= i * 1.15
k	Remaining Storage	-11	= j - c
Buildout Storage Needs			
l	Buildout Storage Demand	403	
m	115% of Buildout Storage Demand	463	= l * 1.15
n	Remaining Storage	-285	= m - c

[1]LOS for storage is having capacity to provide at least 115% of the total demand during the non-irrigation season.

VI. CAPITAL IMPROVEMENTS

A. List of Projects and Priorities

Table 11 shows capital improvement projects necessary to provide for future growth. It also indicates an approximate time frame and ERU count when those projects will be needed. We determined the ERU numbers from the model, then applied anticipated growth rates to identify the estimated year when each project will likely be needed. Payment to land developers for upsizing from 8-inch pipes to larger pipe sizes needed as system improvements will gradually occur as land develops from now until buildout. We included system improvement pipe upsizing projects in Table 11 based on the current General Plan and the hydraulic model. These pipe upsizing projects may vary if actual development is different than the General Plan.

The likely funding sources are based on project type (to resolve existing deficiency or meet future need) and anticipated year of need. More detailed information about each project and costs associated with each are found in Table F-1 in Appendix F.

Figure D-1 "System Improvement Projects" in Appendix D shows the projects that need to be constructed with growth to meet future needs. There are two pipe segments labeled as "Watch List" in Figure D-1. The model suggests these pipes will need an improvement project by buildout, but based on growth patterns, the improvement project will not be needed for over 40 years. Because these improvement projects are so far distant, an improvement project was not planned and it was placed on a watch list.

Table 11: Sanitary Sewer System Improvements

Project Number	Project Name	Estimated Cost (Rounded)[1]	Point at Which Project is Estimated to be Needed[2]		Land Developer (Project Improvement)	City Funds	Impact Fees
			ERUs	Year			
Collection Projects							
1	Install 8" Sewer Main along Orchard Cove Rd from 770 N to 850 N	$ 68,800	3,199	2016			$ 68,800
2	Install 8" Sewer Main along 100 E from 730 N to Canal	$ 325,500	3,400	2017	$ 162,750		$ 162,750
3	Install 18" Sewer Main Along Strawberry Canal Rd from 400 East to 100 East	$ 314,300	4,081	2020			$ 314,300
4A	Install 10" Pipe along 400 East from 530 North to Strawberry Canal Rd and Remove Pipe on 530 North	$ 344,000	4,394	2022			$ 344,000
4B	Install 8" Sewer Main North of 400 North and East of 400 East for Development	$ 507,100	4,559	2023	$ 507,100		
5	Install 8" Sewer Main along Strawberry Canal Rd from 4800 W (county) to 400 East	$ 300,800	4,559	2023	$ 60,175		$ 240,625
6	Install 8" Sewer Main along Center St from 100 S to Manhole at 70 South	$ 18,500	6,422	2030			$ 18,500
7	Install Parallel Sewer Main along 400 E from South Side of 400 N to Next Manhole Directly North	$ 8,600	6,987	2032			$ 8,600
8	Install 8" Sewer Main along 400 E from 200 S to 140 S	$ 28,000	7,600	2034			$ 28,000
9	Install 8" Sewer Main along 4800 W (county) from 400 North to Strawberry Canal Rd	$ 146,100	9,784	2040	$ 146,100		
10	Install 8" Sewer Main along Strawberry Canal Rd from SR198 to 4800 W	$ 348,900	10,479	2042			$ 348,900
11	Install 4" Force Main with Sewer Lift Station on 4800 W (county) and 12400 S (county)	$ 697,500	11,349	2045			$ 697,500
12	Install 8" Sewer Main from SR198 and 13200 S (county) to 12400 S and 4800 W (county)	$ 739,900	11,349	2045			$ 739,900
13	Install 8" Sewer Main Along 4800 W from 12800 S to 12400 S	$ 257,900	11,654	2046			$ 257,900
14	Install 8" & 10" Sewer Main on Strawberry Canal Rd from 6250 West to Center Street Lift Station	$ 536,200	11,654	2046			$ 536,200
15	Install 4" Force Main with Sewer Lift Station Northwest of Storage Ponds near Hwy 6	$ 515,400	12,290	2048			$ 515,400
16	Install 8" Sewer Main West of Storage Ponds to Hwy 6 Lift Station (Project 15)	$ 511,400	12,290	2048			$ 511,400
17	Install 8" Sewer Main from west to 14400 S (county) and Summit Ridge Pkwy	$ 661,800	12,961	2050			$ 661,800
18	Install 4" Force Main with Sewer Lift Station south of Genola near Hwy 6	$ 943,000	14,560	2055			$ 943,000
19	Install 8" Sewer Main Along Summit Ridge Pkwy from Frontage Rd to East side of I-15	$ 262,100	15,574	2058			$ 262,100
20	Install 8" Sewer Main Along 1000 S from Pole Canyon Road to 300 W	$ 131,500	16,289	2060	$ 131,500		
	Subtotal	**$ 7,667,300**			**$ 1,007,625**	**$ -**	**$ 6,659,675**

Table 11: Sanitary Sewer System Improvements (cont'd)

Project Number	Project Name	Estimated Cost (Rounded)[1]	Point at Which Project is Needed[2]		Land Developer (Project Improvement)	City Funds	Impact Fees
			ERUs	Year			
Treatment Projects							
21	Install 2nd Screw Press	$ 578,000	2,957	2016/2017			$ 578,000
22	Activation of Membrane Tank #4	$ 1,246,000	3,181	2016/2017			$ 1,246,000
23	Remove Baffle Wall in UV Channel and Install Additional Lamps	$ 288,000	3,400	2017			$ 288,000
24	Install 4th Reclaimed Water Pump	$ 125,000	3,412	2017			$ 125,000
25	10" Parallel Reclaimed Water Force Main	$ 485,000	4,339	2022			$ 485,000
26	Center Street Lift Station Upgrades	$ 239,000	4,370	2022			$ 239,000
27	Activation of Membrane Tank #5	$ 1,246,000	4,772	2024			$ 1,246,000
28	Upsize Reclaimed Water Pumps	$ 353,000	5,579	2027			$ 353,000
29	Upsize Screw Presses	$ 1,725,000	5,913	2028			$ 1,725,000
30	Biological Process (3rd Train)	$ 398,000	6,191	2029			$ 398,000
31	Biosolids Holding Tank	$ 627,000	6,191	2029			$ 627,000
32	12" Parallel Sewer Force Main (RR to WRF)	$ 51,000	6,555	2030			$ 51,000
33	Populate 2nd UV Channel	$ 840,000	6,800	2031			$ 840,000
34	Activation of Membrane Tank #6 (Change backpulse to membrane tank)	$ 1,230,000	7,953	2035			$ 1,230,000
35	Expand Headworks Building and Add Additional Drum Screen	$ 840,000	8,609	2037			$ 840,000
	Subtotal	**$ 10,271,000**			**$ -**	**$ -**	**$10,271,000**
Storage Projects							
36	Construct Additional North 106 MG Winter Storage Pond	$ 3,180,000	4,348	2022			$ 3,180,000
37	Construct Additional South 93 MG Winter Storage Pond	$ 4,915,000	7,022	2032			$ 4,915,000
	Subtotal	**$ 8,095,000**			**$ -**	**$ -**	**$ 8,095,000**
Public Works Facilities Projects							
38	Public Works Facility	$ 632,500	3,199	2016			$ 632,500
	Subtotal	**$ 632,500**			**$ -**	**$ -**	**$ 632,500**
	Total	**$ 26,665,800**			**$ 1,007,625**	**$ -**	**$25,658,175**
Altnerate Project							
36/37 (alt)	Construct Aquifer Recharge Ponds	$ 805,000	4,348	2022			$ 805,000
	Subtotal	**$ 805,000**			**$ -**	**$ -**	**$ 805,000**

[1]Costs are in 2014 dollars

[2]Project ERUs and years are estimates only. Actual timing will vary based on development.

As shown in Table 11, the estimated cost for all future projects is $26,665,800. The City expects to pay $25,658,175 from collected impact fees, while the rest will be funded by development or by the City to encourage or facilitate development.

B. Funding Sources

Section 302 (2) of the Impact Fee Act requires the City to "generally consider all revenue sources, including impact fees and anticipated dedication of system improvements, to finance the impacts on system improvements." By doing so, the City ensures fair and equitable treatment among users and concludes whether impact fees are the most appropriate method to fund the growth.

There are a number of revenue sources available for managing and expanding Santaquin's sanitary sewer system. They are listed below.

1. User Charges

   The City collects user fees for sanitary sewer services. User fees pay for sanitary sewer that the City collects, treats, stores and disposes of sanitary sewer collected in the Collection system. User fees are the primary source of funding for the operation and maintenance expenses of the City's sanitary sewer system.

2. Grants, Low Interest Loans and donations

   Santaquin City has had grants and low interest loans for sanitary sewer-related projects in the past. It is possible that it may get additional grants for future projects. Additionally some infrastructure is donated, though this typically is at the project improvement level rather than at the system improvement level.

3. Special Assessment or Tax Increment Areas

   This method of financing growth is acceptable and allocates the cost of the new development to the new development. However, special assessment areas can be expensive to establish and complicated to administer, especially if a large development is being considered. Moreover, the special assessments may not accurately reflect the true cost of the facilities.

   Tax Increment Areas are a public private partnership tool to leverage future public revenues against existing developer and investor dollars. These types of financing can also be complicated and may require the City to take on significant risk if development does not move forward in a timely fashion.

4. General Obligation Bonds and Sales Tax Revenue Bonds

   The City may elect to issue bonds to maintain a steady flow of funds to pay for needed facilities. The City has issued bonds in the past, and may determine that bonds are a suitable mechanism for funding future sanitary sewer system facilities. The City may use the revenues from impact fees and user charges to pay debt service on bonds. Bonds may be issued in addition to collecting impact fees.

5. Impact Fees

   This source is a common and equitable method of funding new system improvements because it imposes the cost of providing capacity for new growth upon that new growth. The detailed analysis required to impose impact fees accurately allocates the true impact of a system or facility to those creating the impact. Those creating the

most impact, therefore, pay more. The speculative nature of these revenues, and their elasticity, however, make cash flows from impact fees unpredictable. In addition, the City may use impact fees to pay for costs of issuance on future bonding.

The City may, on a case by case basis, work directly with a developer to adjust the standard impact fee to respond to unusual circumstances and ensure that impact fees are imposed fairly. The City may also, on a case by case basis, adjust the amount of the fee based upon studies and data submitted by a developer.

6. Developer Installed and Financed (Reimbursable by Impact Fees)

   This is a source that the City has recently used to help fund infrastructure needs within specific development areas of the City. This type of arrangement is typically accomplished with a development agreement between the City and the developer, with the private funds being spent for initial improvements and the public funds received based on market conditions, reimbursing developers in accordance with planned expenditures. With this option, the development community accepts more risk, thus providing more fiscally sound practice for the City.

All of the above forms of financing associated with a sanitary sewer system have a place and are needed. For instance, user rates are needed for ongoing operation and maintenance costs; grants, low interest loans and some bonds may be necessary for major infrastructure improvements; special assessment bonds can work well where there is a deficiency in a particular localized area or as a tool to build infrastructure to spur development; impact fees are the equitable, appropriate and needed means of funding system improvements to accommodate future growth.

VII. CONCLUSION & RECOMMENDATIONS

A. Conclusion

This Master Plan effort was undertaken to evaluate Santaquin City's existing sanitary sewer water system, to identify existing deficiencies, if any, to identify reserve capacities and to identify future system needs related to demand due to growth. Recommendations follow.

B. Recommendations

1. Establish Impact Fees to Fund Projects to Meet Future Needs

This report, in conjunction with an Impact Fee Facility Plan (IFFP) and Impact Fee Analysis (IFA) will provide the basis for collection of impact fees needed to help construct the improvements required to support future growth.

We recommend that Santaquin City adopt impact fees in an amount that will fund the projects required to meet future needs without subsidizing the effect of growth using sewer utility rates paid by existing system users.

We recommend that Santaquin City implement a practice of following this Plan in constructing the projects anticipated to satisfy the demand of future growth. As growth occurs and other factors affect conditions relative to the assumptions made in this Plan, the City will need to consider adjusting priorities as needed in order to accommodate changing conditions.

2. Replacement of Aging or Inadequate Infrastructure

With the original piping, manholes, and lift station at 20 years old, we recommend implementing a long term replacement plan with associated financing.

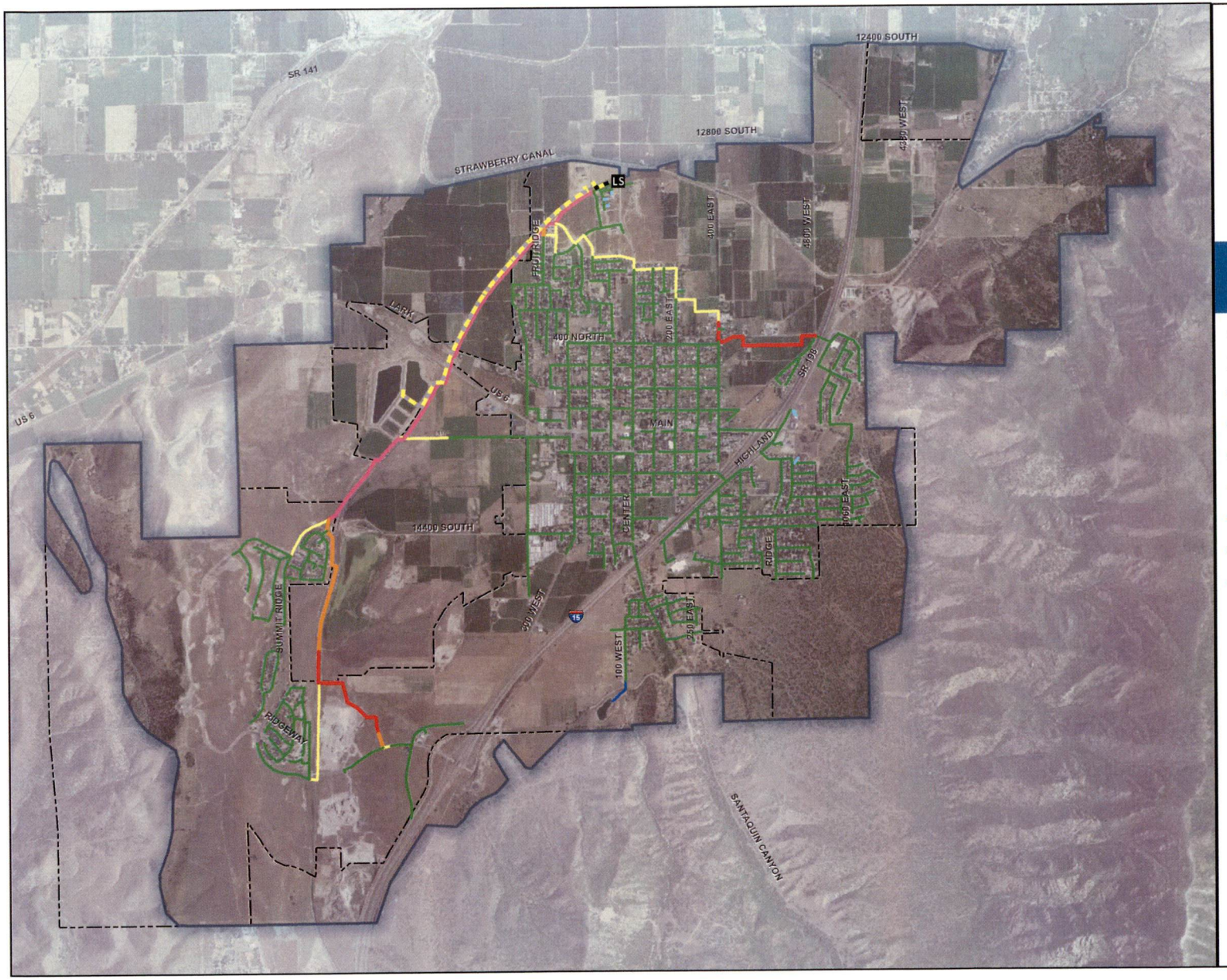
3. Master Plan and Capital Facilities Plan

We recommend that Santaquin City update this Plan as needed but at intervals of not more than every 5 years. An interim update may be needed if planned land uses change significantly.

4. Periodic Review of User Rates

We recommend that Santaquin City periodically review and update their sewer user rates. User rates cover operation & maintenance for the system. As costs to maintain and operate the system will likely increase over time, user rates need be updated periodically to make sure that revenue generated can cover costs. More frequent smaller adjustments are more tolerable than infrequent large adjustments.

APPENDIX A
EXISTING (2014) SYSTEM MAPS



Santaquin

Sanitary Sewer System Master Plan and Capital Facilities Plan

Existing System

FIGURE A-1

Gravity Main

Diamter

- 4"
- 6" (private)
- 8"
- 10"
- 12"
- 15"
- 18"
- 10" Reclaimed Water FM
- 10" Sanitary Sewer FM

LS Lift Station

City Boundary

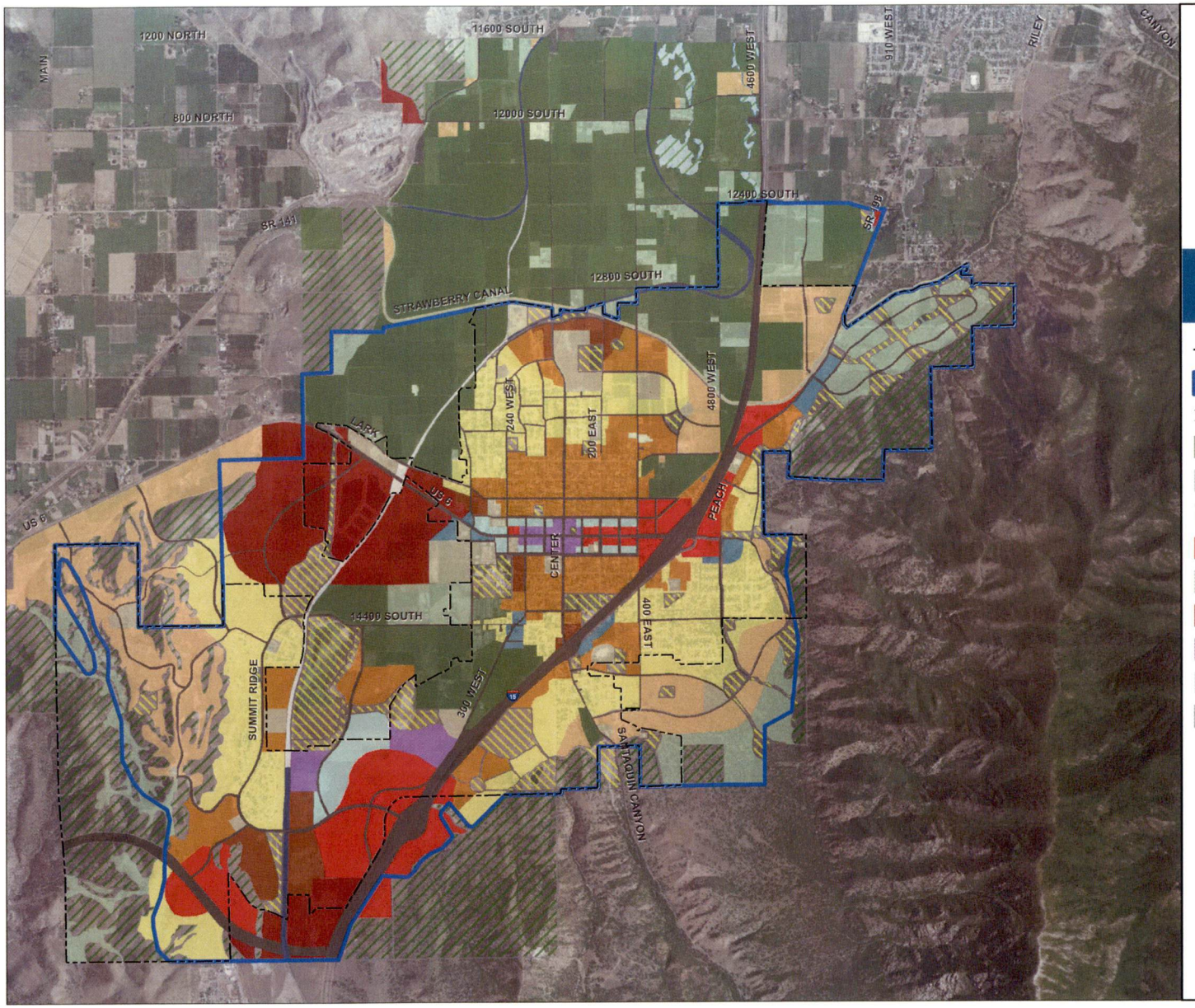
N

0 0.5 1 Miles

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OTHER JUB COMPANIES

Date: 12/15/2016



Santaquin

Sanitary Sewer System Master Plan and Capital Facilities Plan

General Plan Land Use

FIGURE A-2

- City Boundary
- Study Area

Land Use

- Agriculture
- Vey Low Residential
- Agribusiness
- Commercial
- Commuter Rail Corridor
- Industrial
- Commercial Mixed Use
- Residential Mixed Use
- Natural Open Space
- Park
- Wetlands
- Public
- Professional Office
- Medium Residential
- Low Residential
- High Residential
- Multi-Family Residential
- Public Right-of-Way
- Private Right-of-Way
- Railroad Corridor

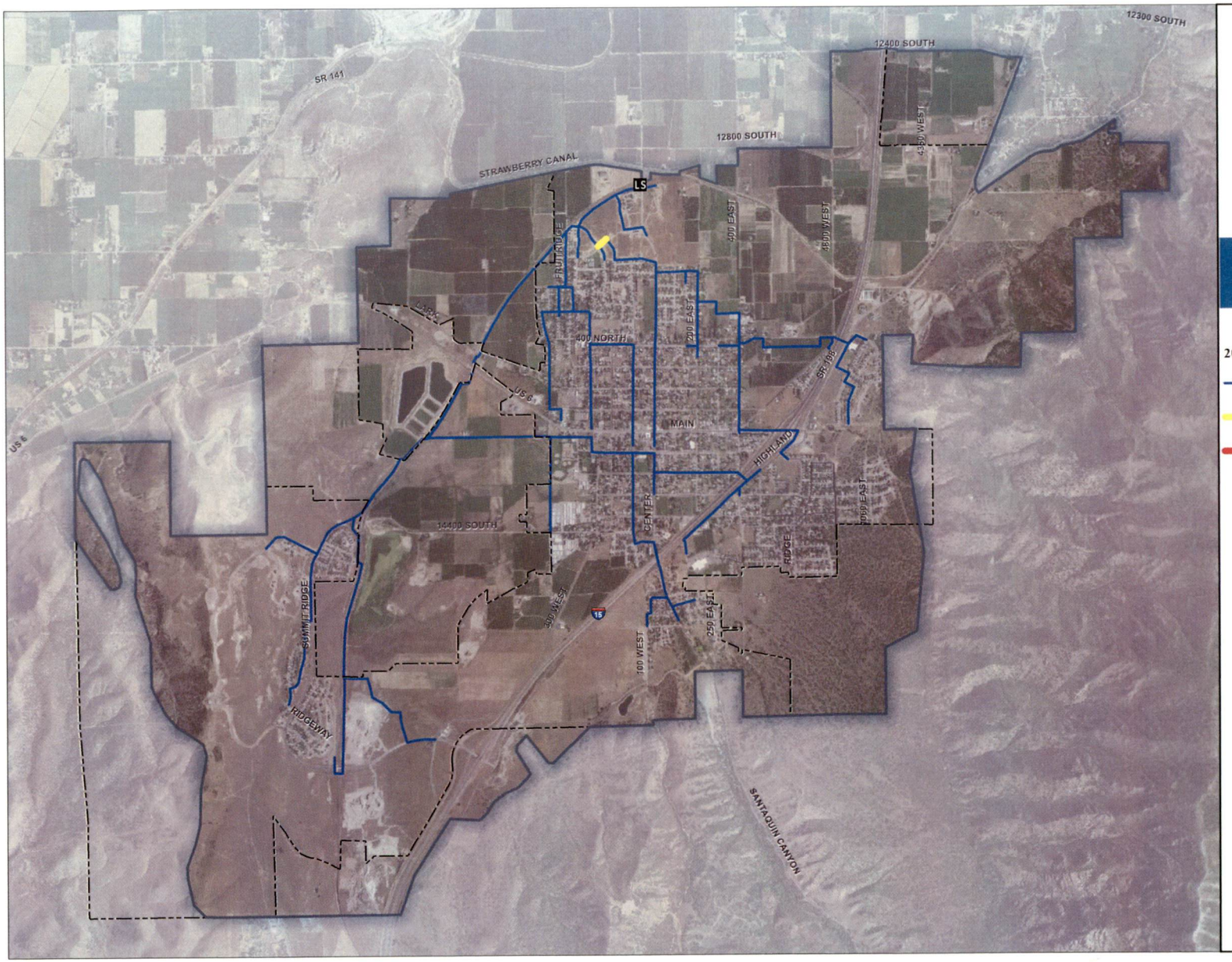
N

0 0.5 1 Miles

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Date: 12/15/2016



Santaquin

Sanitary Sewer System Master Plan and Capital Facilities Plan

Model Results: 2014 System

FIGURE A-3

2014 System q/Qfull

- 0% - 75%
- 75% - 85%
- >85%

LS Lift Station

City Boundary

N

0 0.5 1 Miles

JUB | The Langdon Group | Gateway Mapping Inc.

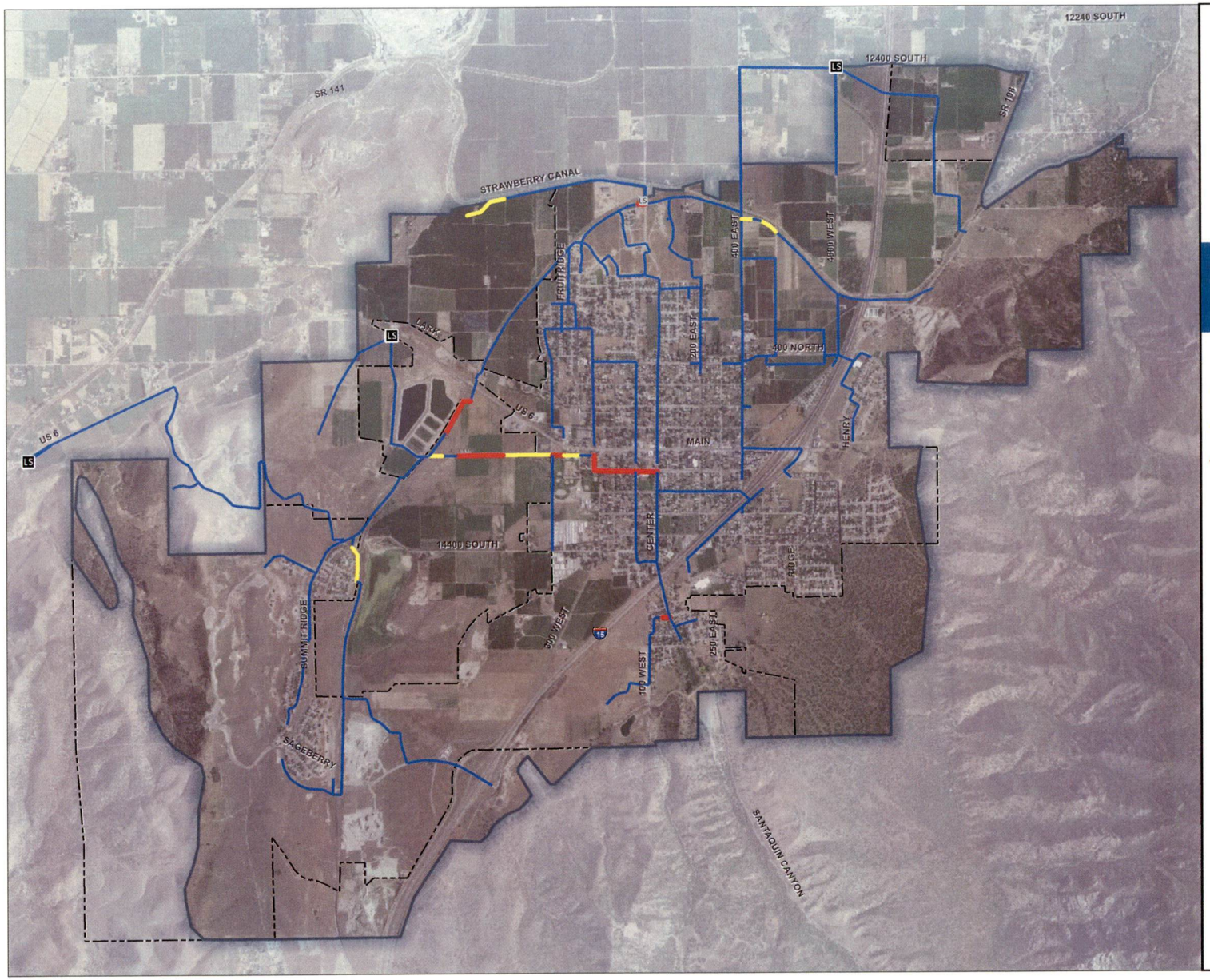
OTHER JUB COMPANIES

Date: 12/15/2016

APPENDIX B
HISTORIC PROJECTS

Name and Description	Approximate Year of Construction
Original Sanitary Sewer System (including 52 MG Winter Storage Pond)	1993-1994
Main Street & I-15 Gravity Line	1998
Large Winter Storage Pond	2001-2002
Land Application Pump	2009
900 South and Center Street Sewer	2009-2010
Water Reclamation Facility (WRF)	2012-2013

APPENDIX C
FUTURE SYSTEM MAPS AND TABLE



Santaquin

Sanitary Sewer System Master Plan and Capital Facilities Plan

Model Results: Buildout System w/o Improvements

FIGURE C-1

Buildout System q/Qfull

- 0% - 75%
- 75% - 85%
- >85%

- Existing Lift Station
- Future Lift Station
- City Boundary

N

0 0.5 1 Miles

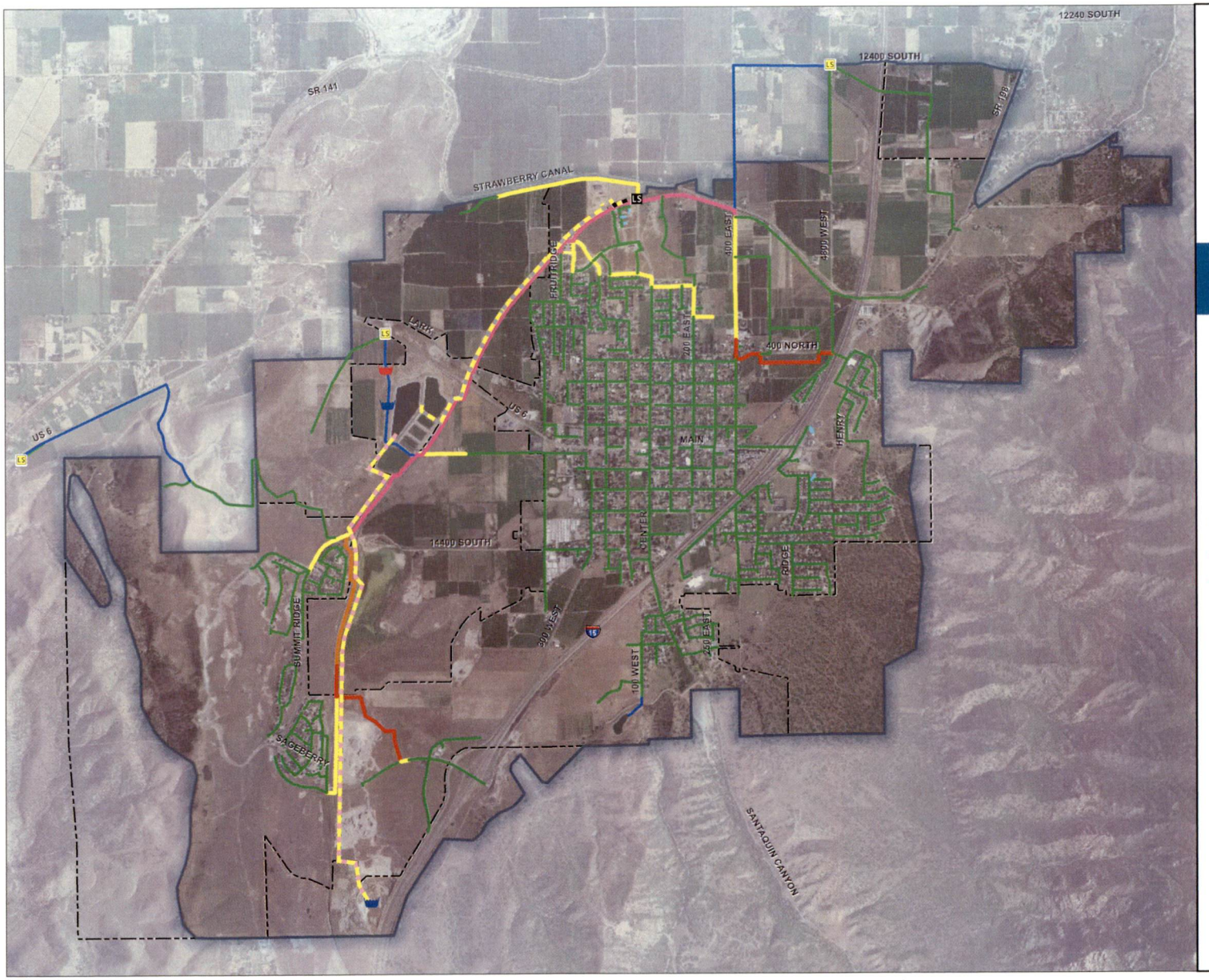
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Date: 12/15/2016



Santaquin

Sanitary Sewer System Master Plan and Capital Facilities Plan

Buildout System

FIGURE C-2

Gravity Main

Diameter

- 4"
- 6" (private)
- 8"
- 10"
- 12"
- 15"
- 18"
- 24"
- 10" Reclaimed Water FM
- 10" Sanitary Sewer FM
- Lift Station

- City Boundary
- 10" Reclaimed Water FM (Future)
- Lift Station (Future)

Future Storage

- Recharge/Recovery Pond
- Storage Pond

0 0.5 1 Miles

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Date: 12/15/2016

Table C-1: Future Collection Pipe Flows Tabulation (q/Qfull)

Pipe Segment ID	Dia (in)	Segment Length (ft)	q/Qfull			
			2014	2024	Buildout	% Needed by 2024
XJ6	10	195	2%	2%	2%	4%
XJ8	10	314	49%	9%	28%	0%
XJ9	10	398	44%	8%	25%	0%
XJ12	10	400	43%	12%	68%	0%
XJ14	10	340	56%	6%	5%	0%
XJ15	10	299	74%	14%	15%	0%
XJ16	10	317	53%	11%	12%	0%
XJ17	10	281	39%	11%	60%	0%
XJ21	10	424	17%	10%	9%	0%
XJ32	10	233	18%	11%	9%	0%
XJ33	10	228	32%	14%	4%	0%
XJ34	10	299	28%	12%	0%	0%
XJ52	10	290	28%	12%	0%	0%
XJ53	10	329	27%	12%	0%	0%
XJ61	10	322	25%	39%	48%	28%
XJ267	10	419	36%	48%	40%	26%
XJ269	10	420	18%	25%	21%	27%
XJ271	10	355	21%	29%	40%	19%
XJ541	10	201	27%	16%	14%	0%
XJ51	10	355	29%	13%	0%	0%
XJ628	10	229	3%	10%	30%	22%
XJ629	10	364	3%	10%	47%	14%
XJ630	10	300	2%	5%	26%	14%
XJ631	10	400	2%	6%	27%	14%
XJ632	10	396	3%	9%	44%	13%
XJ633	10	404	2%	7%	35%	13%
XJ634	10	400	2%	5%	25%	13%
XJ675	10	399	2%	6%	27%	14%
XJ685	10	228	1%	3%	15%	17%
N110	10	213	1%	2%	5%	33%
N112	10	406	1%	3%	7%	32%
N114	10	202	1%	3%	6%	33%
N116	10	204	2%	5%	11%	32%
N118	10	204	2%	5%	11%	32%
CDT-59	10	272	0%	0%	0%	0%
CDT-61	10	61	0%	0%	0%	0%
CDT-63	10	181	45%	16%	32%	0%
CDT-65	10	101	43%	15%	30%	0%
CDT-67	10	108	55%	20%	38%	0%
CDT-69	10	112	29%	10%	20%	0%
CDT-71	10	255	2%	2%	2%	0%
CDT-73	10	77	2%	2%	2%	5%
CDT-75	10	22	39%	13%	27%	0%
N352	10	1977	Future Pipe	20%	19%	Future Pipe

Table C-1: Future Collection Pipe Flows Tabulation (q/Qfull) cont'd

Pipe Segment ID	Dia (in)	Segment Length (ft)	q/Qfull			
			2014	2024	Buildout	% Needed by 2024
N278	10	210	38%	8%	9%	0%
N668	10	223	27%	10%	19%	0%
N672	10	60	22%	8%	15%	0%
N674	10	115	2%	2%	2%	0%
N676	10	112	2%	2%	2%	0%
N678	10	81	3%	3%	4%	0%
N680	10	118	4%	4%	5%	0%
N684	10	50	15%	3%	9%	0%
N696	10	288	2%	5%	22%	15%
N726	10	397	Future Pipe	Future Pipe	62%	Future Pipe
N728	10	385	Future Pipe	Future Pipe	63%	Future Pipe
N730	10	385	Future Pipe	Future Pipe	63%	Future Pipe
N732	10	403	Future Pipe	Future Pipe	63%	Future Pipe
N734	10	401	Future Pipe	Future Pipe	63%	Future Pipe
N736	10	376	Future Pipe	Future Pipe	56%	Future Pipe
N738	10	382	Future Pipe	Future Pipe	56%	Future Pipe
N740	10	401	Future Pipe	Future Pipe	61%	Future Pipe
N744	10	409	Future Pipe	Future Pipe	60%	Future Pipe
N746	10	424	Future Pipe	Future Pipe	46%	Future Pipe
N748	10	403	Future Pipe	Future Pipe	63%	Future Pipe
N780	10	1093	Future Pipe	19%	39%	Future Pipe
CDT-173	10	14	Future Pipe	Future Pipe	1%	Future Pipe
Total of all 10 inch pipes						
Total Length:		**20,662**				
Weighted Average Values:			**20%**	**11%**	**21%**	**10%**

Pipe Segment ID	Dia (in)	Segment Length (ft)	q/Qfull			
			2014	2024	Buildout	% Needed by 2024
XJ1	12	25	7%	9%	14%	15%
XJ656	12	306	2%	10%	74%	10%
XJ657	12	256	2%	11%	79%	10%
XJ658	12	410	2%	10%	77%	10%
XJ659	12	326	2%	10%	76%	10%
XJ660	12	146	2%	9%	63%	11%
XJ661	12	399	2%	10%	71%	11%
XJ662	12	401	2%	10%	72%	11%
XJ663	12	401	2%	10%	72%	11%
XJ664	12	395	2%	10%	71%	11%
XJ665	12	404	2%	10%	70%	11%
XJ666	12	398	2%	7%	42%	13%
Total of all existing 12 inch pipes						
Total Length:		**3,867**				
Weighted Average Values:			**2%**	**10%**	**69%**	**11%**

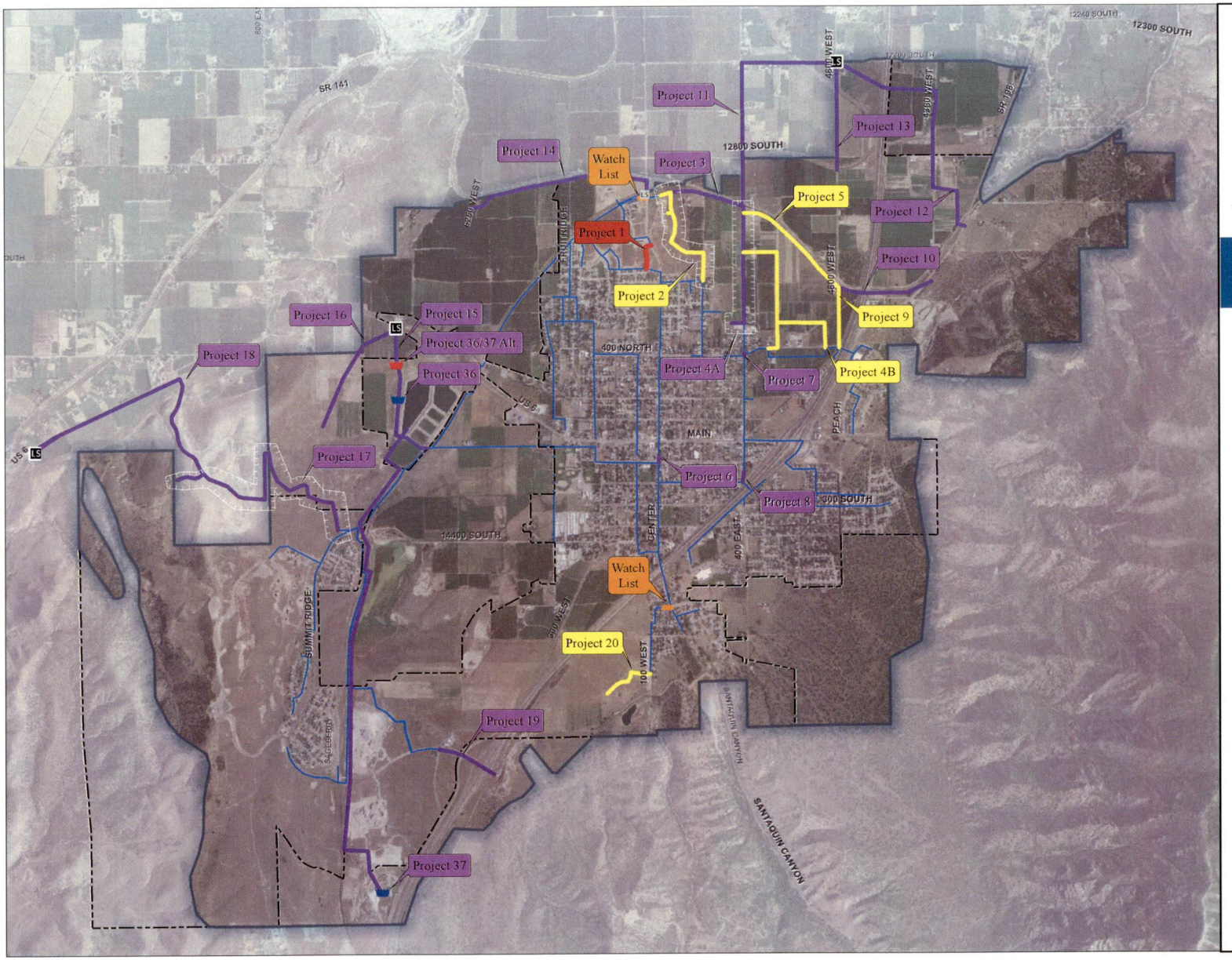
Table C-1: Future Collection Pipe Flows Tabulation (q/Qfull) cont'd

Pipe Segment ID	Dia (in)	Segment Length (ft)	q/Qfull			
			2014	2024	Buildout	% Needed by 2024
XJ68	15	143	18%	27%	34%	29%
XJ71	15	337	5%	10%	8%	45%
XJ72	15	267	8%	14%	14%	43%
XJ77	15	285	51%	89%	49%	42%
XJ78	15	155	23%	41%	36%	44%
XJ79	15	204	41%	63%	43%	35%
XJ98	15	241	4%	8%	2%	46%
XJ99	15	399	4%	7%	2%	46%
XJ100	15	404	4%	8%	2%	46%
XJ101	15	399	5%	10%	2%	46%
XJ102	15	395	3%	6%	1%	47%
XJ103	15	245	7%	10%	2%	34%
XJ530	15	44	1%	2%	1%	47%
XJ539	15	183	17%	27%	33%	29%
XJ667	15	421	1%	6%	34%	13%
XJ668	15	424	2%	8%	50%	13%
XJ669	15	246	0%	3%	20%	12%
XJ676	15	22	1%	5%	30%	13%
XJ670	15	400	0%	2%	10%	13%
XJ671	15	233	0%	2%	11%	12%
XJ672	15	305	0%	2%	11%	13%
XJ673	15	294	0%	2%	10%	13%
XJ674	15	383	0%	2%	10%	13%
XJ677	15	250	0%	2%	11%	12%
XJ678	15	266	0%	2%	11%	12%
XJ679	15	208	0%	2%	11%	12%
XJ684	15	396	0%	1%	6%	13%
N776	15	189	Future Pipe	11%	46%	Future Pipe
Total of all existing 15 inch pipes						
Total Length:		**7,738**				
Weighted Average Values:			**6%**	**12%**	**15%**	**27%**

Table C-1: Future Collection Pipe Flows Tabulation (q/Qfull) cont'd

Pipe Segment ID	Dia (in)	Segment Length (ft)	q/Qfull			
			2014	2024	Buildout	% Needed by 2024
XJ636	18	404	2%	7%	33%	16%
XJ637	18	98	2%	7%	32%	16%
XJ638	18	401	2%	7%	33%	16%
XJ639	18	399	2%	7%	33%	16%
XJ640	18	396	2%	7%	32%	16%
XJ641	18	377	2%	7%	32%	17%
XJ642	18	279	2%	6%	28%	16%
XJ643	18	245	1%	6%	26%	16%
XJ635	18	379	1%	5%	21%	16%
N201	18	176	9%	11%	33%	8%
N203	18	162	7%	9%	27%	8%
N205	18	233	10%	13%	36%	9%
N207	18	195	0%	16%	62%	25%
N209	18	210	0%	14%	57%	25%
N211	18	299	Future Pipe	14%	57%	Future Pipe
N213	18	236	Future Pipe	9%	49%	Future Pipe
N215	18	361	Future Pipe	9%	50%	Future Pipe
N217	18	150	Future Pipe	10%	50%	Future Pipe
N219	18	442	Future Pipe	7%	36%	Future Pipe
N221	18	94	14%	24%	76%	13%
CDT-11	18	62	8%	16%	53%	15%
N374	18	302	13%	25%	82%	15%
N373	18	501	13%	25%	82%	15%
N371	18	366	3%	7%	22%	16%
CDT-27	18	399	9%	18%	58%	16%
CDT-135	18	49	3%	5%	16%	12%
N370	18	246	6%	12%	40%	15%
N369	18	185	6%	12%	40%	15%
CDT-47	18	203	13%	25%	81%	15%
N650	18	62	1%	1%	2%	16%
N710	18	173	12%	14%	40%	6%
N716	18	38	8%	9%	27%	6%
N756	18	396	Future Pipe	7%	32%	Future Pipe
N778	18	274	Future Pipe	7%	32%	Future Pipe
N802	18	198	Future Pipe	9%	49%	Future Pipe
N808	18	210	10%	18%	55%	15%
N810	18	191	11%	19%	57%	15%
N812	18	93	3%	3%	5%	14%
N814	18	175	9%	11%	30%	6%
N816	18	263	12%	14%	40%	6%
N818	18	368	12%	15%	42%	6%
N820	18	367	11%	14%	39%	6%
N822	18	183	24%	31%	90%	8%
CDT-13	18	351	6%	12%	40%	15%
CDT-15	18	351	6%	12%	39%	16%
CDT-17	18	500	6%	12%	39%	16%
CDT-19	18	373	6%	11%	37%	16%
CDT-39	18	45	8%	16%	52%	15%
CDT-41	18	304	7%	13%	42%	15%
CDT-43	18	310	7%	13%	42%	15%
CDT-45	18	189	13%	25%	82%	15%
CDT-49	18	392	9%	19%	60%	16%
CDT-51	18	211	4%	8%	25%	16%
CDT-53	18	178	6%	12%	39%	15%
CDT-55	18	23	2%	6%	33%	14%
CDT-57	18	144	1%	6%	29%	14%
Total of all existing 18 inch pipes						
Total Length:		**14,210**				
Weighted Average Values:			**7%**	**13%**	**43%**	**14%**

APPENDIX D
SYSTEM IMPROVEMENT PROJECTS MAP



Santaquin

Sanitary Sewer System Master Plan and Capital Facilities Plan

System Improvement Projects

FIGURE D-1

City Boundary

Existing Sewer Main

Existing Lift Station

Improvement Projects

Current System Improvement

Project Improvement

System Improvement

Watch List

Future Lift Station

Future Storage Pond

Future Recharge/Recovery Pond

N

0 0.5 1 Miles

JUB | THE LANDON GROUP | GATEWAY MAPPING INC.

OTHER JUB COMPANIES

Date: 12/16/2016

APPENDIX E
SANTAQUIN CITY WATER RIGHTS (2014 REPORT)

J-U-B

J·U·B ENGINEERS, INC.

SANTAQUIN CITY

WATER RIGHTS SUMMARY

December 2014
Including 1/16/2015 Change

PREPARED BY:
J-U-B ENGINEERS, Inc.
240 W. Center Street, Suite 200
Orem, Utah 84057
801-226-0393
www.jub.com

REGISTERED PROFESSIONAL ENGINEER
MARK L. CHRISTENSEN
No. 186311
1/19/2015
STATE OF UTAH

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WR Chronology Spreadsheet 2
Culinary and PI Spreadsheet 2
Recommended Actions 5
APPENDIX A - Water Right Chronology 6
Table 1: Summary of Water Rights and Change Applications 7
Table 2: History of Changes to Points of Diversion 8
Table 3: Water Right Points of Diversion 9
APPENDIX B - Chronology of Individual Water Rights 10
APPENDIX C - Culinary and Pressure Irrigation Sources and Demands 19

Santaquin Water Rights

WR Chronology Spreadsheet

We have compiled a summary of water rights belonging to Santaquin City and Santaquin Special Service District. This summary is located in the spreadsheet entitled "WR Chronology".

The Summary tab (Table 1 in Appendix A) includes information about each water right including the quantity of water in the right, type of water right, status of the water right, priority date, date proof is due, and notes.

The Points of Diversion Changes tab (Table 2 in Appendix A) summarizes the points of diversion of each water right as well as changes made to points of diversion with each change application.

The Source Chart tab (Table 3 in Appendix A) shows a tabulation of the points of diversion as they relate to each water right. It also contains a summary of the maximum quantity of water available from each point of diversion for culinary and pressure irrigation water. The totals are the total amount that can be taken from each point of diversion, and it should be noted that some water rights are counted multiple times because they can be used from multiple points of diversion.

The following tabs list documents (Appendix B) that are related to each water right and give information regarding the documents. These documents have been collected and are located in folders labelled with the number of the water right.

Culinary and PI Spreadsheet

The Culinary and PI Spreadsheet (Appendix C) gives a summary of the water demands and sources for culinary and pressure irrigation. There are assumptions made in this spreadsheet that are noted below.

- Santaquin Growth Projections:
    - Population through 2013 is based off actual values.
    - Growth rate and ERCs match the 2013 Pressure Irrigation System Master Plan and Capital Facilities Plan and the 2013 Culinary Water System Master Plan and Capital Facilities Plan for culinary water and pressure irrigation. The growth in number of ERCs uses an average household size of 3.9 people, again matching the master plans.
    - The 3,123 ERCs for culinary water in 2013 came from the 2013 Culinary Water System Master Plan and Capital Facilities Plan. It counts every user whose estimated peak day water use is equal to or less than 800 gallons/day as a single ERC, and adds the calculated ERC equivalency for users whose estimated peak day water use is more than 800 gallons/day.
    - The 2,363 ERCs for pressure irrigation in 2013 came from the 2013 Pressure Irrigation System Master Plan and Capital Facilities Plan. This value was calculated by multiplying the estimated developed acreage in each land use zone to the ratio of irrigated acres per total acres, which resulted in the estimated number of existing irrigated acres. This value was then divided by 0.25 irrigated acres/ERC, which resulted in the number of ERCs.

- Irrigated acreage is estimated by multiplying the estimated number of pressure irrigation ERCs and 0.25 acres/ERC.

- Indoor Water (Culinary):
  - Genola Town, by court decree, is entitled to 1/9th of the water from the springs. Since the springs produce roughly 900 gpm, they have 100 gpm committed to them (from WR 51-1013).
  - Some irrigation is supplied through the culinary water system (added to culinary requirements). Measured values exist for 2011-2014; we estimate that 600 ac-ft/year will be required until 2018 when the culinary water system will no longer need to provide water to the pressure irrigation system. With development of land in pressure zone 11NE and installation of the booster station to serve that area (projected to occur in 2025), the culinary water system will once again provide water to the pressure irrigation system. We are using the schedule of infrastructure construction in the 2013 Culinary Water System Master Plan and Capital Facilities Plan as the basis of estimating when land in the upper pressure zones will develop. We approximate that development of the land in the upper pressure zones (in which the culinary water system will provide water to the pressure irrigation system) will take about 5 years for each pressure zone. The schedule of development of this land is shown in Table 1 below. The water requirements are calculated by multiplying the ERCs by 0.25 acres/ERC times the water required per ERC (1.87 ac-ft/yr).

Table 1. Projects Requiring Pressure Irrigation from Culinary Water.

Year	Project	Zone Served	ERCs Added
2025	Booster Station	11 NE	21
2045	Summit Ridge Tank	12 W	335
2045	East Tank	13 E	271
2050	Continued development from addition of East Tank	14 E	131
2055	Continued development from addition of East Tank	15 E	15

  - Estimated culinary use matches the state standard of 146,000 gal/ERC (400 gal/ERC/day), which comes from Utah Administrative Code R309-510-7, Table 510-1.
  - The total water required is the sum of water needed for the Town of Genola, culinary water provided to the irrigation system, and water needed for culinary use.
  - The column entitled "Quantity of Rights Held" shows the total quantity of water allowed for culinary use based on the total of Santaquin's water rights.
  - The "Maximum Source Capacity" column shows the total of the supply from the spring and the maximum pumping capability of the wells.
    - For the springs we consider the maximum source capacity to equal the water right.
    - The West Side 1 well is projected to begin use in 2029 and the West Side 2 well is projected to begin use in 2049 based on the number of ERCs at these years. The Center Street well is used in the pressure irrigation system.
    - Note that the maximum source capacity is much greater than the water demand. This is because source capacity must be sized to meet peak day

demand, which requires much more capacity than is required to meet yearly demand, which is the focus of this study. *The sources are still required to meet peak day demand.*

- The "Water Use" column shows the total water that is actually used each year. This must be manually added by filling in values for water used from the springs and the wells. Note that the gray cells denote historic data (as opposed to estimated data).

- Outdoor Water (Pressure Irrigation):
  - The required amount of water is estimated to match the state requirement of 1.87 ac-ft/irrigable acre per season.
  - The "Quantity of Water in Rights and Shares" column is the sum of the water represented by the Summit Creek Irrigation Company shares, the Water Reclamation Facility rights, and the rights associated with the future Strawberry High Line Canal (SHLC) and Central Utah (CUP) aqueduct. Rights related to the culinary wells and springs are not included in this total because these water rights are accounted for in the culinary system.
  - The "Maximum Source Capacity" column is the total of all the water that could be provided to the irrigation system. This includes the water from Summit Creek Irrigation Company shares, the Water Reclamation Facility, the culinary system, the springs, the wells, and the future SHLC and CUP aqueduct. Note that this duplicates the capacity in the wells, as it is already accounted for in the culinary system.
    - Note that the maximum source capacity is much greater than the water demand. This is because source capacity must be sized to meet peak day demand, which requires much more capacity than is required to meet seasonal demand, which is the focus of this study. *The sources are still required to meet peak day demand.*
  - The "Water Use" column is the sum of what is actually used from the Summit Creek Irrigation shares, Water Reclamation Facility, culinary system, springs, wells, and SHLC and CUP aqueduct.
  - Number of Summit Creek Irrigation stocks was determined using the current number of 635.5, the population growth rate, and the target number of stocks in 2060 of 1350. The target number of 1350 shares was established in the Pressure Irrigation System Master Plan and Capital Facilities Plan.
    - A yield of 3 ac-ft/year was used for each Summit Creek Irrigation stock (from the master plan).
    - The actual delivery of Summit Creek Irrigation Water can vary. The construction of the booster station planned in the Pressure Irrigation Master Plan & Capital Facilities Plan in 2014/2015 will increase the ability to take the delivery of the Summit Creek Irrigation well water. Use until 2015 is based on delivery at a rate of 3 ac-ft/year from April 15 to June 30 and a rate of 1.8 ac-ft/year from July 1 to October 15 until 2015 (1.8 ac-ft is the capacity of the booster station to deliver SCIC well water to the PI system), then 3 ac-ft/year thereafter.
  - Water from the Water Reclamation Facility comes from two different sources: the storage ponds and the recovery well. The recovery well is projected to be used starting in 2025.

- Some irrigation is supplied through the culinary water system (see information on the irrigation from culinary supply above).
- The supply from the Water Reclamation Facility, Strawberry High Line Canal, and Central Utah Project match the Pressure Irrigation System Master Plan & Capital Facilities Plan.
- The Strawberry High Line Canal and Central Utah Project aqueduct connections are projected to be used starting in 2030 (6055 ERCs).

Recommended Actions

We have several recommendations to accomplish more flexibility in using the current water rights:

1. File change applications to allow water to be collected from any well for the water rights (see WR Chronology spreadsheet – Source Chart tab to find points of diversion for each water right).
2. Santaquin should continue to receive stocks for WR 53-1496, WR 53-1675, and WR 51-7045; once Santaquin owns all the stocks, they should submit proof of beneficial use.
3. Continue submitting extensions for submission of proof of beneficial use until proof can be supplied.
4. Evaluate the Provisional Well as a possible point of diversion. If it is not feasible, seal the well.
5. Continue work on acquiring the recharge and recovery permits for the Water Reclamation Facility.
6. Continue acquiring water rights through annexation.
7. Continue following the Master Plan and Capital Facilities Plan for each water system to make system improvements.
8. As more water rights are acquired, file new water reuse applications.
9. Study the actual outdoor water use in Santaquin to consider increasing the assumed demand of 1.87 ac-ft/irrigated acre
10. Discuss each certificated water right with the Division of Water Rights to find out if change applications will need to be re-certificated or not.

APPENDIX A – Water Right Chronology Tables

Table 1: Summary of Water Rights and Change Applicatons

Owner	Application / Claim #	Source	Flow cfs	Quantity ac ft	Type	App #	Status	CERT #	Priority Date	Proof Due	Note
Santaquin City Corp.,	51-1013	Summit Creek & Springs	2.00	1447.955	APPL	A4573	CERT	1238	3/22/1912		Supplemental Group No. 227200 and 230961
Santaquin City Corporation	51-1347	Underground Water Well & Spring	2.52	1824.423	APPL	A27809	CERT	6251	1/18/1956		
Santaquin City Corporation	a4097	Underground Water Well & Spring					Approved		7/18/1962		Change Application to WR 51-1347
Santaquin City Corporation	a9506	Underground Water Well & Spring					Withdrawn		11/15/1993		Change Application to WR 51-1347
Santaquin City Corporation	t24464	Underground Water Well					Rejected		4/26/2000		Change Application to WR 51-1347
Santaquin City Corporation	a24465	Underground Water Wells (2) & Spring					Withdrawn		3/24/2011		Change Application to WR 51-1347, POD in part to multiple wells. Withdrawn with approval of a39488
Santaquin City Corporation	a39488	Underground Water Wells (3) & Spring					Approved		9/11/2014	9/30/2019	Change Application to WR 51-1347, POD add existing well
Santaquin City Corporation	51-1348	Underground Water Well	2.48	1795.464	APPL	A27810	CERT	9073	1/18/1956	none	No Proof Due Date on the parent right. Currently Nonuse has been approved
Santaquin City Corporation	a6884	Underground Water Well					CERT		3/30/1972	none	WR 51-1348, POD to Center Street Well
Santaquin City Corporation	a16256	Underground Water Wells (2)					Approved		3/24/2011	1/31/2021	Change Application to WR 51-1348, POD from one city well to another due to diminished production.
Santaquin City	51-7045	Utah Lake & Jordan River			SHAR				00/00/1870		portion of 59-3500, based on 45.5 shares of South Jordan Canal Company Stock
Santaquin City	a20673	Underground Water Wells (2) existing					Withdrawn		1/3/1997		Change Application to WR 51-7045, replaced by final action on a35122
Santaquin City	a26290	Underground Water Wells (4; 1 proposed)					AMENDED		1/28/2002		Change Application to WR 51-7045, Changed POD from Utah Lake and Jordan River to City wells.
Santaquin City	a31014	Underground Water Well					Withdrawn		2/1/2006		Change Application to WR 51-7045, was to replace a26290
Santaquin City	t31016	Underground Water Well					Lapsed		2/1/2006		Change Application to WR 51-7045
Santaquin City	a35122	Underground Water Wells (5) existing		224.770			Approved		12/17/2008	12/31/2016	Change Application to WR 51-7045 right evidenced by a26290
Santaquin Special Service District	51-8394	Underground Water Well			APPL	A26479	CERT	5423	4/26/1955		Supplemental Group #227561,
Santaquin Special Service District	a36078	Underground Water Well (existing)		53.840			Approved		11/17/2009	2/28/2015	Change Application to WR 51-8394, POD from underground well to Underground well of Santaquin Special Service District
Santaquin City Corporation	53-1496	Utah Lake & Jordan River			SHAR	A2136	CERT	1970	10/27/1908		807.35 acft total in 158 shares (103 belong to Santaquin City)
Santaquin City Corporation	a25719	Underground Water Well		204.400			Approved		6/15/2001	9/30/2015	Change Application to WR 53-1496, changed POD from Utah Lake and Jordan River to City Wells
Santaquin City Corporation	53-1675	Utah Lake & Jordan River			SHAR				00/00/1877		49 shares of stock (121 acft) in East Jordan Irrigation Company from WR 53-1507 (Santaquin only has record of 25 of the 49 shares)
Santaquin City Corporation	a26452a	Underground Water Well		61.730			Approved		3/28/2002	1/31/2017	Pertains to WR 53-1675, POD to Summit Ridge Well for Summit Ridge Development from Jordan River
TOTALS			**7.00**	**5612.582**							
Santaquin City	NS015	Sewage Reuse	5302.7000 acft				Approved		10/20/2009		Reuse of a portion of WRs 51-1013, 51-1347, 51-1348, 51-7045, & 53-1496. Deplection limit: 5302.7 acft & Diversion limit: 6099.9 acft
Santaquin City Corporation	RC007	Recharge - West Infiltration Basins	5302.0 acft		Recharge	APPL	Pending				Filed 12/30/2013
Santaquin City Corporation	RC007:001	Recovery - Santaquin City Wells	5302.0 acft		Recovery	APPL	Pending				Filed 12/30/2014
Santaquin City Corporation	51-5162	Willow Springs in Santaquin Canyon	0.217 cfs		APPL	A54218	Withdrawn		1/31/1980		
Santaquin City Corporation	51-5163	Springs & Seeps in Santaquin Canyon	1.700 cfs		APPL	A54219	Withdrawn		1/31/1980		
Santaquin City	a23771	Underground Water Wells (2)	80.0000 acft				Withdrawn		9/27/1999		Transfer of water in East Santaquin Irr Company to Santaquin City

Table 2: History of Changes to Points of Diversion

Owner	Application / Claim #	Source	Points of Diversion Added	Points of Diversion Removed	Current Points of Diversion (at that amendment)	Amount	Priority Date
Santaquin City Corp.,	51-1013	Summit Creek & Springs	S 223ft W 693ft from N4 cor, Sec 19, T 10S, R 2E, SLBM		S 223ft W 693ft from N4 cor, Sec 19, T 10S, R 2E, SLBM	2.0000 cfs	3/22/1912
Santaquin City Corporation	51-1347	Underground Water Well & Spring	S 3222 ft E 449 ft from N4 cor, Sec 13, T 10S, R 1E, SLBM & Center Street Well		S 3222 ft E 449 ft from N4 cor, Sec 13, T 10S, R 1E, SLBM & Center Street Well	2.520 cfs	1/18/1956
Santaquin City Corporation	a24465	Underground Water Wells (2) & Spring	East Side Well		S 3222 ft E 449 ft from N4 cor, Sec 13, T 10S, R 1E, SLBM & Center Street Well, East Side Well	2.520 cfs/1824.4230 acft	3/24/2011
Santaquin City Corporation	a39488	Underground Water Wells (3) & Spring	Summit Ridge Well		S 3222 ft E 449 ft from N4 cor, Sec 13, T 10S, R 1E, SLBM & Center Street Well, East Side Well, Summit Ridge Well	2.520 cfs/1824.4230 acft	9/11/2014
Santaquin City Corporation	51-1348	Underground Water Well	S 4967 ft W 1188 ft from N4 cor, Sec 01, T 10S, R 1E, SLBM	S 4967 ft W 1188 ft from N4 cor, Sec 01, T 10S, R 1E, SLBM		2.480 cfs	1/18/1956
Santaquin City Corporation	a6884	Underground Water Well	Center Street Well		Center Street Well	2.480 cfs	3/30/1972
Santaquin City Corporation	a16256	Underground Water Wells (2)	Cemetary Well		Center Street Well, Cemetary Well	2.480 cfs	3/24/2011
Santaquin City	51-7045	Utah Lake & Jordan River	South Jordan Diversion Dam and Utah Lake Pumping Plant	South Jordan Diversion Dam and Utah Lake Pumping Plant	South Jordan Diversion Dam and Utah Lake Pumping Plant	224.7700 acft	00/00/1870
Santaquin City	a20673	Underground Water Wells (2) existing	Center Street Well & Cemetary Well		Center Street Well, Cemetary Well	127.1000 acft	1/3/1997
Santaquin City	a26290	Underground Water Wells (4; 1 proposed)	Provisional Well & East Side Well		Center Street Well, Cemetary Well, Provisional Well, East Side Well	224.7700 acft	1/28/2002
Santaquin City	a35122	Underground Water Wells (5) existing	Summit Ridge Well		Center Street Well, Cemetary Well, Provisional Well, East Side Well, Summit Ridge Well	224.7700 acft	12/17/2008
Santaquin Special Service District	51-8394	Underground Water Well	N 46 ft W 624 ft from S4 cor, Sec 36, T 9S, R 1E, SLBM		N 46 ft W 624 ft from S4 cor, Sec 36, T 9S, R 1E, SLBM	53.8400 acft	4/26/1955
Santaquin City Corporation	53-1496	Utah Lake & Jordan River	Utah Lake Dam and USBR/MWDSLC Pump Station	Utah Lake Dam and USBR/MWDSLC Pump Station	Utah Lake Dam and USBR/MWDSLC Pump Station	526.31 ac-ft (as shareholder)	10/27/1908
Santaquin City Corporation	a25719	Underground Water Well	Provisional well		Provisional well	526.31 ac-ft (as shareholder)	6/15/2001
Santaquin City Corporation	53-1675	Utah Lake & Jordan River	Turner Dam and Utah Lake Pumping Plant	Turner Dam and Utah Lake Pumping Plant	Turner Dam and Utah Lake Pumping Plant	61.73 acft (as shareholder)	00/00/1877
Santaquin City Corporation	a26452a	Underground Water Well	Summit Ridge Well		Summit Ridge Well	61.73 acft (as shareholder)	3/28/2002

Table 3: Water Right Points of Diversion

Rights	Maximum Quantity (acft/year)	Wells						Springs		WRF
		East Side Well: N 993 ft E 974 ft, from W4 Cor, Section 06, T 10S, R 2E, SLBM	Cemetary Well: N 464 ft E 1359 ft from SW Cor, Section 1, T 10S, R 1E, SLBM	Center Street Well: S 2820 ft W 2219 ft from N4 Cor, Section 1, T 10S, R 1E, SLBM	Summit Ridge Well: N 180 ft E 2520 ft from SW Cor, Section 3, T 10S, R 1E, SLBM	Provisional Well: N 902 ft E 842 ft from S4 Cor, Section 10, T 10S, R 1E, SLBM	Santaquin Special Services Well: at N 46 ft W 624 ft from S4 cor, Sec 36, T 9S, R 1E, SLBM	Springs at S 223ft W 693ft from N4 cor, Sec 19, T 10S, R 2E, SLBM	Springs at S 3222 ft E 449 ft from N4 cor, Sec 13, T 10S, R 1E, SLBM	Water Reclamation Facility
51-1013	1448							X		
51-1347	1824.42	X		X	X				X	
51-1348	1795.44		X	X						
51-7045	224.77	X	X	X	X	X				
51-8394	53.84						X			
53-1496	204.40					X				
53-1675	61.73				X					
NS015	5302.7									X
Culinary (Water from wells and springs for municipal use)										
51-1013	1448							1448		
51-1347	1824.42	1824.42		1824.42	1824.42				1824.42	
51-1348	1795.44		1795.44	1795.44						
51-7045	224.77	224.77	224.77	224.77	224.77	224.77				
51-8394	53.84						53.84			
53-1496	204.40					204.4				
53-1675	61.73				61.73					
Total[1]	**5612.60**	**2049.19**	**2020.21**	**3844.63**	**2110.92**	**429.17**	**53.84**	**1448**	**1824.42**	**0**
Pressure Irrigation (Water from Water Reclamation Facility)										
NS015	5302.7									5302.7
Total	**5302.7**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5302.7**

[1] The totals are the **maximum that can be accessed** from each POD. The total culinary water that can be used is not the sum of the total under each POD, but is only 5612.603 acft/yr.

APPENDIX B – Chronology of Individual Water Rights

Santaquin City
Water Right: 51-1013
Chronology of Action

WR #	Action	Date of Action	Priority Date	Proof Date	Status	Flow Right (cfs)	Max Annual Right	Restrictions	Current Points of Diversion	Ownership	Notes	Implications
A4573 Certificate 1238	Appropriation of Appropriate Water	3/22/1912			Certificated	2		Municipal: Jan 1 - Dec 31	Summit Creek and Springs	Santaquin City Corp. & Summit Creek Irrigation	14.600 foot pipeline to be used to carry 2 cfs for domestic and municipal purposes from Jan 1 to Dec 31 from Summit Creek to minimize evaporation and seepage losses. Permitted to consume 1.72 cfs and return 0.28 cfs in the natural	
A4573	Proof of Appropriation	6/11/1921									Water comes from Summit Creek and springs in the bed of Summit Creek. Consuming 1.34 cfs and returning 0.28	
	Deed of Water to Santaquin	12/22/1942				2				Santaquin City Corp.	Summit Creek Irrigation deeds their right of 0.28 cfs to Town of Santaquin	
	Water User's Claim	10/3/1973						Municipal: Jan 1 - Dec 31 Incidental Irrigation: Apr 1 - Oct 31 Incidental Stockwatering & Domestic: Jan 1 - Dec 31			WR 51-1013, 51-1347, and 51-1348 for municipal uses within the corporate limits of Santaquin	
	Spring Survey	10/5/1976									Santaquin waterworks system inspected and spring sources observed. Suggested improvements were given for	
	Request for WR Info from State Engineer	11/15/1993									Water comes from Summit Creek and springs in the bed of Summit Creek. The 0.28 cfs has not been changed or converted to municipal use, so it is still to be used for irrigation.	
Supplemental Group Number 227200	Statement of Sole Supply	4/26/2007									1447.955 ac-ft for municipal water use from WR51-1013, 1824.423 ac-ft for municipal water use from WR51-1347, and 1795.464 ac-ft for municipal water use from R51-1348	

Santaquin City
Water Right: 51-1347
Chronology of Action

WR #	Action	Date of Action	Priority Date	Proof Date	Status	Flow Right (cfs)	Max Annual Right	Restrictions	Current Points of Diversion	Ownership	Notes	Implications
A27809	Application to Appropriate	1/18/1956			Certificated	2.52		Municipal	Spring at S 3222 ft E 449 ft from N4 cor, Sec 13, T 10S, R 1E, SLBM & Center Street Well	Santaquin City Corp.	Santaquin City applied for 2.52 cfs of underground water for municipal use.	
A27809	Approval to Appropriate Water	8/7/1956				3					Permitted to divert 3 cfs for municipal purposes and to drill a well.	
	Well Log	10/11/1956									Well work began 6/25/1956 and completed 7/27/1956.	
A27809	Application Approved	12/17/1956									Application was approved and proof of appropriation is due 2/10/1959	
A27809	Extension of Time Requested	1/20/1959									Well, pump, housing, and main connections completed, but changes still need to be made to distribution system and well must be tested. Water from the well still hasn't been able to be fully used, so an extension of 2 years is	
A27809	Extension of Time Granted	1/26/1959									Proof due on 10/31/1962 instead of 2/10/1959.	
A27809	Certificate Issued	10/3/1962									Certificate 6251 issued to allow domestic and municipal use from Jan 1 to Dec 31 each year. Underground water from a 16" diameter well that is 461 feet deep leads into a 8" diameter pipe of 176 feet to the 8" diameter water main. The water is to be used as a supplemental supply for municipal purposes within the corporate limits of Santaquin as well as for domestic purposes outside the corporate limits as specified on the certificate.	
A27809	Proof of Appropriation	10/3/1962				2.52					Water used for municipal purposes from Jan 1 to Dec 31. It comes from a 461 foot deep well fully cased with 16" pipe and 176 feet of 8" pipe.	
A27809	Water Users Claim	10/3/1973	1/18/1956			2.52		Municipal: Jan 1 - Dec 31 Incidental Irrigation: Apr 1 - Oct 31			2.52 cfs for municipal use from Jan 1 to Dec 31. Incidental use for stockwatering and domestic use from Jan 1 to Dec 31. Incidental use for Irrigation from Apr 1 to Oct 31. It claims 51-1347, 51-1348, and 51-1013 for municipal uses within city limits of Santaquin	
A27809	Application for nonuse	4/25/2007				2.52	1824.423				Desired to hold water to meet the reasonable future requirements of the public	
A27809	Approval of Application of nonuse	9/10/2007		8/31/2012							Application approved	
A27809	Application for nonuse	8/21/2012									Desired to hold water to meet the reasonable future requirements of the public	
A27809	Approval of Application of nonuse	10/16/2012		8/31/2019							Application approved	
a4097	Change Application Submitted	2/27/1962			Certificated	5			Spring at S 3222 ft E 449 ft from N4 cor, Sec 13, T 10S, R 1E, SLBM & Center Street Well	Santaquin City Corp.	Supplemental water for Santaquin City from a well from Jan 1 to Dec 31. This change changed the boundaries to include domestic purposes outside of the municipal boundaries as well as within municipal boundaries as well as	
a4097	Application Approved	7/18/1962									Application was approved and work permitted to proceed.	
a9506	Change Application Submitted	5/21/1977			Withdrawn	2.52		Municipal and Domestic: Jan 1-Dec 31	Spring at S 3222 ft E 449 ft from N4 cor, Sec 13, T 10S, R 1E, SLBM & Center Street Well, East Side Well	Santaquin City Corp.	2.52 cfs to come from a spring in Santaquin Canyon and/or the well to supply municipal and domestic use from Jan 1 to Dec 31	
a9506	Protest	8/30/1977									Protest by Summit Creek Irrigation and Canal Co.	
a9506	Change Application Approved	7/31/1979				2.52					State engineer decided that all of the water from Santaquin Canyon belongs to Summit Creek Irrigation and Canal 1. There shall be no diversion of water from the spring when the Summit Creek Irrigation and Canal Company is allowing all or part of its water right entitlement to flow out of Santaquin Canyon in the natural stream channel. 2. That in accordance with Condition 1, the applicant shall construct its collection and diversion works such that all 3. The combined rate of diversion of water at any time under the change application cannot exceed 2.52 cfs. 4. In order to ensure that Condition 3 is complied with, the applicant shall install, and maintain in good working 5. That the decision of the State Engineer on this change application shall not prejudice his decisions of any future	
a9506	Request for Extension of Time	11/18/1981									Another spring found in the area and need additional time to complete work on it.	
a9506	Approval for Extension of Time	1/26/1982									Extension granted to extend receiving proof to 11/30/1984	
a9506	Request for Extension of Time	11/20/1984									Haven't developed an engineer or contractor or location of the filing	
a9506	Approval for Extension of Time	12/5/1984									Extension granted to extend receiving proof to 11/30/1987	
a9506	Request for Extension of Time	11/30/1987									Work not completed due to lack of funds	
a9506	Approval for Extension of Time	12/14/1987									Extension granted to extend receiving proof to 11/30/1990	
a9506	Request for Extension of Time	11/30/1990									Installation of a totalizing meter not yet installed	
a9506	Approval for Extension of Time	12/7/1990									Extension granted to extend receiving proof to 7/31/1993	
a9506	Proof of Diversion and Use of Water	7/29/1993				2.52						

WR #	Action	Date of Action	Priority Date	Proof Date	Status	Flow Right (cfs)	Max Annual Right	Restrictions	Current Points of Diversion	Ownership	Notes	Implications
a9506	Withdrawal of Application	10/13/1993									Withdrew proof of a9506	
a9506	Request for Extension of Time	11/4/1993									Construction under change application not complete	
a9506	Approval for Extension of Time	12/7/1994									Extension granted to extend receiving proof to 11/30/1999	
a9506	Lapsed	1/10/2000									Proof was not submitted, so the application lapsed	
a9506	Special Order for Proof	2/11/2000									Because a 60-day notice was not sent, proof is not due until 4/30/2000	
a9506	Request for Extension of Time	2/15/2000									Need additional growth before proof can be provided	
a9506	Protest	4/18/2000									Protest by Provo River Water Users Association	
a9506	Approval for Extension of Time	1/27/2006		7/31/2009							Extension granted	
t24464	Temporary Change Application Submitted	4/26/2000			Rejected	2.52	1824.423		Spring at S 3222 ft E 449 ft from N4 cor, Sec 13, T 10S, R 1E, SLBM & Center Street Well, East Side Well	Santaquin City Corp.	Identical change to a24465, filed to obtain a drilling permit.	
t24464	Temporary Application Rejected	8/17/2001									Rejected due to the approval of a24465	
a24465	Application Submitted	4/26/2000			Withdrawn	2.52	1824.423	Municipal: Jan 1 - Dec 31	Spring at S 3222 ft E 449 ft from N4 cor, Sec 13, T 10S, R 1E, SLBM & Center Street Well, East Side Well	Santaquin City Corp.	Change from one well and a spring to two wells (East Side Well) for their 2.52 cfs or 1824.423 ac-ft per year for	
a24465	Protest	6/13/2000									Protest by US Bureau of Reclamation	
a24465	Protest	6/19/2000									Protest by Provo River Water Users Association	
a24465	Application Approved	10/12/2000		10/31/2003		2.52	1824.423				Application approved and work permitted to start. Conditions of approval include: 1. The change application is limited to the diversion of 2.52 cfs from the combination of both wells at any one time. 2. At the time when the applicant submits proof of beneficial use on this water right, the applicant shall provide	
a24465	Request for Extension of Time	10/29/2003									Construction has been completed, but more time is needed to put full flow into service and verify usage for the Proof.	
a24465	Application Approved	2/10/2006									Application approved with the following conditions: 1. This change application is limited to the diversion of 2.52 cfs or 1824.423 ac-ft per annum from the combination of 2. The applicant shall install permanent measuring devices on all proposed sources; monthly records must be kept of the amount of water diverted under this change. Inasmuch as this application seeks to divert water from numerous points of diversion, it is necessary that detailed information be provided to the State Engineer to show which sources of supply are actually developed and used and the extent of their usage under this application. Upon the submission of proof the applicant must identify every source of water used under this application and the amount of water used from that source. The proof must also show the capacity of the sources of supply and demonstrate that each source can provide the water claimed to be diverted under this right as well as all other water rights which may be approved to be diverted from those sources. 3. At the time when the applicant submits proof of beneficial use, the applicant shall also provide evidence of the total amount of water in ac-ft that has been diverted from all three sources and that amount shall be the limits which will be placed on the certificate. not to exceed 1,824.423 ac-ft.	The application and the Order of the State Engineer misstate the size and depth of the Eastside well (16-inch well, 300 - 700 feet deep) from that which actually exists.
a24465	Lapsed	3/15/2011									Application lapsed	
a24465	Request for Extension of Time	3/9/2011									Extension requested to coordinate spring usage with the wells and document the use.	
a24465	Reinstated	3/31/2011									Reinstated until extension request is addressed	
a24465	Approval for Time Extension	6/1/2011		10/31/2014							Extension for time granted	
a39488	Application for Permanent Change of Water	1/7/2014			Approved	2.52	1824.423	Municipal use	Spring at S 3222 ft E 449 ft from N4 cor, Sec 13, T 10S, R 1E, SLBM & Center Street Well, East Side Well, Summit Ridge Well	Santaquin City Corp.	Adding an existing well to the current points of diversion.	
a39488	Application Approval	9/11/2014		9/30/2019		2.52	1824.423	Year-round municipal use			An additional well added (Summit Ridge Well). The application is approved with the following conditions: 1. This change application is limited to the annual diversion of 2.52 cfs or 1824.423 ac-ft of water to be used for year- 2. The applicants shall install and maintain measuring and totalizing recording devices to meter all water diverted 3. Whereas this Change Application has been filed to entirely replace and superseded prior approved Change 4. Inasmuch as this application seeks to divert water from numerous points of diversion, it is necessary that detailed information be provided to the State Engineer to show which sources of supply are actually developed and used and the extent of their usage under this application. Upon the submission of proof as required by Section 73-3-16, Utah Code, for this application, the applicant must identify every source of water used under this application and the amount of water from that source. The proof must also show the capacity of the sources of supply and demonstrate	Water capture from the spring (at S 3222 ft E 449 ft from N4 cor, Sec 13, T 10S, R 1E, SLBM) needs to be reestablished in preparation of proving beneficial use.

Santaquin City
Water Right: 51-1348
Chronology of Action

WR #	Action	Date of Action	Priority Date	Proof Date	Status	Flow Right (cfs)	Max Annual Right	Restrictions	Current Points of Diversion	Ownership	Notes	Implications
A27810	Application to Appropriate	1/18/1956				5					Water to be used for municipal uses for Santaquin City	
A27810	Application Approved	11/29/1956		1/25/1959							Application approved and permission to drill well given.	
A27810	Request for Extension for Proof deadline	1/21/1959									Expect well will be needed in the next 5 years based on demand conditions.	
A27810	Proof Deadline Extended	1/26/1959		10/31/1961							Proof due date extended from Jan 25, 1959.	
A27810	Request for Extension for Proof deadline	10/31/1961									Well hasn't been drilled yet, so hasn't been put to beneficial use.	
A27810	Proof Deadline Extended	2/27/1962		10/31/1965							Proof due date extended from October 31,1961	
A27810	Request for Extension for Proof deadline	10/29/1965							Well at S 4967 ft W 1188 ft from N4 cor. Sec 01, T 10S, R 1E.	Santaquin City		

WR #	Action	Date of Action	Priority Date	Proof Date	Status	Flow Right (cfs)	Max Annual Right	Restrictions	Current Points of Diversion	Ownership	Notes	Implications
A27810	Proof Deadline Extended	2/21/1966		10/31/1969	Nonuse				SLBM		Proof due date extended from October 31, 1965	
A27810	Request for Extension for Proof deadline	10/27/1969		10/31/1969								
A27810	Proof Deadline Extended	10/30/1969		11/29/1970							Proof due date extended from October 31,1969	
A27810	Proof of Appropriation of Water	11/12/1970				2.48		Municipal Jan 1 - Dec 31			2.48 cfs to be used for municipal use from Jan 1 to Dec 31. The original 5.0 cfs is split between a27809 (2.52 cfs) and a27810.	
A27810	Application for Nonuse of Water	4/26/2007				2.48					Water last beneficially used on 9/30/2006 and it is now being held to meet the reasonable future requirements of the public.	
A27810	Approval of Application for Nonuse	7/25/2007		7/31/2012							Application for nonuse approved.	
a6884	Change Application	3/30/1972			Certificated	2.48			Center Street Well	Santaquin City	Change the point of diversion for that part of the right that has been developed in Santaquin City's well.	
a6884	Change Application Approved	7/26/1972										
a6884	Certificate of Appropriation of Water	7/31/1972	1/18/1956			2.48		Municipal Jan 1 - Dec 31			Certificate 9073 issued for municipal water use within the corporate limits of Santaquin City (Jan 1 to Dec 31) from a 16" well that is 461 feet deep.	
a6884	Water Users Claim	10/3/1973				2.48					Water for municipal use within Santaquin City and for other purposes incidentally.	
a16256	Application for Permanent Change of Water	7/8/1991			Approved	2.48			Center Street Well, Cemetery Well	Santaquin City	The production of the existing well has diminished. so a second well is needed to obtain the applications full water entitlement. (Cemetery Well)	
a16256	Approval Letter	10/3/1991				2.48					Permission to drill new well	
a16256	Application approved	1/24/1992										
a16256	Well drilled	4/29/1992									Well drilled to serve Santaquin City and report filed.	
a16256	Application approved	7/26/2001										
a16256	Request for Extension for Proof deadline	1/25/2006									Storage tank has been constructed, but time is needed to complete work, place water in beneficial use, and submit proof.	
a16256	Protest	2/28/2006									Protest by Warm Springs Irrigation Company	
a16256	Proof Deadline Extended	7/28/2006		1/31/2011							Proof due date extended from Jan 31, 2006	
a16256	Application Lapsed	2/15/2011									Application lapsed.	
a16256	Request for Extension for Proof deadline	3/9/2011									Water is in nonuse status and is due to be renewed in 2012.	
a16256	Reinstated	3/28/2011									Application reinstated	
a16256	Proof Deadline Extended	7/6/2011		1/31/2021							Wells in nonuse status and deadline extended.	

Santaquin City
Water Right: 51-5162
Chronology of Action

WR #	Action	Date of Action	Priority Date	Proof Date	Status	Flow Right (cfs)	Max Annual Right	Restrictions	Current Points of Diversion	Ownership	Notes	Implications
A54218	Application to appropriate	1/31/1980			Withdrawn	0.217		Municipal and Industrial: Jan 1 - Dec 31 Irrigation: Apr 1 - Oct 31	Willow Springs in Santaquin Canyon	Summit Creek Irrigation and Canal Company and Utah Power and Light Company	0.217 cfs is to be used for Municipal and Industrial uses from Jan 1 to Dec 31 and Irrigation from Apr 1 to Oct 31. The water comes from Willow Springs in Santaquin Canyon. It is claimed that Summit Creek Irrigation and Canal	
A54218	Protest	3/3/1980									Protest by Kennecott Copper Corporation	
A54218	Protest	4/15/1980									Protest by Summit Creek Irrigation Canal Company	
A54218	Request to Withdraw	9/30/2004									Mayor of Santaquin requested to withdraw the application	
A54218	Application Withdrawn	10/6/2004									State Engineer ordered that the application be withdrawn	

Santaquin City
Water Right: 51-5163
Chronology of Action

WR #	Action	Date of Action	Priority Date	Proof Date	Status	Flow Right (cfs)	Max Annual Right	Restrictions	Current Points of Diversion	Ownership	Notes	Implications
A54219	Application to Appropriate water	1/31/1980			Withdrawn	1.7		Municipal, Industrial, Stockwater: Mar 1 - Nov 30 Irrigation: Apr 1 - Oct 31	Springs in Santaquin Canyon	Summit Creek Irrigation and Canal Company	Water to be used for municipal, industrial, and stockwater from Mar 1 to Nov 30 and for irrigation from Apr 1 to Oct 31. The water is to come from springs and seeps in Santaquin Canyon. This water was abandoned since 1970 by the Summit Creek Irrigation and Canal Company as issued by certificate 735. If it is unfeasible to develop water from	
A54219	Protest	3/3/1980									Protest by Kennecott Copper Corporation	
A54219	Protest	4/15/1980									Protest by Summit Creek Irrigation Canal Company	
A54219	Request to Withdraw	9/30/2004									City requests to withdraw their request	
A54219	State Engineer Withdraws Request	10/6/2004									State Engineer canceled and withdrew the request	

Santaquin City
Water Right: 51-7045
Chronology of Action

WR #	Action	Date of Action	Priority Date	Proof Date	Status	Flow Right (cfs)	Max Annual Right (ac-ft)	Santaquin's Share (ac-ft)	Restrictions	Current Points of Diversion	Ownership	Notes	Implications
51-7045	Statement of Ownership Segregation	1/3/1997	1870				224.77		Irrigation: Apr 1 - Oct 31	South Jordan Diversion Dam and Utah Lake Pumping Plant	Santaquin City & South Jordan Canal Company	Water right separated from 59-3500 (based on 45.5 shares of South Jordan Canal Company Stock). The source of water is from Utah Lake and the Jordan River through the South Jordan Canal. The water is stored in Utah Lake. From April 1 to October 31, 44.954 acres are irrigated.	
a20673	Change Application	1/3/1997					224.77		Municipal: Jan 1 - Dec 31			Water to come from two existing wells and to be for municipal use from Jan 1 to Dec 31.	

WR #	Action	Date of Action	Priority Date	Proof Date	Status	Flow Right (cfs)	Max Annual Right	Restrictions	Current Points of Diversion	Ownership	Notes	Implications
a20673	Protest	2/10/1997			Withdrawn					Santaquin City & South Jordan Canal Company	Protest by Provo River Water Users Association	
a20673	Protest	2/11/1997									Protest by US Bureau of Reclamation	
a20673	Change Application Approved	7/23/1997		11/30/2000					Center Street Well, Cemetery Well		Water to come from two existing wells and to be for municipal use. Approved subject to following conditions: **1.** In order to balance the historic and proposed depletion of water under this change, the applicants can ***divert 127.10 ac-ft*** under this filing. The applicants shall install permanent totalizing meters on the well and the drain to measure all water diverted and shall ***keep at least monthly records of all water diverted***. The meters and the records shall be made available to the State Engineer or the duly appointed river commissioner at all reasonable times in regulating this change. **2.** The South Jordan Irrigation Company diversion from the Jordan River shall be reduced by 224.77 ac-ft annually. **3.** The River Commissioner shall divert from Utah Lake 129.47 ac-ft of water annually and allow that amount of water to bypass the South Jordan Irrigation Company diversion and be available to the downstream users. **4.** This change application shall be under the direction of the duly appointed river commissioner for the Upper Jordan River. ***The applicants shall provide the diversion measurement required above to the river commissioner annually***. Payment of any costs for the river commissioner's time shall be the responsibility of the applicants. **5.** Should Santaquin City decide to utilize this change application ***strictly for irrigation***, the amount of ***land that can be irrigated is 45.17 acres***. **6.** Upon submittal of proof of change, the applicants shall provide evidence that the above conditions have been met and that the historic 44.95 acres of irrigation under the South Jordan Irrigation Company have been taken out of active cultivation along with all other information required at the time of proof. The applicants shall further submit evidence that no more than 95.30 ac-ft of water have been depleted under this change application by the city's use of the water. Should reuse of this water be contemplated, 34.17 ac-ft of water must be delivered to Utah Lake annually for this change application to balance the historic and proposed uses' effect on the system. **7.** This change application shall be ***valid only when utilized by and for Santaquin City***. No municipal use is implied or granted by this application for any use in any of Santaquin City's facilities by another party. Should Santaquin City withdraw its support of this application, this approval shall be considered void.	
a20673	Request for Proof Extension of Time	11/9/2000									Waiting for growth to increase to fully utilize water right.	
a20673	Approval of Extension of Time	7/19/2001		7/31/2005							Extension of time given	
a26290	Application for Change of Water	1/28/2002			Amended by Subsequent Change		224.77			Santaquin City & South Jordan Canal Company	Use three existing and one proposed well. Replace a20673.	
a26290	Protest	3/11/2002									Protest by PacifiCorp	
a26290	Approval of Application for Change of Water	12/13/2002		12/31/2007			224.77		Center Street Well, Cemetery Well, Provisional Well, East Side Well		Use 4 wells. Approved subject to following conditions: **1.** The applicants shall install permanent totalizing meters on the wells to measure all of the water produced from them in order to ensure water use does not exceed water entitlement. Furthermore, the applicants shall maintain at least monthly records of all water diverted from the wells and these records and the meters shall be made available to the State Engineer/his representative and the duly appointed river commissioner at all reasonable times in regulating this change application. **2.** ***Total annual diversion is limited to 224.77 ac-ft***. The ***total annual depletion*** from the local hydrologic regimen pursuant to this change ***shall not exceed 95.29 ac-ft***. **3.** This change application shall be valid only when utilized by and for Santaquin City. No municipal use is implied or granted by this application for use in any of Santaquin City's facilities by another party other than the City. Should Santaquin withdraw its support of the application, this approval shall be considered void. **4.** South Jordan Canal Company's diversion of water from the Jordan River shall be reduced by 224.77 ac-ft. **5.** The Utah Lake and Jordan River Commissioner shall keep in storage in Utah Lake 129.48 ac-ft annually. This storage cannot be allowed to be carried over from year to year due to high evaporation in Utah Lake. If any water right holder can demonstrate to the satisfaction of the State Engineer that impairment has occurred due to this change application, the State Engineer will instruct the river commissioner to release said water to alleviate the problem **6.** Any additional costs incurred by the Utah Lake and Jordan River Commissioner in the administration of the change application shall be borne by the applicants. The amount of such costs shall be determined by the Commissioner an/or the State Engineer. **7.** Proof of Beneficial Use of Water under the change application shall include copies of the meter readings, evidence that Condition Number Two has been met and confirmation that the 44.95 acres formerly irrigated are no longer having water applied.	
a26290	Request for Proof Extension of Time	11/13/2007									Waiting for new application to be approved.	
a26290	Approval of Extension of Time	4/2/2009		12/31/2016								
a31014	Application for Change of Water	2/1/2006			Withdrawn		224.77			Santaquin City & South Jordan	Change from surface diversion (Associated Canal Companies Pumping Plant) to underground diversion (well)	
a31014	Protest	3/15/2006									Protest by PacifiCorp	

WR #	Action	Date of Action	Priority Date	Proof Date	Status	Flow Right (cfs)	Max Annual Right	Restrictions	Current Points of Diversion	Ownership	Notes	Implications
a31014	Request to Withdraw Application	11/17/2008			Withdr					Canal Company	City requested to withdraw this application.	
a31014	State Engineer Withdraws Application	1/6/2009									State Engineer withdrew the application.	
t31016	Application for Temporary Change of Water	2/1/2006			Lapsed		224.77			Santaquin City & South Jordan Canal Company	Change from surface diversion (Associated Canal Companies Pumping Plant) to underground diversion (well)	
t31016	Approval for Temporary Change of Water	2/13/2006									Temporary Change application approved and it expires 2/13/2007.	
a35122	Change Application	12/17/2008			Approved					Santaquin City & South Jordan Canal Company	Add an additional well.	
a35122	Protest	1/12/2009									Protest by New State, Inc.	
a35122	Protest	1/23/2009									Protest by Bill & Vickie Stansfield	
a35122	Protest	2/2/2009									Protest by Warm Springs Irrigation C.	
a35122	Application Approved	5/5/2009		12/31/2016			244.77	244.77	Center Street Well, Cemetary Well, Provisional Well, East Side Well, Summit Ridge Well		Add an additional well. Approved with following conditions: **1.** The diversion of water under this application is limited such that depletion may not exceed 95.29 ac-ft. Under no circumstances is the diversion to exceed 224.77 ac-ft. ***The applicant must maintain records of use sufficient to demonstrate depletion from uses under this change application is limited to 95.29 ac-ft.*** **2.** ***The 45.5 shares of stock in t he South Jordan Canal Company*** must remain dedicated to this application and ***maintained in good standing by the Santaquin City***. If the stock is not held in the name of Santaquin City, this application is invalid. **3.** All diversions of water under this application shall be made under the direction of the Utah Lake/Jordan River Commissioner. Any additional expenses incurred by the commissioner in distributing water under this application shall be borne by the applicant. **4.** South Jordan Canal Company's diversion of water from the Jordan River shall be reduced by 224.77 ac-ft. The Utah Lake and Jordan River Commissioner shall ***keep in Utah Lake 129.48 ac-ft annually***. This storage cannot carry over from year to year due to high evaporation in Utah Lake. If ***any water right holder can demonstrate to the satisfaction of the State Engineer that impairment has occurred due to this change application, the State Engineer will instruct the river commissioner to release said water to alleviate the problem***. **5.** Inasmuch as this application seeks to divert water from numerous points of diversion, it is necessary that detailed information be provided to the State Engineer to show which sources of supply are actually developed and used and the extent of their usage under this application. Upon the submission of proof as required by Section 73-3-16, Utah Code, for this application, ***the applicants must identify every source of water used under this application and the amount of water used from that source. The proof must also show the capacity of the sources of supply and demonstrate that each source can provide the water claimed to be diverted under this right as well as all other water rights which may be approved to be diverted from those sources.*** **6.** Each source developed under this application must be individually metered and the diversions of water reported at least annually under the Utah Water Use Program. **7.** This Permanent Change Application amends Permanent Change Application 51-745 (a26290) and, therefore, must inherit the proof date of the parent, which is ***December 31, 2016***, the end of the 14-year period.	Santaquin City must pay the annual assessment for said water shares to South Jordan Canal Company. Keep accurate records of each of the water sources (5 wells) to demonstrate that all of the rights in those wells are being benefically used. Identify the pumping capacity of each of the wells. Since the East Side well has water quality problems, its use is limited to the pressure irrigation system.

Santaquin Special Service District
Water Right: 51-8394
Chronology of Action

WR #	Action	Date of Action	Priority Date	Proof Date	Status	Flow Right (cfs)	Max Annual Right (ac-ft)	Restrictions	Current Points of Diversion	Ownership	Notes	Implications
A26479	Segregate Water Right	9/14/2009	4/26/1955		Certificate		53.84	Irrigation: May 1 - Oct 31	Well at N 46 ft W 624 ft from S4 cor, Sec 36, T 9S, R 1E, SLBM	Teakwood Ablestone, Inc.	Segregate water right from 51-1323 to Teakwood Ablestone, Inc.. Water from underground well for irrigation of 13.46 acres from May 1 to Oct 31).	
A26479	Warranty Deed	11/16/2009								Santaquin Special Service District	Teakwood Ablestone, Inc. conveyed and warranted WR 51-8394 to Santaquin Special Service District	
a36078	Change Application	11/17/2009			Approved		53.84	Municipal: Jan 1 - Dec 31	Well at N 46 ft W 624 ft from S4 cor, Sec 36, T 9S, R 1E, SLBM	Santaquin Special Service District	Water use is to be changed from irrigation to municipal use from Jan 1 to Dec 31.	
a36078	Protest	12/31/2009									Protest by US Bureau of Reclamation	
a36078	Approval of Change Application	2/1/2010		2/28/2015			53.84				Water use changed to municipal use from irrigation. This has been approved with the following conditions: **1.** The diversion of water under this application is limited such that depletion may not exceed 29.186 ac-ft. Under no circumstances is diversion to exceed 53.84 ac-ft. The applicants must maintain records of use sufficient to demonstrate the depletion of water associated with the use under this application does not exceed the specified depletion limit. **2.** To accommodate the approval of this permanent change application, the use of 53.84 ac-ft water for the irrigation **3.** The applicant not predecessors-in-interest to this right have claim to supplemental shares of stock from Summit **4.** The applicants are required to install a meter and maintain accurate diversion records from the source. These records are to be submitted on an annual basis to the Water Use Program of the Division of Water Rights.	

WR #	Action	Date of Action	Priority Date	Proof Date	Status	Flow Right (cfs)	Max Annual Right	Restrictions	Current Points of Diversion	Ownership	Notes	Implications
											5. All wells used as public water supply wells are regulated by the Utah Division of Drinking Water. Plans for the construction of new wells must be reviewed and approved by the Division of Drinking Water prior to any drilling or construction activity being commenced. The approval of this water right application does not constitute approval of the well for use as a public water supply by the Division of Drinking Water. Applicants are advised to contact the Division of Drinking Water at (801) 536-4200 to review applicable standards and for information about approval of a source of supply for public use.	The well to which this water right is associated could be connected to the pressure irrigation system. It would likely require changing the pump in the well or the construction of a booster pump facility.

Santaquin City
Water Right: 53-1496
Chronology of Action

WR #	Action	Date of Action	Priority Date	Proof Date	Status	Flow Right (cuffs)	Max Annual Right (ac-ft.)	Santaquin's Share (ac-ft.)	Restrictions	Current Points of Diversion	Ownership	Notes	Implications
53-1496 A2136	WR Filed		10/27/1908		Certificated		807.38		Irrigation: Apr 1 - Oct 31 to irrigate 161.476 acres	Utah Lake Dam and USBR/MWDSLC Pump Station	E. Johnson, Santaquin City Corporation, State of Utah Board of Water Resources. Utah Lake Distributing Company	Per the WR "This right has a share ownership in the Water Company Listed below" (listed on the WR). **158 Shares owned in Utah Lake Distribution Company** **Currently Santaquin City has been conveyed 103 (65.2%) of the 158 Shares in ULDC, per recorded dedication & assignment and ULDC records** (no record of stock certificates (40 shares) transferred to the City, this should be done at some point) (see 2009 Reports of Conveyance below) Owners listed on the water right (and Change Application): Evan Johnson (shareholder); Santaquin City (Shareholder); State of Utah Board of Water Resources; Utah Lake Distribution Company (ULDC)	
00-51-006-P	Application for Provisional Well	8/15/2000								Well History Info for Provisional Well and Summit Ridge Well		Stephen E. Snowby, P.E. submitted application for test well south of SCIC reservoir #2 **(This is NOT the SR Well location)**	
	Permission for Provisional Well	9/19/2000										WR grants permission to drill provisional well (expires 3/19/01) **(This IS NOT the SR Well location)**	
	Extension of time	5/4/2001										WR grants extension of time to drill provisional well (expires 11/1/01) **(This is NOT the SR Well location)**	
	Test Well Drilled	4/15/02 thru 5/15/02										Test well drilled south of SCIC reservoir #2 **(This is NOT the SR Well location)**	
02-51-003-P	Application for Provisional Well	3/20/2002										Stephen E. Snowby, P.E. submitted application for test well at the **actual location of the SR Well**	
	Permission for Provisional Well	3/21/2002										WR grants permission to drill provisional well (expires 9/1/02) **(This is the SR Well)**	
	Test Well Drilled	4/3/02 thru 4/24/02										Test well drilled at the **actual location of the SR Well**	
Both wells were applied for by the same engineer & drilled by the same drilling company, apparently one right after the other. This may have caused the confusion where WR POD's were concerned.													
a25719	Agreement	6/14/2001									E. Johnson, Santaquin City Corporation **(63 shares)**, State of Utah Board of Water Resources, Utah Lake Distributing Company	Change Application Approval Agreement between Evan Johnson and ULDC **Per the above agreement, "... the right to divert water under the change application is conditioned on the ownership of the underlying shares of stock in ULDC that support the change."**	
a25719	Change Application Filed	6/15/2001										Change Application submitted to change: Point of Diversion (POD); Place of Use; Nature of Use Change Application Filed by: Evan Johnson; Santaquin City; State of Utah Board of Water Resources; Utah Lake Distribution Company (ULDC)	
a25719	Protest	7/20/2001										PacifiCorp Protest to Change Application	
	Protest	7/16/2001										USBR Protest to Change Application	
	Protest	7/12/2001										New State Inc. Protest to Change Application	
	Reply to Protest	7/18/2001										Evan Johnson reply to New State Inc. protest	
a25719	Order of State Engineer **(Approval)**	9/7/2001	6/15/2001	9/30/2004			807.35	321.92	Municipal			POD changed from Jordan River & Utah Lake to test well in Santaquin **(Not the SR Well)**. Place of Use changed to Santaquin City. Nature of Use changed from irrigation to Municipal. Approved with following conditions: **1.** Limited Diversion to 807.35 & Depletion to 342.3 acre-feet annually **2.** "The balance of the water or 465.05 acre-feet of water shall be available in Utah Lake for replacement to impaired parties on the Jordan River. **IF** impaired parties can provide information sufficient to satisfy the Sate Engineer that their rights have been impaired by this Change Application the 465.05 acre-feet will be made available to downstream water users. This 465.05 acre-feet cannot be carried over from year to year and will be unavailable after the end of the irrigation season...." **3.** Well must be metered and at least monthly records kept for water diverted from well. Make records available to State Engineer. **4.** At time of proof, provide evidence that 161.47 acres where water has been historically used is no longer being irrigated	**This stipulation is an example of why this type of WR (shares in a dist company) is not necessarily the best type of WR for Santaquin now nor for the City to accept in the future. Discuss recent WR hearing concerning farmers, Elk Ridge & developers.** The location of the 161.47 acres needs to be identified and verification made that it is no longer irrigated.

WR #	Action	Date of Action	Priority Date	Proof Date	Status	Flow Right (cfs)	Max Annual Right	Restrictions	Current Points of Diversion	Ownership	Notes		Implications
	Santaquin City obtains 63 ULDC shares	11/19/2001			Approv					Provisional Well		Per ULDC (1-28-14). Santaquin City Stock certificate # 3959 for 63 shares in ULDC was created on November 19. 2001 **(63 shares representing 321.93 ac-ft.).** Ownership transferred from Evan Johnson to Santaquin City.	
a25719	State Eng Opinion	9/22/2003										State Regional Engineer offered opinion on return flow options	
	Amendment	10/1/2003										Amendment to agreement changing wording on return flow & carrier water (PP 5 changed)	
a25719	Time Extension Request	9/15/2004										Extension of time requested by Santaquin City for proof of WR	
	Order of State Engineer **(Approval)**	12/9/2004		9/30/2007								Time extension granted for proof of WR	
	Report of Conveyance (ROC) of WR	5/19/2005									KBS Holdings L.L.C., Santaquin City Corporation **(63 shares)**. State of Utah Board of Water Resources. Utah Lake Distributing Company. E. Johnson	Water Right Conveyance (ROC) of 40/158ths **(40 shares representing 204.4 ac-ft.)** of ULDC shares **from Evan Johnson and John P. Harr to KBS Holdings (Summit Ridge Communities, LLC)** (includes: stock certificate transfers, Summary showing chain of title & Confirmatory Quitclaim Deed & Assignment)	
												According to the above ROC documents: the sale of these 40 stock shares from Evan Johnson & John P. Harr are dated 12/20/01. The Quitclaim Deed was recorded at the Utah County Recorders office on 3/15/05.	
	WR Ownership	5/25/2005										Map from above ROC still showing test well **(NOT SR Well location)**	
	Time Extension Request	8/22/2007										KBS Holdings was added as an owner for WR 53-1496 **(now 5 owners)**	
a25719	Correspondence from State Engineer	8/28/2007										Extension of time requested by Santaquin City for proof of WR	
	Order of State Engineer **(Approval)**	10/31/2007		9/30/2012								Extension request returned from WR to Santaquin City due to no payment included with Time Extension Request	
	Report of Conveyance (ROC) of WR	1/21/2009									E. Johnson, Santaquin City Corporation **(103 shares)**. State of Utah Board of Water Resources. Utah Lake Distributing Company	Time extension granted for proof of WR	
												Water Right Conveyance (ROC) of 40/158ths **(40 shares representing 204.4 ac-ft.)** of ULDC shares **from KBS Holdings (Summit Ridge Communities, LLC) to Santaquin City Corporation** (includes: Summary showing chain of title & attachments (2) to agreement for transfer of WR)	
												Above agreement includes: dedication of 40/158ths of ULDC Shares **AND** 25/49ths of East Jordan Irrigation Company Stock under WR # 53-1507 & Change Application a26452 for 121 ac-ft. (not included in WR 53-1496)	
												Above agreement includes: dedication of SR Tank and property and SR Well and property.	**Discuss with City Water Credits and credit for SR Tank & SR Well & properties**
	WR Ownership	1/22/2009										WR 53-1496 **(now back to 4 owners)** (KBS Holdings no longer listed as an owner)	
	Time Extension Request	9/20/2012										Extension of time requested by Santaquin City for proof of WR	
	Order of State Engineer **(Approval)**	2/5/2013		**9/30/2015**			**807.35**	**526.31**	**Summary Spreadsheet says they only have 204.4 ac-ft. as shareholder**			Time extension granted for proof of WR	

Santaquin City
Water Right: 53-1675
Chronology of Action

WR #	Action	Date of Action	Priority Date	Proof Date	Status	Flow Right (cfs)	Max Annual Right (ac-ft)	Santaquin's Share (ac-ft)	Restrictions	Current Points of Diversion	Ownership	Notes	Implications
53-1675	Ask to Segregate Santaquin City Portion of WR 53-1507	3/16/2009					121	61.7	Irrigation of 30.25 acres April 1 to October 31	Turner Dam and Utah Lake Pumping Plant	East Jordan Irrigation Company. Santaquin City Corporation **(49 shares but only has record of 25 of them)**	Ask to have their portion of WR 53-1507 segregated (121 ac-ft) from East Jordan Irrigation Company	Verify shares owned by Santaquin City with East Jordan Irrigation Company.
a26452	Change Segregation	3/28/2002			Approved		121.0	61.7	Irrigation of 30.25 acres April 1 to October 31	Summit Ridge Well	East Jordan Irrigation Company. Santaquin City Corporation **(49 shares but only has record of 25 of them)**	Water to come from an underground well instead of from the Jordan River and Utah Lake. The places of use also changed	
a26452	Request for Proof Extension of Time	1/8/2010										Still needing to verify full beneficial use.	
a26452	Approval of Extension of Time	3/19/2010		**1/31/2017**			121	61.7	Irrigation of 30.25 acres April 1 to October 31			Proof due date changed from 1/31/2010	

Santaquin City
Water Right: NS015
Chronology of Action

WR #	Action	Date of Action	Priority Date	Proof Date	Status	Flow Right (cfs)	Max Annual Right (ac-ft.)	Restrictions	Current Points of Diversion	Ownership	Notes	Implications
NS015	Application for Water Reuse	12/18/2008				7	1032.2				Application for water reuse submitted	
NS015	Protest	5/26/2009									Protest by US Bureau of Reclamation	
											Approved and subject to following conditions:	
NS015	Approval by State Engineer	10/20/2009			Approved		Diversion: 6099.9 Depletion: 5302.7 (Error on the website Depletion for WR 51-1013 according to Order of State Engineer)		Treatment Plant	Santaquin City	**1.** The amount of sewage effluent that may be annually reused under this application is limited to the amount of water actually diverted under Water Right Numbers 51-1013, 51-1347, 51-1348, 51-7045, and 53-1496 to a maximum of 6,099.9 ac-ft. The amount of depletion associated with use and reuse of the water diverted must not exceed 5,302.7 ac-ft.	
											2. The applicant shall install and maintain measuring and recording devices to meter all water diverted under water rights identified in the reuse application and all water reused under this application and shall annually report this data to the Division of Water Rights Water Use Data Program. In addition, information necessary to determine the amount of water available to reuse considering depletion associated with use shall be recorded and be kept monthly and reported annually to the State Engineer.	

WR #	Action	Date of Action	Priority Date	Proof Date	Status	Flow Right (cfs)	Max Annual Right	Restrictions	Current Points of Diversion	Ownership	Notes	Implications

Santaquin City
Water Right: RC007
Chronology of Action

WR #	Action	Date of Action	Priority Date	Proof Date	Status	Flow Right (cfs)	Max Annual Right (ac-ft)	Restrictions	Current Points of Diversion	Ownership	Notes	Implications
RC007	Application for Groundwater Recharge Permit	12/19/2013					5302.0			Santaquin City Corporation	Using aquifer storage and recovery. Source: Type 1 wastewater effluent from Santaquin's WRF. Quality of receiving water: Utah Ground Water Classification of Class II.	
RC007	Protest	2/24/2014									Protest by US Bureau of Reclamation	
RC007	Protest	2/25/2014									Protest by Central Utah Water Conservancy District	
RC007	Protest	2/25/2014									Protest by Provo River Water Users Association	

Santaquin City
Water Right: RC007-001
Chronology of Action

WR #	Action	Date of Action	Priority Date	Proof Date	Status	Flow Right (cfs)	Max Annual Right (ac-ft)	Restrictions	Current Points of Diversion	Ownership	Notes	Implications
RC007-001	Groundwater Recovery Permit	12/30/2013					5302			Santaquin City Corporation	Water to be for municipal use throughout the entire year. An existing city well will be used for water recovery.	
RC007-001	Protest	2/24/2014									Protest by US Bureau of Reclamation	
RC007-001	Protest	2/25/2014									Protest by Central Utah Water Conservancy District	
RC007-001	Protest	4/22/2014									Protest by Provo River Water Users Association	

APPENDIX C – Culinary and Pressure Irrigation Sources and Demands

Changes made 1/16/2015:

1. Culinary water use in 2013 was changed from 1949 ac-ft/yr to 1349 ac-ft/yr. The value of 1949 ac-ft/yr was the 2013 reported use from the culinary system for both culinary and irrigation water. The change to 1349 ac-ft/yr reflects the amount of culinary use after the removal of the water supplied to the irrigation system in the previous column (600.22 ac-ft/yr) from the total use from the culinary system (1949 ac-ft/yr).
2. Label of quantity required column for outdoor water changed from ac-ft/irrigable acre/yr to ac-ft/yr.

Santaquin Growth Projections

Indoor Water (Culinary)

Quantity Required

Sources Quantity[1]

Year	Population	Average Annual Growth Rate	Additional Persons/Yr	Culinary Water System ERCs (Starting from Master Plan)	Pressure Irrigation System ERCs (Starting from Master Plan)	Irrigated Acreage	Genola Town	Supplied to Irrigation System	Culinary Use	Total Required (Genola Town + Irrigation + Culinary Use)	Quantity of Rights Held	Maximum Source Capacity	Water Use	Springs	Wells					
															Cemetery	Center Street (used for Pressure Irrigation)	East Side (not culinary quality)	Summit Ridge	West Side 1 (constructed at 6654 ERCs)	West Side 2 (constructed at 10623 ERCs)
						at 0.25 acres/ERC	at 100 gpm		at 400 (gal/ERC/day) (average day)		(Springs + Wells)			at 2 cfs 1448 ac-ft/yr max	at 0.95 MGD 1065 ac-ft/yr max	at 0.00 MGD 0 ac-ft/yr max	at 0 MGD 0 ac-ft/yr max	at 3.78 MGD 4235.7 ac-ft/yr max	at 3.08 MGD 3451.3 ac-ft/yr max	at 3.08 MGD 3451.3 ac-ft/yr max
						(acres)	(ac-ft/yr)	(ac-ft/yr)	(ac-ft/yr)	(ac-ft/yr)	(ac-ft/yr)	(ac-ft/yr)	(ac-ft/yr)	(ac-ft/yr)	(ac-ft/yr)	(ac-ft/yr)	(ac-ft/yr)	(ac-ft/yr)	(ac-ft/yr)	(ac-ft/yr)
2010	9,128	4.23%																		
2011	9,514	1.62%	386				161	443.47			5612.60	6748	1920	1429	119.7		116.5	254.7		
2012	9,668	1.81%	154				161	661.01			5612.60	6748	2085	1253	288.2		25.2	518.1		
2013	9,843	8.28%	175	3,123	2,363	591	161	600.22	1349	2110	5612.60	6748	2150	1387	245.2			517.8		
2014	10,658	8.28%	815	3,332	2,568	642	161	596.64	1493	2251	5612.60	6748		1448	1065		0	4236		
2015	11,540	8.28%	882	3,558	2,790	697	161	600	1594	2356	5612.60	6748		1448	1065		0	4236		
2016	12,496	8.28%	956	3,803	3,030	757	161	600	1704	2466	5612.60	6748		1448	1065		0	4236		
2017	13,531	8.28%	1,035	4,069	3,290	822	161	600	1823	2584	5612.60	6748		1448	1065		0	4236		
2018	14,651	8.28%	1,120	4,356	3,571	893	161	600	1952	2713	5612.60	6748		1448	1065		0	4236		
2019	15,864	8.28%	1,213	4,667	3,876	969	161		2091	2252	5612.60	6748		1448	1065		0	4236		
2020	17,178	8.28%	1,314	5,004	4,206	1,052	161		2242	2403	5612.60	6748		1448	1065		0	4236		
2021	17,815	3.71%	637	5,167	4,366	1,092	161		2315	2477	5612.60	6748		1448	1065		0	4236		
2022	18,476	3.71%	661	5,337	4,532	1,133	161		2391	2553	5612.60	6748		1448	1065		0	4236		
2023	19,161	3.71%	685	5,512	4,705	1,176	161		2470	2631	5612.60	6748		1448	1065		0	4236		
2024	19,872	3.71%	711	5,695	4,883	1,221	161		2552	2713	5612.60	6748		1448	1065		0	4236		
2025	20,610	3.71%	737	5,884	5,069	1,267	161	2	2636	2800	5612.60	6748		1448	1065		0	4236		
2026	21,374	3.71%	765	6,080	5,261	1,315	161	4	2724	2889	5612.60	6748		1448	1065		0	4236		
2027	22,167	3.71%	793	6,283	5,460	1,365	161	6	2815	2983	5612.60	6748		1448	1065		0	4236		
2028	22,990	3.71%	822	6,494	5,667	1,417	161	8	2910	3079	5612.60	6748		1448	1065		0	4236		
2029	23,842	3.71%	853	6,713	5,881	1,470	161	10	3008	3179	5612.60	10199		1448	1065		0	4236	3451	
2030	24,727	3.71%	885	6,939	6,103	1,526	161	10	3109	3281	5612.60	10199		1448	1065		0	4236	3451	
2031	25,481	3.05%	754	7,133	6,293	1,573	161	10	3196	3367	5612.60	10199		1448	1065		0	4236	3451	
2032	26,258	3.05%	777	7,332	6,488	1,622	161	10	3285	3457	5612.60	10199		1448	1065		0	4236	3451	
2033	27,059	3.05%	801	7,537	6,689	1,672	161	10	3377	3549	5612.60	10199		1448	1065		0	4236	3451	
2034	27,885	3.05%	825	7,749	6,897	1,724	161	10	3472	3643	5612.60	10199		1448	1065		0	4236	3451	
2035	28,735	3.05%	850	7,967	7,111	1,778	161	10	3570	3741	5612.60	10199		1448	1065		0	4236	3451	
2036	29,611	3.05%	876	8,192	7,331	1,833	161	10	3671	3842	5612.60	10199		1448	1065		0	4236	3451	
2037	30,515	3.05%	903	8,423	7,558	1,889	161	10	3774	3946	5612.60	10199		1448	1065		0	4236	3451	
2038	31,445	3.05%	931	8,662	7,792	1,948	161	10	3881	4052	5612.60	10199		1448	1065		0	4236	3451	
2039	32,404	3.05%	959	8,908	8,033	2,008	161	10	3992	4163	5612.60	10199		1448	1065		0	4236	3451	
2040	33,393	3.05%	988	9,161	8,281	2,070	161	10	4105	4276	5612.60	10199		1448	1065		0	4236	3451	
2041	34,030	1.91%	638	9,325	8,441	2,110	161	10	4178	4350	5612.60	10199		1448	1065		0	4236	3451	
2042	34,680	1.91%	650	9,492	8,605	2,151	161	10	4253	4424	5612.60	10199		1448	1065		0	4236	3451	
2043	35,343	1.91%	662	9,661	8,771	2,193	161	10	4329	4500	5612.60	10199		1448	1065		0	4236	3451	
2044	36,018	1.91%	675	9,835	8,941	2,235	161	10	4407	4578	5612.60	13651		1448	1065		0	4236	3451	
2045	36,706	1.91%	688	10,011	9,114	2,278	161	66	4486	4714	5612.60	13651		1448	1065		0	4236	3451	
2046	37,407	1.91%	701	10,191	9,290	2,322	161	123	4566	4851	5612.60	13651		1448	1065		0	4236	3451	
2047	38,121	1.91%	714	10,374	9,469	2,367	161	180	4648	4990	5612.60	13651		1448	1065		0	4236	3451	
2048	38,850	1.91%	728	10,561	9,652	2,413	161	236	4732	5130	5612.60	13651		1448	1065		0	4236	3451	
2049	39,592	1.91%	742	10,751	9,839	2,460	161	293	4817	5272	5612.60	13651		1448	1065		0	4236	3451	3451
2050	40,348	1.91%	756	10,945	10,029	2,507	161	305	4904	5371	5612.60	13651		1448	1065		0	4236	3451	3451
2051	40,997	1.61%	650	11,111	10,192	2,548	161	318	4979	5458	5612.60	13651		1448	1065		0	4236	3451	3451
2052	41,657	1.61%	660	11,281	10,358	2,589	161	330	5055	5546	5612.60	13651		1448	1065		0	4236	3451	3451
2053	42,328	1.61%	671	11,453	10,526	2,632	161	342	5132	5635	5612.60	13651		1448	1065		0	4236	3451	3451
2054	43,010	1.61%	681	11,627	10,698	2,674	161	354	5210	5726	5612.60	13651		1448	1065		0	4236	3451	3451
2055	43,702	1.61%	692	11,805	10,872	2,718	161	356	5290	5807	5612.60	13651		1448	1065		0	4236	3451	3451
2056	44,406	1.61%	704	11,985	11,048	2,762	161	357	5370	5889	5612.60	13651		1448	1065		0	4236	3451	3451
2057	45,121	1.61%	715	12,169	11,228	2,807	161	359	5453	5972	5612.60	13651		1448	1065		0	4236	3451	3451
2058	45,847	1.61%	726	12,355	11,411	2,853	161	360	5536	6057	5612.60	13651		1448	1065		0	4236	3451	3451
2059	46,585	1.61%	738	12,544	11,596	2,899	161	361	5621	6144	5612.60	13651		1448	1065		0	4236	3451	3451
2060	47,335	1.61%	750	12,736	11,785	2,946	161	361	5707	6230	5612.60	13651		1448	1065		0	4236	3451	3451

[1] The Source Quantity listed for the wells is the pumping capacity of each well, not what the water right provides access to

= actual values

Santaquin Growth Projections

Outdoor Water (Pressure Irrigation)

Year	Population	Average Annual Growth Rate	Additional Persons/Yr	Culinary Water System ERCs (Starting from Master Plan)	Pressure Irrigation System ERCs (Starting from Master Plan)	Irrigated Acreage	Quantity Required	Sources Quantity[1]											
								Quantity of Water in Rights and Shares	Maximum Source Capacity[2]	Water Use	Summit Creek Irrigation Company (2103 Total Shares Exist)			Water Reclamation Facility (Storage)	Water Reclamation Facility (Recovery Well - 90 days/yr)	Provided by Culinary System	Spring Overflow Capture	Wells[3]	SHLC & CUP Aqueduct Connections (needed at 6055 ERCs)
						at 0.25 acres/ERC	at 1.87 ac-ft/irrigable acre/yr	(SCIC + WRF + CUP) *(not counting culinary, spring or well rights)*	(SCIC + WRF + from Culinary + Springs + Wells + CUP) *(well & spring capacity is duplicated in culinary system)*	(SCIC + WRF + from Culinary + Springs + Wells + CUP)	City-owned Shares	Water Right[4] at 3 ac-ft/ share	Water Use[4] Actual delivery per share varies[1]	at 5302.7 ac-ft/yr max			at 0.2 MGD 111 acft/yr max	Center Street (needed until SHLC & CUP Aqueduct Connections) at 0.348 MGD 192 ac-ft/yr max	at 903 ac-ft/yr max
						(acres)	(ac-ft/yr)	(ac-ft/yr)	(ac-ft/yr)	(ac-ft/yr)		(ac-ft/yr)	(ac-ft/yr)	(ac-ft/yr)	(ac-ft/yr)	(ac-ft/yr)	(ac-ft/yr)	(ac-ft/yr)	(ac-ft/yr)
2010	9,128	4.23%											744.58			443			
2011	9,514	1.62%	386													661			
2012	9,668	1.81%	154					1662	2323	1874	554	1662	1213			661			
2013	9,843	8.28%	175	3,123	2,363	591	1105	1907	2700	1608	635.5	1907	814	0		600		193.7	
2014	10,658	8.28%	815	3,332	2,568	642	1200	2215	3004	1702	660	1981	679	234		597		192	
2015	11,540	8.28%	882	3,558	2,790	697	1304	2616	3519	3519	686	2059	2059	557	0	600	111	192	
2016	12,496	8.28%	956	3,803	3,030	757	1416	2697	3600	3600	713	2140	2140	557	0	600	111	192	
2017	13,531	8.28%	1,035	4,069	3,290	822	1538	2781	3684	3684	741	2224	2224	557	0	600	111	192	
2018	14,651	8.28%	1,120	4,356	3,571	893	1670	2868	3771	3771	770	2311	2311	557	0	600	111	192	
2019	15,864	8.28%	1,213	4,667	3,876	969	1812	2959	3262	3262	801	2402	2402	557	0	0	111	192	
2020	17,178	8.28%	1,314	5,004	4,206	1,052	1966	3565	3867	3867	832	2496	2496	1068	0	0	111	192	
2021	17,815	3.71%	637	5,167	4,366	1,092	2041	3646	3949	3949	847	2540	2540	1106	0	0	111	192	
2022	18,476	3.71%	661	5,337	4,532	1,133	2119	3712	4015	4015	862	2585	2585	1127	0	0	111	192	
2023	19,161	3.71%	685	5,512	4,705	1,176	2199	3778	4081	4081	877	2630	2630	1148	0	0	111	192	
2024	19,872	3.71%	711	5,695	4,883	1,221	2283	3847	4150	4150	892	2676	2676	1170	0	0	111	192	
2025	20,610	3.71%	737	5,884	5,069	1,267	2370	3996	4301	4301	908	2723	2723	1193	80	2	111	192	
2026	21,374	3.71%	765	6,080	5,261	1,315	2459	4090	4396	4396	924	2771	2771	1217	101	4	111	192	
2027	22,167	3.71%	793	6,283	5,460	1,365	2553	4185	4494	4494	940	2820	2820	1242	123	6	111	192	
2028	22,990	3.71%	822	6,494	5,667	1,417	2649	4283	4594	4594	957	2870	2870	1267	146	8	111	192	
2029	23,842	3.71%	853	6,713	5,881	1,470	2749	4384	4697	4697	973	2920	2920	1294	170	10	111	192	0
2030	24,727	3.71%	885	6,939	6,103	1,526	2853	4493	4806	4806	990	2971	2971	1321	195	10	111	192	5
2031	25,481	3.05%	754	7,133	6,293	1,573	2942	4596	4908	4908	1005	3014	3014	1345	216	10	111	192	20
2032	26,258	3.05%	777	7,332	6,488	1,622	3033	4712	5025	5025	1019	3058	3058	1369	238	10	111	192	48
2033	27,059	3.05%	801	7,537	6,689	1,672	3127	4831	5144	5144	1034	3102	3102	1394	260	10	111	192	75
2034	27,885	3.05%	825	7,749	6,897	1,724	3224	4953	5266	5266	1049	3147	3147	1420	283	10	111	192	103
2035	28,735	3.05%	850	7,967	7,111	1,778	3324	5079	5392	5392	1064	3193	3193	1446	307	10	111	192	133
2036	29,611	3.05%	876	8,192	7,331	1,833	3427	5208	5521	5521	1080	3239	3239	1473	332	10	111	192	164
2037	30,515	3.05%	903	8,423	7,558	1,889	3533	5340	5653	5653	1095	3285	3285	1501	357	10	111	192	197
2038	31,445	3.05%	931	8,662	7,792	1,948	3643	5477	5789	5789	1111	3333	3333	1530	383	10	111	192	230
2039	32,404	3.05%	959	8,908	8,033	2,008	3755	5616	5929	5929	1127	3381	3381	1560	410	10	111	192	265
2040	33,393	3.05%	988	9,161	8,281	2,070	3871	5760	6073	6073	1143	3430	3430	1591	437	10	111	192	302
2041	34,030	1.91%	638	9,325	8,441	2,110	3946	5867	6180	6180	1154	3461	3461	1611	455	10	111	192	340
2042	34,680	1.91%	650	9,492	8,605	2,151	4023	5976	6289	6289	1164	3492	3492	1631	474	10	111	192	379
2043	35,343	1.91%	662	9,661	8,771	2,193	4100	6082	6395	6395	1175	3524	3524	1652	492	10	111	192	414
2044	36,018	1.91%	675	9,835	8,941	2,235	4180	6190	6502	6502	1185	3556	3556	1673	511	10	111	192	450
2045	36,706	1.91%	688	10,011	9,114	2,278	4261	6299	6668	6668	1196	3588	3588	1694	530	66	111	192	487
2046	37,407	1.91%	701	10,191	9,290	2,322	4343	6410	6836	6836	1207	3621	3621	1716	550	123	111	192	524
2047	38,121	1.91%	714	10,374	9,469	2,367	4427	6288	6771	6771	1218	3653	3653	1738	570	180	111	192	327
2048	38,850	1.91%	728	10,561	9,652	2,413	4512	6399	6938	6938	1229	3686	3686	1761	590	236	111	192	362
2049	39,592	1.91%	742	10,751	9,839	2,460	4600	6512	7107	7107	1240	3720	3720	1784	611	293	111	192	397
2050	40,348	1.91%	756	10,945	10,029	2,507	4688	6626	7234	7234	1251	3754	3754	1807	632	305	111	192	433
2051	40,997	1.61%	650	11,111	10,192	2,548	4765	6730	7351	7351	1261	3782	3782	1827	650	318	111	192	470
2052	41,657	1.61%	660	11,281	10,358	2,589	4842	6836	7468	7468	1270	3811	3811	1848	669	330	111	192	508
2053	42,328	1.61%	671	11,453	10,526	2,632	4921	6940	7585	7585	1280	3840	3840	1869	688	342	111	192	544
2054	43,010	1.61%	681	11,627	10,698	2,674	5001	7047	7704	7704	1290	3869	3869	1890	707	354	111	192	581
2055	43,702	1.61%	692	11,805	10,872	2,718	5083	7156	7814	7814	1300	3899	3899	1912	726	356	111	192	619
2056	44,406	1.61%	704	11,985	11,048	2,762	5165	7265	7925	7925	1310	3929	3929	1933	746	357	111	192	658
2057	45,121	1.61%	715	12,169	11,228	2,807	5249	7377	8038	8038	1320	3959	3959	1956	766	359	111	192	697
2058	45,847	1.61%	726	12,355	11,411	2,853	5335	7490	8153	8153	1330	3989	3989	1978	786	360	111	192	737
2059	46,585	1.61%	738	12,544	11,596	2,899	5421	7605	8269	8269	1340	4019	4019	2001	807	361	111	192	777
2060	47,335	1.61%	750	12,736	11,785	2,946	5509	7721	8385	8385	1350	4050	4050	2025	828	361	111	192	819

[1] The Source Quantity listed for the wells is the pumping capacity of each well, not what the water right provides access to

[2] The source capacity is needed to meet peak day demand, not seasonal demand

[3] The Cemetery and Center Street Wells are available to serve both the culinary water and pressure irrigation systems. Future values are listed under the available capacity of the culinary water system.

[4] Construction of the booster station planned in the Pressure Irrigation Master Plan & Capital Facilities Plan in 2014/2015 will increase the ability to take delivery of SCIC well water. Use until 2015 is based on delivery at a rate of 3 ac-ft/year from April 15 to June 30 and at a rate of 1.8 ac-ft/year from July 1 to October 15 until 2015 (1.8 ac-ft is the capacity of the booster station to deliver SCIC well water to the PI system), then 3 ac-ft/year thereafter.

= actual values

APPENDIX F
OPINION OF CONCEPTUAL PROJECT COSTS

Table F-1: Sanitary Sewer Projects – Opinion of Conceptual Project Costs

Project Number	Sanitary Sewer System Improvement Projects				
1	*Install 8" Sewer Main along Orchard Cove Rd from 770 N to 850 N*				
	Item Description	**Qty**	**Unit**	**Unit Price**	**Amount**
	Furnish and Install 8" Sewer Main	800	LF	$ 69	$ 55,000
	Other Costs: Engineering, Legal, Administrative, 25%				$ 13,750
				Total	**$ 68,800**
2	*Install 8" Sewer Main along 100 E from 730 N to Canal*				
	Item Description	**Qty**	**Unit**	**Unit Price**	**Amount**
	Furnish and Install 8" Sewer Main along 200 East from 730 N to Canal	3300	LF	$ 69	$ 226,875
	Furnish and Install 18" Sewer Main along Canal from about 100 East to Center Street	300	LF	$ 112	$ 33,525
	Other Costs: Engineering, Legal, Administrative, 25%				$ 65,100
				Total	**$ 325,500**
3	*Install 18" Sewer Main Along Strawberry Canal Rd from 400 East to 100 East*				
	Item Description	**Qty**	**Unit**	**Unit Price**	**Amount**
	Furnish and Install 18" Sewer Main	2250	LF	$ 112	$ 251,438
	Other Costs: Program Costs, Engineering, Legal, Administrative, 25%				$ 62,859
				Total	**$ 314,300**
4A	*Install 10" Pipe along 400 East from 530 North to Strawberry Canal Rd and Remove Pipe on 530 North*				
	Item Description	**Qty**	**Unit**	**Unit Price**	**Amount**
	Furnish and Install 10" Sewer Main	3080	LF	$ 80	$ 245,630
	Furnish and Install 15" Sewer Main	190	LF	$ 103	$ 19,523
	Remove sanitary sewer pipe along 530 N between 400 East and first westerly manhole	1	LS	$ 10,000	$ 10,000
	Other Costs: Engineering, Legal, Administrative, 25%				$ 68,788
				Total	**$ 344,000**
4B	*Install 8" Sewer Main North of 400 North and East of 400 East for Development*				
	Item Description	**Qty**	**Unit**	**Unit Price**	**Amount**
	Furnish and Install 8" Sewer Main	5900	LF	$ 69	$ 405,625
	Other Costs: Engineering, Legal, Administrative, 25%				$ 101,406
				Total	**$ 507,100**
5	*Install 8" Sewer Main along Strawberry Canal Rd from 4800 W (county) to 400 East*				
	Item Description	**Qty**	**Unit**	**Unit Price**	**Amount**
	Furnish and Install 8" Sewer Main	3500	LF	$ 69	$ 240,625
	Other Costs: Engineering, Legal, Administrative, 25%				$ 60,156
				Total	**$ 300,800**
6	*Install 8" Sewer Main along Center St from 100 S to Manhole at 70 South*				
	Item Description	**Qty**	**Unit**	**Unit Price**	**Amount**
	Furnish and Install 8" Sewer Main	215	LF	$ 69	$ 14,781
	Other Costs: Engineering, Legal, Administrative, 25%				$ 3,695
				Total	**$ 18,500**

Table F-1: Sanitary Sewer Projects – Opinion of Conceptual Project Costs (cont'd)

Project Number	Sanitary Sewer System Improvement Projects				
7	*Install Parallel Sewer Main along 400 E from South Side of 400 N to Next Manhole Directly North*				
	Item Description	**Qty**	**Unit**	**Unit Price**	**Amount**
	Furnish and Install 8" Sewer Main	100	LS	$ 69	$ 6,875
	Other Costs: Engineering, Legal, Administrative, 25%				$ 1,719
				Total	**$ 8,600**
8	*Install 8" Sewer Main along 400 E from 200 S to 140 S*				
	Item Description	**Qty**	**Unit**	**Unit Price**	**Amount**
	Furnish and Install 8" Sewer Main	325	LF	$ 69	$ 22,344
	Other Costs: Engineering, Legal, Administrative, 25%				$ 5,586
				Total	**$ 28,000**
9	*Install 8" Sewer Main along 4800 W (county) from 400 North to Strawberry Canal Rd*				
	Item Description	**Qty**	**Unit**	**Unit Price**	**Amount**
	Furnish and Install 8" Sewer Main	1700	LF	$ 69	$ 116,875
	Other Costs: Engineering, Legal, Administrative, 25%				$ 29,219
				Total	**$ 146,100**
10	*Install 8" Sewer Main along Strawberry Canal Rd from SR198 to 4800 W*				
	Item Description	**Qty**	**Unit**	**Unit Price**	**Amount**
	Furnish and Install 8" Sewer Main	2750	LF	$ 69	$ 189,063
	Jack and Bore 12" Steel Casing under Freeway	300	LF	$ 300	$ 90,000
	Other Costs: Program Costs, Engineering, Legal, Administrative, 25%				$ 69,766
				Total	**$ 348,900**
11	*Install 4" Force Main with Sewer Lift Station on 4800 W (county) and 12400 S (county)*				
	Item Description	**Qty**	**Unit**	**Unit Price**	**Amount**
	Furnish and Install 4" Sewer Force Main	6660	LF	$ 54	$ 357,975
	Furnish and Install Sewer Lift Station	1	LS	$ 200,000	$ 200,000
	Other Costs: Program Costs, Engineering, Legal, Administrative, 25%				$ 139,494
				Total	**$ 697,500**
12	*Install 8" Sewer Main from SR198 and 13200 S (county) to 12400 S and 4800 W (county)*				
	Item Description	**Qty**	**Unit**	**Unit Price**	**Amount**
	Furnish and Install 8" Sewer Main	7300	LF	$ 69	$ 501,875
	Jack and Bore 12" Steel Casing under Freeway	300	LF	$ 300	$ 90,000
	Other Costs: Program Costs, Engineering, Legal, Administrative, 25%				$ 147,969
				Total	**$ 739,900**

Table F-1: Sanitary Sewer Projects – Opinion of Conceptual Project Costs (cont'd)

Project Number	Sanitary Sewer System Improvement Projects				
13	*Install 8" Sewer Main Along 4800 W from 12800 S to 12400 S*				
	Item Description	**Qty**	**Unit**	**Unit Price**	**Amount**
	Furnish and Install 8" Sewer Main	3000	LF	$ 69	$ 206,250
	Other Costs: Program Costs, Engineering, Legal, Administrative, 25%				$ 51,563
				Total	**$ 257,900**
14	*Install 8" & 10" Sewer Main on Strawberry Canal Rd from 6250 West to Center Street Lift Station*				
	Item Description	**Qty**	**Unit**	**Unit Price**	**Amount**
	Furnish and Install 8" Sewer Main	1170	LF	$ 69	$ 80,438
	Furnish and Install 10" Sewer Main	4370	LF	$ 80	$ 348,508
	Other Costs: Program Costs, Engineering, Legal, Administrative, 25%				$ 107,236
				Total	**$ 536,200**
15	*Install 4" Force Main with Sewer Lift Station Northwest of Storage Ponds near Hwy 6*				
	Item Description	**Qty**	**Unit**	**Unit Price**	**Amount**
	Furnish and Install 4" Force Sewer Main	3950	LF	$ 54	$ 212,313
	Furnish and Install Sewer Lift Station	1	LS	$ 200,000	$ 200,000
	Other Costs: Program Costs, Engineering, Legal, Administrative, 25%				$ 103,078
				Total	**$ 515,400**
16	*Install 8" Sewer Main West of Storage Ponds to Hwy 6 Lift Station (Project 15)*				
	Item Description	**Qty**	**Unit**	**Unit Price**	**Amount**
	Furnish and Install 8" Sewer Main	5950	LF	$ 69	$ 409,063
	Other Costs: Program Costs, Engineering, Legal, Administrative, 25%				$ 102,265.63
				Total	**$ 511,400**
17	*Install 8" Sewer Main from west to 14400 S (county) and Summit Ridge Pkwy*				
	Item Description	**Qty**	**Unit**	**Unit Price**	**Amount**
	Furnish and Install 8" Sewer Main	7700	LF	$ 69	$ 529,375
	Other Costs: Program Costs, Engineering, Legal, Administrative, 25%				$ 132,344
				Total	**$ 661,800**
18	*Install 4" Force Main with Sewer Lift Station south of Genola near Hwy 6*				
	Item Description	**Qty**	**Unit**	**Unit Price**	**Amount**
	Furnish and Install 4" Force Sewer Main	8450	LF	$ 54	$ 454,188
	Furnish and Install Sewer Lift Station	1	LS	$ 300,000	$ 300,000
	Other Costs: Program Costs, Engineering, Legal, Administrative, 25%				$ 188,547
				Total	**$ 943,000**

Table F-1: Sanitary Sewer Projects – Opinion of Conceptual Project Costs (cont'd)

Project Number	Sanitary Sewer System Improvement Projects				
19	*Install 8" Sewer Main Along Summit Ridge Pkwy from Frontage Rd to East side of I-15*				
	Item Description	**Qty**	**Unit**	**Unit Price**	**Amount**
	Furnish and Install 8" Sewer Main	1740	LF	$ 69	$ 119,625
	Jack and Bore 12" Steel Casing under Freeway	300	LF	$ 300	$ 90,000
	Other Costs: Program Costs, Engineering, Legal, Administrative, 25%				$ 52,406
				Total	**$ 262,100**
20	*Install 8" Sewer Main Along 1000 S from Pole Canyon Road to 300 W*				
	Item Description	**Qty**	**Unit**	**Unit Price**	**Amount**
	Furnish and Install 8" Sewer Main	1530	LF	$ 69	$ 105,188
	Other Costs: Program Costs, Engineering, Legal, Administrative, 25%				$ 26,297
				Total	**$ 131,500**
21	*Install 2nd Screw Press*				
	Item Description	**Qty**	**Unit**	**Unit Price**	**Amount**
	Furnish and Install 2nd Screw Press	1	EA	$ 275,000	$ 275,000
	Misc changes; piping, polymer, access platform, electrical, etc.	1	LS	$ 80,000	$ 80,000
	Upsize Plant Drain LS Pumps	1	LS	$ 30,000	$ 30,000
	Contractor Mob., Insurance, Bonding, OH&P (20%)				$ 77,000
	Other Costs: Engineering, Legal, Administrative, 25%				$ 116,000
				Total	**$ 578,000**
22	*Activation of Membrane Tank #4*				
	Item Description	**Qty**	**Unit**	**Unit Price**	**Amount**
	Furnish Cassette Frames (per existing procurement contract)	2	EA	$ 22,000	$ 44,000
	Furnish Membrane Modules (per existing procurement contract)	96	EA	$ 1,171	$ 112,416
	Install Cassette Frames and Membrane Modules	1	LS	$ 50,000	$ 50,000
	Furnish and Install Ancillary Train 4 Equipment	1	LS	$ 223,000	$ 223,000
	Furnish and Install Coating	1800	SF	$ 30	$ 54,000
	Remove/Replace Knockout Walls	2	EA	$ 2,500	$ 5,000
	Furnish and Install Scour Air Blower	1	LS	$ 65,000	$ 65,000
	Furnish and Install Permeate and Air Piping	1	LS	$ 40,000	$ 40,000
	Install Spare Permeate Pump	1	LS	$ 5,000	$ 5,000
	Procure Shelf Spare Permeate Pump	1	EA	$ 15,000	$ 15,000
	Furnish and Install Chemical Piping	1	LS	$ 7,500	$ 7,500
	Furnish and Install Gate and Actuator	1	LS	$ 10,000	$ 10,000
	Electrical and Controls	1	LS	$ 100,000	$ 100,000
	SCADA Controls and Integration	1	LS	$ 25,000	$ 25,000
	GE engineering, commissioning, and performance test	1	LS	$ 75,000	$ 75,000
	Contractor Mob., Insurance, Bonding, OH&P (20%)				$ 166,000
	Other Costs: Program Costs, Engineering, Legal, Administrative, 25%				$ 249,000
				Total	**$ 1,246,000**

Table F-1: Sanitary Sewer Projects – Opinion of Conceptual Project Costs (cont'd)

Project Number	Sanitary Sewer System Improvement Projects				
23	*Remove Baffle Wall in UV Channel and Install Additional Lamps*				
	Item Description	**Qty**	**Unit**	**Unit Price**	**Amount**
	Remove baffle wall	1	LS	$ 2,000	$ 2,000
	Install 12 additional lamp modules (4 modules x 3 banks)	1	LS	$ 190,000	$ 190,000
	Contractor Mob., Insurance, Bonding, OH&P (20%)				$ 38,000
	Other Costs: Program Costs, Engineering, Legal, Administrative, 25%				$ 58,000
				Total	**$ 288,000**
24	*Install 4th Reclaimed Water Pump*				
	Item Description	**Qty**	**Unit**	**Unit Price**	**Amount**
	Furnish and Install 4th Reclaimed Water Pump	1	LS	$ 70,000	$ 70,000
	Misc Fittings, Valves, Etc.	1	LS	$ 12,500	$ 12,500
	Contractor Mob., Insurance, Bonding, OH&P (20%)				$ 17,000
	Other Costs: Program Costs, Engineering, Legal, Administrative, 25%				$ 25,000
				Total	**$ 125,000**
25	*10" Parallel Reclaimed Water Force Main*				
	Item Description	**Qty**	**Unit**	**Unit Price**	**Amount**
	Furnish and Install Parallel 10" C-900 PVC Reclaimed Water Force Main	6200	LF	$ 50	$ 310,000
	Misc Fittings, Valves, Etc.	1	LS	$ 12,500	$ 12,500
	Contractor Mob., Insurance, Bonding, OH&P (20%)				$ 65,000
	Other Costs: Program Costs, Engineering, Legal, Administrative, 25%				$ 97,000
				Total	**$ 485,000**
26	*Center Street Lift Station Upgrades*				
	Item Description	**Qty**	**Unit**	**Unit Price**	**Amount**
	Purchase and Install Larger Submersible Pumps - 75 hp ea	2	EA	$ 45,000	$ 90,000
	Upgrade Internal Pump Station Piping and Fittings	1	LS	$ 20,000	$ 20,000
	Furnish and Install 10" C-900 PVC Parallel Force Main - Center Steet LS to RR Tracks	680	LF	$ 50	$ 34,000
	Furnish and Install 10" DI 22.5deg MJ Bend	1	LS	$ 750	$ 750
	Furnish and Install 10" DI 90deg MJ Bend	1	LS	$ 750	$ 750
	Tie in Parallel 10" FM w/ Existing 12" FM	1	LS	$ 7,500	$ 7,500
	Contractor Mob., Electrical, Insurance, Bonding, OH&P (25%)				$ 38,000
	Other Costs: Program Costs, Engineering, Legal, Administrative, 25%				$ 48,000
				Total	**$ 239,000**

Table F-1: Sanitary Sewer Projects – Opinion of Conceptual Project Costs (cont'd)

Project Number	Sanitary Sewer System Improvement Projects				
27	*Activation of Membrane Tank #5*				
	Item Description	**Qty**	**Unit**	**Unit Price**	**Amount**
	Furnish Cassette Frames (per existing procurement contract)	2	EA	$ 22,000	$ 44,000
	Furnish Membrane Modules (per existing procurement contract)	96	EA	$ 1,171	$ 112,416
	Install Cassette Frames and Membrane Modules	1	LS	$ 50,000	$ 50,000
	Furnish and Install Ancillary Train 4 Equipment	1	LS	$ 223,000	$ 223,000
	Furnish and Install Coating	1800	SF	$ 30	$ 54,000
	Remove/Replace Knockout Walls	2	EA	$ 2,500	$ 5,000
	Furnish and Install Scour Air Blower	1	LS	$ 65,000	$ 65,000
	Furnish and Install Permeate and Air Piping	1	LS	$ 40,000	$ 40,000
	Install Spare Permeate Pump	1	LS	$ 5,000	$ 5,000
	Procure Shelf Spare Permeate Pump	1	EA	$ 15,000	$ 15,000
	Furnish and Install Chemical Piping	1	LS	$ 7,500	$ 7,500
	Furnish and Install Gate and Actuator	1	LS	$ 10,000	$ 10,000
	Electrical and Controls	1	LS	$ 100,000	$ 100,000
	SCADA Controls and Integration	1	LS	$ 25,000	$ 25,000
	GE engineering, commissioning, and performance test	1	LS	$ 75,000	$ 75,000
	Contractor Mob., Insurance, Bonding, OH&P (20%)				$ 166,000
	Other Costs: Program Costs, Engineering, Legal, Administrative, 25%				$ 249,000
				Total	**$ 1,246,000**
28	*Upsize Reclaimed Water Pumps*				
	Item Description	**Qty**	**Unit**	**Unit Price**	**Amount**
	Furnish and Install Upsized Pumps	3	EA	$ 70,000	$ 210,000
	Misc Fittings, Valves, Etc.	1	LS	$ 25,000	$ 25,000
	Contractor Mob., Insurance, Bonding, OH&P (20%)				$ 47,000
	Other Costs: Program Costs, Engineering, Legal, Administrative, 25%				$ 71,000
				Total	**$ 353,000**
29	*Upsize Screw Presses*				
	Item Description	**Qty**	**Unit**	**Unit Price**	**Amount**
	Furnish and Install 2 Larger Screw Presses (80 gpm each)	2	EA	$ 400,000	$ 800,000
	Misc Changes; Piping, Polymer, Access Platform, Electrical, etc.	1	LS	$ 250,000	$ 250,000
	Larger Dewatering Feed Pumps and Associated Piping	1	LS	$ 100,000	$ 100,000
	Contractor Mob., Insurance, Bonding, OH&P (20%)				$ 230,000
	Other Costs: Program Costs, Engineering, Legal, Administrative, 25%				$ 345,000
				Total	**$ 1,725,000**
30	*Biological Process (3rd Train)*				
	Item Description	**Qty**	**Unit**	**Unit Price**	**Amount**
	Remove Existing Coarse Bubble Aeration and Decant Pumping Systems	1	LS	$ 10,000	$ 10,000
	Furnish and Install Submersible Mixers in Anoxic Basins	2	EA	$ 15,000	$ 30,000
	Furnish and Install Fine Bubble Diffusers	1	LS	$ 20,000	$ 20,000
	Extend 8" SCH 10 SS Air Main Piping from Blower Room to Aeration Tanks	125	LF	$ 100	$ 12,500
	Aeration Control Valves and Actuators	3	EA	$ 12,000	$ 36,000
	Furnish and Install 4th Aeration Blower	1	EA	$ 50,000	$ 50,000
	Remove Dewatering Feed Pumps from Kiva #2	1	LS	$ 5,000	$ 5,000
	Furnish and Install Recycle Pumps (~2000gpm @ 15' TDH) in Kiva #2	2	EA	$ 15,000	$ 30,000
	Furnish and Install Recycle Pump Piping, Fittings and Valves (Assume 12" DIP)	1	LS	$ 55,000	$ 55,000
	Contractor Mob., Electrical, Instrumentation & Controls, Insurance, Bonding, OH&P (23%)				$ 57,000
	Other Costs: Program Costs, Engineering, Legal, Administrative, 30%				$ 92,000
				Total	**$ 398,000**

Table F-1: Sanitary Sewer Projects – Opinion of Conceptual Project Costs (cont'd)

Project Number	Sanitary Sewer System Improvement Projects				
31	*Biosolids Holding Tank*				
	Item Description	**Qty**	**Unit**	**Unit Price**	**Amount**
	Construct 100,000 gal Biosolids Holding Tank	1	LS	$ 175,000	$ 175,000
	Furnish and Install Coarse Bubble Diffusers and Decant Mechanism	1	LS	$ 25,000	$ 25,000
	Extend Air Piping to new Biosolids Holding Tank location	150	LF	$ 50	$ 7,500
	Furnish and Install New Dewatering Feed Pumps	1	LS	$ 50,000	$ 50,000
	Furnish and Install Dewatering Pump Piping, Fittings and Valves	1	LS	$ 50,000	$ 50,000
	New Dewatering Feed Pump Structure adjacent to Dewatering Bldg	1	LS	$ 100,000	$ 100,000
	Contractor Mob., Insurance, Bonding, OH&P (20%)				$ 82,000
	Other Costs: Contingency, Program Costs, Engineering, Legal, Administrative, 28%				$ 137,000
				Total	**$ 627,000**
32	*12" Parallel Sewer Force Main (RR to WRF)*				
	Item Description	**Qty**	**Unit**	**Unit Price**	**Amount**
	Furnish and Install 12" C-900 PVC Parallel Force Main - RR Tracks to WRF Headworks	480	LS	$ 55	$ 26,400
	'Furnish and Install 12" DI 90deg MJ Bend	2	LS	$ 1,000	$ 2,000
	Tie in Parallel 12" FM at WRF Headworks	1	LS	$ 5,000	$ 5,000
	Contractor Mob., Insurance, Bonding, OH&P (20%)				$ 7,000
	Other Costs: Program Costs, Engineering, Legal, Administrative, 25%				$ 10,000
				Total	**$ 51,000**
33	*Populate 2nd UV Channel*				
	Item Description	**Qty**	**Unit**	**Unit Price**	**Amount**
	Populate second channel- fully outfitted (8 modulesx 3 banks)	1	LS	$ 560,000	$ 560,000
	Contractor Mob., Insurance, Bonding, OH&P (20%)				$ 112,000
	Other Costs: Program Costs, Engineering, Legal, Administrative, 25%				$ 168,000
				Total	**$ 840,000**
34	*Activation of Membrane Tank #6 (Change backpulse to membrane tank)*				
	Item Description	**Qty**	**Unit**	**Unit Price**	**Amount**
	Furnish Cassette Frames (per existing procurement contract)	2	EA	$ 22,000	$ 44,000
	Furnish Membrane Modules (per existing procurement contract)	96	EA	$ 1,171	$ 112,416
	Install Cassette Frames and Membrane Modules	1	LS	$ 50,000	$ 50,000
	Furnish and Install Ancillary Train 6 Equipment	1	LS	$ 223,000	$ 223,000
	Furnish and Install Coating (Backpulse Tank is Already Coated)	0	SF	$ 30	$ -
	Remove/Replace Knockout Walls	2	EA	$ 2,500	$ 5,000
	Furnish and Install Scour Air Blower	1	LS	$ 65,000	$ 65,000
	Furnish and Install Permeate and Air Piping	1	LS	$ 40,000	$ 40,000
	Install Spare Permeate Pump	1	LS	$ 5,000	$ 5,000
	Procure Shelf Spare Permeate Pump	1	EA	$ 15,000	$ 15,000
	Furnish and Install Chemical Piping	1	LS	$ 7,500	$ 7,500
	Furnish and Install Gate and Actuator	1	LS	$ 10,000	$ 10,000
	Electrical and Controls	1	LS	$ 100,000	$ 100,000
	SCADA Controls and Integration	1	LS	$ 25,000	$ 25,000
	GE engineering, commissioning, and performance test	1	LS	$ 75,000	$ 75,000
	Remove Piping (Utility Water Intake, Effluent, Backpulse)	1	LS	$ 10,000	$ 10,000
	Piping Changes Outside Tank	1	LS	$ 7,500	$ 7,500
	Install Level Effluent Weir	1	LS	$ 7,500	$ 7,500
	Connect Tank Drain to Drain Pump Intake Manifold	1	LS	$ 7,500	$ 7,500
	Install Tank for Utility Water Needs	1	LS	$ 10,000	$ 10,000
	Contractor Mob., Insurance, Bonding, OH&P (20%)				$ 164,000
	Other Costs: Program Costs, Engineering, Legal, Administrative, 25%				$ 246,000
				Total	**$ 1,230,000**

Table F-1: Sanitary Sewer Projects – Opinion of Conceptual Project Costs (cont'd)

Project Number	Sanitary Sewer System Improvement Projects				
35	*Expand Headworks Building and Add Additional Drum Screen*				
	Item Description	**Qty**	**Unit**	**Unit Price**	**Amount**
	Furnish and Install Third Drum Screen (4 MGD Peak Hour Capacity) and Washer/Compactor	1	EA	$ 300,000	$ 300,000
	Misc Changes (Piping, Flow Split, Electrical, etc.)	1	LS	$ 100,000	$ 100,000
	Building Expansion (Includes HVAC, doors, etc.)	800	SF	$ 200	$ 160,000
	Contractor Mob., Insurance, Bonding, OH&P (20%)				$ 112,000
	Other Costs: Contingency, Program Costs, Engineering, Legal, Administrative, 25%				$ 168,000
				Total	**$ 840,000**
36	*Construct Additional North 106 MG Winter Storage Pond*				
	Item Description	**Qty**	**Unit**	**Unit Price**	**Amount**
	Lined Storage Pond and Associated Piping	106	MG	$ 20,000	$ 2,120,000
	Contractor Mob., Insurance, Bonding, OH&P (20%)				$ 424,000
	Other Costs: Contingency, Program Costs, Engineering, Legal, Administrative, 25%				$ 636,000
				Total	**$ 3,180,000**
37	*Construct Additional South 93 MG Winter Storage Pond*				
	Item Description	**Qty**	**Unit**	**Unit Price**	**Amount**
	Lined Storage Pond and Associated Piping	93	MG	$ 20,000	$ 1,860,000
	Existing Reclaimed Water Pump Station Piping and Valving Adjustments	1	LS	$ 20,000	$ 20,000
	12" Force Main from Existing Ponds to Proposed Storage Pond	14,700	LS	$ 95	$ 1,396,500
	Contractor Mob., Insurance, Bonding, OH&P (20%)				$ 655,000
	Other Costs: Contingency, Program Costs, Engineering, Legal, Administrative, 25%				$ 983,000
				Total	**$ 4,915,000**
38	*Public Works Facility*				
	Item Description	**Qty**	**Unit**	**Unit Price**	**Amount**
	Construct Public Works Facility	1	LS	$ 2,024,000	$ 2,024,000
	Other Costs: Program Costs, Engineering, Legal, Administrative, 25%				$ 506,000
				Project Subtotal	$ 2,530,000
				Portion of Total Project Cost Paid for by Sewer Fund	**$ 632,500**

36/37 (Alt)	*Construct Aquifer Recharge Ponds*				
	Item Description	**Qty**	**Unit**	**Unit Price**	**Amount**
	Shallow Spreading Ponds, Filtration Media, Distribution Boxes, and other Related Infrastructure	1	LS	$ 300,000	$ 300,000
	Force Main to Recharge Location	3000	LF	$ 79	$ 236,250
	Contractor Mob., Insurance, Bonding, OH&P (20%)				$ 107,000
	Other Costs: Contingency, Program Costs, Engineering, Legal, Administrative, 25%				$ 161,000
				Total	**$ 805,000**

Table F-2: Sanitary Sewer Unit Prices Used for Estimated Pipe Installation and Oversizing Reimbursement

Item	Unit	Unit Price	+ Backfill Material	+ Bedding Material	+ Asphalt Repair	Manhole	Total Cost / Foot
4" Gravity Sewer Main	L.F.	$ 30	$ 3	$ 2	$ 12	$ 9	$ 56
6" Gravity Sewer Main	L.F.	$ 35	$ 3	$ 2	$ 12	$ 9	$ 61
8" Gravity Sewer Main	L.F.	$ 40	$ 3	$ 2	$ 15	$ 9	$ 69
10" Gravity Sewer Main	L.F.	$ 45	$ 5	$ 3	$ 18	$ 9	$ 80
12" Gravity Sewer Main	L.F.	$ 55	$ 6	$ 4	$ 21	$ 9	$ 95
15" Gravity Sewer Main	L.F.	$ 60	$ 7	$ 5	$ 22	$ 9	$ 103
18" Gravity Sewer Main	L.F.	$ 65	$ 8	$ 6	$ 24	$ 9	$ 112
24" Gravity Sewer Main	L.F.	$ 75	$ 10	$ 8	$ 27	$ 9	$ 129
4" Force Main, Valves, Fittings	EA.	$ 28	$ 1	$ 2	$ 14	$ 9	$ 54
6" Force Main, Valves, Fittings	EA.	$ 33	$ 1	$ 2	$ 14	$ 9	$ 59
8" Force Main, Valves, Fittings	EA.	$ 41	$ 2	$ 2	$ 15	$ 9	$ 69
10" Force Main, Valves, Fittings	EA.	$ 46	$ 3	$ 3	$ 18	$ 9	$ 79

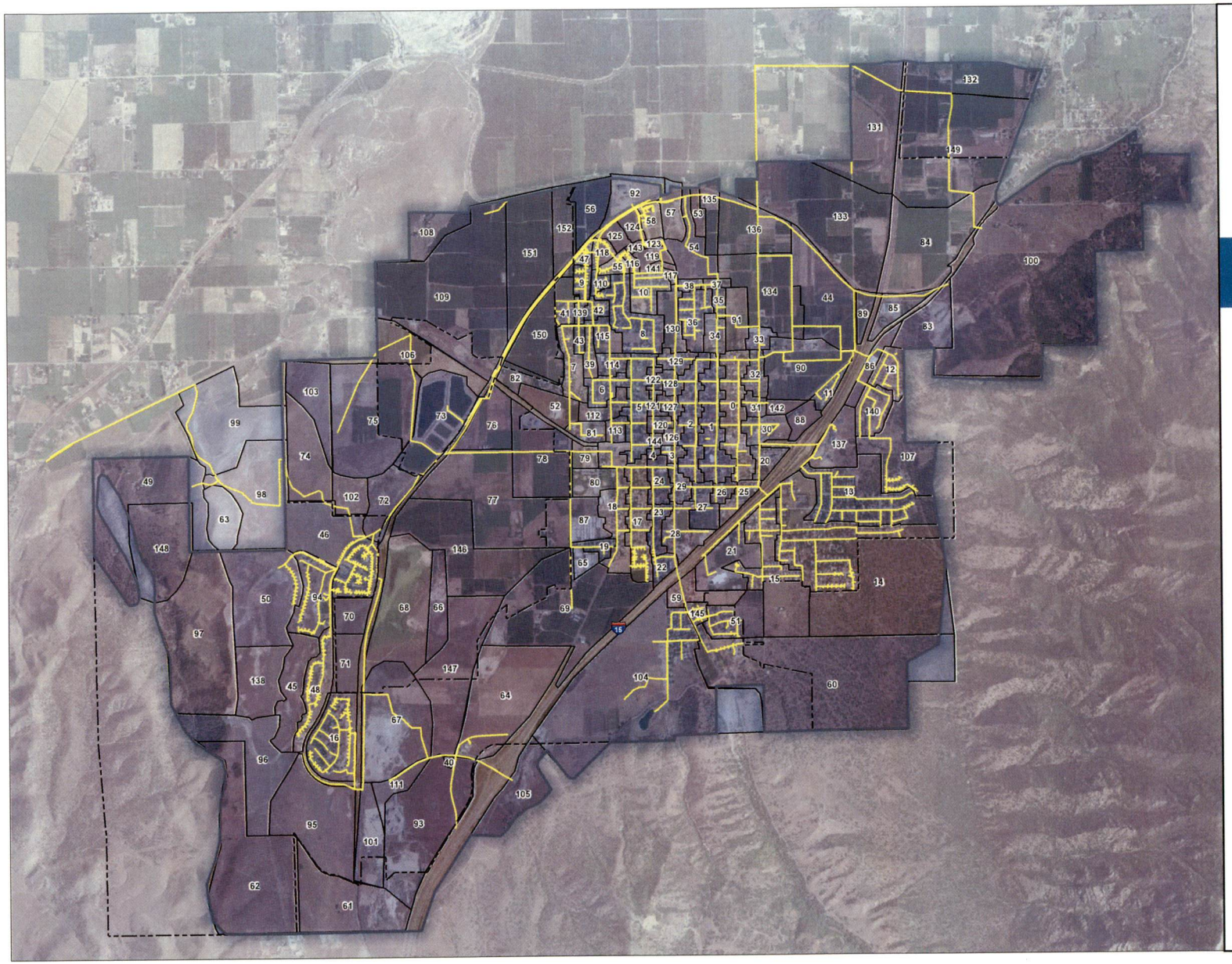
[1]Assumes one manhole per 400 feet at $3,500 each

Table F-3: Sample of Detailed Sanitary Sewer Pipe Costs Used for Estimated Pipe Installation and Oversizing Reimbursement

Item	Unit	Unit Price
4" Gravity Sewer Main	L.F.	$ 56
6" Gravity Sewer Main	L.F.	$ 61
8" Gravity Sewer Main	L.F.	$ 69
10" Gravity Sewer Main	L.F.	$ 80
12" Gravity Sewer Main	L.F.	$ 95
15" Gravity Sewer Main	L.F.	$ 103
18" Gravity Sewer Main	L.F.	$ 112
24" Gravity Sewer Main	L.F.	$ 129
4" Force Main, Valves, Fittings	L.F.	$ 54
6" Force Main, Valves, Fittings	L.F.	$ 59
8" Force Main, Valves, Fittings	L.F.	$ 69
10" Force Main, Valves, Fittings	L.F.	$ 79
Oversizing 8 to 10 inch Pipes	L.F.	$ 11
Oversizing 8 to 12 inch Pipes	L.F.	$ 26
Oversizing 8 to 15 inch Pipes	L.F.	$ 34
Oversizing 8 to 18 inch Pipes	L.F.	$ 43
Oversizing 8 to 24 inch Pipes	L.F.	$ 60
Oversizing 4 to 6 inch Pipes (FM)	L.F.	$ 5
Oversizing 6 to 8 inch Pipes (FM)	L.F.	$ 10
Oversizing 8 to 10 inch Pipes (FM)	L.F.	$ 15

FM - Force Main

APPENDIX G
FLOW GENERATION DATABASE (MODEL LOADING REGIONS)



Santaquin

Sanitary Sewer System Master Plan and Capital Facilities Plan

Model Loading Regions

FIGURE G-1

Buildout Sewer Pipe

Loading Region

Loading Region ID

N

0 0.5 1 Miles

JUB THE LANGDON GROUP GATEWAY MAPPING INC.

OTHER JUB COMPANIES

Date: 12/14/2016

Table G-1: Flow Generation Database (Model Loading Regions)

Region Number	Discharge Manhole ID	Existing ERUs	Horizon ERUs	Buildout ERUs
0	K2	91	97	154
1	J8	87	92	156
2	H1	88	91	133
3	G22	27	28	33
4	F11	7	7	11
5	E2	68	74	163
6	D2	45	50	55
7	C2	41	42	56
8	N948	120	123	153
9	XJ750	28	29	30
10	N950	57	61	66
11	X67	55	56	58
12	J-74	62	63	70
13	X91	163	220	260
14	Q9	187	273	464
15	N1	115	167	234
16	SR778	95	169	170
17	W17	87	96	145
18	D19	70	128	212
19	C28	24	25	27
20	M16	70	71	78
21	XJ762	24	25	133
22	X18	35	36	38
23	F20	20	20	39
24	W19	27	28	46
25	W29	27	30	27
26	W27	17	17	21
27	W25	18	18	25
28	G32	37	38	101
29	W21	21	21	28
30	M9	28	38	60
31	M6	14	15	27
32	A26	27	31	42
33	X82	18	20	34
34	J4	11	20	50
35	A17	14	14	14
36	x193	63	64	71
37	X171	8	13	17
38	N870	12	12	12
39	Y42	23	30	30
40	0	0	0	0
41	X203	24	25	25
42	B10	22	22	22
43	X22	17	17	17
44	N1008	0	42	230
45	N100	0	0	105
46	SR626	78	365	366
47	A1	15	15	15
48	SR744	52	90	90
49	N500	0	0	195

Region Number	Discharge Manhole ID	Existing ERUs	Horizon ERUs	Buildout ERUs
50	N158	2	27	122
51	XJ815	40	86	167
52	C11	8	45	49
53	N207	0	0	41
54	N206	0	0	164
55	N936	5	28	28
56	N982	0	0	162
57	N203	0	0	116
58	N201	23	113	111
59	X61	0	0	24
60	X156	13	30	212
61	SR696	0	0	91
62	SR715	0	0	350
63	N/A	0	0	0
64	SR635	14	29	192
65	C27	1	1	49
66	SR667	0	0	10
67	SR656	0	75	687
68	N/A	0	0	0
69	C28	58	62	73
70	SR680	0	0	225
71	SR682	0	0	90
72	SR683	0	0	1
73	N515	0	0	2
74	N513	0	0	299
75	N515	0	10	309
76	N374	0	0	36
77	W2	0	4	656
78	W6	8	8	37
79	W11	14	15	15
80	C22	2	2	3
81	C15	20	23	71
82	N373	0	8	19
83	N134	0	0	129
84	N878	0	4	56
85	N144	2	2	13
86	X179	3	3	29
87	C25	0	0	121
88	X67	2	2	15
89	N146	0	0	53
90	X77	11	11	359
91	A19	0	0	77
92	N211	1	1	2
93	SR703	0	59	246
94	N100	11	84	84
95	SR709	0	52	152
96	SR716	0	75	222
97	N501	0	0	164
98	N/A	0	0	0
99	N/A	0	0	0

Table G-1: Flow Generation Database (Model Loading Regions) (cont'd)

Region Number	Discharge Manhole ID	Existing ERUs	Horizon ERUs	Buildout ERUs
100	N882	0	0	160
101	SR710	0	0	491
102	N180	0	0	20
103	N514	0	0	18
104	N12	53	143	585
105	N56	0	0	1
106	N516	0	4	39
107	J-86	21	100	107
108	N972	3	3	11
109	N972	0	0	897
110	J-66	20	21	22
111	SR704	0	0	146
112	D11	18	18	48
113	D15	11	26	40
114	B18	19	19	23
115	B12	15	15	28
116	N960	0	17	17
117	A9	5	9	9
118	N962	9	22	22
119	N900	0	43	43
120	F8	13	13	36
121	F5	7	7	8
122	F3	7	7	9
123	N898	5	15	15
124	N200	0	47	47
125	N974	1	43	43
126	G18	6	9	32
127	G15	13	14	18
128	G12	9	9	22
129	G6	19	19	31
130	A11	11	11	81
131	N326	0	0	40
132	N510	0	0	9
133	N872	0	3	47
134	N352	1	5	327
135	N208	0	1	98
136	N210	0	0	364
137	X57	9	14	55
138	N158	0	0	19
139	B9	15	15	15
140	J-76	53	92	107
141	N910	0	9	9
142	N148	1	9	19
143	N894	0	14	14
144	F12	5	6	6
145	XJ159	17	18	18
146	SR665	0	0	10
147	SR686	0	20	538
148	N500	0	0	86
149	N511	0	0	87
150	N512	2	2	222
151	N990	0	0	293
152	N986	0	0	106
	Total	2,835	4,730	16,289

APPENDIX H
WATER RECLAMATION FACILITY LEVEL OF SERVICE

Santaquin Water Reclamation Facility Existing System Capacity Analysis

December 2016

Water Reclamation Facility Demands

SCADA from the Main Lift Station was analyzed to determine the average day, peak month, peak day, and peak hour demands. A summary of these demands are shown below. Note that these are figures as of 2014.

Table 1- Influent Lift Station Flow Summary

	GPM	MGD	Peaking Factor	Cumulative
Average Day	371	0.534		
Peak Month	393	0.567	1.06	1.06
Peak Day	474	0.683	1.20	1.28
Peak Hour	750	1.080	1.58	2.02

Center Street Influent Lift Station

The original KSB submersible pumps were replaced with two new 6 inch Flygt pumps in 2013 and the Center Street lift station was reconfigured to serve as the influent lift station to the plant. In its new configuration, the lift station pumps to the headworks building where the raw sewage is screened prior to entering the biological process. The pumps operate in a duty/standby configuration and are not intended to operate simultaneously. The design capacity of each pump is 1,409 gpm (2.03 MGD) at 62.3 ft TDH. The installed capacity of the pumps is actually 1,550-1,600 gpm based on readings from the magnetic flow meter (these flows will likely decrease to closer to the design capacity as the pipe ages). The 2014 average day flow at the treatment plant is approximately 371 gpm (0.534 MGD), which is well below the capacity of the pumps. As the peak flows to the treatment plant approach 1,400-1,500 gpm, the existing pumps will need to be replaced with larger pumps.

Wastewater is conveyed from the Center Street Lift Station (LS) to the WRF through a single force main. A portion of this 10 inch force main, from the Center Street LS to the railroad tracks, was previously used to convey wastewater to the 420 West LS. This 10 inch pipeline includes a flow meter and valves. After the pipeline extends under the railroad tracks the pipeline connects to a 12 inch line that extends into the screens in the headworks building. During construction of the WRF a parallel 10 inch force main (C-900 PVC) was laid under the railroad tracks to maintain acceptable velocities into the WRF in the future. In order to maintain a maximum velocity of 6 fps in the 10 inch line a parallel line should be laid in the segment from the Center Street LS to the railroad tracks in the future when flows exceed 1,469 gpm. Likewise, in order to maintain a maximum velocity of 6 fps in the 12 inch line from the railroad tracks to the WRF a parallel line should be laid in that segment when flows exceed 2,115 gpm.

Table 2 - Influent Lift Station Expansion Summary

Component	Design Capacity			ERU Level of Service (gpd/ERU)	ERU Capacity
	Peak Hour Flow Basis (gpm)	Average Daily Flow Basis (gpm)[a]	Average Daily Flow Basis (gpd)		
Lift station pumps (duty/standby)	1,409	698	1,005,120	200	5,026
10" Portion of Forcemain, Valves & Flowmeter (Center Street LS to RR)	1,469	727	1,046,880	200	5,234
12" Portion of Forcemain (RR to WRF)	2,115	1047	1,507,680	200	7,538

a. Assumes a peak hour flow factor of 2.02 (See Table 1)

Headworks Building

Rotary Drum Fine Screens

The two rotary drum screens are each capable of processing a peak hour flow of 4.0 MGD (2,778 gpm), which in Santaquin equates to an average day of 1.99 MGD (1375 gpm). Because one unit is sized to handle all design flow conditions, the other unit is redundant. One hundred percent reliability is required because bypassing the screens is not permissible; doing so would jeopardize the membrane equipment and potentially lead to costly repairs. An additional drum screen is needed when the capacity is 115% of system demand, which equates to an average day system demand of 1.72 MGD or 8,609 ERUs. This is expected to occur by about year 2037. The additional drum screen will require the expansion of the headworks building.

Grit Removal (Future)

Grit removal equipment was not included as part of the 2013 WRF Project for the following reasons:

- Potential for settling in the grit chamber at initial lower flow conditions which could cause operational problems
- Relatively new and "tight" collection system should minimize grit loading to the plant
- Large wet well upstream of the plant at the Center Street lift station should allow most of the grit to settle in the wet well

During design, it was decided that the potential benefits of the grit system did not justify its expense especially during the lower flow, early years. However, the site was master planned to allow for the addition of a grit removal system in the future. Space for a future vortex grit chamber was provided in the yard between the headworks building and the process building. Two tees were stubbed out of the screened influent line to the biological basins and are spaced appropriately to install a future grit chamber. The design included sufficient hydraulic head for the screened influent to gravity flow through the future grit chamber and on to the biological basins.

The need for a grit removal system can be assessed by evaluating the buildup of grit within the process basins (either by draining or core sampling) or noting if any excessive wear is occurring on equipment such as the screens, pumps or membranes. Operations staff have noted that grit does tend to accumulate in the Center Street LS wet well, which is occasionally cleaned using a vacuum truck. Regular cleaning of the wet well may reduce the amount of grit passed to the treatment facility. However, as flows increase the ability to capture grit within the wet well may decrease due to the increased turbulence and shorter detention times.

Odor Control Biofilter

The existing biofilter is adequately sized to provide all of the odor control needs at the headworks and dewatering building for the foreseeable future. That said, the fans may struggle to push air through the biofilter as the media compacts and ages over time. It is anticipated that the biofilter media will need to be replaced in 5-10 years. Additional biofilter media and larger exhaust fans may need to be installed if the buildings are expanded in the future.

Table 3 - Headworks Building Expansion Summary

Component	Design Capacity			ERU Level of Service (gpd/ERU)	ERU Capacity
	Peak Hour Flow Basis (gpm)	Average Daily Flow Basis (gpm)[a]	Average Daily Flow Basis (gpd)		
Screens (duty/standby)	2,778	1375	1,980,000	200	9,900

Component	Design Capacity	Expansion	ERU Capacity
Grit Removal System	Not installed	Install if grit accumulation becomes an issue, may never be needed	City judgment
Biofilter	Treats airflow based on volume of HW/DW building	Expand when HW/DW building is expanded. Replace biofilter media as required every 5-10 years. Monitor exhaust fan pressure gauge to determine when media needs to be replaced.	Expand if headworks building is expanded

a. Assumes a peak hour flow factor of 2.02

Biological Processes

The biological process consists of three parallel process trains. Two process trains are fully outfitted and ready for service as process basins while the third train is now serving as a biosolids holding tank. Since commissioning, only one train has been in service. The process was designed to have a maximum month capacity of 0.77 MGD (0.712 MGD AADF) in each process train or a total maximum month capacity of 2.31 MGD with all three trains in operation. Per DWQ rules, a redundant or standby process train is not required, thus simultaneous operation of each train is possible. Based on the current configuration, two process trains could operate concurrently at a firm capacity of 1.54 MGD on a maximum monthly basis. This translates to an AADF of 1.45 MGD using a maximum month peaking factor of 1.06. With the third process train in service, the AADF capacity of biological process would reach 2.18 MGD.

The third process train would need to be converted from a biosolids holding tank to a process tank in order for it to be placed into service. Several changes would be required to make this conversion, these include:

- Remove existing coarse bubble aeration system and decant pumping system
- Purchase and install two submersible mixers in each anoxic basin
- Purchase and install fine bubble diffusers in the three aerobic basins
- Extend air main from blower room to third aeration basin.
- Install fourth process aeration blower
- Remove dewatering feed pumps and piping from 'Kiva 2'
- Install recycle pumps (duty/standby) and piping in 'Kiva 2'
- Consider construction of a dedicated biosolids holding tank
- Alternatively, waste biosolids can be pumped directly to the dewatering facilities
- Reinstall dewatering feed pumps and piping based on selected alternative.

Once all three process trains are in service, an additional process train(s) will be required to increase capacity. Future process trains will either need to be housed in a new building or an expansion of the existing process building. The facility has been configured to support the addition of future process trains on the east side of the process building.

Table 4 - Biological Processes Capacity Summary

Component	Current Status	Design Capacity on AADF Basis (gpd)	ERU Level of Service (gpd/ERU)	ERU Capacity
Process Train 1	In Service	712,000	200	3,560
Process Train 2	Ready For Service	712,000	200	3,560
Process Train 3	Used for Biosolids Holding Tank	712,000	200	3,560
Total Existing Firm Capacity (2 Trains)		**1,424,000**	**200**	**7,120**
Total Future Firm Capacity (3 Trains)		**2,136,000**	**200**	**10,680**

Membrane Bioreactor

The WRF was originally constructed with six membrane tanks, three of which are currently outfitted with membrane cassettes. The three remaining tanks are for future use, with one temporarily serving as a back pulse tank. In the future, as more membrane cassettes are placed into service a dedicated back pulse tank should not be required.

Each membrane tank contains 96 membrane modules with a surface area of 370 sqft/module. The annual average design flux is 10.3 gfd or gal/sqft/day. Thus each membrane tank has a capacity of 365,856 gpd. The membrane tanks occasionally need to be taken out of service for maintenance cleaning, therefore the firm capacity is the N-1 condition or 2 tanks for the current configuration.

The average design flux of 10.3 gfd is somewhat conservative and it may be possible to operate the membranes at a higher average flux rate in order to increase the capacity and defer membrane expansion. This should be carefully vetted with the membrane manufacturer (GE) and the operations staff to fully understand the ramifications of this change.

Table 5 - Membrane Bioreactor Capacity Summary

Component	Current Status	Design Capacity on an AADF Basis (gpd)	ERU Level of Service (gpd/ERU)	ERU Capacity
Membrane Tank 1	In Service	365,856	200	1,829
Membrane Tank 2	In Service	365,856	200	1,829
Membrane Tank 3	In Service	365,856	200	1,829
Membrane Tank 4	Used as Backpulse Tank	365,856	200	1,829
Membrane Tank 5	In Place- For Future Use	365,856	200	1,829
Membrane Tank 6	In Place – For Future Use	365,856	200	1,829
Total Existing Capacity (3 Tanks)		**1,097,568**	**200**	**5,488**
Total Existing Firm Capacity (2 Tanks)[a]		**731,712**	**200**	**3,658**
Total Future Capacity (6 Tanks)		**2,195,136**	**200**	**10,975**
Total Future Firm Capacity (5 Tanks)[a]		**1,829,280**	**200**	**9,146**

a. Considers N-1 Condition where one tank may be out of service for cleaning/maintenance

With respect to schedule on the addition of membrane cassettes, the City must be cognizant of the anticipated lead times to design, procure and install this equipment. First a design must be prepared for the aeration, permeate, cleaning, tank drainage and other ancillary systems. Next the manufacturer will utilize this design to select equipment and generate shop drawings for review. Following review and approval, the equipment will be placed into production and then shipped which based on past experience with GE could take six months or more. Some elements of construction can occur during equipment manufacture but most construction will occur after delivery. An estimate of the cumulative time required for design, shop drawings, manufacture, and construction and commissioning will be approximately 12-18 months.

Chemical Feed Systems

The existing sodium hypochlorite chemical feed system is not routinely used. It serves to dose existing process piping to mitigate filamentous growth and to further disinfect effluent if required. It is not anticipated that the existing chemical feed system will need to be upgraded in the foreseeable future.

As additional membrane capacity is installed, membrane chemical system upgrades may be required but these will be provided as part of the contract with GE.

Table 6 - Chemical Feed Systems Expansion Summary

Component	Design Capacity	Expansion	ERU Capacity
Sodium Hypochlorite Chemical Feed System	10 gph	This chemical feed skid is not routinely used and upgrades are not anticipated.	No capacity limitation anticipated
GE Chemical Feed Systems		Upgraded chemical feed systems will be provided by GE as membrane capacity is increased.	Expand if membrane bioreactor is upsized

Ultraviolet Light Disinfection

From the table below, the maximum flow for one duty channel with the channel reduction baffle is 1.58 MGD. This includes two duty banks with 4 modules per bank and 8 lamps per module. The third bank of lamps is redundant.

The maximum flow for one channel with the channel reduction baffle removed is 3.16 MGD. This includes two duty banks with 8 modules per bank and 8 lamps per module. The third bank of lamps is redundant.

The maximum flow for two channels with no channel reduction baffles is 6.32 MGD. This includes two duty banks with 8 modules per bank and 8 lamps per module in each channel. The third bank of lamps is redundant in each channel.

The initial 2013 construction included the installation of 3 banks of lamps installed in one channel, with 4 modules per bank and 8 lamps per module.

Table 7 - UV Disinfection Capacity Criteria [a]

Design Flow, mgd	Total # of Channels	Total # of Duty Channels	Banks per Channel	# of Banks at Duty	Modules per Bank	Lamps per Module	Total # of Duty Lamps per Bank	Total # of Lamps	Flow per Lamp, gpm	Delivered Dose	Meets Specified Dose?
1.58	1	1	3	2	4[b]	8	32	96	34.29	80.35	yes
3.16	1	1	3	2	8	8	64	192	34.29	80.35	yes
6.32	2	2	3	2	8	8	64	384	34.29	80.35	yes

a. The assumptions are as follows from the specifications: the design dose is 80 mJ/cm^2, the UV transmittance is 65%, the fouling factor and aging factor are 0.9, and there is always one redundant bank that is not included in the "duty" and is not part of the delivered dose. Of the three banks of lamps there are always two on and one in standby mode.

b. Channel reduction baffle is installed.

Table 8 - UV Disinfection Expansion Summary

Component	Design Capacity	Expansion	ERU Capacity
UV Disinfection System as currently configured	1,097 gpm at peak hour flow	Remove baffle wall when peak permeate flows approach 1,000 gpm	3,910 (using phf of 2.02)
UV Disinfection System with baffle wall removed	2,194 gpm at peak hour flow	Populate second channel when peak permeate flows approach 2,100 gpm	7,820 (using phf of 2.02)
UV Disinfection System with both channels populated	4,389 gpm at peak hour flow		15,644 (using phf of 2.02)

Component	Design Capacity			ERU Level of Service (gpd/ERU)	ERU Capacity
	Peak Hour Flow Basis (gpm)	Average Daily Flow Basis (gpm)[a]	Average Daily Flow Basis (gpd)		
Current UV System Configuration	1,097	543	781,920	200	3,910

a. Assumes a peak hour flow factor of 2.02

Reclaimed Water Infrastructure

Reclaimed Water Pump Station

The reclaimed water pump station consists of three 40HP vertical turbine pumps that were installed during the 2013 construction project with space for a fourth pump in the future. At startup, 2 of the pumps are duty and 1 is standby. The capacity of each pump is 800 gpm at 135 feet of head. The table below provides the capacity of the pumping system for one, two and three pumps in operation with one pump always available as a standby. To date, the City has never had to operate more than a single pump.

Table 9 - Reclaimed Water Pump Station Capacity Criteria [a]

Pumps	Flow Capacity (gpm)	ERU Capacity[b]
1 duty, 2 standby	800-900	2,851
2 duty, 1 standby	1,100-1,200	3,924
3 duty, 1 standby (Add the future pump)	1,200-1,400	4,990
3 duty, 1 standby (Modify pump impellers or upsize pumps as flows approach capacity of 3 pumps operating simultaneously. Consider upsizing sections of 10" force main or install a parallel pipe.)	>1,400 gpm	>4,990

a. This analysis assumes that 100% of the reclaimed water flows through the existing 10, 12 and 14 inch pipelines.

b. Assumes a peak hour flow factor of 2.02

Table 10 - Current Reclaimed Water Pump Station Capacity

Component	Design Capacity			ERU Level of Service (gpd/ERU)	ERU Capacity
	Peak Hour Flow Basis (gpm)	Average Daily Flow Basis (gpm) [(1)]	Average Daily Flow Basis (gpd)		
Current Reclaimed Water Pump Station Configuration	1,100	545	784,800	200	3,924

a. Assumes a peak hour flow factor of 2.02

Reclaimed Water Pipeline

The force main that previously conveyed sewage from the 420 West lift station to the lagoons is now the reclaimed water line. This line now delivers pressurized reclaimed water from the reclaimed water pump station to the storage ponds. The size of this line is a mixture of 10 and 12 inch pipelines. The majority of the existing reclaimed water line is 10 inch. As the flow increases beyond 1,500 gpm (2.16 MGD), the portions of the discharge pipe from the WRF to the existing storage ponds that are 10 inch can be upsized to reduce velocities or a parallel pipe can be installed in these locations. Another option would be to construct an alternate storage/disposal pond with new pipe routing or obtain a UPDES permit at the Strawberry Highline Canal. Alternatively, the pump impellers can be modified to produce more flow or the pumps can be upsized to accommodate the increased friction loss due to higher pipe velocities. The

table below shows the capacity of the pumps in the Reclaimed Water Pump Station if any of the following occur:

- The existing 10 inch pipe carries 50% of the flow, which assumes that another parallel pipe is added, or
- a new larger diameter pipe replaces the 10 inch, or
- some water is sent to an alternate disposal location, or
- The pump impellers are modified to discharge additional flow, or
- The pumps are upsized.

Table 11 -Reclaimed Water Pump Station Capacity Criteria—Pipelines Upsized [a]

Pumps	Flow Capacity (gpm)	ERU Capacity
2 duty, 1 standby	1,400-1,600	5,703
3 duty, 1 standby (Add the future pump)	1,600-1,800	6,416

a. This analysis assumes use of the existing pumps and only 50% of the reclaimed water flows through the existing 10 inch pipelines and 100% through the 12 and 14 inch pipelines. Instead of upsizing the pipeline, similar discharge rates can be achieved by modifying the pump impellers or upsizing the pumps which would be a cheaper capital cost but increased O&M costs.

Reclaimed Water Storage Ponds

The table below shows the capacity of the reclaimed water storage ponds, which store water during the winter months for use of the water for irrigation during the summer months. The ponds have a total storage capacity of 178 million gallons. As the flow to the new WRF approaches 1.0 MGD average day the City will need to construct shallow spreading ponds that have been permitted by the State of Utah (see State of Utah Water Right RC007). Water Right RC007 allows for recharge of Type 1 reclaimed water in the amount of 550 acre feet per year. This 550 acre feet per year effectively doubles the City's winter storage capacity of the existing ponds. A recover permit for recovery of recharged water is currently pending with the State of Utah, Division of Water Rights. If that permit is not received, additional above-ground storage ponds will need to be constructed.

Table 12 - Reclaimed Water Storage Capacity Criteria

Storage Facility	Storage Capacity (MG)
Pond #1	52
Pond #2	126
Future Underground Storage (Aquifer Recahrge)	179
Total Available Storage	**357**

Table 13- Reclaimed Water Expansion Summary

Component	Design Capacity	Expansion	ERUs
Reclaimed Water Pump Station and Pipeline	1,200-1,400 gpm	Add future pump and modify impellers as required when peak permeate flows approach 1,200 gpm - 1400 gpm. Consider upsizing portions of force main.	4,990 (using phf of 2.02)
Reclaimed Water Storage Ponds	180 MG (1 MGD for 180 days)	Implement recharge of reclaimed water using permitted spreading ponds when average daily flows approach 0.85 MGD.	5,000
Reclaimed Water Recharge	179 MG	Consider additional storage options when average daily flows approach 1.85 MGD	10,000

Non-Potable Water System

The Non-Potable Water (NPW) pumps are contained in a package, skid-mounted system consisting of three centrifugal pumps and associated controls and valving. The NPW pumps utilize variable frequency drives in order to achieve an operator-adjustable discharge pressure setpoint (typically 80 psi to ensure adequate cleaning at the headworks screens). The 15 hp motors on each pump are rated to deliver 111 gpm at up to 269 feet of head (116 psi). Currently a single pump is adequate for all of the treatment facility's NPW needs, except when staff is washing down equipment using the plant water hoses. When this occurs, typically two NPW pumps are activated. It is anticipated the NPW pump skid is adequately sized for the foreseeable future, at least until a new process building needs to be constructed.

Table 14 - Non-Potable Water System Expansion Summary

Component	Design Capacity (gpm)	Expansion
Non-Potable Water System	300	Consider adding additional pumping capacity when process and dewatering buildings are expanded.

Plant Drain Lift Station

The Plant Drain Lift Station consists of two pumps operated in a duty/standby configuration. The duty point is 100 gpm and 30 TDH feet for each pump. The plant drain pumps currently operate infrequently except for when the screw press is operating. The screw press sends approximately 40 gpm to the Plant Drain Lift Station during biosolids processing, which causes the PDLS pumps to activate every few minutes. It is anticipated that the Plant Drain Lift Station is adequately sized until a new screw press is added or the process building is expanded. If expansion is required in the future, a new PDLS could be constructed to serve the new processes. Alternatively, the existing PDLS wet well could continue to be utilized and the existing pumps replaced with larger pumps.

Table 15 - Plant Drain Lift Station Expansion Summary

Component	Design Capacity (gpm)	Expansion
Plant Drain Lift Station	100	Consider adding additional pumping capacity when process and dewatering buildings are expanded.

Solids Handling Processes

Biosolids Holding Tank

As flow rates increase in the future, the biosolids holding tank will be reconfigured as the Train 3 process basin similar to Trains 1 and 2. At this time a new biosolids holding tank will need to be constructed outside the current building or the City could waste directly from the biological process.

Dewatering Feed Pumps

Two 7.5 HP rotary lobe dewatering feed pumps were provided to pump biosolids from the biosolids holding tank to the screw press dewatering system. The pumps are located inside "Kiva 2" in the membrane process building and operate in duty/standby mode. The pumps use variable frequency drives so they can match the optimum flow rate for the screw press. The pumps are each capable of discharging approximately 80 gpm. They are currently operating using the VFD at ~30 gpm as this is the flow rate where the screw press appears to perform best. If a second screw press is installed, there is still adequate capacity in a single rotary lobe pump to provide flow to both screw presses.

Screw Press Dewatering System

The City currently hauls biosolids to the landfill approximately 3 days/week. In 2014, 126 dry metric tons (139 dry tons US) were produced at an average solids concentration between 14% and 16%. The City has a single screw press unit for biosolids dewatering. This press has a rated capacity of 275 lb dry solids/hr. However, the press has not been able to operate at this capacity and achieve the desired cake dryness. Operations staff have found that the press operates best at about half of its rated capacity or 138 lb dry solids/hr. Considering press operation of 40 hrs/week as a practical limit, the press would be able to handle about 5,520 lb dry solids/week or 143 dry tons/year at this reduced capacity. This suggests that the press is nearing its practical operating capacity which is confirmed by operations staff who indicate that the press is currently operating about 35-45 hrs/week.

When the screw press operates more than 40 hours per week, the City may want to consider purchasing an additional screw press. A second screw press is not a requirement; however, the decreased hours required for dewatering would simplify operations and reduce the need to haul biosolids to the landfill on weekends and after normal working hours. A second screw press would also improve redundancy in the dewatering process. As currently configured, if the existing screw press was damaged, biosolids could be stored in the biosolids holding tank for a few days. Eventually, the biosolids would need to be wasted. If the screw press was down for repairs, the biosolids would need to be transported in a pumper truck to another treatment facility for processing.

The existing dewatering building is master planned to incorporate the addition of an identical Huber screw press. The City could also consider purchasing a screw press from a different manufacturer. Feed piping is stubbed to the future unit and drain piping is stubbed out of the floor slab. An additional polymer system would likely need to be purchased and the elevated platform will need to be extended. It is possible that the existing flocculation tank could be utilized by both screw presses. The dewatering feed pumps are adequately sized to comply with the flow requirements from two screw presses.

In the future when both screw presses are each operating more than 40 hours per week, the City will need to expand the dewatering building to accommodate additional screw presses. Alternatively, the existing screw presses could be replaced with larger screw presses or belt filter presses that have a higher throughput.

Table 16 - Solids Handling System Expansion Summary

Component	Design Capacity	Expansion	ERU Capacity
Biosolids Holding Tank	The Biosolids Holding Tank is adequately sized for sludge processing until it needs to be removed from service when the 3rd process train is required.	Construct new biosolids holding tank when a 3rd process train is required. Alternatively, the excess solids can be wasted directly from the process without using a holding tank.	7260[a]
Dewatering Feed Pumps	80 gpm	Add a 3rd pump or upsize existing pumps when a 3rd screw press is added. The existing pumps may need to be modified when the 3rd process train is installed and the biosolids holding tank is removed from service.	7260[a]
Dewatering System as Currently Configured	46 hours/week	Install a new screw press when the existing press is operating more than 46 hours/week.	3,400
Dewatering System with 2 Screw Presses	46 hours each/week	Expand the dewatering building and add a 3rd screw press when both presses are each operating 46 hours/week. Alternatively, replace the screw presses with larger screw presses that have a higher throughput or a belt filter press.	6,800

a. These capacities correspond with the need to add the 3rd process train

Summary

Table 17 summarizes the capacity (in terms of ERUs) of each major component of the WRF.

Table 17 - Summary Table

Component	Peak Hour Design Capacity (gpm)	AADF Design Capacity (gpd)	ERU Capacity (gpd/ERU)	ERU[a]
Center Street Lift Station	1,409		200	5,026
10" Force Main (LS to RR Tracks)	1,469		200	5,234
Drum Screens	2,778		200	9,900
Biological Process		1,424,000	200	7,120
Membranes Process		731,712	200	3,658
UV Disinfection	1,097		200	3,910
Reclaimed Water Pumping	3,412		200	3,924
Reclaimed Water Storage		1,000,000	200	5,000
Biosolids Holding Tank		1,424,000	200	7,120
Dewatering Feed Pumps		1,424,000	200	7,120
Screw Press		680,000	200	3,400
Upsize Screw Press		1,360,000	200	6,800

a. Peak hour demand is converted to annual average day flow (AADF) using the 2.02 factor, then converted to ERUs by dividing by 200 gpd/ERU.

As the capacity of each component approaches, Santaquin City should plan to increase the capacity. Table 18 shows the ERU count and approximate year when capacity is 115% of flow.

Table 18 – ERUs when Capacity is 115% of Flow

Component	Capacity (in ERUs)	ERUs when Capacity is 115% of Flow	Approx. Year when Capacity is 115% of Flow
Center Street Lift Station	5,026	4,370	2022
10" Force Main (LS to RR Tracks)	5,234	4,552	2023
Drum Screens	9,900	8,609	2037
Biological Process	7,120	6,191	2029
Membranes Process	3,658	3,181	2016
UV Disinfection	3,910	3,400	2017
Reclaimed Water Pumping	3,924	3,412	2017
Reclaimed Water Storage	5,000	4,348	2022
Biosolids Holding Tank	7,120	6,191	2029
Dewatering Feed Pumps	7,120	6,191	2029
2nd Screw Press	3,400	2,957	2015
Upsize Screw Presses	6,800	5,913	2028

SANTAQUIN CITY

2016 SANITARY SEWER SYSTEM IMPACT FEE FACILITIES PLAN



Prepared by:

J-U-B ENGINEERS, INC.

240 West Center Street, Suite 200

Orem, Utah 84057

(801) 226-0393

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Adopted by Santaquin City Council

on January 4, 2017

Santaquin

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REGISTERED PROFESSIONAL ENGINEER
MARK L. CHRISTENSEN
1/6/17
No. 186311
STATE OF UTAH

Adopted by Santaquin City Council

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Santaquin

J-U-B

J-U-B ENGINEERS, INC.

SANITARY SEWER IMPACT FEE FACILITIES PLAN

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I. INTRODUCTION

A. Purpose

The purpose of the Sanitary Sewer Impact Fee Facilities Plan (IFFP) is to fulfill the requirements established in Utah Code Title 11 Chapter 36a, the "Impact Fees Act" relative to impact fee facilities plans. Appendix A contains the Impact Fee Act (Enacted by Chapter 47, 2011 General Session).

B. Background

The Sanitary Sewer Master Plan and Capital Facilities Plan (MP & CFP) is a document that establishes long term plans for Santaquin City's sanitary sewer infrastructure. It also performs the following functions pertinent to the Impact Fee Facilities Plan:

1. Identifies the level of service
2. Distinguishes between system improvements and project improvements
3. Identifies system improvements that will be required in the future to accommodate future growth and associated costs
4. Identifies cost sharing based on proportional historical, current, and projected future growth.
5. Evaluates available funding sources
6. Recommends a schedule of project construction based on projected growth rates and prioritizes projects

This IFFP document extracts information from the 2016 Sanitary Sewer MP & CFP to provide the information that becomes the foundation for the Sanitary Sewer Impact Fee Analysis (IFA).

Appendix B contains the Sanitary Sewer MP & CFP by reference.

C. Scope

The Sanitary Sewer IFFP takes results and documentation from the MP & CFP and supplements it to provide the basis needed to complete the Sanitary Sewer Impact Fee Analysis. It is the intent that this document comply with the Utah Impact Fee Act as it currently exists.

II. LEVEL OF SERVICE

A. Level of Service from Sanitary Sewer Master Plan and Capital Facilities Plan

The 2016 Sanitary Sewer MP & CFP in Appendix B contains the sanitary sewer system level of service established for Santaquin City.

B. Service Areas

Utah Code requires the impact fee enactment to establish one or more service areas within which impact fees will be imposed. The impact fee related costs identified in this document will be assessed to a single service area encompassing the entire service area of the Santaquin sanitary sewer system.

III. EXISTING AND FUTURE SANITARY SEWER SYSTEM DEMANDS

The Sanitary Sewer MP & CFP contains a detailed description of existing and future demands on the sanitary sewer system. It illustrates the impact of future development on the system. See Appendix B for more information.

IV. EXISTING SYSTEM IMPROVEMENTS WITH RESERVE CAPACITY

Shown on the following pages are system facilities that have reserve capacity available to accommodate future growth, as well as the proportion of the facility capacity that is available for future growth. This existing capacity will gradually be consumed as development occurs.

A. Reserve Capacity of Collection/Transmission System

We evaluated the capacity of all modeled collection and transmission system pipelines that were deemed to be a system improvement according to the definition in the 2016 Sanitary Sewer MP & CFP and the Impact Fee Act. Most of these pipelines are at or over 8 inches in diameter. The process of determining reserve capacity in the collection/transmission system improvements is as follows:

1. Identify existing q/Qfull (peak flow divided by the maximum capacity of the pipe) in each existing pipe segment identified as a system improvement.

2. Identify buildout q/Qfull in the same existing pipe segments. In most cases the pipe would still have the ability to carry more flow at buildout, but we are only counting that portion of capacity that will actually get consumed for reserve capacity calculations.
3. Calculate the weighted average existing q/Qfull and the weighted average buildout q/Qfull for all pipes of a given size (weighted based on the length of the segment).
4. Calculate the reserve capacity as the difference between the weighted average of existing flow and the weighted average of buildout flow.

For the purposes of the 2016 Sanitary Sewer MP, CFP & IFFP, buildout demands are estimated to occur in the year 2060. The master plan identifies 2,835 ERUs in 2014, 4730 ERUs in 2024, and 16,289 ERUs at buildout. For this 2016 Impact Fee Facilities Plan, we interpolated the data shown in the 2016 Sanitary Sewer MP & CFP to calculate the demand and ERUs in 2016 and 2026. We estimate there to be 3199 ERUs in 2016, 5238 ERUs in 2026, and 16,289 ERUs at buildout. We therefore anticipate that 13,090 ERUs will be added between now (considered to be 2016) and buildout. We also anticipate that these ERUs of future growth will consume the portions of existing transmission/ distribution system pipe capacity over the next 44 years.

See Table C-1 in Appendix C for a detailed tabulation of each modeled pipe's 2016, 2026, and buildout q/Qfull, reserve capacity, capacity to be consumed by 2026, historical costs, as well as its impact fee eligible cost. Table C-2 in Appendix C contains similar data for pipes not modeled, and assume q/Qfull flow values match adjacent modeled pipes.

B. Reserve Capacity of the Water Reclamation Facility

The demand, reserve capacity, and capacity to be consumed by 2026 by the WRF is summarized below. These numbers are based on the 2016 Sanitary Sewer Master Plan and Capital Facilities Plan.

Table 1. WRF Reserve Capacity Summary

	Peak Instantaneous Flow (gpm)	Reserve Capacity
2014[1]	759	83%
2016[2]	897	80%
2026[2]	1,501	67%
Buildout	4,562	0%

% Needed by 2026
13.25%

[1] Based on SCADA records

[2] Estimated by interpolation of 2014, 2024, and buildout data as contained in the master plan

Based on Table 1, the remaining capacity of the WRF in 2016 is 80%, with 13.25% needed by 2026 due to growth.

Similar reserve capacity calculations are performed for other infrastructure with Historic Costs paid for by Santaquin City, and are located in Appendix D.

C. Historic Costs

We used actual historic costs where available. Where they were not available we estimated the year of construction of the facility, we then estimated what it would cost to construct the facility in 2016 (using the same method used to estimate the cost of future system improvements), and calculated an approximate historic cost of construction based on the ratio of the Engineering News Record (ENR) construction cost index (see Table D-9 in Appendix D) between the year of construction and 2016. The reserve capacity to be consumed by 2026 is coupled with the actual or estimated historic cost to determine the impact fee eligible cost.

The total historic costs for modeled transmission/distribution lines eligible for impact fee collection is $490,663 (see Table C-1 in Appendix C). Historical piping project costs are shown in Appendix D. There were about 32 miles of 6-inch and larger sanitary sewer mains that were not modeled. Santaquin City paid for the installation of part of these pipes. We conservatively estimated their reserve capacity to be the same as the modeled pipe directly downstream. These pipes the City paid for/installed had a total historical cost of $217,155 (see Table C-2 in Appendix C).

The total construction cost for the WRF was $18,380,688. The City's portion was $7,869,642.80 for the WRF plus an additional $815,045 for the associated piping (see Table D-2 in Appendix D). The percentage of reserve capacity estimated to be used by 2026 is 13.25% (see Table 1). The impact fee eligible cost for the

WRF is $1,042,864. The associated piping cost that is impact fee eligible is captured as part of the non-modeled sanitary sewer pipe total shown above.

The historical cost paid by Santaquin City for the 126 MG Winter Storage Pond #2 was $1,247,683. Based on calculations shown in Table D-5 in Appendix D, the impact fee eligible amount is 41.5% of the $1,247,683, or $$517,369 (see Table D-5).

The total construction cost for the public works facility was $2,530,000. The City spread the cost between sanitary sewer, pressure irrigation, culinary water, and parks at 25% each. Thus, sanitary sewer was responsible for $632,500. Based on calculations shown in Table D-6 in Appendix D, the impact fee eligible amount is 15.57% of the $632,500, or $98,507 (see Table D-5).

Table D-7 in Appendix D summarizes other City Projects that were paid for by others. Table D-8 in Appendix D calculates the percent of Project 35 in Table 3 that will be used by 2026 for impact fee calculation purposes.

In addition to historic costs, Santaquin also paid for the master plan and capital facilities plan, impact fee facilities plan, and impact fee analysis. These costs totaled about $76,250 and are impact fee eligible (see Table D-10 in Appendix D).

Table 2. Summary of Historic Project Costs and Engineering Costs Related to Planning that are Eligible for Impact Fee Collection

	Impact Fee Eligible Cost	
Modeled Transmission/Distribution Lines	$	490,663
Non-Modeled Transmission/Distribution Lines	$	217,155
Wastewater Reclamation Facility	$	1,042,864
Winter Storage Pond #2	$	517,369
Public Works Building	$	98,507
MP/CFP, IFFP, IFA	$	78,250
Total	$	2,444,808

V. FUTURE PROJECTS TO ACCOMMODATE GROWTH

The 2016 Sanitary Sewer MP & CFP identifies which projects will be needed to accommodate future growth and determines at what point they will be needed. Given the growth rate contained in the master plan, it also calculates what year (or range of years, for later projects) Santaquin expects the projects to be needed.

Projects expected to be needed by 2026 to accommodate growth are listed in Table 3. Projects identified in the 2016 Sanitary Sewer MP & CFP that have been completed (e.g. Public Works Facility) were removed from the list of projects.

Table 3. Sanitary Sewer Projects Needed to Accommodate Future Growth

Project No.	Project Name	Estimated Total Cost (Rounded)[1]	Point at Which Project is Needed		Land Developer (Project Improvement)	City Funds	Impact Fee	% Capacity Consumed by 2026
			ERUs	Year				
Collection Projects								
1	Install 8" Sewer Main along Orchard Cove Rd from 770 N to 850 N	$ 68,800	3,199	2016			$ 68,800	9%
2	Install 8" Sewer Main along 100 E from 730 N to Canal	$ 325,500	3,400	2017	$ 162,750		$ 162,750	16%
3	Install 18" Sewer Main Along Strawberry Canal Rd from 400 East to 100 East	$ 314,300	4,081	2020			$ 314,300	10%
4A	Install 10" Pipe along 400 East from 530 North to Strawberry Canal Rd and Remove Pipe on 530 North	$ 344,000	4,394	2022			$ 344,000	5%
4B	Install 8" Sewer Main North of 400 North and East of 400 East for Development	$ 507,100	4,559	2023	$ 507,100			3%
5	Install 8" Sewer Main along Strawberry Canal Rd from 4800 W (county) to 400 East	$ 300,800	4,559	2023	$ 60,175		$ 240,625	3%
6	Install 8" Sewer Main along Center St from 100 S to Manhole at 70 South	$ 18,500	6,422	2030			$ 18,500	
7	Install Parallel Sewer Main along 400 E from South Side of 400 N to Next Manhole Directly North	$ 8,600	6,987	2032			$ 8,600	
8	Install 8" Sewer Main along 400 E from 200 S to 140 S	$ 28,000	7,600	2034			$ 28,000	
9	Install 8" Sewer Main along 4800 W (county) from 400 North to Strawberry Canal Rd	$ 146,100	9,784	2040	$ 146,100			
10	Install 8" Sewer Main along Strawberry Canal Rd from SR198 to 4800 W	$ 348,900	10,479	2042			$ 348,900	
11	Install 4" Force Main with Sewer Lift Station on 4800 W (county) and 12400 S (county)	$ 697,500	11,349	2045			$ 697,500	
12	Install 8" Sewer Main from SR198 and 13200 S (county) to 12400 S and 4800 W (county)	$ 739,900	11,349	2045			$ 739,900	
13	Install 8" Sewer Main Along 4800 W from 12800 S to 12400 S	$ 257,900	11,654	2046			$ 257,900	
14	Install 8" & 10" Sewer Main on Strawberry Canal Rd from 6250 West to Center Street Lift Station	$ 536,200	11,654	2046			$ 536,200	
15	Install 4" Force Main with Sewer Lift Station Northwest of Storage Ponds near Hwy 6	$ 515,400	12,290	2048			$ 515,400	
16	Install 8" Sewer Main West of Storage Ponds to Hwy 6 Lift Station (Project 15)	$ 511,400	12,290	2048			$ 511,400	
17	Install 8" Sewer Main from west to 14400 S (county) and Summit Ridge Pkwy	$ 661,800	12,961	2050			$ 661,800	
18	Install 4" Force Main with Sewer Lift Station south of Genola near Hwy 6	$ 943,000	14,560	2055			$ 943,000	
19	Install 8" Sewer Main Along Summit Ridge Pkwy from Frontage Rd to East side of I-15	$ 262,100	15,574	2058			$ 262,100	
20	Install 8" Sewer Main Along 1000 S from Pole Canyon Road to 300 W	$ 131,500	16,289	2060	$ 131,500			
	Subtotal	**$ 7,667,300**			**$ 1,007,625**	**$ -**	**$ 6,659,675**	

Table 3. Sanitary Sewer Projects Needed to Accommodate Future Growth (cont'd)

Project No.	Project Name	Estimated Total Cost (Rounded)[1]	Point at Which Project is Needed		Land Developer (Project Improvement)	City Funds	Impact Fee	% Capacity Consumed by 2026
			ERUs	Year				
Treatment Projects								
21	Install 2nd Screw Press	$ 578,000	2,957	2016/2017	$ -	$ -	$ 578,000	77%
22	Activation of Membrane Tank #4	$ 1,246,000	3,181	2016/2017	$ -	$ -	$ 1,246,000	100%
23	Remove Baffle Wall in UV Channel and Install Additional Lamps	$ 288,000	3,400	2017	$ -	$ -	$ 288,000	54%
24	Install 4th Reclaimed Water Pump	$ 125,000	3,412	2017	$ -	$ -	$ 125,000	100%
25	10" Parallel Reclaimed Water Force Main	$ 485,000	4,339	2022	$ -	$ -	$ 485,000	72%
26	Center Street Lift Station Upgrades	$ 239,000	4,370	2022	$ -	$ -	$ 239,000	40%
27	Activation of Membrane Tank #5	$ 1,246,000	4,772	2024	$ -	$ -	$ 1,246,000	15%
28	Upsize Reclaimed Water Pumps	$ 353,000	5,579	2027	$ -	$ -	$ 353,000	
29	Upsize Screw Presses	$ 1,725,000	5,913	2028	$ -	$ -	$ 1,725,000	
30	Biological Process (3rd Train)	$ 398,000	6,191	2029	$ -	$ -	$ 398,000	
31	Biosolids Holding Tank	$ 627,000	6,191	2029	$ -	$ -	$ 627,000	
32	12" Parallel Sewer Force Main (RR to WRF)	$ 51,000	6,555	2030	$ -	$ -	$ 51,000	
33	Populate 2nd UV Channel	$ 840,000	6,800	2031	$ -	$ -	$ 840,000	
34	Activation of Membrane Tank #6 (Change backpulse to membrane tank)	$ 1,230,000	7,953	2035	$ -	$ -	$ 1,230,000	
35	Expand Headworks Building and Add Additional Drum Screen	$ 840,000	8,609	2037	$ -	$ -	$ 840,000	
	Subtotal	**$ 10,271,000**			**$ -**	**$ -**	**$ 10,271,000**	
Storage Projects								
36	Construct Additional North 106 MG Winter Storage Pond	$ 3,180,000	4,348	2022	$ -		$ 3,180,000	30%
	Subtotal	**$ 3,180,000**			**$ -**	**$ -**	**$ 3,180,000**	
	Total	**$ 21,118,300**			**$ 1,007,625**	**$ -**	**$ 20,110,675**	

[1]Costs are in 2014 dollars

We have chosen the commonly accepted period of 10 years, which is supported by the following reasoning. Current legislation requires that impact fees collected must be spent within 6 years. Impact fees will be collected as calculated in an IFA based on this IFFP until the IFFP is updated, which should happen no less frequently than every 5 years. So impact fees based on this IFFP may be collected 4 years after its adoption. Those fees would need to be spent within 6 years thereafter, which would be 10 years from the date of IFFP adoption. Thus projects as far as 10 years into the future are included in this IFFP.

VI. FUNDING FUTURE PROJECTS

D. Consideration of Funding Sources

Section 302 (2) of the Impact Fee Act requires the City to "generally consider all revenue sources, including impact fees and anticipated dedication of system improvements, to finance the impacts on system improvements." By doing so,

the City ensures fair and equitable treatment among users and concludes whether impact fees are the most appropriate method to fund the growth.

The Sanitary Sewer MP & CFP considered multiple revenue sources, including impact fees and anticipated dedication of system improvements. It establishes that impact fees are necessary to achieve an equitable allocation to the costs borne in the past and to be borne in the future, in comparison to the benefits already received and yet to be received.

E. Impact Fee Credit

The Impact Fee Act allows a "...credit against impact fees for any dedication of land for, improvement to, or new construction of, any system improvements provided by the developer if the facilities: are system improvements; or are dedicated to the public; and offset the need for an identified system improvement." The improvements do not necessarily need to be made in the proposed development. This plan does not contemplate a credit owed, and any credits given in the future would be negotiated between the developer and the City on a case by case basis as they arise.

APPENDIX A – UTAH IMPACT FEE ACT

APPENDIX B – SANITARY SEWER
MASTER PLAN & CAPITAL FACILITIES PLAN

The 2014 Santaquin City Sanitary Sewer Master Plan and Capital Facilities Plan is incorporated herein by reference.

APPENDIX C – DETAILS OF PIPES WITH RESERVE CAPACITY

Table C-1. Existing Sanitary Sewer Pipes Reserve Capacity Detail

Pipe Segment ID	Dia (in)	Segment Length (ft)	Year Built	Paid for by or Installed as part of:	q/Qfull					Max % Capacity Ever Used	Proportion of Max Capacity Ever Used		Impact Fee Eligible?	Estimated Project Cost	Estimated Impact Fee-Eligible Cost
					2014	2016	2024	2026	2060		2016 to 2060	2016 to 2026			
					A	B	C	D	E	F	G	H	I	J	K
										= Max (B, D, and E)	= (F - B) / F	= (D - B) / F			= (H x J) if I is "Yes"
FME_1	4	3,043	After 1996	Future or Developer	Future	Future	Future	Future	17%	17%	Future	Future	No	$ -	$ -
CDT-179	4	6,652	After 1996	Future or Developer	Future	Future	Future	Future	62%	62%	Future	Future	No	$ -	$ -
FML_1	4	3,926	After 1996	Future or Developer	Future	Future	Future	Future	90%	90%	Future	Future	No	$ -	$ -
CDT-177	4	4,507	After 1996	Future or Developer	Future	Future	Future	Future	39%	39%	Future	Future	No	$ -	$ -
XJ7	8	338	1995	Original System	25%	27%	32%	33%	51%	51%	47%	13%	Yes	$ 11,112	$ 1,440
XJ18	8	148	1995	Original System	15%	16%	19%	20%	31%	31%	50%	14%	Yes	$ 4,878	$ 670
XJ22	8	353	1995	Original System	14%	15%	18%	19%	30%	30%	50%	14%	Yes	$ 11,588	$ 1,584
XJ23	8	203	1995	Original System	17%	19%	23%	24%	38%	38%	52%	14%	Yes	$ 6,664	$ 938
XJ24	8	413	1995	Original System	3%	3%	3%	6%	48%	48%	94%	6%	Yes	$ 13,567	$ 810
XJ30	8	149	1995	Original System	13%	14%	17%	18%	29%	29%	53%	14%	Yes	$ 4,881	$ 695
XJ44	8	184	1995	Original System	18%	20%	25%	26%	42%	42%	53%	14%	Yes	$ 6,042	$ 835
XJ45	8	337	1995	Original System	19%	21%	26%	27%	44%	44%	53%	14%	Yes	$ 11,073	$ 1,591
XJ47	8	267	1995	Original System	6%	6%	6%	6%	10%	10%	41%	5%	Yes	$ 8,774	$ 468
XJ49	8	64	1995	Original System	8%	9%	11%	11%	18%	18%	53%	14%	Yes	$ 2,102	$ 293
XJ57	8	263	1995	Original System	7%	8%	10%	10%	17%	17%	53%	14%	Yes	$ 8,625	$ 1,190
XJ58	8	320	1995	Original System	5%	5%	5%	5%	8%	8%	38%	4%	Yes	$ 10,498	$ 421
XJ65	8	253	1995	Original System	8%	9%	11%	11%	19%	19%	53%	14%	Yes	$ 8,298	$ 1,162
XJ67	8	324	1995	Original System	5%	5%	5%	5%	8%	8%	39%	4%	Yes	$ 10,630	$ 437
XJ75	8	132	After 1996	Developer/IF	1%	1%	1%	1%	2%	2%	44%	20%	No	$ -	$ -
XJ80	8	358	1995	Original System	8%	9%	11%	12%	19%	19%	53%	14%	Yes	$ 11,763	$ 1,621
XJ81	8	296	1995	Original System	7%	7%	8%	8%	16%	16%	54%	6%	Yes	$ 9,715	$ 570
XJ82	8	296	1995	Original System	9%	9%	10%	10%	19%	19%	54%	6%	Yes	$ 9,726	$ 631
XJ83	8	316	1995	Original System	2%	2%	2%	2%	4%	4%	47%	7%	Yes	$ 10,371	$ 706
XJ84	8	306	1995	Original System	2%	2%	2%	2%	4%	4%	46%	6%	Yes	$ 10,039	$ 645
XJ91	8	323	1995	Original System	5%	5%	5%	5%	8%	8%	39%	5%	Yes	$ 10,597	$ 524
XJ92	8	296	1995	Original System	7%	7%	7%	7%	10%	10%	33%	3%	Yes	$ 9,727	$ 319
XJ95	8	72	1995	Original System	5%	5%	6%	7%	11%	11%	53%	15%	Yes	$ 2,366	$ 352
XJ96	8	276	1995	Original System	7%	7%	7%	8%	12%	12%	40%	5%	Yes	$ 9,065	$ 487
XJ97	8	281	1995	Original System	7%	7%	8%	8%	12%	12%	40%	5%	Yes	$ 9,229	$ 491
XJ104	8	193	After 1996	Developer/IF	1%	1%	1%	1%	2%	2%	47%	19%	No	$ -	$ -
XJ105	8	46	After 1996	Developer/IF	1%	1%	2%	2%	3%	3%	45%	21%	No	$ -	$ -
XJ109	8	296	1995	Original System	6%	7%	10%	10%	16%	16%	54%	19%	Yes	$ 9,726	$ 1,856
XJ111	8	301	1995	Original System	1%	1%	1%	1%	2%	2%	46%	6%	Yes	$ 9,878	$ 602
XJ114	8	293	1995	Original System	16%	18%	24%	27%	68%	68%	74%	13%	Yes	$ 9,611	$ 1,243
XJ116	8	303	1995	Original System	3%	3%	3%	3%	5%	5%	44%	5%	Yes	$ 9,940	$ 543
XJ133	8	297	1995	Original System	10%	11%	15%	17%	43%	43%	74%	13%	Yes	$ 9,759	$ 1,265
XJ158	8	275	1995	Original System	17%	19%	26%	28%	73%	73%	74%	13%	Yes	$ 9,036	$ 1,170
XJ186	8	342	1995	Original System	11%	13%	17%	19%	50%	50%	74%	13%	Yes	$ 11,223	$ 1,450
XJ196	8	305	1995	Original System	7%	7%	8%	9%	25%	25%	72%	9%	Yes	$ 10,006	$ 907
XJ210	8	289	1995	Original System	10%	10%	12%	14%	37%	37%	72%	9%	Yes	$ 9,496	$ 833
XJ220	8	12	1995	Original System	7%	7%	8%	9%	27%	27%	74%	9%	Yes	$ 396	$ 34
XJ230	8	276	1995	Original System	5%	5%	6%	7%	20%	20%	74%	9%	Yes	$ 9,053	$ 772
XJ243	8	254	1995	Original System	5%	5%	6%	7%	21%	21%	74%	8%	Yes	$ 8,347	$ 707
XJ244	8	451	1998	City Funds - Main Street	8%	9%	11%	11%	14%	14%	40%	16%	Yes	$ 17,837	$ 2,810
XJ247	8	431	1998	City Funds - Main Street	8%	9%	11%	12%	15%	15%	40%	16%	Yes	$ 17,059	$ 2,710
XJ248	8	402	1998	City Funds - Main Street	10%	11%	14%	14%	19%	19%	39%	16%	Yes	$ 15,913	$ 2,482
XJ250	8	369	1998	City Funds - Main Street	9%	10%	12%	12%	16%	16%	39%	15%	Yes	$ 14,602	$ 2,223

Table C-1. Existing Sanitary Sewer Pipes Reserve Capacity Detail (Cont'd)

Pipe Segment ID	Dia (in)	Segment Length (ft)	Year Built	Paid for by or Installed as part of:	q/Qfull					Max % Capacity Ever Used	Proportion of Max Capacity Ever Used		Impact Fee Eligible?	Estimated Project Cost	Estimated Impact Fee-Eligible Cost
					2014	2016	2024	2026	2060		2016 to 2060	2016 to 2026			
					A	B	C	D	E	F	G	H	I	J	K
										= Max (B, D, and E)	= (F - B) / F	= (D - B) / F			= (H x J) if I is "Yes"
XJ255	8	87	1995	Original System	2%	2%	2%	2%	15%	15%	89%	5%	No	$ 2,868	$ -
XJ259	8	346	1995	Original System	28%	31%	38%	38%	31%	38%	19%	19%	Yes	$ 11,370	$ 2,169
XJ260	8	490	1995	Original System	27%	30%	37%	37%	30%	37%	19%	19%	Yes	$ 16,105	$ 3,070
XJ261	8	418	1995	Original System	27%	29%	37%	36%	30%	36%	19%	19%	Yes	$ 13,739	$ 2,614
XJ262	8	418	1995	Original System	49%	54%	67%	66%	55%	66%	19%	19%	Yes	$ 13,727	$ 2,604
XJ263	8	111	1995	Original System	28%	31%	38%	38%	31%	38%	19%	19%	Yes	$ 3,644	$ 690
XJ264	8	308	1995	Original System	37%	40%	51%	50%	30%	50%	19%	19%	Yes	$ 10,134	$ 1,962
XJ265	8	417	1995	Original System	34%	37%	47%	46%	39%	46%	19%	19%	Yes	$ 13,708	$ 2,596
XJ268	8	416	1995	Original System	25%	28%	36%	35%	21%	35%	20%	20%	Yes	$ 13,682	$ 2,680
XJ270	8	416	1995	Original System	25%	27%	35%	34%	21%	34%	20%	20%	Yes	$ 13,682	$ 2,673
XJ280	8	288	After 1996	Developer/IF	4%	4%	5%	5%	6%	6%	30%	17%	No	$ -	$ -
XJ281	8	110	After 1996	Developer/IF	3%	3%	4%	4%	4%	4%	31%	16%	No	$ -	$ -
XJ286	8	401	1995	Original System	3%	3%	3%	3%	9%	9%	71%	5%	Yes	$ 13,162	$ 655
XJ289	8	415	1995	Original System	41%	45%	58%	56%	34%	56%	20%	20%	Yes	$ 13,621	$ 2,686
XJ298	8	135	1995	Original System	49%	54%	69%	68%	41%	68%	20%	20%	Yes	$ 4,435	$ 870
XJ299	8	403	1995	Original System	53%	58%	74%	72%	44%	72%	20%	20%	Yes	$ 13,231	$ 2,600
CDT-81	8	308	After 1996	Developer/IF	1%	1%	1%	1%	1%	1%	19%	12%	No	$ -	$ -
XJ300	8	302	1995	Original System	50%	55%	72%	70%	36%	70%	21%	21%	Yes	$ 9,907	$ 2,057
XJ301	8	297	1995	Original System	44%	48%	63%	61%	31%	61%	21%	21%	Yes	$ 9,747	$ 2,024
XJ302	8	342	1995	Original System	32%	34%	41%	40%	24%	40%	15%	15%	Yes	$ 11,253	$ 1,709
XJ303	8	407	After 1996	Developer/IF	4%	4%	5%	5%	6%	6%	31%	16%	No	$ -	$ -
XJ304	8	260	1995	Original System	33%	35%	42%	41%	25%	41%	15%	15%	Yes	$ 8,553	$ 1,310
XJ307	8	278	After 1996	Developer/IF	3%	4%	4%	4%	5%	5%	30%	16%	No	$ -	$ -
XJ308	8	240	1995	Original System	6%	7%	10%	10%	2%	10%	32%	32%	Yes	$ 7,886	$ 2,545
XJ312	8	243	1995	Original System	16%	17%	21%	22%	51%	51%	67%	11%	Yes	$ 7,985	$ 853
XJ319	8	401	1995	Original System	3%	3%	3%	4%	11%	11%	71%	5%	Yes	$ 13,177	$ 634
XJ326	8	308	1995	Original System	4%	5%	8%	8%	2%	8%	32%	32%	Yes	$ 10,121	$ 3,205
XJ327	8	314	1995	Original System	27%	29%	36%	35%	21%	35%	17%	17%	Yes	$ 10,332	$ 1,767
XJ328	8	299	1995	Original System	16%	17%	21%	23%	52%	52%	67%	11%	Yes	$ 9,826	$ 1,054
XJ332	8	267	1995	Original System	28%	31%	38%	37%	22%	37%	17%	17%	Yes	$ 8,777	$ 1,507
XJ335	8	287	1995	Original System	29%	31%	39%	38%	21%	38%	18%	18%	Yes	$ 9,439	$ 1,673
XJ336	8	295	1995	Original System	26%	29%	36%	35%	20%	35%	18%	18%	Yes	$ 9,697	$ 1,713
XJ337	8	244	1995	Original System	19%	21%	26%	25%	14%	25%	18%	18%	Yes	$ 8,013	$ 1,450
XJ338	8	354	1995	Original System	26%	28%	36%	35%	19%	35%	18%	18%	Yes	$ 11,640	$ 2,126
XJ339	8	270	1995	Original System	15%	16%	20%	20%	10%	20%	19%	19%	Yes	$ 8,876	$ 1,681
XJ340	8	296	1995	Original System	14%	16%	20%	19%	10%	19%	19%	19%	Yes	$ 9,710	$ 1,844
XJ346	8	402	1995	Original System	3%	3%	3%	3%	9%	9%	70%	5%	Yes	$ 13,197	$ 655
XJ349	8	483	1995	Original System	13%	15%	19%	19%	32%	32%	54%	16%	Yes	$ 15,867	$ 2,485
XJ350	8	355	1995	Original System	28%	31%	40%	41%	71%	71%	56%	14%	Yes	$ 11,664	$ 1,689
XJ353	8	297	1995	Original System	5%	6%	9%	9%	2%	9%	32%	32%	Yes	$ 9,760	$ 3,128
XJ355	8	295	1995	Original System	1%	1%	1%	3%	30%	30%	97%	6%	No	$ 9,694	$ -
XJ359	8	287	1995	Original System	10%	11%	13%	14%	25%	25%	58%	13%	Yes	$ 9,433	$ 1,203
XJ362	8	297	1995	Original System	5%	6%	10%	9%	2%	9%	32%	32%	Yes	$ 9,744	$ 3,164
XJ371	8	297	1995	Original System	2%	2%	2%	4%	44%	44%	97%	6%	No	$ 9,759	$ -
XJ374	8	401	1995	Original System	2%	2%	2%	3%	8%	8%	71%	5%	Yes	$ 13,160	$ 664
XJ380	8	206	1995	Original System	5%	6%	7%	7%	10%	10%	44%	18%	Yes	$ 6,769	$ 1,189
XJ383	8	394	1995	Original System	1%	1%	1%	1%	4%	4%	80%	5%	No	$ 12,941	$ -
XJ387	8	304	1995	Original System	4%	5%	9%	8%	1%	8%	34%	34%	Yes	$ 9,989	$ 3,358
XJ392	8	351	1995	Original System	2%	2%	3%	3%	5%	5%	50%	6%	Yes	$ 11,533	$ 686
XJ393	8	393	1995	Original System	7%	7%	7%	9%	37%	37%	81%	5%	No	$ 12,920	$ -

Table C-1. Existing Sanitary Sewer Pipes Reserve Capacity Detail (Cont'd)

Pipe Segment ID	Dia (in)	Segment Length (ft)	Year Built	Paid for by or Installed as part of:	q/Qfull					Max % Capacity Ever Used	Proportion of Max Capacity Ever Used		Impact Fee Eligible?	Estimated Project Cost	Estimated Impact Fee-Eligible Cost
					2014	2016	2024	2026	2060		2016 to 2060	2016 to 2026			
					A	B	C	D	E	F	G	H	I	J	K
										= Max (B, D, and E)	= (F - B) / F	= (D - B) / F			= (H x J) if I is "Yes"
XJ405	8	378	1995	Original System	1%	1%	1%	1%	3%	3%	82%	5%	No	$ 12,434	$ -
XJ417	8	374	1995	Original System	4%	5%	8%	8%	1%	8%	34%	34%	Yes	$ 12,273	$ 4,186
XJ418	8	353	1995	Original System	2%	2%	3%	3%	5%	5%	50%	6%	Yes	$ 11,599	$ 690
XJ424	8	380	1995	Original System	1%	1%	1%	1%	5%	5%	82%	5%	No	$ 12,474	$ -
XJ437	8	347	After 1996	Developer/IF	4%	5%	9%	8%	1%	8%	34%	34%	No	$ -	$ -
XJ439	8	344	1995	Original System	7%	7%	7%	7%	10%	10%	30%	5%	Yes	$ 11,288	$ 533
XJ445	8	328	After 1996	Developer/IF	1%	1%	1%	1%	3%	3%	82%	5%	No	$ -	$ -
XJ455	8	339	After 1996	Developer/IF	7%	9%	16%	15%	0%	15%	0%	0%	No	$ -	$ -
XJ456	8	200	After 1996	Developer/IF	7%	10%	16%	15%	0%	15%	0%	0%	No	$ -	$ -
XJ457	8	366	After 1996	Developer/IF	5%	6%	9%	9%	1%	9%	34%	34%	No	$ -	$ -
XJ469	8	278	1995	Original System	3%	4%	8%	9%	28%	28%	84%	16%	Yes	$ 9,122	$ 1,427
XJ486	8	402	1995	Original System	4%	5%	9%	10%	33%	33%	84%	16%	Yes	$ 13,218	$ 2,087
XJ512	8	362	1995	Original System	3%	4%	8%	9%	27%	27%	83%	16%	Yes	$ 11,891	$ 1,903
XJ519	8	332	After 1996	Developer/IF	2%	2%	2%	2%	3%	3%	25%	4%	No	$ -	$ -
XJ528	8	163	After 1996	Developer/IF	8%	10%	16%	16%	20%	20%	48%	32%	No	$ -	$ -
XJ529	8	283	After 1996	Developer/IF	3%	3%	6%	6%	7%	7%	48%	31%	No	$ -	$ -
XJ544	8	276	1995	Original System	5%	6%	8%	8%	13%	13%	55%	19%	Yes	$ 9,073	$ 1,756
XJ545	8	398	After 1996	Developer/IF	1%	1%	1%	1%	1%	1%	0%	0%	No	$ -	$ -
XJ552	8	188	1995	Original System	15%	16%	20%	21%	34%	34%	53%	14%	Yes	$ 6,180	$ 892
XJ555	8	400	After 1996	Developer/IF	1%	1%	1%	1%	1%	1%	0%	0%	No	$ -	$ -
XJ557	8	177	After 1996	Developer/IF	1%	1%	1%	1%	1%	1%	0%	0%	No	$ -	$ -
XJ558	8	484	After 1996	Developer/IF	0%	0%	2%	2%	2%	2%	75%	75%	No	$ -	$ -
XJ561	8	101	1995	Original System	7%	8%	11%	11%	16%	16%	49%	19%	Yes	$ 3,327	$ 625
XJ562	8	60	1995	Original System	15%	17%	21%	22%	36%	36%	53%	14%	Yes	$ 1,976	$ 269
XJ565	8	167	1995	Original System	6%	7%	10%	10%	15%	15%	55%	19%	Yes	$ 5,489	$ 1,069
XJ568	8	158	1995	Original System	18%	19%	24%	25%	41%	41%	53%	14%	Yes	$ 5,184	$ 720
XJ577	8	398	1995	Original System	2%	2%	2%	2%	2%	2%	0%	0%	No	$ 13,084	$ -
XJ713	8	146	1995	Original System	20%	21%	26%	26%	41%	41%	49%	13%	Yes	$ 4,795	$ 635
XJ750	8	331	After 1996	Developer/IF	1%	1%	1%	1%	3%	3%	82%	5%	No	$ -	$ -
XJ751	8	62	After 1996	Developer/IF	1%	1%	1%	1%	4%	4%	81%	5%	No	$ -	$ -
XJ850	8	447	After 1996	Developer/IF	7%	8%	12%	12%	12%	12%	32%	32%	No	$ -	$ -
UN19	8	89	1995	Original System	1%	1%	2%	2%	2%	2%	5%	5%	Yes	$ 2,925	$ 146
XJ11	8	191	1995	Original System	15%	16%	19%	19%	30%	30%	47%	13%	Yes	$ 6,279	$ 806
XJ712	8	112	1995	Original System	11%	11%	14%	14%	22%	22%	48%	13%	Yes	$ 3,667	$ 479
XJ454	8	259	After 1996	Developer/IF	6%	6%	6%	8%	32%	32%	81%	5%	No	$ -	$ -
XJ513	8	350	1995	Original System	3%	4%	6%	7%	21%	21%	83%	16%	Yes	$ 11,507	$ 1,823
XJ606	8	16	1995	Original System	4%	5%	8%	9%	27%	27%	83%	16%	Yes	$ 515	$ 81
N30	8	328	After 1996	Developer/IF	0%	0%	0%	0%	0%	0%	0%	0%	No	$ -	$ -
N34	8	386	After 1996	Developer/IF	0%	0%	0%	0%	0%	0%	0%	0%	No	$ -	$ -
N36	8	68	After 1996	Developer/IF	0%	0%	0%	0%	0%	0%	0%	0%	No	$ -	$ -
N38	8	211	After 1996	Developer/IF	0%	0%	0%	0%	0%	0%	0%	0%	No	$ -	$ -
N40	8	196	After 1996	Developer/IF	9%	13%	24%	28%	97%	97%	87%	16%	No	$ -	$ -
XJ492	8	187	After 1996	Developer/IF	7%	9%	15%	17%	52%	52%	83%	16%	No	$ -	$ -
N44	8	116	After 1996	Developer/IF	0%	0%	0%	0%	0%	0%	0%	0%	No	$ -	$ -
N48	8	256	After 1996	Developer/IF	Future	Future	Future	Future	0%	0%	Future	Future	No	$ -	$ -
N50	8	290	After 1996	Developer/IF	Future	Future	Future	Future	0%	0%	Future	Future	No	$ -	$ -
N52	8	1,060	After 1996	Developer/IF	Future	Future	Future	Future	0%	0%	Future	Future	No	$ -	$ -
N54	8	160	After 1996	Developer/IF	Future	Future	Future	Future	0%	0%	Future	Future	No	$ -	$ -
N56	8	108	After 1996	Developer/IF	Future	Future	Future	Future	0%	0%	Future	Future	No	$ -	$ -
N58	8	356	After 1996	Developer/IF	Future	Future	Future	Future	0%	0%	Future	Future	No	$ -	$ -

Table C-1. Existing Sanitary Sewer Pipes Reserve Capacity Detail (Cont'd)

Pipe Segment ID	Dia (in)	Segment Length (ft)	Year Built	Paid for by or Installed as part of:	q/Qfull					Max % Capacity Ever Used	Proportion of Max Capacity Ever Used		Impact Fee Eligible?	Estimated Project Cost	Estimated Impact Fee-Eligible Cost
					2014	2016	2024	2026	2060		2016 to 2060	2016 to 2026			
					A	B	C	D	E	F	G	H	I	J	K
										= Max (B, D, and E)	= (F - B) / F	= (D - B) / F			= (H x J) if I is "Yes"
N60	8	156	After 1996	Developer/IF	Future	Future	Future	Future	0%	0%	Future	Future	No	$ -	$ -
N62	8	185	After 1996	Developer/IF	Future	Future	Future	Future	0%	0%	Future	Future	No	$ -	$ -
XJ686	8	246	After 1996	Developer/IF	1%	1%	1%	2%	9%	9%	91%	11%	No	$ -	$ -
XJ687	8	314	After 1996	Developer/IF	1%	1%	1%	2%	9%	9%	91%	11%	No	$ -	$ -
N100	8	263	After 1996	Future or Developer	Future	Future	Future	Future	0%	0%	Future	Future	No	$ -	$ -
N102	8	375	After 1996	Future or Developer	Future	Future	Future	Future	0%	0%	Future	Future	No	$ -	$ -
N104	8	395	After 1996	Future or Developer	Future	Future	Future	Future	0%	0%	Future	Future	No	$ -	$ -
N106	8	328	After 1996	Future or Developer	Future	Future	Future	Future	0%	0%	Future	Future	No	$ -	$ -
N108	8	352	After 1996	Future or Developer	Future	Future	Future	Future	0%	0%	Future	Future	No	$ -	$ -
XJ494	8	130	After 1996	Developer/IF	3%	4%	7%	7%	13%	13%	68%	23%	No	$ -	$ -
XJ495	8	298	After 1996	Developer/IF	1%	2%	3%	3%	9%	9%	81%	16%	No	$ -	$ -
XJ655	8	226	After 1996	Developer/IF	1%	1%	2%	2%	2%	2%	32%	32%	No	$ -	$ -
CDT-83	8	311	After 1996	Developer/IF	4%	4%	5%	5%	5%	5%	21%	11%	No	$ -	$ -
CDT-85	8	404	After 1996	Developer/IF	1%	2%	4%	4%	4%	4%	51%	41%	No	$ -	$ -
N120	8	185	After 1996	Developer/IF	2%	2%	3%	3%	3%	3%	30%	30%	No	$ -	$ -
XJ869	8	532	After 1996	Developer/IF	1%	1%	2%	3%	5%	5%	69%	24%	No	$ -	$ -
XJ755	8	132	After 1996	Developer/IF	0%	0%	0%	0%	0%	0%	0%	0%	No	$ -	$ -
XJ756	8	82	After 1996	Developer/IF	0%	0%	0%	0%	0%	0%	0%	0%	No	$ -	$ -
XJ757	8	80	After 1996	Developer/IF	0%	0%	0%	0%	0%	0%	0%	0%	No	$ -	$ -
XJ758	8	176	After 1996	Developer/IF	0%	0%	0%	0%	0%	0%	0%	0%	No	$ -	$ -
XJ759	8	200	After 1996	Developer/IF	0%	0%	0%	0%	0%	0%	0%	0%	No	$ -	$ -
XJ760	8	217	After 1996	Developer/IF	0%	0%	0%	0%	0%	0%	0%	0%	No	$ -	$ -
XJ761	8	328	After 1996	Developer/IF	0%	0%	0%	0%	0%	0%	0%	0%	No	$ -	$ -
XJ762	8	350	After 1996	Developer/IF	0%	0%	0%	0%	0%	0%	0%	0%	No	$ -	$ -
XJ763	8	347	After 1996	Developer/IF	0%	0%	0%	0%	0%	0%	0%	0%	No	$ -	$ -
XJ764	8	144	After 1996	Developer/IF	0%	0%	0%	0%	0%	0%	0%	0%	No	$ -	$ -
XJ795	8	149	After 1996	Developer/IF	0%	0%	0%	0%	0%	0%	0%	0%	No	$ -	$ -
XJ794	8	144	After 1996	Developer/IF	0%	0%	0%	0%	0%	0%	0%	0%	No	$ -	$ -
XJ766	8	159	After 1996	Developer/IF	0%	0%	0%	0%	0%	0%	0%	0%	No	$ -	$ -
XJ765	8	159	After 1996	Developer/IF	0%	0%	0%	0%	0%	0%	0%	0%	No	$ -	$ -
XJ60	8	375	1995	Original System	1%	2%	3%	3%	5%	5%	68%	28%	Yes	$ 12,330	$ 3,395
XJ62	8	23	1995	Original System	1%	1%	2%	3%	4%	4%	68%	28%	Yes	$ 748	$ 206
XJ66	8	213	1995	Original System	1%	1%	3%	3%	5%	5%	68%	27%	Yes	$ 7,003	$ 1,892
XJ74	8	270	1995	Original System	1%	1%	2%	2%	4%	4%	68%	27%	Yes	$ 8,876	$ 2,385
XJ108	8	346	1995	Original System	1%	1%	2%	2%	4%	4%	69%	28%	Yes	$ 11,372	$ 3,135
XJ121	8	295	1995	Original System	1%	1%	2%	2%	4%	4%	68%	27%	Yes	$ 9,677	$ 2,600
XJ151	8	268	1995	Original System	1%	1%	2%	2%	3%	3%	68%	27%	Yes	$ 8,806	$ 2,365
XJ152	8	44	1995	Original System	1%	1%	1%	1%	2%	2%	70%	29%	Yes	$ 1,446	$ 414
XJ166	8	295	1995	Original System	1%	2%	3%	3%	5%	5%	69%	28%	Yes	$ 9,677	$ 2,668
XJ46	8	339	1995	Original System	2%	3%	5%	5%	9%	9%	68%	28%	Yes	$ 11,135	$ 3,068
N225	8	282	After 1996	Future or Developer	Future	Future	10%	10%	9%	10%	Future	Future	No	$ -	$ -
N227	8	159	After 1996	Future or Developer	Future	Future	13%	13%	11%	13%	Future	Future	No	$ -	$ -
N229	8	120	After 1996	Future or Developer	Future	Future	12%	12%	10%	12%	Future	Future	No	$ -	$ -
N231	8	116	After 1996	Future or Developer	Future	Future	0%	0%	0%	0%	Future	Future	No	$ -	$ -
XJ31	8	400	1995	Original System	2%	2%	2%	4%	36%	36%	94%	6%	Yes	$ 13,127	$ 777
XJ56	8	406	1995	Original System	2%	2%	2%	4%	35%	35%	94%	6%	Yes	$ 13,341	$ 819
XJ64	8	399	1995	Original System	2%	2%	2%	4%	36%	36%	94%	6%	Yes	$ 13,115	$ 777
XJ86	8	404	1995	Original System	3%	3%	4%	7%	55%	55%	94%	6%	Yes	$ 13,283	$ 803
XJ112	8	302	1995	Original System	1%	1%	2%	3%	31%	31%	96%	6%	Yes	$ 9,908	$ 603
XJ122	8	301	1995	Original System	6%	7%	9%	10%	15%	15%	54%	20%	Yes	$ 9,896	$ 1,944

Table C-1. Existing Sanitary Sewer Pipes Reserve Capacity Detail (Cont'd)

Pipe Segment ID	Dia (in)	Segment Length (ft)	Year Built	Paid for by or Installed as part of:	q/Qfull					Max % Capacity Ever Used	Proportion of Max Capacity Ever Used		Impact Fee Eligible?	Estimated Project Cost	Estimated Impact Fee-Eligible Cost
					2014	2016	2024	2026	2060		2016 to 2060	2016 to 2026			
					A	B	C	D	E	F	G	H	I	J	K
										= Max (B, D, and E)	= (F - B) / F	= (D - B) / F			= (H x J) if I is "Yes"
XJ131	8	293	1995	Original System	2%	2%	2%	5%	49%	49%	96%	6%	Yes	$ 9,613	$ 582
XJ153	8	311	1995	Original System	3%	3%	5%	5%	9%	9%	61%	21%	Yes	$ 10,219	$ 2,148
XJ157	8	310	1995	Original System	1%	1%	2%	4%	37%	37%	96%	6%	Yes	$ 10,187	$ 636
XJ167	8	310	1995	Original System	3%	3%	5%	5%	8%	8%	61%	21%	Yes	$ 10,187	$ 2,186
XJ175	8	307	1995	Original System	2%	2%	2%	4%	44%	44%	96%	6%	Yes	$ 10,072	$ 619
XJ189	8	290	1995	Original System	2%	3%	4%	5%	7%	7%	61%	24%	Yes	$ 9,514	$ 2,299
XJ192	8	298	1995	Original System	1%	1%	1%	3%	33%	33%	97%	6%	Yes	$ 9,792	$ 624
XJ198	8	289	1995	Original System	4%	5%	8%	8%	13%	13%	61%	24%	Yes	$ 9,496	$ 2,309
XJ207	8	299	1995	Original System	1%	1%	1%	3%	38%	38%	97%	6%	Yes	$ 9,809	$ 597
XJ234	8	388	1995	Original System	2%	3%	4%	5%	7%	7%	60%	23%	Yes	$ 12,751	$ 2,948
XJ235	8	391	1995	Original System	1%	1%	1%	3%	32%	32%	98%	6%	Yes	$ 12,832	$ 766
XJ240	8	159	1995	Original System	2%	2%	4%	4%	6%	6%	60%	24%	Yes	$ 5,209	$ 1,253
XJ277	8	396	1995	Original System	1%	1%	1%	3%	39%	39%	98%	6%	Yes	$ 12,996	$ 795
XJ283	8	226	1995	Original System	0%	0%	0%	1%	23%	23%	100%	6%	No	$ 7,410	$ -
XJ285	8	400	1995	Original System	6%	6%	6%	7%	14%	14%	56%	3%	No	$ 13,132	$ -
XJ311	8	396	1995	Original System	6%	6%	6%	7%	10%	10%	39%	2%	No	$ 12,998	$ -
N154	8	207	After 1996	Future or Developer	Future	Future	Future	Future	26%	26%	Future	Future	No	$ -	$ -
N156	8	309	After 1996	Future or Developer	Future	Future	Future	Future	10%	10%	Future	Future	No	$ -	$ -
XJ500	8	398	After 1996	Developer/IF	0%	0%	1%	1%	5%	5%	92%	11%	No	$ -	$ -
XJ543	8	366	After 1996	Developer/IF	2%	2%	4%	4%	4%	4%	52%	43%	No	$ -	$ -
N160	8	389	After 1996	Future or Developer	Future	Future	Future	Future	6%	6%	Future	Future	No	$ -	$ -
N162	8	377	After 1996	Future or Developer	Future	Future	Future	Future	10%	10%	Future	Future	No	$ -	$ -
N164	8	407	After 1996	Future or Developer	Future	Future	Future	Future	9%	9%	Future	Future	No	$ -	$ -
N166	8	399	After 1996	Future or Developer	Future	Future	Future	Future	9%	9%	Future	Future	No	$ -	$ -
N168	8	361	After 1996	Future or Developer	Future	Future	Future	Future	9%	9%	Future	Future	No	$ -	$ -
N170	8	396	After 1996	Future or Developer	Future	Future	Future	Future	9%	9%	Future	Future	No	$ -	$ -
N172	8	250	After 1996	Future or Developer	Future	Future	3%	4%	8%	8%	Future	Future	No	$ -	$ -
XJ188	8	311	1995	Original System	1%	1%	1%	1%	2%	2%	72%	7%	Yes	$ 10,202	$ 757
XJ202	8	302	1995	Original System	1%	1%	1%	1%	2%	2%	69%	8%	Yes	$ 9,924	$ 752
XJ206	8	316	1995	Original System	1%	1%	1%	1%	2%	2%	70%	7%	Yes	$ 10,371	$ 731
XJ224	8	311	1995	Original System	1%	1%	1%	1%	2%	2%	72%	7%	Yes	$ 10,203	$ 757
XJ627	8	333	After 1996	Developer/IF	Future	Future	1%	2%	8%	8%	Future	Future	No	$ -	$ -
XJ626	8	364	After 1996	Developer/IF	Future	Future	2%	2%	14%	14%	Future	Future	No	$ -	$ -
XJ625	8	302	After 1996	Developer/IF	Future	Future	1%	2%	11%	11%	Future	Future	No	$ -	$ -
XJ624	8	306	After 1996	Developer/IF	Future	Future	1%	2%	9%	9%	Future	Future	No	$ -	$ -
XJ623	8	305	After 1996	Developer/IF	Future	Future	1%	2%	8%	8%	Future	Future	No	$ -	$ -
XJ622	8	307	After 1996	Developer/IF	Future	Future	3%	3%	9%	9%	Future	Future	No	$ -	$ -
N174	8	306	After 1996	Developer/IF	0%	0%	1%	1%	3%	3%	96%	18%	No	$ -	$ -
N176	8	572	After 1996	Developer/IF	0%	0%	0%	1%	2%	2%	96%	17%	No	$ -	$ -
N178	8	181	After 1996	Developer/IF	0%	0%	1%	1%	2%	2%	95%	20%	No	$ -	$ -
N180	8	226	After 1996	Developer/IF	0%	0%	0%	1%	2%	2%	96%	18%	No	$ -	$ -
N184	8	48	After 1996	Future or Developer	Future	Future	Future	Future	31%	31%	Future	Future	No	$ -	$ -
N186	8	291	After 1996	Future or Developer	Future	Future	Future	Future	31%	31%	Future	Future	No	$ -	$ -
N188	8	432	After 1996	Future or Developer	Future	Future	Future	Future	31%	31%	Future	Future	No	$ -	$ -
N190	8	358	After 1996	Future or Developer	Future	Future	Future	Future	31%	31%	Future	Future	No	$ -	$ -
N192	8	379	After 1996	Future or Developer	Future	Future	Future	Future	29%	29%	Future	Future	No	$ -	$ -
N194	8	334	After 1996	Future or Developer	Future	Future	Future	Future	29%	29%	Future	Future	No	$ -	$ -
N196	8	278	After 1996	Future or Developer	Future	Future	Future	Future	29%	29%	Future	Future	No	$ -	$ -
N198	8	100	After 1996	Future or Developer	Future	Future	Future	Future	29%	29%	Future	Future	No	$ -	$ -
N200	8	442	After 1996	Future or Developer	Future	Future	Future	Future	29%	29%	Future	Future	No	$ -	$ -
N202	8	424	After 1996	Future or Developer	Future	Future	Future	Future	29%	29%	Future	Future	No	$ -	$ -
N204	8	405	After 1996	Future or Developer	Future	Future	Future	Future	29%	29%	Future	Future	No	$ -	$ -

Table C-1. Existing Sanitary Sewer Pipes Reserve Capacity Detail (Cont'd)

Pipe Segment ID	Dia (in)	Segment Length (ft)	Year Built	Paid for by or Installed as part of:	q/Qfull					Max % Capacity Ever Used	Proportion of Max Capacity Ever Used		Impact Fee Eligible?	Estimated Project Cost	Estimated Impact Fee-Eligible Cost
					2014	2016	2024	2026	2060		2016 to 2060	2016 to 2026			
					A	B	C	D	E	F	G	H	I	J	K
										= Max (B, D, and E)	= (F - B) / F	= (D - B) / F			= (H x J) if I is "Yes"
N206	8	413	After 1996	Future or Developer	Future	Future	Future	Future	29%	29%	Future	Future	No	$ -	$ -
N326	8	2,036	After 1996	Future or Developer	Future	Future	Future	Future	2%	2%	Future	Future	No	$ -	$ -
CDT-77	8	86	1995	Original System	14%	15%	18%	19%	29%	29%	48%	13%	Yes	$ 2,813	$ 372
CDT-89	8	363	After 1996	Developer/IF	1%	1%	3%	3%	4%	4%	62%	54%	No	$ -	$ -
CDT-91	8	285	After 1996	Developer/IF	0%	1%	2%	2%	2%	2%	62%	57%	No	$ -	$ -
CDT-93	8	408	After 1996	Developer/IF	0%	1%	2%	2%	2%	2%	63%	58%	No	$ -	$ -
CDT-95	8	302	After 1996	Developer/IF	0%	1%	2%	2%	2%	2%	63%	57%	No	$ -	$ -
CDT-97	8	277	After 1996	Developer/IF	0%	1%	2%	2%	2%	2%	61%	56%	No	$ -	$ -
FME_2	8	4,509	After 1996	Future or Developer	Future	Future	Future	Future	16%	16%	Future	Future	No	$ -	$ -
CDT-141	8	786	After 1996	Future or Developer	Future	Future	Future	Future	6%	6%	Future	Future	No	$ -	$ -
CDT-143	8	1,927	After 1996	Future or Developer	Future	Future	Future	Future	20%	20%	Future	Future	No	$ -	$ -
CDT-147	8	1,281	After 1996	Future or Developer	Future	Future	Future	Future	16%	16%	Future	Future	No	$ -	$ -
CDT-149	8	129	After 1996	Future or Developer	Future	Future	Future	Future	6%	6%	Future	Future	No	$ -	$ -
CDT-153	8	35	After 1996	Future or Developer	Future	Future	Future	Future	7%	7%	Future	Future	No	$ -	$ -
CDT-155	8	2,694	After 1996	Future or Developer	Future	Future	Future	Future	17%	17%	Future	Future	No	$ -	$ -
CDT-157	8	1,313	After 1996	Future or Developer	Future	Future	Future	Future	7%	7%	Future	Future	No	$ -	$ -
CDT-159	8	220	After 1996	Future or Developer	Future	Future	Future	Future	20%	20%	Future	Future	No	$ -	$ -
CDT-161	8	1,434	After 1996	Future or Developer	Future	Future	Future	Future	36%	36%	Future	Future	No	$ -	$ -
CDT-163	8	1,469	After 1996	Future or Developer	Future	Future	Future	Future	5%	5%	Future	Future	No	$ -	$ -
CDT-165	8	1,064	After 1996	Future or Developer	Future	Future	Future	Future	12%	12%	Future	Future	No	$ -	$ -
CDT-167	8	982	After 1996	Future or Developer	Future	Future	Future	Future	17%	17%	Future	Future	No	$ -	$ -
N264	8	392	After 1996	Future or Developer	Future	Future	Future	Future	13%	13%	Future	Future	No	$ -	$ -
N266	8	409	After 1996	Developer/IF	0%	0%	0%	0%	2%	2%	95%	19%	No	$ -	$ -
XJ542	8	371	After 1996	Developer/IF	2%	2%	4%	4%	4%	4%	51%	42%	No	$ -	$ -
XJ130	8	296	1995	Original System	1%	1%	1%	1%	2%	2%	49%	6%	Yes	$ 9,731	$ 592
XJ156	8	308	1995	Original System	1%	1%	1%	1%	2%	2%	51%	7%	Yes	$ 10,104	$ 725
XJ170	8	304	1995	Original System	1%	1%	2%	2%	3%	3%	53%	8%	Yes	$ 9,989	$ 800
XJ191	8	292	1995	Original System	1%	1%	1%	1%	2%	2%	54%	9%	Yes	$ 9,596	$ 896
XJ201	8	289	1995	Original System	1%	1%	1%	1%	2%	2%	52%	8%	Yes	$ 9,496	$ 735
XJ228	8	340	1995	Original System	0%	0%	0%	0%	1%	1%	35%	16%	Yes	$ 11,173	$ 1,807
XJ258	8	405	1995	Original System	0%	0%	0%	0%	1%	1%	65%	46%	Yes	$ 13,308	$ 6,145
XJ282	8	274	1995	Original System	0%	0%	0%	0%	0%	0%	88%	40%	Yes	$ 9,004	$ 3,641
XJ391	8	321	1995	Original System	2%	2%	2%	3%	27%	27%	94%	6%	No	$ 10,548	$ -
XJ412	8	322	1995	Original System	2%	2%	2%	3%	29%	29%	95%	6%	No	$ 10,581	$ -
XJ430	8	113	After 1996	Developer/IF	Future	Future	Future	Future	41%	41%	Future	Future	No	$ -	$ -
XJ452	8	317	After 1996	Developer/IF	Future	Future	Future	Future	23%	23%	Future	Future	No	$ -	$ -
XJ538	8	151	1995	Original System	2%	2%	2%	4%	36%	36%	96%	6%	No	$ 4,946	$ -
N274	8	118	After 1996	Developer/IF	Future	Future	Future	Future	29%	29%	Future	Future	No	$ -	$ -
N280	8	524	After 1996	Future or Developer	Future	Future	14%	14%	12%	14%	Future	Future	No	$ -	$ -
N286	8	159	After 1996	Future or Developer	Future	Future	12%	12%	10%	12%	Future	Future	No	$ -	$ -
N288	8	111	After 1996	Future or Developer	Future	Future	23%	23%	20%	23%	Future	Future	No	$ -	$ -
N290	8	216	After 1996	Future or Developer	Future	Future	17%	17%	15%	17%	Future	Future	No	$ -	$ -
N292	8	263	After 1996	Future or Developer	Future	Future	20%	20%	17%	20%	Future	Future	No	$ -	$ -
N294	8	154	After 1996	Future or Developer	Future	Future	11%	11%	9%	11%	Future	Future	No	$ -	$ -
N296	8	185	After 1996	Future or Developer	Future	Future	8%	8%	7%	8%	Future	Future	No	$ -	$ -
N298	8	972	After 1996	Future or Developer	Future	Future	Future	Future	2%	2%	Future	Future	No	$ -	$ -
N606	8	681	After 1996	Future or Developer	Future	Future	Future	Future	4%	4%	Future	Future	No	$ -	$ -
N608	8	931	After 1996	Future or Developer	Future	Future	Future	Future	7%	7%	Future	Future	No	$ -	$ -
N610	8	213	After 1996	Future or Developer	Future	Future	Future	Future	2%	2%	Future	Future	No	$ -	$ -
N612	8	261	After 1996	Developer/IF	0%	2%	6%	8%	35%	35%	95%	18%	No	$ -	$ -
N614	8	269	After 1996	Developer/IF	0%	2%	6%	8%	34%	34%	95%	18%	No	$ -	$ -
N616	8	189	After 1996	Developer/IF	0%	2%	6%	8%	35%	35%	95%	18%	No	$ -	$ -
N618	8	103	After 1996	Developer/IF	0%	2%	6%	8%	35%	35%	95%	18%	No	$ -	$ -
N620	8	205	After 1996	Developer/IF	0%	2%	8%	10%	45%	45%	95%	18%	No	$ -	$ -
N622	8	272	After 1996	Developer/IF	0%	3%	12%	16%	78%	78%	96%	16%	No	$ -	$ -

Table C-1. Existing Sanitary Sewer Pipes Reserve Capacity Detail (Cont'd)

Pipe Segment ID	Dia (in)	Segment Length (ft)	Year Built	Paid for by or Installed as part of:	q/Qfull					Max % Capacity Ever Used	Proportion of Max Capacity Ever Used		Impact Fee Eligible?	Estimated Project Cost	Estimated Impact Fee-Eligible Cost
					2014	2016	2024	2026	2060		2016 to 2060	2016 to 2026			
					A	B	C	D	E	F	G	H	I	J	K
										= Max (B, D, and E)	= (F - B) / F	= (D - B) / F			= (H x J) if I is "Yes"
N624	8	264	After 1996	Developer/IF	0%	3%	12%	16%	77%	77%	96%	16%	No	$ -	$ -
N626	8	251	After 1996	Developer/IF	0%	2%	7%	9%	46%	46%	96%	16%	No	$ -	$ -
N628	8	94	After 1996	Future or Developer	Future	Future	9%	12%	74%	74%	Future	Future	No	$ -	$ -
N630	8	84	After 1996	Future or Developer	Future	Future	7%	10%	59%	59%	Future	Future	No	$ -	$ -
N632	8	224	After 1996	Future or Developer	Future	Future	3%	5%	28%	28%	Future	Future	No	$ -	$ -
N634	8	106	After 1996	Future or Developer	Future	Future	4%	6%	33%	33%	Future	Future	No	$ -	$ -
N636	8	263	After 1996	Future or Developer	Future	Future	2%	3%	22%	22%	Future	Future	No	$ -	$ -
N638	8	254	After 1996	Future or Developer	Future	Future	18%	18%	16%	18%	Future	Future	No	$ -	$ -
N640	8	161	After 1996	Future or Developer	Future	Future	29%	29%	25%	29%	Future	Future	No	$ -	$ -
N642	8	137	After 1996	Future or Developer	Future	Future	26%	25%	22%	25%	Future	Future	No	$ -	$ -
N644	8	95	After 1996	Future or Developer	Future	Future	26%	26%	22%	26%	Future	Future	No	$ -	$ -
N646	8	270	After 1996	Future or Developer	Future	Future	13%	12%	11%	12%	Future	Future	No	$ -	$ -
N648	8	53	After 1996	Future or Developer	Future	Future	10%	10%	9%	10%	Future	Future	No	$ -	$ -
N686	8	153	After 1996	Developer/IF	2%	2%	3%	3%	3%	3%	31%	31%	No	$ -	$ -
N688	8	352	After 1996	Developer/IF	2%	2%	3%	3%	3%	3%	31%	31%	No	$ -	$ -
CDT-169	8	53	After 1996	Future or Developer	Future	Future	Future	Future	15%	15%	Future	Future	No	$ -	$ -
N690	8	200	After 1996	Developer/IF	1%	2%	2%	2%	2%	2%	29%	29%	No	$ -	$ -
N692	8	400	After 1996	Developer/IF	1%	1%	2%	2%	2%	2%	31%	31%	No	$ -	$ -
N694	8	389	After 1996	Developer/IF	1%	2%	2%	2%	2%	2%	31%	31%	No	$ -	$ -
N698	8	216	After 1996	Developer/IF	37%	30%	9%	10%	23%	30%	0%	0%	No	$ -	$ -
N704	8	106	After 1996	Developer/IF	32%	26%	7%	8%	19%	26%	0%	0%	No	$ -	$ -
N706	8	334	After 1996	Developer/IF	69%	55%	16%	18%	42%	55%	0%	0%	No	$ -	$ -
N708	8	302	After 1996	Developer/IF	82%	67%	21%	23%	52%	67%	0%	0%	No	$ -	$ -
N750	8	399	After 1996	Future or Developer	Future	Future	Future	Future	81%	81%	Future	Future	No	$ -	$ -
N752	8	372	After 1996	Future or Developer	Future	Future	Future	Future	78%	78%	Future	Future	No	$ -	$ -
N754	8	393	After 1996	Future or Developer	Future	Future	Future	Future	80%	80%	Future	Future	No	$ -	$ -
N758	8	411	After 1996	Future or Developer	Future	Future	Future	Future	65%	65%	Future	Future	No	$ -	$ -
N760	8	397	After 1996	Future or Developer	Future	Future	Future	Future	37%	37%	Future	Future	No	$ -	$ -
N762	8	427	After 1996	Future or Developer	Future	Future	Future	Future	65%	65%	Future	Future	No	$ -	$ -
N764	8	125	After 1996	Future or Developer	Future	Future	Future	Future	25%	25%	Future	Future	No	$ -	$ -
N766	8	270	After 1996	Future or Developer	Future	Future	Future	Future	51%	51%	Future	Future	No	$ -	$ -
N768	8	390	After 1996	Future or Developer	Future	Future	Future	Future	62%	62%	Future	Future	No	$ -	$ -
N770	8	403	After 1996	Future or Developer	Future	Future	Future	Future	63%	63%	Future	Future	No	$ -	$ -
N772	8	243	After 1996	Future or Developer	Future	Future	6%	10%	80%	80%	Future	Future	No	$ -	$ -
N774	8	252	After 1996	Future or Developer	Future	Future	6%	10%	82%	82%	Future	Future	No	$ -	$ -
CDT-183	8	967	After 1996	Future or Developer	Future	Future	Future	Future	32%	32%	Future	Future	No	$ -	$ -
CDT-185	8	2,912	After 1996	Future or Developer	Future	Future	Future	Future	39%	39%	Future	Future	No	$ -	$ -
N796	8	158	After 1996	Future or Developer	Future	Future	5%	8%	65%	65%	Future	Future	No	$ -	$ -
N798	8	295	After 1996	Future or Developer	Future	Future	6%	10%	80%	80%	Future	Future	No	$ -	$ -
N800	8	107	After 1996	Future or Developer	Future	Future	4%	8%	59%	59%	Future	Future	No	$ -	$ -
N804	8	798	After 1996	Future or Developer	Future	Future	Future	Future	3%	3%	Future	Future	No	$ -	$ -
N806	8	883	After 1996	Future or Developer	Future	Future	Future	Future	3%	3%	Future	Future	No	$ -	$ -
CDT-187	8	2,025	After 1996	Future or Developer	Future	Future	Future	Future	9%	9%	Future	Future	No	$ -	$ -
CDT-189	8	291	After 1996	Future or Developer	Future	Future	Future	Future	11%	11%	Future	Future	No	$ -	$ -
XJ6	10	195	After 1996	Developer/IF	2%	2%	2%	2%	2%	2%	7%	3%	No	$ -	$ -
XJ8	10	314	1995	Original System	49%	39%	9%	10%	28%	39%	0%	0%	No	$ 12,276	$ -
XJ9	10	398	1995	Original System	44%	35%	8%	9%	25%	35%	0%	0%	No	$ 15,570	$ -
XJ12	10	400	1995	Original System	43%	35%	12%	15%	68%	68%	48%	0%	No	$ 15,648	$ -
XJ14	10	340	1995	Original System	56%	43%	6%	6%	5%	43%	0%	0%	No	$ 13,294	$ -
XJ15	10	299	1995	Original System	74%	59%	14%	14%	15%	59%	0%	0%	No	$ 11,689	$ -
XJ16	10	317	1995	Original System	53%	42%	11%	11%	12%	42%	0%	0%	No	$ 12,377	$ -
XJ17	10	281	1995	Original System	39%	32%	11%	14%	60%	60%	48%	0%	No	$ 10,988	$ -
XJ21	10	424	1995	Original System	17%	15%	10%	10%	9%	15%	0%	0%	No	$ 16,582	$ -
XJ32	10	233	1995	Original System	18%	16%	11%	11%	9%	16%	0%	0%	No	$ 9,111	$ -
XJ33	10	228	1995	Original System	32%	27%	14%	13%	4%	27%	0%	0%	No	$ 8,903	$ -

Table C-1. Existing Sanitary Sewer Pipes Reserve Capacity Detail (Cont'd)

Pipe Segment ID	Dia (in)	Segment Length (ft)	Year Built	Paid for by or Installed as part of:	q/Qfull					Max % Capacity Ever Used	Proportion of Max Capacity Ever Used		Impact Fee Eligible?	Estimated Project Cost	Estimated Impact Fee-Eligible Cost
					2014	2016	2024	2026	2060		2016 to 2060	2016 to 2026			
					A	B	C	D	E	F	G	H	I	J	K
										= Max (B, D, and E)	= (F - B) / F	= (D - B) / F			= (H x J) if I is "Yes"
XJ34	10	299	1995	Original System	28%	24%	12%	11%	0%	24%	0%	0%	No	$ 11,669	$ -
XJ52	10	290	1995	Original System	28%	24%	12%	12%	0%	24%	0%	0%	No	$ 11,321	$ -
XJ53	10	329	1995	Original System	27%	23%	12%	11%	0%	23%	0%	0%	No	$ 12,862	$ -
XJ61	10	322	1995	Original System	25%	29%	39%	39%	48%	48%	41%	22%	Yes	$ 12,587	$ 2,784
XJ267	10	419	1995	Original System	36%	39%	48%	48%	40%	48%	19%	19%	Yes	$ 16,360	$ 3,099
XJ269	10	420	1995	Original System	18%	20%	25%	25%	21%	25%	19%	19%	Yes	$ 16,398	$ 3,125
XJ271	10	355	1995	Original System	21%	23%	29%	29%	40%	40%	43%	16%	Yes	$ 13,872	$ 2,237
XJ541	10	201	1995	Original System	27%	24%	16%	16%	14%	24%	0%	0%	No	$ 7,858	$ -
XJ51	10	355	1995	Original System	29%	25%	13%	12%	0%	25%	0%	0%	No	$ 13,877	$ -
XJ628	10	229	After 1996	Summit Ridge	3%	5%	10%	11%	30%	30%	84%	21%	Yes	$ 14,116	$ 2,897
XJ629	10	364	After 1996	Summit Ridge	3%	5%	10%	12%	47%	47%	89%	15%	Yes	$ 22,454	$ 3,473
XJ630	10	300	After 1996	Summit Ridge	2%	3%	5%	6%	26%	26%	90%	15%	Yes	$ 18,502	$ 2,751
XJ631	10	400	After 1996	Summit Ridge	2%	3%	6%	7%	27%	27%	90%	15%	Yes	$ 24,671	$ 3,667
XJ632	10	396	After 1996	Summit Ridge	3%	4%	9%	11%	44%	44%	90%	15%	Yes	$ 24,407	$ 3,613
XJ633	10	404	After 1996	Summit Ridge	2%	3%	7%	9%	35%	35%	90%	15%	Yes	$ 24,910	$ 3,681
XJ634	10	400	After 1996	Summit Ridge	2%	2%	5%	6%	25%	25%	90%	15%	Yes	$ 24,664	$ 3,652
XJ675	10	399	After 1996	Summit Ridge	2%	3%	6%	7%	27%	27%	90%	15%	Yes	$ 24,637	$ 3,662
XJ685	10	228	After 1996	Summit Ridge	1%	1%	3%	4%	15%	15%	92%	17%	Yes	$ 14,063	$ 2,452
N110	10	213	After 1996	Developer/IF	1%	1%	2%	2%	5%	5%	76%	28%	No	$ -	$ -
N112	10	406	After 1996	Developer/IF	1%	2%	3%	3%	7%	7%	77%	27%	No	$ -	$ -
N114	10	202	After 1996	Developer/IF	1%	1%	3%	3%	6%	6%	76%	28%	No	$ -	$ -
N116	10	204	After 1996	Developer/IF	2%	3%	5%	5%	11%	11%	76%	27%	No	$ -	$ -
N118	10	204	After 1996	Developer/IF	2%	3%	5%	5%	11%	11%	76%	27%	No	$ -	$ -
CDT-59	10	272	After 1996	Developer/IF	0%	0%	0%	0%	0%	0%	0%	0%	No	$ -	$ -
CDT-61	10	61	After 1996	Developer/IF	0%	0%	0%	0%	0%	0%	0%	0%	No	$ -	$ -
CDT-63	10	181	After 1996	Developer/IF	45%	38%	16%	17%	32%	38%	0%	0%	No	$ -	$ -
CDT-65	10	101	After 1996	Developer/IF	43%	36%	15%	16%	30%	36%	0%	0%	No	$ -	$ -
CDT-67	10	108	After 1996	Developer/IF	55%	46%	20%	21%	38%	46%	0%	0%	No	$ -	$ -
CDT-69	10	112	After 1996	Developer/IF	29%	24%	10%	11%	20%	24%	0%	0%	No	$ -	$ -
CDT-71	10	255	1995	Original System	2%	2%	2%	2%	2%	2%	6%	0%	No	$ 9,981	$ -
CDT-73	10	77	After 1996	Developer/IF	2%	2%	2%	2%	2%	2%	9%	4%	No	$ -	$ -
CDT-75	10	22	After 1996	Developer/IF	39%	33%	13%	14%	27%	33%	0%	0%	No	$ -	$ -
N352	10	1,977	After 1996	Future or Developer	Future	Future	20%	20%	19%	20%	Future	Future	No	$ -	$ -
N278	10	210	1995	Original System	38%	31%	8%	8%	9%	31%	0%	0%	No	$ 8,194	$ -
N668	10	223	After 1996	Developer/IF	27%	22%	10%	10%	19%	22%	0%	0%	No	$ -	$ -
N672	10	60	After 1996	Developer/IF	22%	19%	8%	8%	15%	19%	0%	0%	No	$ -	$ -
N674	10	115	After 1996	Developer/IF	2%	2%	2%	2%	2%	2%	5%	0%	No	$ -	$ -
N676	10	112	After 1996	Developer/IF	2%	2%	2%	2%	2%	2%	5%	0%	No	$ -	$ -
N678	10	81	After 1996	Developer/IF	3%	3%	3%	3%	4%	4%	9%	1%	No	$ -	$ -
N680	10	118	After 1996	Developer/IF	4%	4%	4%	4%	5%	5%	9%	1%	No	$ -	$ -
N684	10	50	After 1996	Developer/IF	15%	12%	3%	3%	9%	12%	0%	0%	No	$ -	$ -
N696	10	288	After 1996	Developer/IF	2%	2%	5%	6%	22%	22%	89%	16%	No	$ -	$ -
N726	10	397	After 1996	Future or Developer	Future	Future	Future	Future	62%	62%	Future	Future	No	$ -	$ -
N728	10	385	After 1996	Future or Developer	Future	Future	Future	Future	63%	63%	Future	Future	No	$ -	$ -
N730	10	385	After 1996	Future or Developer	Future	Future	Future	Future	63%	63%	Future	Future	No	$ -	$ -
N732	10	403	After 1996	Future or Developer	Future	Future	Future	Future	63%	63%	Future	Future	No	$ -	$ -
N734	10	401	After 1996	Future or Developer	Future	Future	Future	Future	63%	63%	Future	Future	No	$ -	$ -
N736	10	376	After 1996	Future or Developer	Future	Future	Future	Future	56%	56%	Future	Future	No	$ -	$ -
N738	10	382	After 1996	Future or Developer	Future	Future	Future	Future	56%	56%	Future	Future	No	$ -	$ -
N740	10	401	After 1996	Future or Developer	Future	Future	Future	Future	61%	61%	Future	Future	No	$ -	$ -
N744	10	409	After 1996	Future or Developer	Future	Future	Future	Future	60%	60%	Future	Future	No	$ -	$ -
N746	10	424	After 1996	Future or Developer	Future	Future	Future	Future	46%	46%	Future	Future	No	$ -	$ -
N748	10	403	After 1996	Future or Developer	Future	Future	Future	Future	63%	63%	Future	Future	No	$ -	$ -
N780	10	1,093	After 1996	Future or Developer	Future	Future	19%	20%	39%	39%	Future	Future	No	$ -	$ -
CDT-173	10	14	After 1996	Future or Developer	Future	Future	Future	Future	1%	1%	Future	Future	No	$ -	$ -

Table C-1. Existing Sanitary Sewer Pipes Reserve Capacity Detail (Cont'd)

Pipe Segment ID	Dia (in)	Segment Length (ft)	Year Built	Paid for by or Installed as part of:	q/Qfull					Max % Capacity Ever Used	Proportion of Max Capacity Ever Used		Impact Fee Eligible?	Estimated Project Cost	Estimated Impact Fee-Eligible Cost
					2014	2016	2024	2026	2060		2016 to 2060	2016 to 2026			
					A	B	C	D	E	F	G	H	I	J	K
										= Max (B, D, and E)	= (F - B) / F	= (D - B) / F			= (H x J) if I is "Yes"
XJ1	12	25	After 1996	Developer/IF	7%	7%	9%	9%	14%	14%	47%	13%	No	$ -	$ -
XJ656	12	306	After 1996	Summit Ridge	2%	4%	10%	14%	74%	74%	94%	13%	Yes	$ 22,399	$ 2,858
XJ657	12	256	After 1996	Summit Ridge	2%	4%	11%	15%	79%	79%	94%	13%	Yes	$ 18,780	$ 2,404
XJ658	12	410	After 1996	Summit Ridge	2%	4%	10%	14%	77%	77%	94%	13%	Yes	$ 30,062	$ 3,837
XJ659	12	326	After 1996	Summit Ridge	2%	4%	10%	14%	76%	76%	94%	13%	Yes	$ 23,884	$ 3,059
XJ660	12	146	After 1996	Summit Ridge	2%	4%	9%	12%	63%	63%	94%	13%	Yes	$ 10,722	$ 1,420
XJ661	12	399	After 1996	Summit Ridge	2%	4%	10%	14%	71%	71%	94%	13%	Yes	$ 29,206	$ 3,896
XJ662	12	401	After 1996	Summit Ridge	2%	4%	10%	14%	72%	72%	94%	13%	Yes	$ 29,410	$ 3,917
XJ663	12	401	After 1996	Summit Ridge	2%	4%	10%	14%	72%	72%	94%	13%	Yes	$ 29,405	$ 3,886
XJ664	12	395	After 1996	Summit Ridge	2%	4%	10%	14%	71%	71%	94%	13%	Yes	$ 28,924	$ 3,871
XJ665	12	404	After 1996	Summit Ridge	2%	4%	10%	14%	70%	70%	94%	13%	Yes	$ 29,584	$ 3,991
XJ666	12	398	After 1996	Summit Ridge	2%	3%	7%	9%	42%	42%	93%	14%	Yes	$ 29,167	$ 4,184
XJ68	15	143	1995	Original System	18%	20%	27%	28%	34%	34%	40%	23%	Yes	$ 7,371	$ 1,677
XJ71	15	337	After 1996	Developer/IF	5%	7%	10%	10%	8%	10%	33%	33%	No	$ -	$ -
XJ72	15	267	After 1996	Developer/IF	8%	10%	14%	14%	14%	14%	32%	32%	No	$ -	$ -
XJ77	15	285	After 1996	Developer/IF	51%	61%	89%	87%	49%	87%	30%	30%	No	$ -	$ -
XJ78	15	155	After 1996	Developer/IF	23%	28%	41%	41%	36%	41%	33%	33%	No	$ -	$ -
XJ79	15	204	1995	Original System	41%	46%	63%	61%	43%	61%	25%	25%	Yes	$ 10,553	$ 2,637
XJ98	15	241	After 1996	Developer/IF	4%	5%	8%	7%	2%	7%	31%	31%	No	$ -	$ -
XJ99	15	399	After 1996	Developer/IF	4%	5%	7%	7%	2%	7%	32%	32%	No	$ -	$ -
XJ100	15	404	After 1996	Developer/IF	4%	5%	8%	7%	2%	7%	31%	31%	No	$ -	$ -
XJ101	15	399	After 1996	Developer/IF	5%	7%	10%	10%	2%	10%	31%	31%	No	$ -	$ -
XJ102	15	395	After 1996	Developer/IF	3%	4%	6%	5%	1%	5%	32%	32%	No	$ -	$ -
XJ103	15	245	After 1996	Developer/IF	7%	8%	10%	10%	2%	10%	22%	22%	No	$ -	$ -
XJ530	15	44	After 1996	Developer/IF	1%	1%	2%	1%	1%	1%	33%	33%	No	$ -	$ -
XJ539	15	183	1995	Original System	17%	19%	27%	27%	33%	33%	40%	23%	Yes	$ 9,465	$ 2,151
XJ667	15	421	After 1996	Summit Ridge	1%	2%	6%	7%	34%	34%	93%	14%	Yes	$ 33,456	$ 4,803
XJ668	15	424	After 1996	Summit Ridge	2%	4%	8%	11%	50%	50%	93%	14%	Yes	$ 33,692	$ 4,843
XJ669	15	246	After 1996	Summit Ridge	0%	1%	3%	4%	20%	20%	96%	14%	Yes	$ 19,512	$ 2,747
XJ676	15	22	After 1996	Summit Ridge	1%	2%	5%	6%	30%	30%	93%	14%	Yes	$ 1,775	$ 256
XJ670	15	400	After 1996	Summit Ridge	0%	1%	2%	2%	10%	10%	95%	15%	Yes	$ 31,762	$ 4,772
XJ671	15	233	After 1996	Summit Ridge	0%	1%	2%	2%	11%	11%	94%	14%	Yes	$ 18,538	$ 2,602
XJ672	15	305	After 1996	Summit Ridge	0%	1%	2%	2%	11%	11%	94%	15%	Yes	$ 24,238	$ 3,519
XJ673	15	294	After 1996	Summit Ridge	0%	1%	2%	2%	10%	10%	95%	15%	Yes	$ 23,389	$ 3,492
XJ674	15	383	After 1996	Summit Ridge	0%	1%	2%	2%	10%	10%	95%	15%	Yes	$ 30,421	$ 4,514
XJ677	15	250	After 1996	Summit Ridge	0%	1%	2%	2%	11%	11%	94%	14%	Yes	$ 19,863	$ 2,774
XJ678	15	266	After 1996	Summit Ridge	0%	1%	2%	2%	11%	11%	94%	14%	Yes	$ 21,158	$ 2,970
XJ679	15	208	After 1996	Summit Ridge	0%	1%	2%	2%	11%	11%	94%	14%	Yes	$ 16,492	$ 2,341
XJ684	15	396	After 1996	Summit Ridge	0%	0%	1%	1%	6%	6%	95%	15%	Yes	$ 31,472	$ 4,586
N776	15	189	After 1996	Future or Developer	Future	Future	11%	13%	46%	46%	Future	Future	No	$ -	$ -
XJ636	18	404	After 1996	Summit Ridge	2%	3%	7%	9%	33%	33%	91%	17%	Yes	$ 34,880	$ 5,864
XJ637	18	98	After 1996	Summit Ridge	2%	3%	7%	8%	32%	32%	91%	17%	Yes	$ 8,427	$ 1,423
XJ638	18	401	After 1996	Summit Ridge	2%	3%	7%	9%	33%	33%	91%	17%	Yes	$ 34,668	$ 5,840
XJ639	18	399	After 1996	Summit Ridge	2%	3%	7%	9%	33%	33%	91%	17%	Yes	$ 34,506	$ 5,813
XJ640	18	396	After 1996	Summit Ridge	2%	3%	7%	8%	32%	32%	91%	17%	Yes	$ 34,264	$ 5,795
XJ641	18	377	After 1996	Summit Ridge	2%	3%	7%	8%	32%	32%	91%	17%	Yes	$ 32,580	$ 5,537
XJ642	18	279	After 1996	Summit Ridge	2%	3%	6%	7%	28%	28%	91%	17%	Yes	$ 24,110	$ 4,061
XJ643	18	245	After 1996	Summit Ridge	1%	2%	6%	7%	26%	26%	91%	17%	Yes	$ 21,167	$ 3,562
XJ635	18	379	After 1996	Summit Ridge	1%	2%	5%	6%	21%	21%	91%	17%	Yes	$ 32,784	$ 5,535
N201	18	176	After 1996	Developer/IF	9%	9%	11%	12%	33%	33%	72%	10%	No	$ -	$ -
N203	18	162	After 1996	Developer/IF	7%	8%	9%	10%	27%	27%	72%	10%	No	$ -	$ -
N205	18	233	After 1996	Developer/IF	10%	10%	13%	14%	36%	36%	72%	10%	No	$ -	$ -
N207	18	195	After 1996	Developer/IF	0%	4%	16%	18%	62%	62%	94%	23%	No	$ -	$ -
N209	18	210	After 1996	Developer/IF	0%	4%	14%	17%	57%	57%	94%	23%	No	$ -	$ -
N211	18	299	After 1996	Future or Developer	Future	Future	14%	17%	57%	57%	Future	Future	No	$ -	$ -

Table C-1. Existing Sanitary Sewer Pipes Reserve Capacity Detail (Cont'd)

Pipe Segment ID	Dia (in)	Segment Length (ft)	Year Built	Paid for by or Installed as part of:	q/Qfull					Max % Capacity Ever Used	Proportion of Max Capacity Ever Used		Impact Fee Eligible?	Estimated Project Cost	Estimated Impact Fee-Eligible Cost
					2014	2016	2024	2026	2060		2016 to 2060	2016 to 2026			
					A	B	C	D	E	F	G	H	I	J	K
										= Max (B, D, and E)	= (F - B) / F	= (D - B) / F			= (H x J) if I is "Yes"
N213	18	236	After 1996	Future or Developer	Future	Future	9%	11%	49%	49%	Future	Future	No	$ -	$ -
N215	18	361	After 1996	Future or Developer	Future	Future	9%	12%	50%	50%	Future	Future	No	$ -	$ -
N217	18	150	After 1996	Future or Developer	Future	Future	10%	12%	50%	50%	Future	Future	No	$ -	$ -
N219	18	442	After 1996	Future or Developer	Future	Future	7%	8%	36%	36%	Future	Future	No	$ -	$ -
N221	18	94	After 1996	Developer/IF	14%	17%	24%	27%	76%	76%	78%	14%	No	$ -	$ -
CDT-11	18	62	After 1996	Developer/IF	8%	10%	16%	18%	53%	53%	81%	16%	No	$ -	$ -
N374	18	302	2013	2013 WRF	13%	16%	25%	29%	82%	82%	81%	16%	Yes	$ 28,474	$ 4,457
N373	18	501	2013	2013 WRF	13%	16%	25%	29%	82%	82%	81%	16%	Yes	$ 47,297	$ 7,412
N371	18	366	2013	2013 WRF	3%	4%	7%	8%	22%	22%	81%	16%	Yes	$ 34,559	$ 5,487
CDT-27	18	399	2013	2013 WRF	9%	11%	18%	20%	58%	58%	81%	16%	Yes	$ 37,677	$ 5,930
CDT-135	18	49	After 1996	Future or Developer	3%	3%	5%	5%	16%	16%	80%	13%	No	$ -	$ -
N370	18	246	2013	2013 WRF	6%	8%	12%	14%	40%	40%	81%	15%	Yes	$ 23,226	$ 3,598
N369	18	185	2013	2013 WRF	6%	8%	12%	14%	40%	40%	81%	16%	Yes	$ 17,469	$ 2,719
CDT-47	18	203	2013	2013 WRF	13%	16%	25%	28%	81%	81%	81%	16%	Yes	$ 19,175	$ 2,999
N650	18	62	After 1996	Developer/IF	1%	1%	1%	1%	2%	2%	49%	14%	No	$ -	$ -
N710	18	173	2013	2013 WRF	12%	13%	14%	16%	40%	40%	69%	8%	Yes	$ 16,292	$ 1,374
N716	18	38	2013	2013 WRF	8%	8%	9%	10%	27%	27%	69%	8%	Yes	$ 3,580	$ 287
N756	18	396	After 1996	Future or Developer	Future	Future	7%	8%	32%	32%	Future	Future	No	$ -	$ -
N778	18	274	After 1996	Future or Developer	Future	Future	7%	8%	32%	32%	Future	Future	No	$ -	$ -
N802	18	198	After 1996	Future or Developer	Future	Future	9%	12%	49%	49%	Future	Future	No	$ -	$ -
N808	18	210	After 1996	Developer/IF	10%	12%	18%	21%	55%	55%	78%	15%	No	$ -	$ -
N810	18	191	After 1996	Developer/IF	11%	13%	19%	21%	57%	57%	78%	15%	No	$ -	$ -
N812	18	93	After 1996	Developer/IF	3%	3%	3%	3%	5%	5%	46%	12%	No	$ -	$ -
N814	18	175	2013	2013 WRF	9%	9%	11%	12%	30%	30%	69%	8%	Yes	$ 16,534	$ 1,339
N816	18	263	2013	2013 WRF	12%	12%	14%	16%	40%	40%	69%	8%	Yes	$ 24,840	$ 2,110
N818	18	368	2013	2013 WRF	12%	13%	15%	16%	42%	42%	69%	8%	Yes	$ 34,741	$ 2,936
N820	18	367	2013	2013 WRF	11%	12%	14%	15%	39%	39%	69%	8%	Yes	$ 34,687	$ 2,934
N822	18	183	After 1996	Developer/IF	24%	26%	31%	35%	90%	90%	72%	10%	No	$ -	$ -
CDT-13	18	351	2013	2013 WRF	6%	8%	12%	14%	40%	40%	81%	16%	Yes	$ 33,173	$ 5,147
CDT-15	18	351	2013	2013 WRF	6%	8%	12%	14%	39%	39%	81%	16%	Yes	$ 33,141	$ 5,224
CDT-17	18	500	2013	2013 WRF	6%	7%	12%	13%	39%	39%	81%	16%	Yes	$ 47,208	$ 7,436
CDT-19	18	373	2013	2013 WRF	6%	7%	11%	13%	37%	37%	81%	16%	Yes	$ 35,220	$ 5,546
CDT-21	18	349	2013	2013 WRF	6%	7%	11%	13%	37%	37%	81%	16%	Yes	$ 32,955	$ 5,198
CDT-23	18	253	2013	2013 WRF	9%	11%	18%	20%	58%	58%	81%	16%	Yes	$ 23,886	$ 3,755
CDT-25	18	231	2013	2013 WRF	6%	7%	12%	13%	38%	38%	81%	16%	Yes	$ 21,811	$ 3,441
CDT-29	18	293	2013	2013 WRF	7%	9%	15%	17%	47%	47%	81%	16%	Yes	$ 27,695	$ 4,388
CDT-31	18	218	2013	2013 WRF	7%	8%	13%	15%	42%	42%	81%	16%	Yes	$ 20,622	$ 3,255
CDT-33	18	115	2013	2013 WRF	3%	4%	6%	7%	20%	20%	81%	16%	Yes	$ 10,896	$ 1,709
CDT-35	18	44	2013	2013 WRF	9%	11%	18%	20%	57%	57%	81%	16%	Yes	$ 4,167	$ 655
CDT-37	18	174	2013	2013 WRF	9%	11%	18%	20%	58%	58%	81%	16%	Yes	$ 16,401	$ 2,589
CDT-39	18	45	2013	2013 WRF	8%	10%	16%	18%	52%	52%	81%	16%	Yes	$ 4,245	$ 666
CDT-41	18	304	2013	2013 WRF	7%	8%	13%	15%	42%	42%	81%	16%	Yes	$ 28,705	$ 4,491
CDT-43	18	310	2013	2013 WRF	7%	8%	13%	15%	42%	42%	81%	16%	Yes	$ 29,310	$ 4,572
CDT-45	18	189	2013	2013 WRF	13%	16%	25%	28%	82%	82%	81%	16%	Yes	$ 17,817	$ 2,791
CDT-49	18	392	2013	2013 WRF	9%	12%	19%	21%	60%	60%	81%	16%	Yes	$ 37,009	$ 5,820
CDT-51	18	211	2013	2013 WRF	4%	5%	8%	9%	25%	25%	81%	16%	Yes	$ 19,908	$ 3,124
CDT-53	18	178	2013	2013 WRF	6%	8%	12%	14%	39%	39%	81%	16%	Yes	$ 16,837	$ 2,639
CDT-55	18	23	After 1996	Developer/IF	2%	3%	6%	8%	33%	33%	92%	15%	No	$ -	$ -
CDT-57	18	144	After 1996	Summit Ridge	1%	2%	6%	7%	29%	29%	92%	15%	Yes	$ 12,425	$ 1,925
													Total	$ 3,639,844	**$ 490,663**

Table C-2. Non-Modeled Existing Sanitary Sewer Pipes Reserve Capacity Detail

Pipe Segment ID	Dia (in)	Segment Length (ft)	Year Built	Reference Pipe[1]	q/Qfull					Max % Capacity Ever Used	Proportion of Max Capacity Ever Used		Impact Fee Eligible?	Estimated Project Cost	Estimated Impact Fee-Eligible Cost
					2014	2016	2024	2026	2060		2016 to 2060	2016 to 2026			
					A	B	C	D	E	F	G	H	I	J	K
										= Max (B, D, and E)	= (F - B) / F	= (D - B) / F			= (H x J) if I is "Yes"
778	6	97	After 1996	XJ116	3%	3%	3%	3%	5%	5%	44%	5.5%	No	$ -	$ -
829	6	178	1,998	XJ250	9%	10%	12%	12%	16%	16%	39%	15.2%	Yes	$ 6,213	$ 946
830	6	73	1,998	XJ250	9%	10%	12%	12%	16%	16%	39%	15.2%	Yes	$ 2,568	$ 391
1223	6	14	1,998	XJ250	9%	10%	12%	12%	16%	16%	39%	15.2%	Yes	$ 476	$ 72
831	6	180	After 1996	XJ307	3%	4%	4%	4%	5%	5%	30%	15.6%	No	$ -	$ -
911	6	29	After 1996	N203	7%	8%	9%	10%	27%	27%	72%	10.0%	No	$ -	$ -
922	6	29	After 1996	N203	7%	8%	9%	10%	27%	27%	72%	10.0%	No	$ -	$ -
929	6	144	After 1996	N203	7%	8%	9%	10%	27%	27%	72%	10.0%	No	$ -	$ -
936	6	136	After 1996	N203	7%	8%	9%	10%	27%	27%	72%	10.0%	No	$ -	$ -
941	6	114	After 1996	N203	7%	8%	9%	10%	27%	27%	72%	10.0%	No	$ -	$ -
944	6	77	After 1996	N203	7%	8%	9%	10%	27%	27%	72%	10.0%	No	$ -	$ -
947	6	103	After 1996	N203	7%	8%	9%	10%	27%	27%	72%	10.0%	No	$ -	$ -
949	6	129	After 1996	N203	7%	8%	9%	10%	27%	27%	72%	10.0%	No	$ -	$ -
777	8	60	After 1996	XJ687	1%	1%	1%	2%	9%	9%	91%	10.6%	No	$ -	$ -
1213	8	322	After 1996	XJ684	0%	0%	1%	1%	6%	6%	95%	14.6%	No	$ -	$ -
1215	8	322	After 1996	XJ684	0%	0%	1%	1%	6%	6%	95%	14.6%	No	$ -	$ -
776	8	102	After 1996	XJ687	1%	1%	1%	2%	9%	9%	91%	10.6%	No	$ -	$ -
1116	8	537	2,010	XJ500	0%	0%	1%	1%	5%	5%	92%	11.1%	Yes	$ 22,057	$ 2,439
1117	8	842	2,010	N30	0%	0%	0%	0%	0%	0%	0%	0.0%	Yes	$ 34,542	$ -
115	8	76	1,998	XJ250	9%	10%	12%	12%	16%	16%	39%	15.2%	Yes	$ 3,001	$ 457
122	8	310	1,998	XJ250	9%	10%	12%	12%	16%	16%	39%	15.2%	Yes	$ 12,255	$ 1,866
131	8	317	1,998	XJ250	9%	10%	12%	12%	16%	16%	39%	15.2%	Yes	$ 12,538	$ 1,909
374	8	207	After 1996	XJ684	0%	0%	1%	1%	6%	6%	95%	14.6%	No	$ -	$ -
375	8	303	After 1996	XJ684	0%	0%	1%	1%	6%	6%	95%	14.6%	No	$ -	$ -
376	8	396	After 1996	XJ684	0%	0%	1%	1%	6%	6%	95%	14.6%	No	$ -	$ -
377	8	397	After 1996	XJ687	1%	1%	1%	2%	9%	9%	91%	10.6%	No	$ -	$ -
378	8	402	After 1996	XJ687	1%	1%	1%	2%	9%	9%	91%	10.6%	No	$ -	$ -
379	8	196	After 1996	XJ687	1%	1%	1%	2%	9%	9%	91%	10.6%	No	$ -	$ -
380	8	124	After 1996	XJ687	1%	1%	1%	2%	9%	9%	91%	10.6%	No	$ -	$ -
381	8	271	After 1996	XJ687	1%	1%	1%	2%	9%	9%	91%	10.6%	No	$ -	$ -
382	8	113	After 1996	XJ687	1%	1%	1%	2%	9%	9%	91%	10.6%	No	$ -	$ -
383	8	200	After 1996	XJ687	1%	1%	1%	2%	9%	9%	91%	10.6%	No	$ -	$ -
384	8	402	After 1996	XJ687	1%	1%	1%	2%	9%	9%	91%	10.6%	No	$ -	$ -
385	8	399	After 1996	XJ687	1%	1%	1%	2%	9%	9%	91%	10.6%	No	$ -	$ -
386	8	200	After 1996	XJ687	1%	1%	1%	2%	9%	9%	91%	10.6%	No	$ -	$ -

Table C-2. Non-Modeled Existing Sanitary Sewer Pipes Reserve Capacity Detail (Continued)

Pipe Segment ID	Dia (in)	Segment Length (ft)	Year Built	Reference Pipe[1]	q/Qfull					Max % Capacity Ever Used	Proportion of Max Capacity Ever Used		Impact Fee Eligible?	Estimated Project Cost	Estimated Impact Fee-Eligible Cost
					2014	2016	2024	2026	2060		2016 to 2060	2016 to 2026			
					A	B	C	D	E	F	G	H	I	J	K
										= Max (B, D, and E)	= (F - B) / F	= (D - B) / F			= (H x J) if I is "Yes"
387	8	200	After 1996	XJ687	1%	1%	1%	2%	9%	9%	91%	10.6%	No	$ -	$ -
388	8	400	After 1996	XJ687	1%	1%	1%	2%	9%	9%	91%	10.6%	No	$ -	$ -
389	8	299	After 1996	XJ687	1%	1%	1%	2%	9%	9%	91%	10.6%	No	$ -	$ -
390	8	147	After 1996	XJ687	1%	1%	1%	2%	9%	9%	91%	10.6%	No	$ -	$ -
391	8	64	After 1996	XJ684	0%	0%	1%	1%	6%	6%	95%	14.6%	No	$ -	$ -
1152	8	263	After 1996	N30	0%	0%	0%	0%	0%	0%	0%	0.0%	No	$ -	$ -
1153	8	140	After 1996	N30	0%	0%	0%	0%	0%	0%	0%	0.0%	No	$ -	$ -
1212	8	322	After 1996	XJ684	0%	0%	1%	1%	6%	6%	95%	14.6%	No	$ -	$ -
1214	8	322	After 1996	XJ684	0%	0%	1%	1%	6%	6%	95%	14.6%	No	$ -	$ -
1	8	259	After 1996	N680	4%	4%	4%	4%	5%	5%	9%	0.5%	No	$ -	$ -
2	8	309	After 1996	N680	4%	4%	4%	4%	5%	5%	9%	0.5%	No	$ -	$ -
3	8	323	After 1996	N680	4%	4%	4%	4%	5%	5%	9%	0.5%	No	$ -	$ -
4	8	205	After 1996	N680	4%	4%	4%	4%	5%	5%	9%	0.5%	No	$ -	$ -
5	8	353	After 1996	N680	4%	4%	4%	4%	5%	5%	9%	0.5%	No	$ -	$ -
6	8	264	After 1996	N680	4%	4%	4%	4%	5%	5%	9%	0.5%	No	$ -	$ -
7	8	291	After 1996	XJ558	0%	0%	2%	2%	2%	2%	75%	75.0%	No	$ -	$ -
8	8	188	After 1996	N680	4%	4%	4%	4%	5%	5%	9%	0.5%	No	$ -	$ -
9	8	209	After 1996	XJ558	0%	0%	2%	2%	2%	2%	75%	75.0%	No	$ -	$ -
10	8	299	After 1996	N680	4%	4%	4%	4%	5%	5%	9%	0.5%	No	$ -	$ -
11	8	97	After 1996	N680	4%	4%	4%	4%	5%	5%	9%	0.5%	No	$ -	$ -
12	8	230	After 1996	N680	4%	4%	4%	4%	5%	5%	9%	0.5%	No	$ -	$ -
13	8	396	After 1996	N680	4%	4%	4%	4%	5%	5%	9%	0.5%	No	$ -	$ -
14	8	328	After 1996	N680	4%	4%	4%	4%	5%	5%	9%	0.5%	No	$ -	$ -
15	8	97	After 1996	N680	4%	4%	4%	4%	5%	5%	9%	0.5%	No	$ -	$ -
16	8	330	After 1996	XJ558	0%	0%	2%	2%	2%	2%	75%	75.0%	No	$ -	$ -
17	8	167	After 1996	XJ558	0%	0%	2%	2%	2%	2%	75%	75.0%	No	$ -	$ -
18	8	166	After 1996	N680	4%	4%	4%	4%	5%	5%	9%	0.5%	No	$ -	$ -
19	8	128	After 1996	N680	4%	4%	4%	4%	5%	5%	9%	0.5%	No	$ -	$ -
20	8	162	After 1996	N680	4%	4%	4%	4%	5%	5%	9%	0.5%	No	$ -	$ -
21	8	237	After 1996	N680	4%	4%	4%	4%	5%	5%	9%	0.5%	No	$ -	$ -
22	8	145	After 1996	XJ60	1%	2%	3%	3%	5%	5%	68%	27.5%	No	$ -	$ -
23	8	401	After 1996	XJ545	1%	1%	1%	1%	1%	1%	0%	0.0%	No	$ -	$ -
24	8	132	After 1996	XJ545	1%	1%	1%	1%	1%	1%	0%	0.0%	No	$ -	$ -
25	8	235	After 1996	XJ545	1%	1%	1%	1%	1%	1%	0%	0.0%	No	$ -	$ -
26	8	144	After 1996	CDT-81	1%	1%	1%	1%	1%	1%	19%	12.0%	No	$ -	$ -
34	8	244	After 1996	CDT-81	1%	1%	1%	1%	1%	1%	19%	12.0%	No	$ -	$ -
35	8	330	After 1996	CDT-81	1%	1%	1%	1%	1%	1%	19%	12.0%	No	$ -	$ -
37	8	269	After 1996	CDT-81	1%	1%	1%	1%	1%	1%	19%	12.0%	No	$ -	$ -
40	8	318	After 1996	CDT-81	1%	1%	1%	1%	1%	1%	19%	12.0%	No	$ -	$ -
41	8	338	After 1996	CDT-81	1%	1%	1%	1%	1%	1%	19%	12.0%	No	$ -	$ -
42	8	237	After 1996	CDT-81	1%	1%	1%	1%	1%	1%	19%	12.0%	No	$ -	$ -
62	8	234	After 1996	CDT-81	1%	1%	1%	1%	1%	1%	19%	12.0%	No	$ -	$ -
63	8	288	After 1996	CDT-81	1%	1%	1%	1%	1%	1%	19%	12.0%	No	$ -	$ -
64	8	48	After 1996	CDT-81	1%	1%	1%	1%	1%	1%	19%	12.0%	No	$ -	$ -
65	8	227	After 1996	CDT-81	1%	1%	1%	1%	1%	1%	19%	12.0%	No	$ -	$ -

Table C-2. Non-Modeled Existing Sanitary Sewer Pipes Reserve Capacity Detail (Cont'd)

Pipe Segment ID	Dia (in)	Segment Length (ft)	Year Built	Reference Pipe[1]	q/Qfull					Max % Capacity Ever Used	Proportion of Max Capacity Ever Used		Impact Fee Eligible?	Estimated Project Cost	Estimated Impact Fee-Eligible Cost
					2014	2016	2024	2026	2060		2016 to 2060	2016 to 2026			
					A	B	C	D	E	F	G	H	I	J	K
										= Max (B, D, and E)	= (F - B) / F	= (D - B) / F			= (H x J) if I is "Yes"
66	8	317	After 1996	CDT-81	1%	1%	1%	1%	1%	1%	19%	12.0%	No	$ -	$ -
72	8	400	After 1996	CDT-85	1%	2%	4%	4%	4%	4%	51%	41.0%	No	$ -	$ -
73	8	256	After 1996	CDT-81	1%	1%	1%	1%	1%	1%	19%	12.0%	No	$ -	$ -
74	8	167	After 1996	CDT-85	1%	2%	4%	4%	4%	4%	51%	41.0%	No	$ -	$ -
152	8	293	After 1996	XJ307	3%	4%	4%	4%	5%	5%	30%	15.6%	No	$ -	$ -
153	8	347	After 1996	XJ307	3%	4%	4%	4%	5%	5%	30%	15.6%	No	$ -	$ -
157	8	309	After 1996	XJ307	3%	4%	4%	4%	5%	5%	30%	15.6%	No	$ -	$ -
158	8	307	After 1996	XJ307	3%	4%	4%	4%	5%	5%	30%	15.6%	No	$ -	$ -
159	8	122	After 1996	XJ307	3%	4%	4%	4%	5%	5%	30%	15.6%	No	$ -	$ -
163	8	54	After 1996	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	No	$ -	$ -
164	8	309	After 1996	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	No	$ -	$ -
171	8	313	After 1996	XJ307	3%	4%	4%	4%	5%	5%	30%	15.6%	No	$ -	$ -
172	8	306	After 1996	XJ307	3%	4%	4%	4%	5%	5%	30%	15.6%	No	$ -	$ -
173	8	279	After 1996	XJ307	3%	4%	4%	4%	5%	5%	30%	15.6%	No	$ -	$ -
174	8	425	After 1996	XJ307	3%	4%	4%	4%	5%	5%	30%	15.6%	No	$ -	$ -
175	8	178	After 1996	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	No	$ -	$ -
177	8	113	After 1996	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	No	$ -	$ -
181	8	427	After 1996	XJ307	3%	4%	4%	4%	5%	5%	30%	15.6%	No	$ -	$ -
200	8	266	After 1996	XJ307	3%	4%	4%	4%	5%	5%	30%	15.6%	No	$ -	$ -
206	8	271	After 1996	XJ307	3%	4%	4%	4%	5%	5%	30%	15.6%	No	$ -	$ -
219	8	445	After 1996	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	No	$ -	$ -
232	8	236	After 1996	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	No	$ -	$ -
233	8	382	After 1996	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	No	$ -	$ -
234	8	496	After 1996	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	No	$ -	$ -
235	8	294	After 1996	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	No	$ -	$ -
241	8	235	After 1996	XJ380	5%	6%	7%	7%	10%	10%	44%	17.6%	No	$ -	$ -
245	8	373	After 1996	XJ299	53%	58%	74%	72%	44%	72%	20%	19.6%	No	$ -	$ -
246	8	210	After 1996	XJ299	53%	58%	74%	72%	44%	72%	20%	19.6%	No	$ -	$ -
247	8	250	After 1996	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	No	$ -	$ -
249	8	77	After 1996	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	No	$ -	$ -
250	8	417	After 1996	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	No	$ -	$ -
251	8	285	After 1996	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	No	$ -	$ -
254	8	262	After 1996	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	No	$ -	$ -
255	8	403	After 1996	XJ380	5%	6%	7%	7%	10%	10%	44%	17.6%	No	$ -	$ -
256	8	273	After 1996	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	No	$ -	$ -
257	8	109	After 1996	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	No	$ -	$ -
258	8	428	After 1996	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	No	$ -	$ -
259	8	399	After 1996	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	No	$ -	$ -
260	8	80	After 1996	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	No	$ -	$ -
264	8	135	After 1996	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	No	$ -	$ -
265	8	206	After 1996	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	No	$ -	$ -
266	8	245	After 1996	XJ380	5%	6%	7%	7%	10%	10%	44%	17.6%	No	$ -	$ -
267	8	263	After 1996	XJ380	5%	6%	7%	7%	10%	10%	44%	17.6%	No	$ -	$ -
268	8	220	After 1996	XJ380	5%	6%	7%	7%	10%	10%	44%	17.6%	No	$ -	$ -
269	8	100	After 1996	XJ457	5%	6%	9%	9%	1%	9%	34%	33.7%	No	$ -	$ -

Table C-2. Non-Modeled Existing Sanitary Sewer Pipes Reserve Capacity Detail (Cont'd)

Pipe Segment ID	Dia (in)	Segment Length (ft)	Year Built	Reference Pipe[1]	q/Qfull					Max % Capacity Ever Used	Proportion of Max Capacity Ever Used		Impact Fee Eligible?	Estimated Project Cost	Estimated Impact Fee-Eligible Cost
					2014	2016	2024	2026	2060		2016 to 2060	2016 to 2026			
					A	B	C	D	E	F	G	H	I	J	K
										= Max (B, D, and E)	= (F - B) / F	= (D - B) / F			= (H x J) if I is "Yes"
270	8	287	After 1996	XJ457	5%	6%	9%	9%	1%	9%	34%	33.7%	No	$ -	$ -
271	8	223	After 1996	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	No	$ -	$ -
272	8	91	After 1996	XJ380	5%	6%	7%	7%	10%	10%	44%	17.6%	No	$ -	$ -
273	8	401	After 1996	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	No	$ -	$ -
274	8	362	After 1996	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	No	$ -	$ -
275	8	212	After 1996	XJ457	5%	6%	9%	9%	1%	9%	34%	33.7%	No	$ -	$ -
276	8	211	After 1996	XJ380	5%	6%	7%	7%	10%	10%	44%	17.6%	No	$ -	$ -
277	8	398	After 1996	XJ380	5%	6%	7%	7%	10%	10%	44%	17.6%	No	$ -	$ -
279	8	400	After 1996	XJ380	5%	6%	7%	7%	10%	10%	44%	17.6%	No	$ -	$ -
280	8	279	After 1996	XJ380	5%	6%	7%	7%	10%	10%	44%	17.6%	No	$ -	$ -
281	8	401	After 1996	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	No	$ -	$ -
282	8	213	After 1996	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	No	$ -	$ -
286	8	234	After 1996	N34	0%	0%	0%	0%	0%	0%	0%	0.0%	No	$ -	$ -
287	8	189	After 1996	N34	0%	0%	0%	0%	0%	0%	0%	0.0%	No	$ -	$ -
288	8	258	After 1996	N34	0%	0%	0%	0%	0%	0%	0%	0.0%	No	$ -	$ -
289	8	259	After 1996	N30	0%	0%	0%	0%	0%	0%	0%	0.0%	No	$ -	$ -
290	8	293	After 1996	N698	37%	30%	9%	10%	23%	30%	0%	0.0%	No	$ -	$ -
291	8	228	After 1996	N698	37%	30%	9%	10%	23%	30%	0%	0.0%	No	$ -	$ -
292	8	237	After 1996	N698	37%	30%	9%	10%	23%	30%	0%	0.0%	No	$ -	$ -
293	8	254	After 1996	N698	37%	30%	9%	10%	23%	30%	0%	0.0%	No	$ -	$ -
294	8	400	After 1996	N698	37%	30%	9%	10%	23%	30%	0%	0.0%	No	$ -	$ -
295	8	207	After 1996	N698	37%	30%	9%	10%	23%	30%	0%	0.0%	No	$ -	$ -
296	8	193	After 1996	N698	37%	30%	9%	10%	23%	30%	0%	0.0%	No	$ -	$ -
297	8	220	After 1996	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	No	$ -	$ -
298	8	269	After 1996	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	No	$ -	$ -
299	8	236	After 1996	XJ371	2%	2%	2%	4%	44%	44%	97%	5.7%	No	$ -	$ -
300	8	149	After 1996	XJ371	2%	2%	2%	4%	44%	44%	97%	5.7%	No	$ -	$ -
301	8	304	After 1996	XJ519	2%	2%	2%	2%	3%	3%	25%	3.7%	No	$ -	$ -
302	8	111	After 1996	XJ519	2%	2%	2%	2%	3%	3%	25%	3.7%	No	$ -	$ -
303	8	139	After 1996	XJ519	2%	2%	2%	2%	3%	3%	25%	3.7%	No	$ -	$ -
305	8	179	After 1996	XJ558	0%	0%	2%	2%	2%	2%	75%	75.0%	No	$ -	$ -
306	8	460	After 1996	N698	37%	30%	9%	10%	23%	30%	0%	0.0%	No	$ -	$ -
307	8	196	After 1996	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	No	$ -	$ -
308	8	66	After 1996	XJ105	1%	1%	2%	2%	3%	3%	45%	21.0%	No	$ -	$ -
309	8	436	After 1996	XJ105	1%	1%	2%	2%	3%	3%	45%	21.0%	No	$ -	$ -
310	8	346	After 1996	XJ105	1%	1%	2%	2%	3%	3%	45%	21.0%	No	$ -	$ -
311	8	472	After 1996	XJ105	1%	1%	2%	2%	3%	3%	45%	21.0%	No	$ -	$ -
312	8	417	After 1996	XJ105	1%	1%	2%	2%	3%	3%	45%	21.0%	No	$ -	$ -
313	8	394	After 1996	XJ105	1%	1%	2%	2%	3%	3%	45%	21.0%	No	$ -	$ -
314	8	206	After 1996	XJ105	1%	1%	2%	2%	3%	3%	45%	21.0%	No	$ -	$ -
315	8	151	After 1996	XJ539	17%	19%	27%	27%	33%	33%	40%	22.7%	No	$ -	$ -
316	8	383	After 1996	N698	37%	30%	9%	10%	23%	30%	0%	0.0%	No	$ -	$ -
317	8	405	After 1996	N698	37%	30%	9%	10%	23%	30%	0%	0.0%	No	$ -	$ -
318	8	120	After 1996	N698	37%	30%	9%	10%	23%	30%	0%	0.0%	No	$ -	$ -
319	8	177	After 1996	XJ30	13%	14%	17%	18%	29%	29%	53%	14.2%	No	$ -	$ -

Table C-2. Non-Modeled Existing Sanitary Sewer Pipes Reserve Capacity Detail (Cont'd)

Pipe Segment ID	Dia (in)	Segment Length (ft)	Year Built	Reference Pipe[1]	q/Qfull					Max % Capacity Ever Used	Proportion of Max Capacity Ever Used		Impact Fee Eligible?	Estimated Project Cost	Estimated Impact Fee-Eligible Cost
					2014	2016	2024	2026	2060		2016 to 2060	2016 to 2026			
					A	B	C	D	E	F	G	H	I	J	K
										= Max (B, D, and E)	= (F - B) / F	= (D - B) / F			= (H x J) if I is "Yes"
320	8	300	After 1996	XJ30	13%	14%	17%	18%	29%	29%	53%	14.2%	No	$ -	$ -
321	8	278	After 1996	XJ558	0%	0%	2%	2%	2%	2%	75%	75.0%	No	$ -	$ -
322	8	354	After 1996	XJ558	0%	0%	2%	2%	2%	2%	75%	75.0%	No	$ -	$ -
323	8	139	After 1996	N698	37%	30%	9%	10%	23%	30%	0%	0.0%	No	$ -	$ -
324	8	381	After 1996	XJ561	7%	8%	11%	11%	16%	16%	49%	18.8%	No	$ -	$ -
325	8	402	After 1996	XJ561	7%	8%	11%	11%	16%	16%	49%	18.8%	No	$ -	$ -
326	8	208	After 1996	XJ562	15%	17%	21%	22%	36%	36%	53%	13.6%	No	$ -	$ -
327	8	399	After 1996	XJ562	15%	17%	21%	22%	36%	36%	53%	13.6%	No	$ -	$ -
328	8	539	After 1996	N680	4%	4%	4%	4%	5%	5%	9%	0.5%	No	$ -	$ -
329	8	170	After 1996	N680	4%	4%	4%	4%	5%	5%	9%	0.5%	No	$ -	$ -
330	8	348	After 1996	N680	4%	4%	4%	4%	5%	5%	9%	0.5%	No	$ -	$ -
331	8	229	After 1996	N680	4%	4%	4%	4%	5%	5%	9%	0.5%	No	$ -	$ -
332	8	351	After 1996	N680	4%	4%	4%	4%	5%	5%	9%	0.5%	No	$ -	$ -
333	8	220	After 1996	N680	4%	4%	4%	4%	5%	5%	9%	0.5%	No	$ -	$ -
334	8	247	After 1996	N680	4%	4%	4%	4%	5%	5%	9%	0.5%	No	$ -	$ -
335	8	268	After 1996	XJ18	15%	16%	19%	20%	31%	31%	50%	13.7%	No	$ -	$ -
336	8	239	After 1996	N680	4%	4%	4%	4%	5%	5%	9%	0.5%	No	$ -	$ -
337	8	227	After 1996	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	No	$ -	$ -
338	8	296	After 1996	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	No	$ -	$ -
339	8	328	After 1996	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	No	$ -	$ -
340	8	152	After 1996	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	No	$ -	$ -
341	8	216	After 1996	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	No	$ -	$ -
342	8	241	After 1996	XJ307	3%	4%	4%	4%	5%	5%	30%	15.6%	No	$ -	$ -
343	8	335	After 1996	XJ307	3%	4%	4%	4%	5%	5%	30%	15.6%	No	$ -	$ -
344	8	391	After 1996	XJ307	3%	4%	4%	4%	5%	5%	30%	15.6%	No	$ -	$ -
345	8	250	After 1996	XJ307	3%	4%	4%	4%	5%	5%	30%	15.6%	No	$ -	$ -
346	8	89	After 1996	XJ307	3%	4%	4%	4%	5%	5%	30%	15.6%	No	$ -	$ -
347	8	317	After 1996	XJ307	3%	4%	4%	4%	5%	5%	30%	15.6%	No	$ -	$ -
348	8	269	After 1996	XJ307	3%	4%	4%	4%	5%	5%	30%	15.6%	No	$ -	$ -
349	8	183	After 1996	XJ307	3%	4%	4%	4%	5%	5%	30%	15.6%	No	$ -	$ -
350	8	190	After 1996	XJ307	3%	4%	4%	4%	5%	5%	30%	15.6%	No	$ -	$ -
351	8	277	After 1996	XJ307	3%	4%	4%	4%	5%	5%	30%	15.6%	No	$ -	$ -
352	8	304	After 1996	XJ307	3%	4%	4%	4%	5%	5%	30%	15.6%	No	$ -	$ -
353	8	72	After 1996	XJ307	3%	4%	4%	4%	5%	5%	30%	15.6%	No	$ -	$ -
354	8	630	After 1996	XJ307	3%	4%	4%	4%	5%	5%	30%	15.6%	No	$ -	$ -
355	8	289	After 1996	CDT-97	0%	1%	2%	2%	2%	2%	61%	55.6%	No	$ -	$ -
356	8	330	After 1996	CDT-97	0%	1%	2%	2%	2%	2%	61%	55.6%	No	$ -	$ -
357	8	220	After 1996	CDT-97	0%	1%	2%	2%	2%	2%	61%	55.6%	No	$ -	$ -
358	8	348	After 1996	CDT-97	0%	1%	2%	2%	2%	2%	61%	55.6%	No	$ -	$ -
359	8	128	After 1996	XJ380	5%	6%	7%	7%	10%	10%	44%	17.6%	No	$ -	$ -
360	8	149	After 1996	XJ380	5%	6%	7%	7%	10%	10%	44%	17.6%	No	$ -	$ -
361	8	401	After 1996	N280	61%	50%	14%	14%	12%	50%	0%	0.0%	No	$ -	$ -
362	8	402	After 1996	N280	61%	50%	14%	14%	12%	50%	0%	0.0%	No	$ -	$ -
363	8	278	After 1996	N280	61%	50%	14%	14%	12%	50%	0%	0.0%	No	$ -	$ -
364	8	400	After 1996	N280	61%	50%	14%	14%	12%	50%	0%	0.0%	No	$ -	$ -

Table C-2. Non-Modeled Existing Sanitary Sewer Pipes Reserve Capacity Detail (Cont'd)

Pipe Segment ID	Dia (in)	Segment Length (ft)	Year Built	Reference Pipe[1]	q/Qfull					Max % Capacity Ever Used	Proportion of Max Capacity Ever Used		Impact Fee Eligible?	Estimated Project Cost	Estimated Impact Fee-Eligible Cost
					2014	2016	2024	2026	2060		2016 to 2060	2016 to 2026			
					A	B	C	D	E	F	G	H	I	J	K
										= Max (B, D, and E)	= (F - B) / F	= (D - B) / F			= (H x J) if I is "Yes"
365	8	144	After 1996	XJ380	5%	6%	7%	7%	10%	10%	44%	17.6%	No	$ -	$ -
366	8	351	After 1996	XJ307	3%	4%	4%	4%	5%	5%	30%	15.6%	No	$ -	$ -
367	8	307	After 1996	XJ307	3%	4%	4%	4%	5%	5%	30%	15.6%	No	$ -	$ -
368	8	205	After 1996	XJ307	3%	4%	4%	4%	5%	5%	30%	15.6%	No	$ -	$ -
369	8	146	After 1996	XJ307	3%	4%	4%	4%	5%	5%	30%	15.6%	No	$ -	$ -
370	8	238	After 1996	XJ307	3%	4%	4%	4%	5%	5%	30%	15.6%	No	$ -	$ -
371	8	332	After 1996	XJ307	3%	4%	4%	4%	5%	5%	30%	15.6%	No	$ -	$ -
372	8	307	After 1996	XJ307	3%	4%	4%	4%	5%	5%	30%	15.6%	No	$ -	$ -
373	8	141	After 1996	XJ307	3%	4%	4%	4%	5%	5%	30%	15.6%	No	$ -	$ -
401	8	165	After 1996	XJ850	7%	8%	12%	12%	12%	12%	32%	32.0%	No	$ -	$ -
402	8	269	After 1996	XJ850	7%	8%	12%	12%	12%	12%	32%	32.0%	No	$ -	$ -
403	8	233	After 1996	XJ850	7%	8%	12%	12%	12%	12%	32%	32.0%	No	$ -	$ -
404	8	137	After 1996	XJ850	7%	8%	12%	12%	12%	12%	32%	32.0%	No	$ -	$ -
405	8	172	After 1996	XJ850	7%	8%	12%	12%	12%	12%	32%	32.0%	No	$ -	$ -
406	8	162	After 1996	XJ850	7%	8%	12%	12%	12%	12%	32%	32.0%	No	$ -	$ -
407	8	205	After 1996	XJ850	7%	8%	12%	12%	12%	12%	32%	32.0%	No	$ -	$ -
408	8	113	After 1996	XJ850	7%	8%	12%	12%	12%	12%	32%	32.0%	No	$ -	$ -
409	8	119	After 1996	XJ850	7%	8%	12%	12%	12%	12%	32%	32.0%	No	$ -	$ -
410	8	235	After 1996	XJ850	7%	8%	12%	12%	12%	12%	32%	32.0%	No	$ -	$ -
411	8	86	After 1996	XJ850	7%	8%	12%	12%	12%	12%	32%	32.0%	No	$ -	$ -
412	8	158	After 1996	XJ850	7%	8%	12%	12%	12%	12%	32%	32.0%	No	$ -	$ -
413	8	156	After 1996	XJ850	7%	8%	12%	12%	12%	12%	32%	32.0%	No	$ -	$ -
414	8	174	After 1996	XJ850	7%	8%	12%	12%	12%	12%	32%	32.0%	No	$ -	$ -
415	8	217	After 1996	XJ850	7%	8%	12%	12%	12%	12%	32%	32.0%	No	$ -	$ -
416	8	190	After 1996	XJ850	7%	8%	12%	12%	12%	12%	32%	32.0%	No	$ -	$ -
417	8	438	After 1996	XJ850	7%	8%	12%	12%	12%	12%	32%	32.0%	No	$ -	$ -
418	8	334	After 1996	XJ850	7%	8%	12%	12%	12%	12%	32%	32.0%	No	$ -	$ -
419	8	93	After 1996	XJ850	7%	8%	12%	12%	12%	12%	32%	32.0%	No	$ -	$ -
420	8	174	After 1996	XJ850	7%	8%	12%	12%	12%	12%	32%	32.0%	No	$ -	$ -
421	8	160	After 1996	XJ850	7%	8%	12%	12%	12%	12%	32%	32.0%	No	$ -	$ -
422	8	153	After 1996	XJ850	7%	8%	12%	12%	12%	12%	32%	32.0%	No	$ -	$ -
423	8	180	After 1996	XJ850	7%	8%	12%	12%	12%	12%	32%	32.0%	No	$ -	$ -
424	8	158	After 1996	XJ850	7%	8%	12%	12%	12%	12%	32%	32.0%	No	$ -	$ -
425	8	235	After 1996	XJ850	7%	8%	12%	12%	12%	12%	32%	32.0%	No	$ -	$ -
426	8	149	After 1996	XJ850	7%	8%	12%	12%	12%	12%	32%	32.0%	No	$ -	$ -
427	8	298	After 1996	XJ850	7%	8%	12%	12%	12%	12%	32%	32.0%	No	$ -	$ -
428	8	134	After 1996	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	No	$ -	$ -
429	8	146	After 1996	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	No	$ -	$ -
430	8	391	After 1996	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	No	$ -	$ -
431	8	341	After 1996	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	No	$ -	$ -
432	8	324	After 1996	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	No	$ -	$ -
433	8	219	After 1996	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	No	$ -	$ -
434	8	90	After 1996	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	No	$ -	$ -
435	8	55	After 1996	XJ454	6%	6%	6%	8%	32%	32%	81%	4.8%	No	$ -	$ -
444	8	170	After 1996	XJ795	0%	0%	0%	0%	0%	0%	0%	0.0%	No	$ -	$ -

Table C-2. Non-Modeled Existing Sanitary Sewer Pipes Reserve Capacity Detail (Cont'd)

Pipe Segment ID	Dia (in)	Segment Length (ft)	Year Built	Reference Pipe[1]	q/Qfull					Max % Capacity Ever Used	Proportion of Max Capacity Ever Used		Impact Fee Eligible?	Estimated Project Cost	Estimated Impact Fee-Eligible Cost
					2014	2016	2024	2026	2060		2016 to 2060	2016 to 2026			
					A	B	C	D	E	F	G	H	I	J	K
										= Max (B, D, and E)	= (F - B) / F	= (D - B) / F			= (H x J) if I is "Yes"
445	8	178	After 1996	XJ795	0%	0%	0%	0%	0%	0%	0%	0.0%	No	$ -	$ -
446	8	154	After 1996	XJ795	0%	0%	0%	0%	0%	0%	0%	0.0%	No	$ -	$ -
459	8	283	After 1996	N280	61%	50%	14%	14%	12%	50%	0%	0.0%	No	$ -	$ -
460	8	300	After 1996	N280	61%	50%	14%	14%	12%	50%	0%	0.0%	No	$ -	$ -
461	8	125	After 1996	N280	61%	50%	14%	14%	12%	50%	0%	0.0%	No	$ -	$ -
462	8	439	After 1996	N280	61%	50%	14%	14%	12%	50%	0%	0.0%	No	$ -	$ -
463	8	128	After 1996	N280	61%	50%	14%	14%	12%	50%	0%	0.0%	No	$ -	$ -
464	8	170	After 1996	N280	61%	50%	14%	14%	12%	50%	0%	0.0%	No	$ -	$ -
465	8	253	After 1996	N280	61%	50%	14%	14%	12%	50%	0%	0.0%	No	$ -	$ -
466	8	403	After 1996	XJ561	7%	8%	11%	11%	16%	16%	49%	18.8%	No	$ -	$ -
467	8	132	After 1996	N280	61%	50%	14%	14%	12%	50%	0%	0.0%	No	$ -	$ -
468	8	348	After 1996	N280	61%	50%	14%	14%	12%	50%	0%	0.0%	No	$ -	$ -
469	8	196	After 1996	XJ307	3%	4%	4%	4%	5%	5%	30%	15.6%	No	$ -	$ -
470	8	125	After 1996	XJ307	3%	4%	4%	4%	5%	5%	30%	15.6%	No	$ -	$ -
471	8	214	After 1996	XJ11	15%	16%	19%	19%	30%	30%	47%	12.8%	No	$ -	$ -
472	8	86	After 1996	CDT-71	2%	2%	2%	2%	2%	2%	6%	0.3%	No	$ -	$ -
473	8	63	After 1996	XJ307	3%	4%	4%	4%	5%	5%	30%	15.6%	No	$ -	$ -
474	8	139	After 1996	XJ850	7%	8%	12%	12%	12%	12%	32%	32.0%	No	$ -	$ -
475	8	70	After 1996	XJ850	7%	8%	12%	12%	12%	12%	32%	32.0%	No	$ -	$ -
476	8	116	After 1996	XJ850	7%	8%	12%	12%	12%	12%	32%	32.0%	No	$ -	$ -
477	8	330	After 1996	XJ850	7%	8%	12%	12%	12%	12%	32%	32.0%	No	$ -	$ -
478	8	91	After 1996	XJ850	7%	8%	12%	12%	12%	12%	32%	32.0%	No	$ -	$ -
479	8	169	After 1996	XJ850	7%	8%	12%	12%	12%	12%	32%	32.0%	No	$ -	$ -
480	8	45	After 1996	XJ850	7%	8%	12%	12%	12%	12%	32%	32.0%	No	$ -	$ -
481	8	310	After 1996	XJ850	7%	8%	12%	12%	12%	12%	32%	32.0%	No	$ -	$ -
482	8	326	After 1996	XJ850	7%	8%	12%	12%	12%	12%	32%	32.0%	No	$ -	$ -
483	8	221	After 1996	XJ850	7%	8%	12%	12%	12%	12%	32%	32.0%	No	$ -	$ -
484	8	83	After 1996	XJ850	7%	8%	12%	12%	12%	12%	32%	32.0%	No	$ -	$ -
485	8	211	After 1996	XJ850	7%	8%	12%	12%	12%	12%	32%	32.0%	No	$ -	$ -
486	8	81	After 1996	XJ850	7%	8%	12%	12%	12%	12%	32%	32.0%	No	$ -	$ -
487	8	269	After 1996	XJ850	7%	8%	12%	12%	12%	12%	32%	32.0%	No	$ -	$ -
488	8	169	After 1996	XJ850	7%	8%	12%	12%	12%	12%	32%	32.0%	No	$ -	$ -
489	8	262	After 1996	XJ850	7%	8%	12%	12%	12%	12%	32%	32.0%	No	$ -	$ -
490	8	137	After 1996	XJ850	7%	8%	12%	12%	12%	12%	32%	32.0%	No	$ -	$ -
491	8	400	After 1996	XJ850	7%	8%	12%	12%	12%	12%	32%	32.0%	No	$ -	$ -
492	8	397	After 1996	XJ850	7%	8%	12%	12%	12%	12%	32%	32.0%	No	$ -	$ -
493	8	321	After 1996	XJ850	7%	8%	12%	12%	12%	12%	32%	32.0%	No	$ -	$ -
513	8	131	After 1996	XJ869	1%	1%	2%	3%	5%	5%	69%	24.0%	No	$ -	$ -
514	8	400	After 1996	XJ869	1%	1%	2%	3%	5%	5%	69%	24.0%	No	$ -	$ -
515	8	110	After 1996	XJ760	0%	0%	0%	0%	0%	0%	0%	0.0%	No	$ -	$ -
516	8	94	After 1996	XJ760	0%	0%	0%	0%	0%	0%	0%	0.0%	No	$ -	$ -
517	8	407	After 1996	XJ760	0%	0%	0%	0%	0%	0%	0%	0.0%	No	$ -	$ -
518	8	294	After 1996	XJ760	0%	0%	0%	0%	0%	0%	0%	0.0%	No	$ -	$ -
519	8	159	After 1996	XJ760	0%	0%	0%	0%	0%	0%	0%	0.0%	No	$ -	$ -
520	8	95	After 1996	XJ760	0%	0%	0%	0%	0%	0%	0%	0.0%	No	$ -	$ -

Table C-2. Non-Modeled Existing Sanitary Sewer Pipes Reserve Capacity Detail (Cont'd)

Pipe Segment ID	Dia (in)	Segment Length (ft)	Year Built	Reference Pipe[1]	q/Qfull					Max % Capacity Ever Used	Proportion of Max Capacity Ever Used		Impact Fee Eligible?	Estimated Project Cost	Estimated Impact Fee-Eligible Cost
					2014	2016	2024	2026	2060		2016 to 2060	2016 to 2026			
					A	B	C	D	E	F	G	H	I	J	K
										= Max (B, D, and E)	= (F - B) / F	= (D - B) / F			= (H x J) if I is "Yes"
521	8	186	After 1996	XJ760	0%	0%	0%	0%	0%	0%	0%	0.0%	No	$ -	$ -
522	8	74	After 1996	N266	0%	0%	0%	0%	2%	2%	95%	18.8%	No	$ -	$ -
532	8	77	After 1996	XJ850	7%	8%	12%	12%	12%	12%	32%	32.0%	No	$ -	$ -
533	8	109	After 1996	XJ307	3%	4%	4%	4%	5%	5%	30%	15.6%	No	$ -	$ -
534	8	383	After 1996	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	No	$ -	$ -
535	8	375	After 1996	XJ850	7%	8%	12%	12%	12%	12%	32%	32.0%	No	$ -	$ -
536	8	248	After 1996	XJ850	7%	8%	12%	12%	12%	12%	32%	32.0%	No	$ -	$ -
537	8	311	After 1996	XJ656	2%	4%	10%	14%	74%	74%	94%	12.8%	No	$ -	$ -
538	8	65	After 1996	XJ656	2%	4%	10%	14%	74%	74%	94%	12.8%	No	$ -	$ -
539	8	175	After 1996	XJ656	2%	4%	10%	14%	74%	74%	94%	12.8%	No	$ -	$ -
540	8	49	After 1996	N688	2%	2%	3%	3%	3%	3%	31%	30.6%	No	$ -	$ -
541	8	96	After 1996	N688	2%	2%	3%	3%	3%	3%	31%	30.6%	No	$ -	$ -
702	8	1,204	After 1996	N266	0%	0%	0%	0%	2%	2%	95%	18.8%	No	$ -	$ -
703	8	1,639	After 1996	N110	1%	1%	2%	2%	5%	5%	76%	28.0%	No	$ -	$ -
704	8	447	After 1996	N110	1%	1%	2%	2%	5%	5%	76%	28.0%	No	$ -	$ -
705	8	1,746	After 1996	N110	1%	1%	2%	2%	5%	5%	76%	28.0%	No	$ -	$ -
706	8	135	After 1996	N110	1%	1%	2%	2%	5%	5%	76%	28.0%	No	$ -	$ -
767	8	184	After 1996	XJ7	25%	27%	32%	33%	51%	51%	47%	13.0%	No	$ -	$ -
782	8	655	After 1996	XJ656	2%	4%	10%	14%	74%	74%	94%	12.8%	No	$ -	$ -
783	8	417	After 1996	XJ656	2%	4%	10%	14%	74%	74%	94%	12.8%	No	$ -	$ -
784	8	415	After 1996	XJ656	2%	4%	10%	14%	74%	74%	94%	12.8%	No	$ -	$ -
785	8	186	After 1996	XJ656	2%	4%	10%	14%	74%	74%	94%	12.8%	No	$ -	$ -
786	8	440	After 1996	XJ656	2%	4%	10%	14%	74%	74%	94%	12.8%	No	$ -	$ -
787	8	286	After 1996	XJ656	2%	4%	10%	14%	74%	74%	94%	12.8%	No	$ -	$ -
788	8	178	After 1996	XJ656	2%	4%	10%	14%	74%	74%	94%	12.8%	No	$ -	$ -
791	8	121	After 1996	XJ656	2%	4%	10%	14%	74%	74%	94%	12.8%	No	$ -	$ -
792	8	598	After 1996	XJ656	2%	4%	10%	14%	74%	74%	94%	12.8%	No	$ -	$ -
793	8	281	After 1996	XJ656	2%	4%	10%	14%	74%	74%	94%	12.8%	No	$ -	$ -
794	8	183	After 1996	N688	2%	2%	3%	3%	3%	3%	31%	30.6%	No	$ -	$ -
797	8	124	After 1996	XJ656	2%	4%	10%	14%	74%	74%	94%	12.8%	No	$ -	$ -
798	8	175	After 1996	XJ656	2%	4%	10%	14%	74%	74%	94%	12.8%	No	$ -	$ -
799	8	371	After 1996	XJ656	2%	4%	10%	14%	74%	74%	94%	12.8%	No	$ -	$ -
800	8	352	After 1996	XJ656	2%	4%	10%	14%	74%	74%	94%	12.8%	No	$ -	$ -
801	8	314	After 1996	N110	1%	1%	2%	2%	5%	5%	76%	28.0%	No	$ -	$ -
910	8	310	After 1996	N203	7%	8%	9%	10%	27%	27%	72%	10.0%	No	$ -	$ -
1055	8	613	After 1996	CDT-89	1%	1%	3%	3%	4%	4%	62%	54.1%	No	$ -	$ -
1056	8	427	After 1996	CDT-89	1%	1%	3%	3%	4%	4%	62%	54.1%	No	$ -	$ -
1057	8	1,364	After 1996	CDT-89	1%	1%	3%	3%	4%	4%	62%	54.1%	No	$ -	$ -
1058	8	733	After 1996	XJ500	0%	0%	1%	1%	5%	5%	92%	11.1%	No	$ -	$ -
1059	8	312	After 1996	N203	7%	8%	9%	10%	27%	27%	72%	10.0%	No	$ -	$ -
1063	8	267	After 1996	XJ500	0%	0%	1%	1%	5%	5%	92%	11.1%	No	$ -	$ -
1064	8	193	After 1996	XJ500	0%	0%	1%	1%	5%	5%	92%	11.1%	No	$ -	$ -
1067	8	297	After 1996	XJ850	7%	8%	12%	12%	12%	12%	32%	32.0%	No	$ -	$ -
1068	8	407	After 1996	N672	22%	19%	8%	8%	15%	19%	0%	0.0%	No	$ -	$ -
1091	8	152	After 1996	N110	1%	1%	2%	2%	5%	5%	76%	28.0%	No	$ -	$ -

Table C-2. Non-Modeled Existing Sanitary Sewer Pipes Reserve Capacity Detail (Cont'd)

Pipe Segment ID	Dia (in)	Segment Length (ft)	Year Built	Reference Pipe[1]	q/Qfull					Max % Capacity Ever Used	Proportion of Max Capacity Ever Used		Impact Fee Eligible?	Estimated Project Cost	Estimated Impact Fee-Eligible Cost
					2014	2016	2024	2026	2060		2016 to 2060	2016 to 2026			
					A	B	C	D	E	F	G	H	I	J	K
										= Max (B, D, and E)	= (F - B) / F	= (D - B) / F			= (H x J) if I is "Yes"
1096	8	672	After 1996	N680	4%	4%	4%	4%	5%	5%	9%	0.5%	No	$ -	$ -
1097	8	175	After 1996	N672	22%	19%	8%	8%	15%	19%	0%	0.0%	No	$ -	$ -
1098	8	373	After 1996	XJ850	7%	8%	12%	12%	12%	12%	32%	32.0%	No	$ -	$ -
1099	8	258	After 1996	N110	1%	1%	2%	2%	5%	5%	76%	28.0%	No	$ -	$ -
1100	8	545	After 1996	N110	1%	1%	2%	2%	5%	5%	76%	28.0%	No	$ -	$ -
1101	8	261	After 1996	XJ299	53%	58%	74%	72%	44%	72%	20%	19.6%	No	$ -	$ -
1102	8	261	After 1996	XJ299	53%	58%	74%	72%	44%	72%	20%	19.6%	No	$ -	$ -
1103	8	108	After 1996	XJ299	53%	58%	74%	72%	44%	72%	20%	19.6%	No	$ -	$ -
1104	8	326	After 1996	XJ299	53%	58%	74%	72%	44%	72%	20%	19.6%	No	$ -	$ -
1105	8	94	After 1996	XJ299	53%	58%	74%	72%	44%	72%	20%	19.6%	No	$ -	$ -
1106	8	137	After 1996	XJ299	53%	58%	74%	72%	44%	72%	20%	19.6%	No	$ -	$ -
1107	8	216	After 1996	XJ299	53%	58%	74%	72%	44%	72%	20%	19.6%	No	$ -	$ -
1108	8	212	After 1996	XJ299	53%	58%	74%	72%	44%	72%	20%	19.6%	No	$ -	$ -
1109	8	228	After 1996	XJ492	7%	9%	15%	17%	52%	52%	83%	15.9%	No	$ -	$ -
1110	8	238	After 1996	XJ492	7%	9%	15%	17%	52%	52%	83%	15.9%	No	$ -	$ -
1111	8	182	After 1996	XJ869	1%	1%	2%	3%	5%	5%	69%	24.0%	No	$ -	$ -
1112	8	1,060	After 1996	XJ869	1%	1%	2%	3%	5%	5%	69%	24.0%	No	$ -	$ -
1113	8	147	After 1996	XJ869	1%	1%	2%	3%	5%	5%	69%	24.0%	No	$ -	$ -
1114	8	913	After 1996	XJ869	1%	1%	2%	3%	5%	5%	69%	24.0%	No	$ -	$ -
1115	8	445	After 1996	XJ869	1%	1%	2%	3%	5%	5%	69%	24.0%	No	$ -	$ -
1118	8	256	After 1996	N30	0%	0%	0%	0%	0%	0%	0%	0.0%	No	$ -	$ -
1119	8	543	After 1996	XJ380	5%	6%	7%	7%	10%	10%	44%	17.6%	No	$ -	$ -
1120	8	334	After 1996	XJ380	5%	6%	7%	7%	10%	10%	44%	17.6%	No	$ -	$ -
1121	8	376	After 1996	XJ380	5%	6%	7%	7%	10%	10%	44%	17.6%	No	$ -	$ -
1122	8	433	After 1996	XJ750	1%	1%	1%	1%	3%	3%	82%	4.8%	No	$ -	$ -
1123	8	832	After 1996	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	No	$ -	$ -
1124	8	312	After 1996	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	No	$ -	$ -
1125	8	283	After 1996	XJ307	3%	4%	4%	4%	5%	5%	30%	15.6%	No	$ -	$ -
1126	8	448	After 1996	XJ307	3%	4%	4%	4%	5%	5%	30%	15.6%	No	$ -	$ -
1127	8	323	After 1996	XJ307	3%	4%	4%	4%	5%	5%	30%	15.6%	No	$ -	$ -
1128	8	308	After 1996	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	No	$ -	$ -
1129	8	128	After 1996	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	No	$ -	$ -
1130	8	663	After 1996	XJ307	3%	4%	4%	4%	5%	5%	30%	15.6%	No	$ -	$ -
1131	8	325	After 1996	CDT-89	1%	1%	3%	3%	4%	4%	62%	54.1%	No	$ -	$ -
1132	8	397	After 1996	CDT-89	1%	1%	3%	3%	4%	4%	62%	54.1%	No	$ -	$ -
1133	8	327	After 1996	CDT-89	1%	1%	3%	3%	4%	4%	62%	54.1%	No	$ -	$ -
1134	8	987	After 1996	CDT-85	1%	2%	4%	4%	4%	4%	51%	41.0%	No	$ -	$ -
1135	8	34	After 1996	CDT-89	1%	1%	3%	3%	4%	4%	62%	54.1%	No	$ -	$ -
1136	8	118	After 1996	N203	7%	8%	9%	10%	27%	27%	72%	10.0%	No	$ -	$ -
1137	8	171	After 1996	N203	7%	8%	9%	10%	27%	27%	72%	10.0%	No	$ -	$ -
1138	8	177	After 1996	N680	4%	4%	4%	4%	5%	5%	9%	0.5%	No	$ -	$ -
1139	8	583	After 1996	CDT-71	2%	2%	2%	2%	2%	2%	6%	0.3%	No	$ -	$ -
1140	8	357	After 1996	CDT-71	2%	2%	2%	2%	2%	2%	6%	0.3%	No	$ -	$ -
1142	8	194	After 1996	XJ307	3%	4%	4%	4%	5%	5%	30%	15.6%	No	$ -	$ -
1143	8	158	After 1996	N680	4%	4%	4%	4%	5%	5%	9%	0.5%	No	$ -	$ -

Table C-2. Non-Modeled Existing Sanitary Sewer Pipes Reserve Capacity Detail (Cont'd)

Pipe Segment ID	Dia (in)	Segment Length (ft)	Year Built	Reference Pipe[1]	q/Qfull					Max % Capacity Ever Used	Proportion of Max Capacity Ever Used		Impact Fee Eligible?	Estimated Project Cost	Estimated Impact Fee-Eligible Cost
					2014	2016	2024	2026	2060		2016 to 2060	2016 to 2026			
					A	B	C	D	E	F	G	H	I	J	K
										= Max (B, D, and E)	= (F - B) / F	= (D - B) / F			= (H x J) if I is "Yes"
1149	8	105	After 1996	XJ869	1%	1%	2%	3%	5%	5%	69%	24.0%	No	$ -	$ -
1151	8	387	After 1996	N30	0%	0%	0%	0%	0%	0%	0%	0.0%	No	$ -	$ -
1154	8	290	After 1996	XJ307	3%	4%	4%	4%	5%	5%	30%	15.6%	No	$ -	$ -
1155	8	59	After 1996	XJ281	3%	3%	4%	4%	4%	4%	31%	16.3%	No	$ -	$ -
1156	8	166	After 1996	XJ281	3%	3%	4%	4%	4%	4%	31%	16.3%	No	$ -	$ -
1157	8	92	After 1996	XJ281	3%	3%	4%	4%	4%	4%	31%	16.3%	No	$ -	$ -
1159	8	482	After 1996	N612	0%	2%	6%	8%	35%	35%	95%	17.7%	No	$ -	$ -
1173	8	230	After 1996	N40	9%	13%	24%	28%	97%	97%	87%	15.8%	No	$ -	$ -
1194	8	129	After 1996	N266	0%	0%	0%	0%	2%	2%	95%	18.8%	No	$ -	$ -
1209	8	217	After 1996	XJ541	27%	24%	16%	16%	14%	24%	0%	0.0%	No	$ -	$ -
1210	8	219	After 1996	XJ712	11%	11%	14%	14%	22%	22%	48%	13.1%	No	$ -	$ -
1211	8	219	After 1996	XJ712	11%	11%	14%	14%	22%	22%	48%	13.1%	No	$ -	$ -
1216	8	14	After 1996	XJ7	25%	27%	32%	33%	51%	51%	47%	13.0%	No	$ -	$ -
1217	8	14	After 1996	XJ7	25%	27%	32%	33%	51%	51%	47%	13.0%	No	$ -	$ -
1230	8	11	After 1996	XJ380	5%	6%	7%	7%	10%	10%	44%	17.6%	No	$ -	$ -
1231	8	11	After 1996	XJ380	5%	6%	7%	7%	10%	10%	44%	17.6%	No	$ -	$ -
1238	8	19	After 1996	XJ299	53%	58%	74%	72%	44%	72%	20%	19.6%	No	$ -	$ -
1239	8	19	After 1996	XJ299	53%	58%	74%	72%	44%	72%	20%	19.6%	No	$ -	$ -
27	8	247	1995	XJ86	3%	3%	4%	7%	55%	55%	94%	6.0%	Yes	$ 8,113	$ 490
28	8	230	1995	XJ86	3%	3%	4%	7%	55%	55%	94%	6.0%	Yes	$ 7,570	$ 457
29	8	241	1995	XJ86	3%	3%	4%	7%	55%	55%	94%	6.0%	Yes	$ 7,907	$ 478
30	8	264	1995	XJ86	3%	3%	4%	7%	55%	55%	94%	6.0%	Yes	$ 8,659	$ 523
31	8	291	1995	XJ92	7%	7%	7%	7%	10%	10%	33%	3.3%	Yes	$ 9,554	$ 314
32	8	282	1995	XJ97	7%	7%	8%	8%	12%	12%	40%	5.3%	Yes	$ 9,280	$ 494
33	8	255	1995	XJ97	7%	7%	8%	8%	12%	12%	40%	5.3%	Yes	$ 8,379	$ 446
36	8	294	1995	XJ82	9%	9%	10%	10%	19%	19%	54%	6.5%	Yes	$ 9,644	$ 625
38	8	307	1995	XJ92	7%	7%	7%	7%	10%	10%	33%	3.3%	Yes	$ 10,088	$ 331
39	8	300	1995	XJ97	7%	7%	8%	8%	12%	12%	40%	5.3%	Yes	$ 9,842	$ 524
43	8	245	1995	XJ122	6%	7%	9%	10%	15%	15%	54%	19.6%	Yes	$ 8,063	$ 1,584
44	8	243	1995	XJ122	6%	7%	9%	10%	15%	15%	54%	19.6%	Yes	$ 7,993	$ 1,570
45	8	240	1995	XJ122	6%	7%	9%	10%	15%	15%	54%	19.6%	Yes	$ 7,883	$ 1,548
46	8	302	1995	XJ82	9%	9%	10%	10%	19%	19%	54%	6.5%	Yes	$ 9,907	$ 642
47	8	241	1995	XJ122	6%	7%	9%	10%	15%	15%	54%	19.6%	Yes	$ 7,915	$ 1,555
48	8	235	1995	XJ82	9%	9%	10%	10%	19%	19%	54%	6.5%	Yes	$ 7,711	$ 500
49	8	267	1995	XJ82	9%	9%	10%	10%	19%	19%	54%	6.5%	Yes	$ 8,774	$ 569
50	8	430	1995	XJ131	2%	2%	2%	5%	49%	49%	96%	6.1%	Yes	$ 14,143	$ 856
51	8	221	1995	XJ92	7%	7%	7%	7%	10%	10%	33%	3.3%	Yes	$ 7,246	$ 238
52	8	297	1995	XJ92	7%	7%	7%	7%	10%	10%	33%	3.3%	Yes	$ 9,760	$ 321
53	8	266	1995	XJ92	7%	7%	7%	7%	10%	10%	33%	3.3%	Yes	$ 8,753	$ 287
54	8	300	1995	XJ133	10%	11%	15%	17%	43%	43%	74%	13.0%	Yes	$ 9,859	$ 1,278
55	8	170	1995	XJ133	10%	11%	15%	17%	43%	43%	74%	13.0%	Yes	$ 5,582	$ 724
56	8	132	1995	XJ116	3%	3%	3%	3%	5%	5%	44%	5.5%	Yes	$ 4,350	$ 238
57	8	105	1995	XJ97	7%	7%	8%	8%	12%	12%	40%	5.3%	Yes	$ 3,434	$ 183
58	8	300	1995	XJ116	3%	3%	3%	3%	5%	5%	44%	5.5%	Yes	$ 9,857	$ 538
59	8	310	1995	XJ116	3%	3%	3%	3%	5%	5%	44%	5.5%	Yes	$ 10,199	$ 557

Table C-2. Non-Modeled Existing Sanitary Sewer Pipes Reserve Capacity Detail (Cont'd)

Pipe Segment ID	Dia (in)	Segment Length (ft)	Year Built	Reference Pipe[1]	q/Qfull					Max % Capacity Ever Used	Proportion of Max Capacity Ever Used		Impact Fee Eligible?	Estimated Project Cost	Estimated Impact Fee-Eligible Cost
					2014	2016	2024	2026	2060		2016 to 2060	2016 to 2026			
					A	B	C	D	E	F	G	H	I	J	K
										= Max (B, D, and E)	= (F - B) / F	= (D - B) / F			= (H x J) if I is "Yes"
60	8	299	1995	XJ97	7%	7%	8%	8%	12%	12%	40%	5.3%	Yes	$ 9,808	$ 522
61	8	395	1995	XJ97	7%	7%	8%	8%	12%	12%	40%	5.3%	Yes	$ 12,963	$ 690
67	8	315	1995	XJ122	6%	7%	9%	10%	15%	15%	54%	19.6%	Yes	$ 10,335	$ 2,030
68	8	314	1995	XJ82	9%	9%	10%	10%	19%	19%	54%	6.5%	Yes	$ 10,318	$ 669
69	8	305	1995	XJ92	7%	7%	7%	7%	10%	10%	33%	3.3%	Yes	$ 10,022	$ 329
70	8	302	1995	XJ97	7%	7%	8%	8%	12%	12%	40%	5.3%	Yes	$ 9,924	$ 528
71	8	306	1995	XJ116	3%	3%	3%	3%	5%	5%	44%	5.5%	Yes	$ 10,038	$ 548
75	8	378	1995	XJ152	1%	1%	1%	1%	2%	2%	70%	28.6%	Yes	$ 12,427	$ 3,560
76	8	217	1995	XJ167	3%	3%	5%	5%	8%	8%	61%	21.5%	Yes	$ 7,134	$ 1,531
77	8	309	1995	XJ82	9%	9%	10%	10%	19%	19%	54%	6.5%	Yes	$ 10,137	$ 657
78	8	287	1995	XJ82	9%	9%	10%	10%	19%	19%	54%	6.5%	Yes	$ 9,441	$ 612
79	8	236	1995	XJ82	9%	9%	10%	10%	19%	19%	54%	6.5%	Yes	$ 7,763	$ 503
80	8	242	1995	XJ167	3%	3%	5%	5%	8%	8%	61%	21.5%	Yes	$ 7,936	$ 1,703
81	8	315	1995	XJ122	6%	7%	9%	10%	15%	15%	54%	19.6%	Yes	$ 10,334	$ 2,030
82	8	447	1995	XJ175	2%	2%	2%	4%	44%	44%	96%	6.1%	Yes	$ 14,680	$ 902
83	8	221	1995	XJ122	6%	7%	9%	10%	15%	15%	54%	19.6%	Yes	$ 7,255	$ 1,425
84	8	301	1995	XJ92	7%	7%	7%	7%	10%	10%	33%	3.3%	Yes	$ 9,893	$ 325
85	8	449	1995	XJ92	7%	7%	7%	7%	10%	10%	33%	3.3%	Yes	$ 14,758	$ 485
86	8	186	1995	XJ116	3%	3%	3%	3%	5%	5%	44%	5.5%	Yes	$ 6,104	$ 333
87	8	302	1995	XJ116	3%	3%	3%	3%	5%	5%	44%	5.5%	Yes	$ 9,907	$ 541
88	8	333	1995	XJ116	3%	3%	3%	3%	5%	5%	44%	5.5%	Yes	$ 10,942	$ 598
89	8	306	1995	XJ97	7%	7%	8%	8%	12%	12%	40%	5.3%	Yes	$ 10,039	$ 534
90	8	347	1995	XJ97	7%	7%	8%	8%	12%	12%	40%	5.3%	Yes	$ 11,398	$ 607
91	8	166	1995	XJ97	7%	7%	8%	8%	12%	12%	40%	5.3%	Yes	$ 5,446	$ 290
92	8	449	1995	XJ186	11%	13%	17%	19%	50%	50%	74%	12.9%	Yes	$ 14,768	$ 1,908
93	8	287	1995	XJ82	9%	9%	10%	10%	19%	19%	54%	6.5%	Yes	$ 9,430	$ 611
94	8	308	1995	XJ92	7%	7%	7%	7%	10%	10%	33%	3.3%	Yes	$ 10,104	$ 332
95	8	304	1995	XJ116	3%	3%	3%	3%	5%	5%	44%	5.5%	Yes	$ 9,990	$ 546
96	8	304	1995	XJ97	7%	7%	8%	8%	12%	12%	40%	5.3%	Yes	$ 9,989	$ 532
97	8	256	1995	XJ198	4%	5%	8%	8%	13%	13%	61%	24.3%	Yes	$ 8,396	$ 2,041
98	8	291	1995	XJ82	9%	9%	10%	10%	19%	19%	54%	6.5%	Yes	$ 9,546	$ 619
99	8	235	1995	XJ198	4%	5%	8%	8%	13%	13%	61%	24.3%	Yes	$ 7,719	$ 1,877
100	8	397	1995	XJ82	9%	9%	10%	10%	19%	19%	54%	6.5%	Yes	$ 13,050	$ 846
101	8	255	1995	XJ201	1%	1%	1%	1%	2%	2%	52%	7.7%	Yes	$ 8,367	$ 648
102	8	247	1995	XJ201	1%	1%	1%	1%	2%	2%	52%	7.7%	Yes	$ 8,112	$ 628
103	8	286	1995	XJ116	3%	3%	3%	3%	5%	5%	44%	5.5%	Yes	$ 9,399	$ 513
104	8	457	1995	XJ116	3%	3%	3%	3%	5%	5%	44%	5.5%	Yes	$ 15,029	$ 821
105	8	297	1995	XJ210	10%	10%	12%	14%	37%	37%	72%	8.8%	Yes	$ 9,753	$ 856
106	8	254	1995	XJ210	10%	10%	12%	14%	37%	37%	72%	8.8%	Yes	$ 8,330	$ 731
107	8	172	1995	XJ92	7%	7%	7%	7%	10%	10%	33%	3.3%	Yes	$ 5,648	$ 185
108	8	264	1995	XJ220	7%	7%	8%	9%	27%	27%	74%	8.5%	Yes	$ 8,670	$ 739
109	8	303	1995	XJ92	7%	7%	7%	7%	10%	10%	33%	3.3%	Yes	$ 9,940	$ 326
110	8	315	1995	XJ92	7%	7%	7%	7%	10%	10%	33%	3.3%	Yes	$ 10,359	$ 340
111	8	301	1995	XJ97	7%	7%	8%	8%	12%	12%	40%	5.3%	Yes	$ 9,890	$ 526
112	8	407	1995	XJ97	7%	7%	8%	8%	12%	12%	40%	5.3%	Yes	$ 13,382	$ 712

Table C-2. Non-Modeled Existing Sanitary Sewer Pipes Reserve Capacity Detail (Cont'd)

Pipe Segment ID	Dia (in)	Segment Length (ft)	Year Built	Reference Pipe[1]	q/Qfull					Max % Capacity Ever Used	Proportion of Max Capacity Ever Used		Impact Fee Eligible?	Estimated Project Cost	Estimated Impact Fee-Eligible Cost
					2014	2016	2024	2026	2060		2016 to 2060	2016 to 2026			
					A	B	C	D	E	F	G	H	I	J	K
										= Max (B, D, and E)	= (F - B) / F	= (D - B) / F			= (H x J) if I is "Yes"
113	8	105	1995	XJ97	7%	7%	8%	8%	12%	12%	40%	5.3%	Yes	$ 3,435	$ 183
114	8	213	1995	XJ220	7%	7%	8%	9%	27%	27%	74%	8.5%	Yes	$ 6,997	$ 596
116	8	221	1995	XJ224	1%	1%	1%	1%	2%	2%	72%	7.4%	Yes	$ 7,259	$ 539
117	8	266	1995	XJ116	3%	3%	3%	3%	5%	5%	44%	5.5%	Yes	$ 8,740	$ 477
118	8	376	1995	XJ224	1%	1%	1%	1%	2%	2%	72%	7.4%	Yes	$ 12,347	$ 916
119	8	278	1995	XJ220	7%	7%	8%	9%	27%	27%	74%	8.5%	Yes	$ 9,119	$ 777
120	8	353	1995	XJ82	9%	9%	10%	10%	19%	19%	54%	6.5%	Yes	$ 11,583	$ 751
121	8	424	1995	XJ210	10%	10%	12%	14%	37%	37%	72%	8.8%	Yes	$ 13,941	$ 1,224
123	8	207	1995	XJ235	1%	1%	1%	3%	32%	32%	98%	6.0%	Yes	$ 6,794	$ 406
124	8	366	1995	XJ92	7%	7%	7%	7%	10%	10%	33%	3.3%	Yes	$ 12,026	$ 395
125	8	44	1995	XJ235	1%	1%	1%	3%	32%	32%	98%	6.0%	Yes	$ 1,429	$ 85
126	8	405	1995	XJ97	7%	7%	8%	8%	12%	12%	40%	5.3%	Yes	$ 13,309	$ 708
127	8	251	1995	XJ82	9%	9%	10%	10%	19%	19%	54%	6.5%	Yes	$ 8,231	$ 534
128	8	433	1995	XJ82	9%	9%	10%	10%	19%	19%	54%	6.5%	Yes	$ 14,240	$ 923
129	8	149	1995	XJ97	7%	7%	8%	8%	12%	12%	40%	5.3%	Yes	$ 4,901	$ 261
130	8	379	1995	XJ97	7%	7%	8%	8%	12%	12%	40%	5.3%	Yes	$ 12,442	$ 662
132	8	208	1995	XJ92	7%	7%	7%	7%	10%	10%	33%	3.3%	Yes	$ 6,836	$ 224
133	8	346	1995	XJ92	7%	7%	7%	7%	10%	10%	33%	3.3%	Yes	$ 11,353	$ 373
134	8	324	1995	XJ116	3%	3%	3%	3%	5%	5%	44%	5.5%	Yes	$ 10,658	$ 582
135	8	361	1995	XJ116	3%	3%	3%	3%	5%	5%	44%	5.5%	Yes	$ 11,846	$ 647
136	8	182	1995	XJ82	9%	9%	10%	10%	19%	19%	54%	6.5%	Yes	$ 5,964	$ 387
137	8	252	1995	XJ97	7%	7%	8%	8%	12%	12%	40%	5.3%	Yes	$ 8,287	$ 441
138	8	177	1995	XJ97	7%	7%	8%	8%	12%	12%	40%	5.3%	Yes	$ 5,808	$ 309
139	8	165	1995	XJ116	3%	3%	3%	3%	5%	5%	44%	5.5%	Yes	$ 5,432	$ 297
140	8	335	1995	XJ277	1%	1%	1%	3%	39%	39%	98%	6.1%	Yes	$ 11,024	$ 675
141	8	204	1995	XJ92	7%	7%	7%	7%	10%	10%	33%	3.3%	Yes	$ 6,715	$ 220
142	8	280	1995	XJ82	9%	9%	10%	10%	19%	19%	54%	6.5%	Yes	$ 9,184	$ 596
143	8	387	1995	XJ97	7%	7%	8%	8%	12%	12%	40%	5.3%	Yes	$ 12,726	$ 677
144	8	369	1995	XJ97	7%	7%	8%	8%	12%	12%	40%	5.3%	Yes	$ 12,120	$ 645
145	8	356	1995	XJ92	7%	7%	7%	7%	10%	10%	33%	3.3%	Yes	$ 11,682	$ 384
146	8	444	1995	XJ92	7%	7%	7%	7%	10%	10%	33%	3.3%	Yes	$ 14,602	$ 479
147	8	186	1995	XJ116	3%	3%	3%	3%	5%	5%	44%	5.5%	Yes	$ 6,120	$ 334
148	8	398	1995	XJ116	3%	3%	3%	3%	5%	5%	44%	5.5%	Yes	$ 13,061	$ 713
149	8	231	1995	XJ116	3%	3%	3%	3%	5%	5%	44%	5.5%	Yes	$ 7,590	$ 415
150	8	342	1995	XJ116	3%	3%	3%	3%	5%	5%	44%	5.5%	Yes	$ 11,238	$ 614
151	8	165	1995	XJ116	3%	3%	3%	3%	5%	5%	44%	5.5%	Yes	$ 5,418	$ 296
154	8	287	1995	XJ92	7%	7%	7%	7%	10%	10%	33%	3.3%	Yes	$ 9,430	$ 310
155	8	300	1995	XJ97	7%	7%	8%	8%	12%	12%	40%	5.3%	Yes	$ 9,862	$ 525
156	8	293	1995	XJ116	3%	3%	3%	3%	5%	5%	44%	5.5%	Yes	$ 9,611	$ 525
160	8	143	1995	XJ97	7%	7%	8%	8%	12%	12%	40%	5.3%	Yes	$ 4,701	$ 250
161	8	151	1995	XJ92	7%	7%	7%	7%	10%	10%	33%	3.3%	Yes	$ 4,945	$ 162
162	8	189	1995	XJ116	3%	3%	3%	3%	5%	5%	44%	5.5%	Yes	$ 6,211	$ 339
165	8	459	1995	XJ326	4%	5%	8%	8%	2%	8%	32%	31.7%	Yes	$ 15,074	$ 4,774
166	8	290	1995	XJ298	49%	54%	69%	68%	41%	68%	20%	19.6%	Yes	$ 9,541	$ 1,871
167	8	315	1995	XJ298	49%	54%	69%	68%	41%	68%	20%	19.6%	Yes	$ 10,335	$ 2,027

Table C-2. Non-Modeled Existing Sanitary Sewer Pipes Reserve Capacity Detail (Cont'd)

Pipe Segment ID	Dia (in)	Segment Length (ft)	Year Built	Reference Pipe[1]	q/Qfull					Max % Capacity Ever Used	Proportion of Max Capacity Ever Used		Impact Fee Eligible?	Estimated Project Cost	Estimated Impact Fee-Eligible Cost
					2014	2016	2024	2026	2060		2016 to 2060	2016 to 2026			
					A	B	C	D	E	F	G	H	I	J	K
										= Max (B, D, and E)	= (F - B) / F	= (D - B) / F			= (H x J) if I is "Yes"
168	8	316	1995	XJ299	53%	58%	74%	72%	44%	72%	20%	19.6%	Yes	$ 10,370	$ 2,038
169	8	243	1995	XJ299	53%	58%	74%	72%	44%	72%	20%	19.6%	Yes	$ 7,998	$ 1,572
170	8	270	1995	XJ299	53%	58%	74%	72%	44%	72%	20%	19.6%	Yes	$ 8,884	$ 1,746
176	8	196	1995	XJ298	49%	54%	69%	68%	41%	68%	20%	19.6%	Yes	$ 6,441	$ 1,263
178	8	351	1995	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	Yes	$ 11,534	$ 544
179	8	288	1995	XJ299	53%	58%	74%	72%	44%	72%	20%	19.6%	Yes	$ 9,450	$ 1,857
180	8	97	1995	XJ298	49%	54%	69%	68%	41%	68%	20%	19.6%	Yes	$ 3,174	$ 623
182	8	297	1995	XJ299	53%	58%	74%	72%	44%	72%	20%	19.6%	Yes	$ 9,743	$ 1,914
183	8	234	1995	XJ299	53%	58%	74%	72%	44%	72%	20%	19.6%	Yes	$ 7,693	$ 1,512
184	8	298	1995	XJ298	49%	54%	69%	68%	41%	68%	20%	19.6%	Yes	$ 9,777	$ 1,918
185	8	220	1995	XJ632	3%	4%	9%	11%	44%	44%	90%	14.8%	Yes	$ 7,225	$ 1,070
186	8	293	1995	XJ332	28%	31%	38%	37%	22%	37%	17%	17.2%	Yes	$ 9,611	$ 1,651
187	8	298	1995	XJ299	53%	58%	74%	72%	44%	72%	20%	19.6%	Yes	$ 9,804	$ 1,926
188	8	200	1995	XJ371	2%	2%	2%	4%	44%	44%	97%	5.7%	Yes	$ 6,584	$ 374
189	8	317	1995	XJ298	49%	54%	69%	68%	41%	68%	20%	19.6%	Yes	$ 10,429	$ 2,045
190	8	257	1995	XJ371	2%	2%	2%	4%	44%	44%	97%	5.7%	Yes	$ 8,441	$ 480
191	8	243	1995	XJ332	28%	31%	38%	37%	22%	37%	17%	17.2%	Yes	$ 7,982	$ 1,371
192	8	243	1995	XJ332	28%	31%	38%	37%	22%	37%	17%	17.2%	Yes	$ 7,985	$ 1,371
193	8	285	1995	XJ632	3%	4%	9%	11%	44%	44%	90%	14.8%	Yes	$ 9,354	$ 1,385
194	8	169	1995	XJ337	19%	21%	26%	25%	14%	25%	18%	18.1%	Yes	$ 5,559	$ 1,006
195	8	295	1995	XJ337	19%	21%	26%	25%	14%	25%	18%	18.1%	Yes	$ 9,677	$ 1,751
196	8	300	1995	XJ337	19%	21%	26%	25%	14%	25%	18%	18.1%	Yes	$ 9,852	$ 1,782
197	8	403	1995	XJ380	5%	6%	7%	7%	10%	10%	44%	17.6%	Yes	$ 13,250	$ 2,328
198	8	150	1995	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	Yes	$ 4,926	$ 232
199	8	363	1995	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	Yes	$ 11,928	$ 563
201	8	294	1995	XJ298	49%	54%	69%	68%	41%	68%	20%	19.6%	Yes	$ 9,661	$ 1,895
202	8	300	1995	XJ299	53%	58%	74%	72%	44%	72%	20%	19.6%	Yes	$ 9,858	$ 1,937
203	8	263	1995	XJ380	5%	6%	7%	7%	10%	10%	44%	17.6%	Yes	$ 8,642	$ 1,519
204	8	176	1995	XJ380	5%	6%	7%	7%	10%	10%	44%	17.6%	Yes	$ 5,779	$ 1,016
205	8	225	1995	XJ380	5%	6%	7%	7%	10%	10%	44%	17.6%	Yes	$ 7,377	$ 1,296
207	8	437	1995	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	Yes	$ 14,343	$ 677
208	8	125	1995	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	Yes	$ 4,107	$ 194
209	8	286	1995	XJ299	53%	58%	74%	72%	44%	72%	20%	19.6%	Yes	$ 9,398	$ 1,847
210	8	202	1995	XJ299	53%	58%	74%	72%	44%	72%	20%	19.6%	Yes	$ 6,634	$ 1,304
211	8	275	1995	XJ299	53%	58%	74%	72%	44%	72%	20%	19.6%	Yes	$ 9,032	$ 1,775
212	8	303	1995	XJ298	49%	54%	69%	68%	41%	68%	20%	19.6%	Yes	$ 9,957	$ 1,953
213	8	313	1995	XJ298	49%	54%	69%	68%	41%	68%	20%	19.6%	Yes	$ 10,289	$ 2,018
214	8	317	1995	XJ380	5%	6%	7%	7%	10%	10%	44%	17.6%	Yes	$ 10,418	$ 1,831
215	8	289	1995	XJ380	5%	6%	7%	7%	10%	10%	44%	17.6%	Yes	$ 9,511	$ 1,671
216	8	116	1995	XJ380	5%	6%	7%	7%	10%	10%	44%	17.6%	Yes	$ 3,816	$ 671
217	8	242	1995	XJ380	5%	6%	7%	7%	10%	10%	44%	17.6%	Yes	$ 7,967	$ 1,400
218	8	280	1995	XJ380	5%	6%	7%	7%	10%	10%	44%	17.6%	Yes	$ 9,192	$ 1,615
220	8	146	1995	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	Yes	$ 4,789	$ 226
221	8	154	1995	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	Yes	$ 5,044	$ 238
222	8	396	1995	XJ371	2%	2%	2%	4%	44%	44%	97%	5.7%	Yes	$ 12,996	$ 738

Table C-2. Non-Modeled Existing Sanitary Sewer Pipes Reserve Capacity Detail (Cont'd)

Pipe Segment ID	Dia (in)	Segment Length (ft)	Year Built	Reference Pipe[1]	q/Qfull					Max % Capacity Ever Used	Proportion of Max Capacity Ever Used		Impact Fee Eligible?	Estimated Project Cost	Estimated Impact Fee-Eligible Cost
					2014	2016	2024	2026	2060		2016 to 2060	2016 to 2026			
					A	B	C	D	E	F	G	H	I	J	K
										= Max (B, D, and E)	= (F - B) / F	= (D - B) / F			= (H x J) if I is "Yes"
223	8	208	1995	XJ371	2%	2%	2%	4%	44%	44%	97%	5.7%	Yes	$ 6,847	$ 389
224	8	398	1995	XJ371	2%	2%	2%	4%	44%	44%	97%	5.7%	Yes	$ 13,075	$ 743
225	8	151	1995	XJ371	2%	2%	2%	4%	44%	44%	97%	5.7%	Yes	$ 4,953	$ 281
226	8	298	1995	XJ393	7%	7%	7%	9%	37%	37%	81%	4.6%	Yes	$ 9,775	$ 448
227	8	149	1995	XJ380	5%	6%	7%	7%	10%	10%	44%	17.6%	Yes	$ 4,898	$ 861
228	8	333	1995	XJ380	5%	6%	7%	7%	10%	10%	44%	17.6%	Yes	$ 10,942	$ 1,923
229	8	280	1995	XJ299	53%	58%	74%	72%	44%	72%	20%	19.6%	Yes	$ 9,184	$ 1,805
230	8	239	1995	XJ380	5%	6%	7%	7%	10%	10%	44%	17.6%	Yes	$ 7,845	$ 1,379
231	8	287	1995	XJ298	49%	54%	69%	68%	41%	68%	20%	19.6%	Yes	$ 9,431	$ 1,850
236	8	312	1995	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	Yes	$ 10,251	$ 484
237	8	325	1995	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	Yes	$ 10,685	$ 504
238	8	303	1995	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	Yes	$ 9,945	$ 469
239	8	278	1995	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	Yes	$ 9,120	$ 430
240	8	304	1995	XJ393	7%	7%	7%	9%	37%	37%	81%	4.6%	Yes	$ 9,973	$ 457
242	8	361	1995	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	Yes	$ 11,876	$ 560
243	8	402	1995	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	Yes	$ 13,222	$ 624
244	8	399	1995	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	Yes	$ 13,123	$ 619
248	8	272	1995	XJ298	49%	54%	69%	68%	41%	68%	20%	19.6%	Yes	$ 8,922	$ 1,750
252	8	166	1995	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	Yes	$ 5,454	$ 257
253	8	185	1995	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	Yes	$ 6,062	$ 286
261	8	399	1995	XJ298	49%	54%	69%	68%	41%	68%	20%	19.6%	Yes	$ 13,117	$ 2,573
262	8	342	1995	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	Yes	$ 11,239	$ 530
263	8	102	1995	XJ298	49%	54%	69%	68%	41%	68%	20%	19.6%	Yes	$ 3,345	$ 656
278	8	351	1995	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	Yes	$ 11,534	$ 544
283	8	332	1995	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	Yes	$ 10,916	$ 515
284	8	306	1995	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	Yes	$ 10,053	$ 474
285	8	201	1995	XJ439	7%	7%	7%	7%	10%	10%	30%	4.7%	Yes	$ 6,615	$ 312
304	8	118	1995	XJ122	6%	7%	9%	10%	15%	15%	54%	19.6%	Yes	$ 3,882	$ 762
1161	8	146	1995	XJ202	1%	1%	1%	1%	2%	2%	69%	7.6%	Yes	$ 4,809	$ 364
1162	8	259	1995	XJ289	41%	45%	58%	56%	34%	56%	20%	19.7%	Yes	$ 8,520	$ 1,680
1163	8	246	1995	XJ299	53%	58%	74%	72%	44%	72%	20%	19.6%	Yes	$ 8,067	$ 1,585
1164	8	258	1995	XJ298	49%	54%	69%	68%	41%	68%	20%	19.6%	Yes	$ 8,481	$ 1,663
1165	8	291	1995	XJ332	28%	31%	38%	37%	22%	37%	17%	17.2%	Yes	$ 9,562	$ 1,642
1166	8	299	1995	XJ337	19%	21%	26%	25%	14%	25%	18%	18.1%	Yes	$ 9,825	$ 1,777
1167	8	414	1995	XJ336	26%	29%	36%	35%	20%	35%	18%	17.7%	Yes	$ 13,587	$ 2,400
999999	10	99	2013	WRF2013_1	17%	21%	33%	37%	100%	100%	79%	16.1%	Yes	$ 4,893	$ 790
888888	10	210	2013	WRF2013_2	17%	21%	33%	37%	100%	100%	79%	16.1%	Yes	$ 10,435	$ 1,685
1000000	10 FM	4,305	1995	Lift Station	17%	21%	33%	37%	100%	100%	79%	16.1%	Yes	$ 168,282	$ 27,178
													Total	$ 2,076,372	$ 217,155

[1] First downstream modeled pipe.

APPENDIX D – HISTORIC COSTS

The following tables show a summary of projects with known historical costs.

The Santaquin City sanitary sewer system was installed in 1994 when the City installed miles of sewer pipe. The project was funded 47% from grants and the other 53% was paid in cash or bonded for by the City. Tables D-1 through D-4 show how costs per foot for different pipe diameters were calculated for various projects the City paid for. These costs were used in Table C-1 and C-2.

Table D-1: Historic Cost Paid by Santaquin for Original Sanitary Sewer System Project

Original System Historical Project Cost[1]	$ 6,751,908
Impact Fee Eligible Cost[2]	$ 3,681,927

[1]Cost includes Center Street Lift Station and 52 MG Winter Storage Ponds

[2]Recorded costs paid for by City

Diameter	Approximate Pipe Length from GIS (ft)	Present Day Unit Cost (per LF)	Present Day Cost	Percent of Total	Impact Fee Eligible Cost	Impact Fee Eligible Cost (per LF)
8	98,007	$ 69	$ 6,737,949	87.8%	$ 3,232,854	**$ 33**
10	6,793	$ 80	$ 541,760	7.1%	$ 259,935	**$ 38**
15	530	$ 103	$ 54,410	0.7%	$ 26,106	**$ 49**
10 FM	4,315	$ 79	$ 339,794	4.4%	$ 163,032	**$ 38**
Total	109,644		$ 7,673,913		$ 3,681,927	

Table D-2: Historic Cost Paid by Santaquin for the 2013 WRF Project (Gravity Piping-only)

a	2013 WRF Historical Project Cost	$ 18,380,688	
b	Piping Portion	$ 1,725,000	
c	Impact Fee Eligible Cost[2]	$ 8,684,688	
d	Impact Fee Eligible Pipe Portion	$ 815,045	= (b/a) x c

[2]Recorded costs paid for by City

Diameter	Approximate Pipe Length from GIS (ft)	Present Day Unit Cost (per LF)	Present Day Cost	Percent of Total	Impact Fee Eligible Cost	Impact Fee Eligible Cost (per LF)
10	309	$ 80	$ 24,631	2.5%	$ 20,671	**$ 36**
18	8,470	$ 112	$ 946,539	97.5%	$ 794,374	**$ 38**
Total	8,779		$ 971,171		$ 815,045	

Table D-3: Historic Cost Paid by Santaquin for the 900 South and Center Street Project

Historical Project Cost	Unknown
Impact Fee Eligible Cost[1]	$ 56,601

[1]Recorded costs paid for by City

Diameter	Approximate Pipe Length from GIS (ft)	Present Day Unit Cost (per LF)	Present Day Cost	Percent of Total	Impact Fee Eligible Cost	Impact Fee Eligible Cost (per LF)
8	1,379	$ 69	$ 94,807	100.0%	$ 56,601	**$ 41**
Total	1,379		$ 94,807		$ 56,601	

Table D-4: Historic Cost Paid by Santaquin for the Main Street & I-15 Project

Historical Project Cost	Unknown
Impact Fee Eligible Cost[1]	$ 102,791

[1]Estimated based on estimated 2016 costs with a 1998 ENR Construction Index reduction.

Diameter	Approximate Pipe Length from GIS (ft)	Present Day Unit Cost (per LF)	Present Day Cost	Percent of Total	Impact Fee Eligible Cost[1]	Impact Fee Eligible Cost (per LF)
6	275	$ 60.75	$ 16,687	9%	$ 9,608	$ 34.98
8	2,354	$ 68.75	$ 161,838	91%	$ 93,183	**$ 39.58**
Total	2,629		$178,526		$ 102,791	

[1]Reduced using ENR Construction Index factor of 1.737 for 1998 construction year (see Table D-7)

Table D-5: Historic Cost Paid by Santaquin for the Winter Storage Ponds

a	% of Pond #2 Used in 2016	58.5%	
b	% of Pond #2 Used in 2026	100%	
c	% Impact Fee Eligible	41.5%	[1-a]
d	Historical Project Cost[1]	$ 1,247,683	
e	Impact Fee Eligible Cost	$ 517,369	[c*d]

[1]Based on City records

Table D-6: Historic Cost Paid by Santaquin for Sewer Improvements at Summit Ridge

Historical Project Cost	Unknown
Impact Fee Eligible Cost[1]	$ 1,049,547

[1]Recorded costs paid by the developer to be reimbursed by the City

Diameter	Approximate Pipe Length from GIS (ft)	Present Day Unit Cost (per LF)	Present Day Cost	Percent of Total	Impact Fee Eligible Cost[1]	Impact Fee Eligible Cost (per LF)
10	3,120	$ 79.75	$ 248,813	18%	$ 192,424	$ 61.68
12	3,842	$ 94.75	$ 364,047	27%	$ 281,543	$ 73.28
15	3,848	$ 102.75	$ 395,370	29%	$ 305,768	$ 79.46
18	3,122	$ 111.75	$ 348,878	26%	$ 269,812	$ 86.42
Total	13,932		1,357,108		1,049,547	

Table D-7: Historic Cost Paid by Santaquin for the Public Works Facility

a	2016 ERUs	3,199	
b	2026 ERUs	5,238	
c	Buildout ERUs	16,289	
d	2016 to Buildout Growth	13,090	[c-a]
e	2016 to 2026 Growth	2,039	[b-a]
f	10-year growth responsibility	15.57%	[e/g]
g	Historical Project Cost[1]	$ 2,530,000	
h	Sanitary Sewer Portion[2]	$ 632,500	[g*0.25]
i	Impact Fee Eligible Cost	$ 98,507	[f*h]

[1]Based on City records

[2]City records indicate a cost-sharing of 25% each between sanitary sewer, parks, culinary water, and secondary water

Table D-7: City Projects Paid for by Others

Projet Description	Year Constructed	Funding Source
Winter Storage Expansion (Large Pond & Pump Station)	2001-2002	Developer/Impact Fee Funded
Land Application Pump (New)	2009	Developer/Impact Fee Funded
100 West (Pole Canyon Road) Sewer (900 South to 1200 South)	2015	Developer/Impact Fee Funded

Table D-8: Winter Storage Pond Storage Summary and % of Recharge Permit to be Used by 2026

Table Row		Storage (MG)	
Existing Storage			
a	Pond #1 Storage	52	
b	Pond #2 Storage	126	
c	Total Existing Storage	178	= a + b
2016 Storage Needs			
d	2016 Storage Demand	109	
e	115% of 2016 Storage Demand[1]	126	= d * 1.15
f	Remaining Storage	52	= c - f
g	% of Pond #1 Used	100%	
h	% of Pond #2 Used	58.5%	= (e - a) / b
2026 Storage Needs			
i	2026 Storage Demand	183	
j	115% of 2026 Storage Demand	210	= i * 1.15
k	Remaining Storage	-32	= j - c
l	% of Pond #1 Used	100%	
m	% of Pond #2 Used	126%	= (j - a) / b
Additional Storage Project in Year 2022 to Meet LOS			
n	Existing Storage	178	
o	Proposed North Winter Storage Pond	106	
p	Total Storage in 2022	284	= n + o
% of Proposed Winter Storage Pond Used by 2026			
q	% of Pond #1 Used	100%	
r	% of Pond #2 Used	100%	
s	% Proposed Winter Storage Pond Used	30%	= (j - n) / o

[1]LOS for storage is having capacity to provide at least 115% of the total demand during the non-irrigation season.

Table D-9 shows the Engineering News Record Construction Cost Index, which is an index based on labor, steel, concrete and lumber in 20 major cities in the United States.

Table D-9. Engineering News Record Construction Cost Index History

Construction Year	Index Cost	Ratio to 2016 to Construction Year
2016	10282	1.000
2015	10036	1.025
2014	9806	1.049
2013	9547	1.077
2012	9308	1.105
2011	9070	1.134
2010	8799	1.169
2009	8570	1.200
2008	8310	1.237
2007	7966	1.291
2006	7751	1.327
2005	7446	1.381
2004	7115	1.445
2003	6694	1.536
2002	6538	1.573
2001	6343	1.621
2000	6221	1.653
1999	6059	1.697
1998	5920	1.737
1997	5826	1.765
1996	5620	1.829
1995	5471	1.879
1994	5408	1.901
1993	5210	1.973
1992	4985	2.063
1991	4835	2.127
1990	4732	2.173
1989	4615	2.228
1988	4519	2.275
1987	4406	2.334
1986	4295	2.394
1985	4195	2.451
1984	4146	2.480
1983	4066	2.529
1982	3825	2.688
1981	3535	2.909
1980	3237	3.176
1979	3003	3.424
1978	2776	3.704
1977	2576	3.991
1976	2401	4.282
1975	2212	4.648
1974	2020	5.090
1973	1895	5.426
1972	1753	5.865
1971	1581	6.503
1970	1381	7.445
1969	1269	8.102
1968	1155	8.902
1967	1074	9.573
1966	1019	10.090
1965	971	10.589
1964	936	10.985
1963	901	11.411
1962	872	11.791
1961	847	12.139
1960	824	12.478
1959	797	12.901
1958	759	13.546
1957	724	14.201
1956	692	14.858
1955	660	15.578
1954	628	16.372
1953	600	17.136
1952	569	18.070
1951	543	18.935
1950	510	20.160
1949	477	21.555
1948	461	22.303
1947	413	24.895
1946	346	29.716
1945	308	33.382
1944	299	34.387
1943	290	35.454
1942	276	37.253
1941	258	39.852
1940	242	42.487
1939	236	43.567
1938	236	43.567
1937	235	43.752
1936	206	49.911
1935	196	52.458
1934	198	51.928
1933	170	60.481
1932	157	65.489
1931	181	56.805
1930	203	50.649
1929	207	49.670
1928	207	49.670
1927	206	49.911
1926	208	49.431
1925	207	49.670
1924	215	47.822
1923	214	48.046
1922	174	59.090
1921	202	50.900

Table D-10 details the engineering and financial costs related to planning for impact fee collection. These costs include modeling, master planning, capital facilities planning, and impact fee facilities plan (by J-U-B Engineers), and an impact fee analysis (by Zions Bank Public Finance).

Table D-10. Engineering / Financial Costs Related to Planning Eligible for Impact Fee Collection

	Cost	
Master Plan & Capital Facilities Plan	$	52,000
Impact Fee Facilities Plan	$	20,000
Impact Fee Analysis	$	6,250
Total	$	78,250

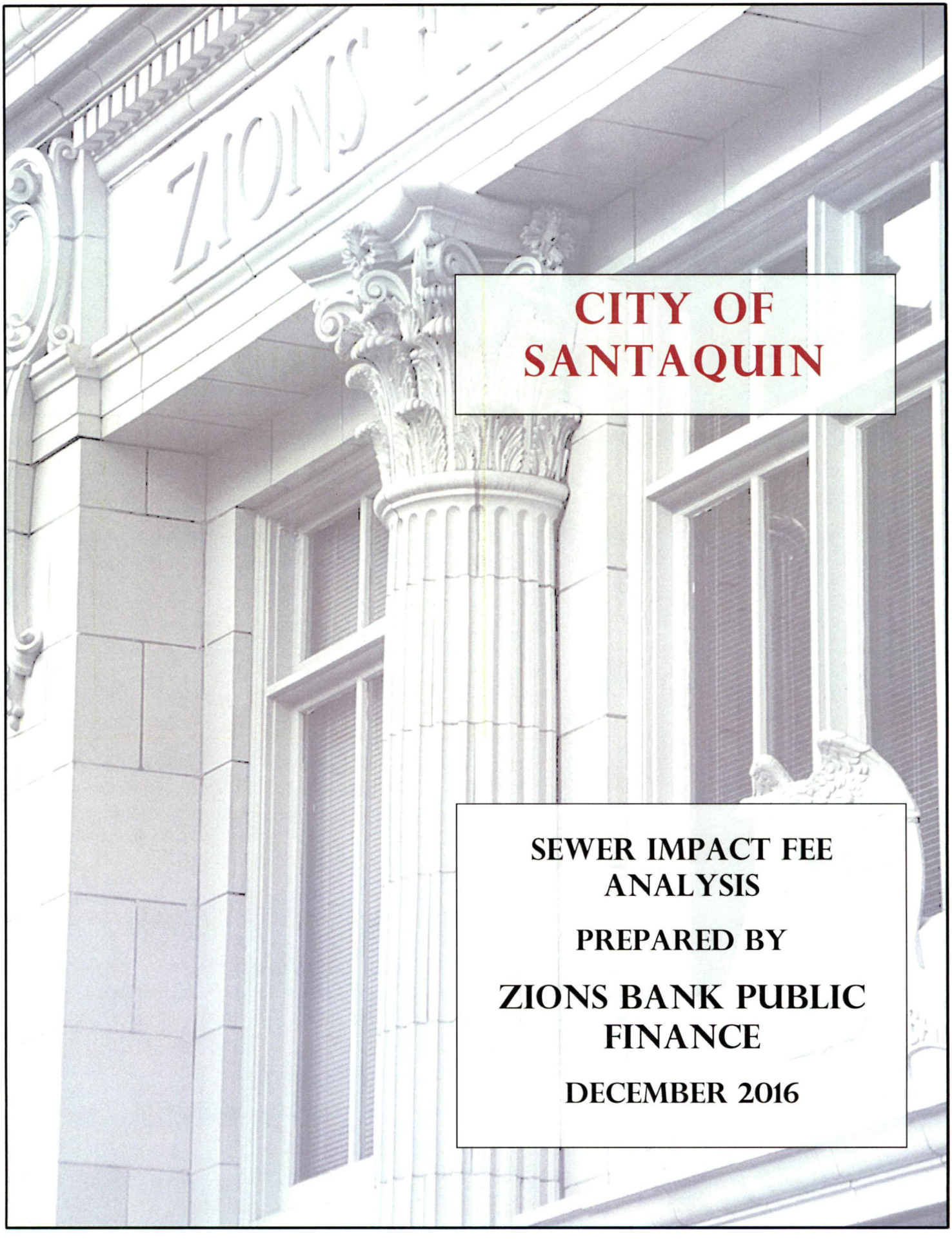
APPENDIX E – IMPACT FEE FACILITIES PLAN CERTIFICATION

As required by Section 11-36a-306 of the Impact Fee Act, J-U-B Engineers, Inc. provides the following statement:

I certify that the attached Impact Fee Facilities plan:

1. includes only the costs of public facilities that are:
   a. allowed in the Impact Fees Act; and
   b. actually incurred; or
   c. projected to be incurred or encumbered within 6 years after the day on which each impact fee is paid;
2. does not include:
   a. costs of operation and maintenance of public facilities;
   b. costs for qualifying public facilities that will raise the level of service for the facilities, through impact fees, above the level of service that is supported by existing residents;
   c. an expense for overhead, unless the expense is calculated pursuant to the 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 reimbursements; and
3. complies with each and every relevant respect with the Impact Fees Act.

J-U-B Engineers, Inc.



CITY OF SANTAQUIN

SEWER IMPACT FEE ANALYSIS

PREPARED BY

ZIONS BANK PUBLIC FINANCE

DECEMBER 2016

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EXECUTIVE SUMMARY

Santaquin City, Utah (the City) recently commissioned Zions Public Finance, Inc. (Zions) to calculate the City's sewer impact fees in accordance with Utah State Law. An impact fee is a one-time charge to new development to reimburse the City for the cost of developing new sewer system capacity that will allow development to occur. In conjunction with this project, J-U-B Engineers (J-U-B) prepared the *Santaquin City Sanitary Sewer System Impact Fee Facilities Plan* (IFFP) dated November 2016.

City Sewer System and Service Area

The City owns and operates a wastewater treatment system that serves all connections within the current City boundaries and some residents in unincorporated areas. A major portion of the City's original sewer system and the recent water reclamation facility (WRF) were funded with grants and low interest loans. A City's service area map is included in Appendix A and shows where impact fees will be assessed by the City. This impact fee includes the cost of capacity in the existing water reclamation facility, collection system and lift station, wastewater effluent storage, and the sewer portion of the public works building.

The City's sanitary sewer system currently serves 3,199 Equivalent Residential Units (ERUs) as of 2016 and will add 2,039 more ERUS by 2026 which is the ten-year horizon. The level of service or demand per ERU is 200 gallons per average day.

Sewer System Costs and Allocations

The City's existing wastewater facilities have been constructed with a combination of City funding and grant funding. Also several bonds were issued to fund the original collection and lift station as well as the WRF. The total cost of the system is shown in the City's depreciation statements to be $29,291,488 and $12,765,982 was funded with grants. The grant funded portion of facilities have been removed from the impact fee.

The City will need to build $10,729,418 (FV) of future sewer projects in the next ten years to expand the existing system capacities to accommodate new growth. These projects are required to provide capacity to allow new growth to connect to a safe and reliable system and are 100% allocated to growth. Additional bonds will need to be issued to fund these future improvements. The City prefers not to issue bonds but currently future bonds are necessary to fund the future capital projects due to cash and financial constraints in the sewer fund.

Recommended Sewer Impact Fees

The recommended impact fee structure presented in this analysis has been prepared to satisfy the Impact Fees Act, Utah Code Ann. § 11-36-101 et. seq., and represents the maximum sanitary sewer impact fees that the City may assess within the service areas. The City will be required to use other revenue sources to fund any projects identified in the IFFP that constitute repair and replacement, cure any existing deficiencies, increase the level of service or maintain the level of service for existing users.

The following table shows the maximum legal sanitary sewer impact fee that the City can assess per ERU. The final impact fee paid will be based on the unique characteristics of the residential or non-residential property that is proposed to be developed. All multi-family and non-residential units will be assessed an impact fee according to the number of fixture units as determined by the International Residential Code (IRC) from 2015.

FIGURE ES.1: IMPACT FEE PER SEWER ERU [1]

Unit Type	ERU Equivalent	Price per ERU	Proposed Fee
Single Family Residential	1.00	$ 4,415.54	$ 4,415.54
Multi-Family/ Non-Residential (16 Fixture Units)*	1.00	4,415.54	4,415.54

* Fixture units are based upon the 2015 IRC

Figure ES.2 provides a calculation of the impact fee for a non-standard user that may not fit the schedule found in the previous table. The non-standard calculation is based on the estimated gallons of use of a new property on a peak month average day basis and the proposed cost per gallon of wastewater for each of the service areas. It is at the City's discretion if the non-standard calculation will be used and clear and thorough documentation of the proposed property's estimated demand must be provided.

FIGURE ES.2: CALCULATION OF NON-STANDARD SEWER IMPACT FEE

Non-Standard Users Impact Fee Formula
Step 1: Identify Estimated Average Day Gallons per Day Divided by 200 for an ERU Count
Step 2: Multiply ERUs Calculated in Step 1 by $4,415.54 per ERUs

[1] The proposed impact fee shown above includes the cost of a surface water storage pond included at the cost of $3,797,086 (FV) which is likely to be the proposed solution for effluent storage. However, the City may be able to develop a ground water storage system in the future at a cost of $961,212 but it is not yet known if the less expensive alternative can be implemented. The difference in the impact fees given the different storage alternatives is $690. Until a final storage solution is determined, the City will set aside $690 that relates to the higher project cost in a special fund that will be reimbursed back to impact fee payers in case the less expensive ground water recharge option is implemented.

CHAPTER 1: OVERVIEW OF THE CITY SEWER IMPACT FEES

Impact Fee Overview

An impact fee is a one-time fee, not a tax, charged to new development to recover the City's cost of constructing sewer facilities with excess capacity that will be utilized by new growth. The fee is assessed at the time of building permit issuance as a condition of development approval. The calculation of the impact fee must strictly follow the Impact Fees Act to ensure that the fee is equitable, fair, and legally defensible. This analysis provides documentation that there is a fair comparison, or rational nexus, between the impact fee charged to new development and the impact on the capacity of the system.

Until new development utilizes the full capacity of existing facilities the City can assess an impact fee to recover its cost of latent capacity available to serve future development. The general impact fee methodology divides the available capacity of existing and future capital projects between the number of existing and future users.

Qualifying and Non-Qualifying Costs

The impact fees proposed in this analysis are calculated based upon:

- New capital infrastructure for sewer treatment;
- Professional and planning expenses related to the construction of new infrastructure; and
- Any impact fee qualifying historic costs of existing improvements that will serve new development.

The costs that cannot be included in the impact fee are as follows:

- Projects that cure existing deficiencies for existing users;
- Projects that increase the level of service above that which is currently provided;
- Operations and maintenance costs;
- Costs of facilities funded by grants or other funds that the City does not have to repay; and
- Costs of reconstruction of facilities that do not have capacity to serve new growth.

Level of Service, ERU Definition

The level of service standard is established in the IFFP and reflects City policies, sound engineering analysis and standards, and observed demands. This is a defensible level of service that is established in the IFFP and it is anticipated that this level of service per ERU will be perpetuated into the future. However, the City has the right to increase this established level of service in the future by constructing facilities that will provide

greater capacity but such level of service increases cannot be funded through impact fees. The City will have to find other funding sources, such as user rates, for projects that increase level of service should it decide to do so. There are currently no plans to increase the level of service beyond what is proposed in the IFFP.

Description of the Service Area

The sewer impact fee service area includes all areas in the City boundaries and various unincorporated customers. The City does have a collection system. A map of the City's service area where impact fees will be assessed is found in Appendix A.

CHAPTER 2: IMPACT FROM GROWTH UPON THE CITY'S FACILITIES AND LEVEL OF SERVICE

Future Sewer Demand within the Service Area

Sewer demand within the City will increase as development activity continues and homes and other types of development are built. Currently there are 3,199 ERUs and there will be 16,289 total ERUs when buildout is estimated to occur at buildout at some point in the future. This study focuses on a ten-year horizon from 2016 to 2026 when the system will add 2,039 sewer ERUs of growth. Figure 2.1 shows the growth in ERUs through an estimated buildout and Figure 2.2 shows the increase in ERUs expected from 2016 to 2026.

FIGURE 2.1:. PROJECTED GROWTH IN DEMAND (ERUS)

Year	Population	ERUs	Ave Day Demand (GPD)	GPD per ERU
2014	10,689	2,835	534,681	189
2015	11,352	3,013	570,281	200
2016	**12,044**	**3,199**	**607,481**	**200**
2017	12,791	3,400	647,681	200
2018	13,584	3,613	690,281	200
2019	14,426	3,840	735,681	200
2020	15,321	4,081	783,881	200
2021	15,889	4,235	814,681	200
2022	16,479	4,394	846,481	200
2023	17,090	4,559	879,481	200
2024	17,724	4,730	913,681	200
2025	18,382	4,977	963,081	200
2026	**19,064**	**5,238**	**1,015,281**	**200**
2030	22,054	6,422	1,252,081	200
2040	29,783	9,784	1,924,481	200
2050	36,389	12,961	2,559,881	200
Buildout	**42,817**	**16,289**	**3,225,481**	**200**

Source: Santaquin City Sewer Impact Fee Facilities Plan, JUB Engineers

FIGURE 2.2: PROJECTED TEN-YEAR GROWTH IN DEMAND (ERUS)

SEWER ERUs	
Current Peak Day Demand (ERU)	3,199
Ten Year Demand (ERU)	5,238
Buildout Peak Day Demand (ERU)	16,289
Undeveloped Demand (ERU)	13,090
% Undeveloped	80%
ERU Demand Added in Ten Year	**2,039**

Sewer Level of Service

Figure 2.3 shows the general sewer design characteristics for the programmed level of service for hydraulic and biological demands and hydraulic flow through the City's collection system.

FIGURE 2.3: ENGINEERING LEVEL OF SERVICE FOR FACILITY DESIGN

Treatment Level of Service			
BOD	25mg/l	DO	5 mg/l min
TSS	25 mg/l	TRC	1.8 mg/l max
E Coli	126 / 158 CFU	TIN	10 mg/l
pH	6.5-9.0		

Impact Fee Equivalent Residential Unit

The City's sewer infrastructure is sized to be adequate to meet peak month average day demand. The primary measurement used for sewer treatment demand and improvement sizing and capacity evaluations in this analysis is an ERU which is equal to 200 gallons per average day in the peak month. The City's treatment infrastructure is sized to be adequate to meet peak month average day demand. The primary measurement used for sewer treatment demand and improvement sizing and capacity evaluations in this analysis is an ERU which is equal to 200 gallons per average day in the peak month.

A fair impact fee is calculated by dividing the cost of existing and future facilities by unused capacity in existing or future facilities expressed in terms of an ERU. This cost per ERU is then multiplied by the estimated demand of an individual home, business, or other non-residential user expressed in term of an ERU or 200 gallons on an average day in the peak month to determine the final impact fee to be paid.

CHAPTER 3: HISTORIC AND FUTURE CAPITAL PROJECTS COSTS

The Impact Fees Act allows for the inclusion of various growth-driven capital cost components improvements and appropriate professional services inflated from current dollars to construction year costs. Impact fees can only fund system improvements which are defined as facilities or lines that contribute to the entire system's capacity rather than just to a small, localized area. The City has currently several outstanding bonds related to sewer capital projects and the City does not anticipate issuing debt in future years. The City may receive future grants to fund future projects but none are considered in this analysis. If future grants are received then an amendment to the IFA may be required.

Historic Capital Project Costs

This analysis considers existing assets in the calculation of the impact fees per ERU. This is referred to as the buy-in which represents the cost of infrastructure that has been built in the past that still has capacity in it available for new growth. Only historic costs can be used in calculating the buy-in however any grants used to fund improvements must be excluded.

Existing Collection and Lift Station Facilities

The existing collection and lift station facilities cost about $10,505,814 to construct. The majority of that cost is related to the original system dating back to about 1995 but more improvements have been added since then. Of this amount, it has been estimated that 46% ($4,789,598) of the existing collection system costs are related to project improvements which are sewer lines constructed and installed by developers. These project improvements are not included in the impact fee. The remaining $5,716,216 relates to system improvements of which $3,979,938 was grant funded leaving $1,736,278 as impact fee qualifying. Approximately 12.37% of the existing collection lines will be required to serve the ten-year demand. Additional interest cost from the 1993 and 2012 series of bonds related to the existing collection system is $751,444 in total. The ten-year demand portion for the bond interest cost is also 12.37% which totals $88,852. This represents $426,119 in total future and existing impact fee costs to the ten-year demand.

Existing Water Reclamation Facility

The existing WRF cost the City $16,660,688 to construct in about 2011. The WRF is entirely related to system improvements and there are no project improvements provided by the WRF. The City received $8,768,044 in grant funding leaving $7,874,643 as impact fee qualifying. Approximately 13.25% of the existing WRF is needed to serve the ten-year demand. This represents $1,426,110 in impact fee costs for the portion of the existing WRF that will serve the ten-year demand. Three Series 2011 bonds were issued to help fund the WRF and 13.25% of these bonds' interest cost are assigned to the impact fees.

Existing Sewer Storage Ponds

The City currently maintains a large and small storage pond required to hold effluent produced by the WRF. The small pond has a capacity of 52 MG and the large pond has a capacity of 126 MG. The small pond was constructed first and its capacity is entirely used. The large pond is mostly used and will not have sufficient capacity to serve the entire ten-year demand. The large pond was constructed for $1,247,683 without the use of grants or bonds. Approximately 41.47% of the large storage pond is needed to serve the ten-year demand. This represents $517,369 in impact fee costs to the ten-year demand. There is no existing debt related to the small pond.

Existing Sewer Building

The City has recently constructed a new public works building of which 25% is allocated to sewer facilities. Without this facility, the sewer system cannot be effectively operated. This facility is a new building and benefits existing as well as future users. Existing users will pay for this facility through user rates which will also be paid by new users. An impact fee credit is calculated based on the portion of the debt service that new users will pay through rates for the existing users' portion of the facility. The building was constructed for $2,500,000 without grants but Series 2016 Excise Tax Revenue Bonds were issued. Approximately 15.57% of the sewer building is needed to serve the ten-year demand. The building adds $637,500 to total sewer costs and $99,284 for ten-year demand impact fee costs. A credit is calculated to be $45.26 per ERU for the portion of the costs of the building that will relate to existing users.

FIGURE 3.1: VALUATION OF EXISTING ASSETS.

Depreciation Statement	Total	Original Coll/ LS/ Small Pond	New Collection	Water Reclamation Facility	2003 Large Pond #2 126MG	Sewer Building	Other	Total Cost
Land	$ 110,000	$ 50,000	$ 50,000	$ 5,000	$ -	$ 5,000		$ 110,000
Buildings (Pond Pump Station)	64,097				64,097			64,097
Sewer Collection	6,843,385							-
- 1995 Additions to Sewer System (Original)	(261,879)	261,879						261,879
- 1995 Sewer Collection (Original)	(6,440,029)	6,440,029						6,440,029
- 2003 Sewer Pond	(1,501)				1,501			1,501
Net Sewer Collection	139,975		139,975					139,975
Machinery & Equipment	33,626						33,626	33,626
Automobiles and Trucks	198,778						198,778	198,778
Sewer Collection 10 Yrs	545,204		545,204					545,204
Sewer Collection 25 Yrs	20,856,499							-
- 2003 Sewer Pond	(1,055,372)				1,055,372			1,055,372
- 2004 Sewer Pond	(126,712)				126,712			126,712
-Water Reclamation Facility	(18,380,688)			16,655,688				16,655,688
- WRF Piping	(1,725,000)		1,725,000					1,725,000
Net Sewer Collection 25 Yrs	244,180		244,180					244,180
Summit Ridge Collection	1,049,547		1,049,547					1,049,547
Machinery & Equipment	7,400						7,400	7,400
ADDED Public Works Building	632,500					632,500		632,500
Total Costs by Component	$ 29,291,488	$ 6,751,908	$ 3,753,906	$ 16,660,688	$ 1,247,683	$ 637,500	$ 239,804	$ 29,291,488
	Grants	$ (3,069,982)	$ (909,956)	$ (8,786,044)				$ (12,765,982)
	Qualifying Cost	**$ 3,681,927**	**$ 2,843,950**	**$ 7,874,643**	**$ 1,247,683**	**$ 637,500**	**$ 239,804**	**$ 16,525,506**

Future Capital Projects

Future Collection and Lift Station

The City has more additions to the existing collection system to provide adequate capacity to meet the ten-year demand. The future collection projects total $2,162,182 for the next ten years and 6.73% or $145,555 of those projects' capacity will be used to serve the ten-year demand. Future bonds will be issued to fund these projects. It is assumed that the bonds will be 20 year bonds, have a 5% coupon, and 2% costs of issuance. These bonding assumptions are used for all future capital projects.

Future Water Reclamation Facility

The City has more additions to the WRF to provide adequate capacity to meet the ten-year demand. The future WRF project totals $4,701,027 for the next ten years and 59.39% or $2,791,705 of those projects' capacity will be used to serve the ten-year demand. Bonds will be used to fund these projects.

Future Sewer Storage Facilities

The City has more additions to the WRF storage ponds to provide adequate capacity to meet the ten-year demand. The future storage pond will cost a total of $3,797,086 for the next ten years and 30% or $1,139,126 of the storage project's capacity will be used to serve the ten-year demand. Bonds will be used to fund these projects.

The following future capital projects are necessary to meet demand in the sewer system for existing and future users. All construction estimates are shown in 2016 dollars and a 3.0% inflation rate is added to projects to be constructed after 2016. As shown in Figure 3.2 project costs were sorted by 10-year impact fee qualifying demand, beyond 10-year demand, or whether any portion is non-qualifying which includes portions of the project that will be utilized by existing users.

FIGURE 3.2: FUTURE CAPITAL PROJECT COSTS

By Component	10 Year Impact Fee Qualifying Cost	Impact Fee Qualifying Beyond 10 Years	Non Impact Fee Qualifying	Total Ten Year Construction Cost
Collection and Lift Station	$ 145,555	$ 2,016,626	$ -	$ 2,162,182
Water Reclamation Facility	2,791,705	1,909,321	-	4,701,027
Storage	1,139,126	3,113,611	-	3,797,086
Sewer Building	-	-	-	-
Total	**$ 4,076,386**	**$ 7,039,558**	**$ -**	**$ 10,660,295**

Bond Expenses

Outstanding Bonds

The City has nine different bonds outstanding related to sewer expenses. Two are no interest loans and have no real relevance to the impact fee study since they do not have interest costs associated with them. The bonds were either used to construct the original collection system, build the WRF, or construct the sewer portion of the new public work building.

FIGURE 3.3: OUTSTANDING BOND EXPENSE

Bond Issue	Total Par Amount	Interest	Total Debt Service
Series 1993A Sewer DWQ Loan (No Interest)	$ 1,000,000	$ -	$ 1,000,000
Series 1993B Sewer DWQ Loan (No Interest)	1,307,000	-	1,307,000
Series 1993C Sewer USDA Loan	188,560	393,329	581,889
Series 1993D Sewer USDA Loan	123,474	257,123	380,597
Series 2012 Sewer Revenue Refund (Refunded 1993 C&D)	670,000	100,993	770,993
Series 2011 A-1 DWQ	6,034,000	570,635	6,604,635
Series 2011 A-2 USDA Loan	2,912,000	2,143,902	5,055,902
Series 2011B Sewer Revenue Bond DWQ	900,000	172,290	1,072,290
Series 2015 Lease Revenue Bonds (25% to Sewer)	2,500,000	1,236,905	3,736,905
Totals	**$ 15,635,034**	**$ 4,875,178**	**$ 20,510,212**

Figure 3.4 shows that the Series 1993 bonds, including the Series 2012 bond which refunded a 1993 bond, are all related to the original collection system. The 2011 bonds funded the WRF and the 2015 bond funded the public works building.

FIGURE 3.4: OUTSTANDING BOND EXPENSE ALLOCATION TO PROJECT

System	Collection	Treatment	Storage	Sewer Building	Non-Qualifying	% Total
Series 1993A Sewer DWQ Loan (No Interest)	100%	0%	0%	0%	0%	100%
Series 1993B Sewer DWQ Loan (No Interest)	100%	0%	0%	0%	0%	100%
Series 1993C Sewer USDA Loan	100%	0%	0%	0%	0%	100%
Series 1993D Sewer USDA Loan	100%	0%	0%	0%	0%	100%
Series 2012 Sewer Revenue Refund (Refunded 1993 C&D)	100%	0%	0%	0%	0%	100%
Series 2011 A-1 DWQ	0%	100%	0%	0%	0%	100%
Series 2011 A-2 USDA Loan	0%	100%	0%	0%	0%	100%
Series 2011B Sewer Revenue Bond DWQ	0%	100%	0%	0%	0%	100%
Series 2015 Lease Revenue Bonds (25% to Sewer)	0%	0%	0%	25%	75%	100%
Total Outstanding Interest Cost	**$ 751,445**	**$ 2,886,827**	**$ -**	**$ 309,226**	**$ 927,679**	**$ 4,875,178**

Future Bonds

The City anticipates the need to issue additional bonds in the future to fund the future costs of projects needed to serve new development. As mentioned above, the future bonds are structured to have a 20-year term, 2%

costs of issuance, and a 5% coupon. The interest related to future bonds is a reasonable expense for future impact fee payers to fund as the growth-related projects cannot be constructed without future financing.

FIGURE 3.5: FUTURE BOND FUNDING

	Project Costs	Percent to Bond	Amunt funded with Bonds
Collection and Lift Station	$ -	0%	$ -
Water Reclamation Facility	2,373,233	100%	2,000,000
Storage	-	0%	-
Totals	$ 2,373,233		$ 2,000,000

	Project Costs	Percent to Bond	Amunt funded with Bonds
Collection and Lift Station	$ 1,404,369	18%	$ 1,386,187
Water Reclamation Facility	2,396,917	32%	2,365,885
Storage	3,797,086	50%	3,747,927
Totals	$ 7,598,372		$ 7,500,000

Professional Expenses

As development occurs and capital project planning is periodically revised, the future lists of capital projects and their costs may be different than the information utilized in this analysis. For this reason, it is assumed that the City will perform updates to the analysis every three years. The cost of preparing this analysis, the impact fee facilities plan and the future costs of updating both documents for a ten-year period of time has been included in the impact fee calculations at an estimated cost of $80,250.

CHAPTER 4: PROPORTIONATE SHARE ANALYSIS

The Impact Fees Act requires the impact fee analysis to estimate the proportionate share of the cost for existing capacity that will be recouped. The impact fee must be based on the historic costs and reasonable future costs of the system. This chapter will show in Figure 4.1 and 4.2 that the proposed impact fee for system improvements by service area are reasonably related to the impact on the sewer system from new development activity.

The proportionate share analysis considers the manner of funding utilized for existing public facilities. Historically the City has funded existing infrastructure with sources including the following:

- Sewer Impact Fees
- Sewer User Rates and Miscellaneous Fees
- Special Assessment Bonds
- Revenue Bonds
- Developer Exactions

In the future, the City will rely upon sewer impact fees and possibly developer exactions to fund the capital projects required for future expansion of the system. Some rate revenues may be used to pay the debt service of any bonds or cash-funded projects in years when impact fee revenues are insufficient to cover the annual payment to principal and interest. However, if rate revenues are used to pay what should be funded through impact fees (due to a shortfall in impact fee revenues) then the general fund will be repaid with impact fees.

Grant funding is not secured at the moment, however, if any grants are received, future impact fees will be discounted according to the size of grant and what impact fee qualifying projects it will be intended to fund.

Developer Credits

If a project included in the Impact Fee Facilities Plan (or a project that will offset the demand for a system improvement that is listed in the IFFP) is constructed by a developer then that developer is entitled to a credit against impact fees owed. (Utah Impact Fees Act, 11-36a-304(2)(f)). There are currently no situations/projects in this analysis that would entitle a developer to a credit.

User Rate Credits

Credits to the impact fees have been calculated for any projects which will benefit existing users and be paid for through user rate funds. Credits have been calculated for treatment projects listed in the IFFP that will provide capacity to existing users.

Time-Price Differential

Utah Code 11-36a-301(2)(h) allows for the inclusion of a time-price differential in order to create fairness for amounts paid at different times. To address the time-price differential, this analysis includes an inflationary component to account for construction inflation for future projects. Projects constructed after the year 2016 will be calculated at a future value with a 3.0% inflation rate. All users who pay an impact fee today or within the next ten years will benefit from projects to be constructed and included in the fee.

Non-Standard Demand Adjustments

The City reserves the right under the Impact Fees Act (Utah Code 11-36-402(1)(c,d)) to assess an adjusted fee to respond to unusual circumstances and to ensure that the impact fees are assessed fairly. The impact fee ordinance must include a provision that permits adjustment of the fee for a particular development based upon studies and data submitted by the developer that indicate a more realistic and accurate impact upon the City's infrastructure. The impact fee formula shown below in Figure 4.4 for a non-standard user is based upon the anticipated annual sewer demand of that particular user.

Maximum Legal Sewer Impact Fees Based per ERU

As shown in Figure 4.1 and Figure 4.2, the maximum legal impact fee per ERU is calculated to be $4,416[2]. This fee is the combination of individual fees for treatment and professional fees. Each fee for individual components is based upon the historic and future costs divided by the total and available capacities. The result is a precise impact fee per ERU demand that complies with the Impact Fees Act.

Determination of Residential and Non-Residential Impact Fees

The impact fees to be paid by different residential and non-residential users are assessed according to demand per ERU. Demand in terms of ERUs will be assessed individually by the City's engineers who will determine the number of ERUs per new development. The impact fee per ERU will then be multiplied by that figure. All multi-family and non-residential units will be assessed an impact fee according to the number of fixture units as determined by the International Residential Code (IRC) from 2015.

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[2] The proposed impact fee shown above includes the cost of a surface water storage pond included at the cost of $3,797,086 (FV) which is likely to be the proposed solution for effluent storage. However, the City may be able to develop a ground water storage system in the future at a cost of $961,212 but it is not yet known if the less expensive alternative can be implemented. The difference in the impact fees given the different storage alternatives is $690. Until a final storage solution is determined, the City will set aside $690 that relates to the higher project cost in a special fund that will be reimbursed back to impact fee payers in case the less expensive ground water recharge option is implemented.

FIGURE 4.1: MAXIMUM INDOOR IMPACT FEE SCHEDULE

Unit Type	ERU Equivalent	Price per ERU	Proposed Fee
Single Family Residential	1.00	$ 4,415.54	$ 4,415.54
Multi-Family/ Non-Residential (16 Fixture Units)*	1.00	4,415.54	4,415.54

* Fixture units are based upon the 2015 IRC

FIGURE 4.2: CALCULATION OF NON-STANDARD IMPACT FEE

Non-Standard Users Impact Fee Formula
Step 1: Identify Estimated Average Day Gallons per Day Divided by 200 for an ERU Count Step 2: Multiply ERUs Calculated in Step 1 by $4,415.54 per ERUs

FIGURE 4.1: SEWER IMPACT FEE CALCULATION

Component	Total Cost to Component	% That will Serve Ten Year Demand	Dollar Amount that will Serve Ten Year Demand	Ten Year Demand (ERU)	Cost per ERU
Collection and Lift Station					
Future 10 Year Capital Projects	$ 2,162,182	6.73%	$ 145,555	2,039	$ 71
Future Collection Related Debt to be Issued - INTEREST ONLY	855,549	6.73%	57,594	2,039	28
Existing Collection Projects + Land	5,716,216	12.37%	$829,420	2,039	407
Existing Collection Related Debt - INTEREST ONLY	751,445	12.37%	88,852	2,039	44
Minus Collection Grants	(3,979,938)	12.37%	(492,154)	2,039	(241)
Collection Subtotal	**$ 5,505,453**		**$ 629,268**		**$ 308.62**
Water Reclamation Facility					
Future 10 Year Capital Projects	$ 4,770,150	59.80%	$ 2,852,627	2,039	$ 1,399
Future Treatment Related Debt to be Issued - INTEREST ONLY	2,694,605	59.80%	1,611,418	2,039	790
Existing Treatment Projects + Land	16,660,688	13.25%	2,207,874	2,039	1,083
Existing Treatment Related Debt - INTEREST ONLY	2,886,827	13.25%	382,562	2,039	188
Minus WRF Grants	(8,786,044)	13.25%	(1,164,327)	2,039	(571)
Treatment Subtotal	**$ 18,226,226**		**$ 5,890,155**		**$ 2,888.75**
Storage					
Future 10 Year Capital Projects	$ 3,797,086	30.00%	$ 1,139,126	2,039	$ 559
Future Storage Related Debt to be Issued - INTEREST ONLY	2,313,204	30.00%	693,961	2,039	340
Existing Storage Projects + Land	1,247,683	41.47%	517,369	2,039	254
Existing Storage Related Debt - OUTSTANDING INTEREST	-	0.00%	-	2,039	-
Minus Grants					
Storage Subtotal	**$ 7,357,973**		**$ 2,350,456**		**$ 1,152.75**
Sewer Building					
Future 10 Year Capital Projects	$ -	0.00%	$ -	2,039	$ -
Future Sewer Building Related Debt to be Issued - INTEREST ONLY	-	0.00%	-	2,039	-
Existing Sewer Building Projects + Land	637,500	15.57%	99,284	2,039	49
Existing Lift Sewer Building Related Debt - OUTSTANDING INTERES	309,226	15.57%	48,159	2,039	24
Minus Grants	-	0.00%	-	-	-
Transmission Subtotal	**$ 946,726**		**$ 147,443**		**$ 72.31**
Professional Services/ Credits					
Unspent Impact Fee Funds	-	0.00%	$ -	2,039	$ -
Professional Services - Master Plan	52,000	100%	52,000	2,039	25
Professional Services - Engineering	20,000	100%	20,000	2,039	10
Professional Services - IFA	8,250	100%	8,250	2,039	4
Sewer Building Rate Credits					(45)
Professional Services/Credits Subtotal	**$ 80,250**		**$ 80,250**		**$ (6.88)**
Total Impact Fee Per ERU	**$ 32,116,629**		**$ 9,097,573**		**$ 4,415.54**

APPENDICES: CERTIFICATION, SERVICE AREA MAP, IMPACT FEE CALCULATIONS

In accordance with Utah Code Annotated, 11-36a-306(2), Zions Public Finance, Inc., makes the following certification:

Zions Public Finance, Inc. certifies that the attached impact fee analysis:

1. includes only the cost 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. cost of qualifying public facilities that will raise the level of service for the facilities, through impact fees, above the level of service that is supported by existing residents;

c. an expense for overhead, unless the expense is calculated pursuant to a methodology that is consistent with generally accepted cost accounting practices and the methodological standards set forth by the federal Office of Management and Budget for federal grant reimbursement;

3. offset costs with grants or other alternate sources of payment; and
4. complies in each and every relevant respect with the Impact Fees Act.

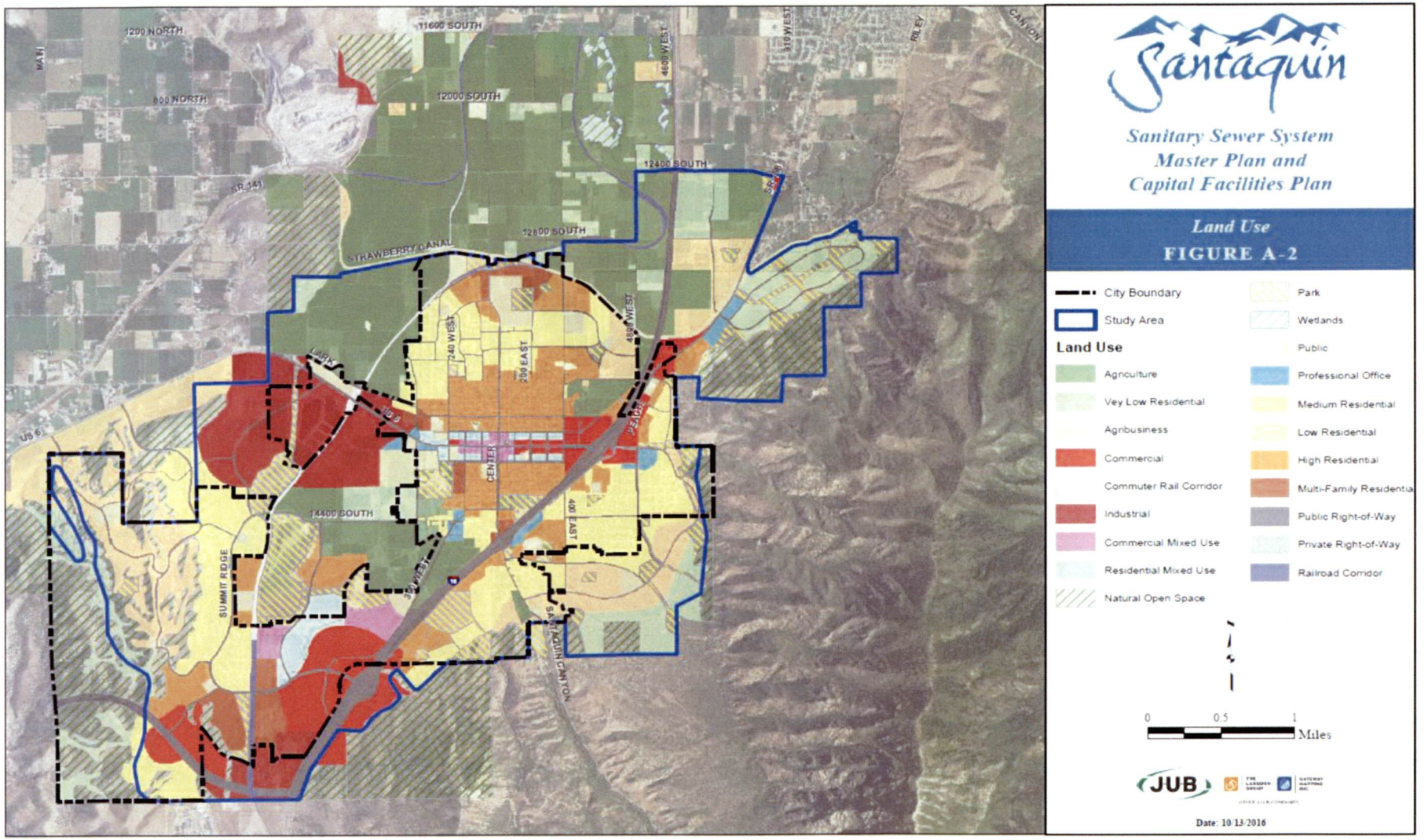
Zions Public Finance, Inc. makes this certification with the following caveats:

1. All of the recommendations for implementations of the Impact Fee Facilities Plan (IFFP) made in the IFFP or in the impact fee analysis are followed in their entirety by City staff and City Council in accordance to the specific policies established for the Service Area.
2. If all or a portion of the IFFP or impact fee analysis are modified or amended, this certification is no longer valid.
3. All information provided to Zions Public Finance, Inc., its contractors or suppliers is assumed to be correct, complete and accurate. This includes information provided by Santaquin City and outside sources. Copies of letters requesting data are included as appendices to the IFFP and the impact fee analysis.

Dated: 12/21/2016

ZIONS PUBLIC FINANCE, INC.

APPENDIX A: MAP OF IMPACT FEE SERVICE AREA (BLUE STUDY AREA BOUNDARY)



APPENDIX B: PEAK DAY DEMAND (ERU) PROJECTIONS FOR SANITARY SEWER

CURRENT AND FUTURE ERUs FOR THE SANITARY SEWER SERVICE AREA

TABLE B.1: CURRENT AND FUTURE SANITARY SEWER ERUs

Year	Population	ERUs	Ave Day Demand (GPD)	GPD per ERU
2014	10,689	2,835	534,681	189
2015	11,352	3,013	570,281	200
2016	**12,044**	**3,199**	**607,481**	**200**
2017	12,791	3,400	647,681	200
2018	13,584	3,613	690,281	200
2019	14,426	3,840	735,681	200
2020	15,321	4,081	783,881	200
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2025	18,382	4,977	963,081	200
2026	**19,064**	**5,238**	**1,015,281**	**200**
2030	22,054	6,422	1,252,081	200
2040	29,783	9,784	1,924,481	200
2050	36,389	12,961	2,559,881	200
Buildout	**42,817**	**16,289**	**3,225,481**	**200**

Source: Santaquin City Sewer Impact Fee Facilities Plan, JUB Engineers

TABLE B.2: SANITARY SEWER ERUs

SEWER ERUs	
Current Peak Day Demand (ERU)	3,199
Ten Year Demand (ERU)	5,238
Buildout Peak Day Demand (ERU)	16,289
Undeveloped Demand (ERU)	13,090
% Undeveloped	80%
ERU Demand Added in Ten Year	**2,039**

APPENDIX C: SANITARY SEWER 10 YEAR CAPITAL PROJECTS

TABLE C.1: SANITARY SEWER CAPITAL PROJECTS

Inflation Rate (20 Year ENR Construction Cost Index History 3.0%

Project Name	% to Existing / Project Level	% Impact Fee Qualifying - 10 Year	% Impact Fee Qualifying - Beyond 10 Year	FY Year to be Constructed	2016 Cost	Construction Cost with Inflation	10 Year Impact Fee Qualifying Cost	Impact Fee Qualifying Beyond 10 Years	Non Impact Fee Qualifying		
Collection and Lift Station											
Install 8" Sewer Main along Orchard Cove Rd from 770 N to 850 N	0.0%	9.0%	91.0%	2016	$ 68,800	68,800	$ 6,192	$ 62,608	$ -		
Install 8" Sewer Main along 100 E from 730 N to Canal	0.0%	16.0%	84.0%	2017	325,500	335,265	53,642	281,623	-		
Install 18" Sewer Main along Strawberry Canal Rd from 400 E to 100 E	0.0%	10.0%	90.0%	2020	314,300	353,747	35,375	318,373	-		
Install 10" pipe along 400 E from 530 N to Strawberry Canal Rd and Remove Pipe on 530 North	0.0%	5.0%	95.0%	2022	344,000	410,754	20,538	390,216	-		
Install 8" Sewer Main North of 400 North and East of 400 East for Development	0.0%	3.0%	97.0%	2023	507,100	623,669	18,710	604,959	-		
Install 8" Sewer Main along Strawberry Canal Rd from 4800 W (County) to 400 E	0.0%	3.0%	97.0%	2023	300,800	369,946	11,098	358,848	-		
Collection and Lift Station Subtotal					**$ 1,860,500**	**$ 2,162,182**	**$ 145,555**	**$ 2,016,626**	**$ -**		
Water Reclamation Facility											
Install 2nd Screw Press	0.0%	77.0%	23.0%	2018	$ 578,000	$ 613,200	$ 472,164	$ 141,036	$ -		
Activation of Membrane Tank #4 - Next Train	0.0%	100.0%	0.0%	2018	1,246,000	**1,321,881**	1,321,881	-	-		
Remove Baffle Wall in UV Channel and Install Additional Lamps	0.0%	54.0%	46.0%	2018	288,000	305,539	164,991	140,548	-	2,091,649	
Install 4th Reclaimed Water Pump	0.0%	100.0%	0.0%	2018	125,000	132,613	132,613	-	-	2,039	
10" Parallel Reclaimed Water Force Main	0.0%	72.0%	28.0%	2022	485,000	579,115	416,963	162,152	-	**1,026**	
Center Street Lift Station Upgrades	0.0%	40.0%	60.0%	2022	239,000	285,378	114,151	171,227	-		
Activation of Membrane Tank #5	0.0%	15.0%	85.0%	2024	1,246,000	1,532,423	229,863	1,302,559	-		
Treatment Subtotal					**$ 4,207,000**	**$ 4,770,150**	**$ 2,852,627**	**$ 1,917,523**	**$ -**		
Storage											
Construct Additional North 106 MG Winter Storage Pond	0.0%	30.0%	70.0%	2022	$ 3,180,000	$ 3,797,086	$ 1,139,126	$ 2,657,960	$ -		
							-	-	-		
Storage Subtotal					**$ 3,180,000**	**$ 3,797,086**	**$ 1,139,126**	**$ 2,657,960**	**$ -**		
Sewer Building											
		30%									
						-	-	-	-		
Lift Station Subtotal					**$ -**	**$ -**	**$ -**	**$ -**	**$ -**		
Replacement Capital Projects											
Maintenance Subtotal					**$ -**	**$ -**	**$ -**	**$ -**	**$ -**		
Ten Year Total					**$ 9,247,500**	**$ 10,729,418**	**$ 4,137,308**	**$ 6,592,110**	**$ -**		

	1.000	1.030	1.061	1.093	1.126	1.159	1.194	1.230	1.230	1.230

Table C.2: Total Capital Projects by Year

Project	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Collection and Lift Station										
Install 8" Sewer Main along Orchard Cove Rd from 770 N to 850 N	$ 68,800	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Install 8" Sewer Main along 100 E from 730 N to Canal	-	335,265	-	-	-	-	-	-	-	-
Install 18" Sewer Main along Strawberry Canal Rd from 400 E to 100 E	-	-	-	-	353,747	-	-	-	-	-
Install 10" pipe along 400 E from 530 N to Strawberry Canal Rd and Remove Pipe on 530 North	-	-	-	-	-	-	410,754	-	-	-
Install 8" Sewer Main North of 400 North and East of 400 East for Development	-	-	-	-	-	-	-	623,669	-	-
Install 8" Sewer Main along Strawberry Canal Rd from 4800 W (County) to 400 E	-	-	-	-	-	-	-	369,946	-	-
Collection and Lift Station Subtotal	$ 68,800	$ 335,265	$ -	$ -	$ 353,747	$ -	$ 410,754	$ 993,615	$ -	$ -
Water Reclamation Facility										
Install 2nd Screw Press	$ -	$ -	$ 613,200	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Activation of Membrane Tank #4 - Next Train	-	-	1,321,881	-	-	-	-	-	-	-
Remove Baffle Wall in UV Channel and Install Additional Lamps	-	-	305,539	-	-	-	-	-	-	-
Install 4th Reclaimed Water Pump	-	-	132,613	-	-	-	-	-	-	-
10" Parallel Reclaimed Water Force Main	-	-	-	-	-	-	579,115	-	-	-
Center Street Lift Station Upgrades	-	-	-	-	-	-	285,378	-	-	-
Activation of Membrane Tank #5	-	-	-	-	-	-	-	-	1,532,423	-
0	-	-	-	-	-	-	-	-	-	-
Treatment Subtotal	$ -	$ -	$ 2,373,233	$ -	$ -	$ -	$ 864,494	$ -	$ 1,532,423	$ -
Storage										
Construct Additional North 106 MG Winter Storage Pond	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,797,086	$ -	$ -	$ -
Storage Subtotal	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,797,086	$ -	$ -	$ -
Sewer Building										
	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	-	-	-	-	-	-	-	-	-	-
Lift Station Subtotal	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Capital Projects	**$ 68,800**	**$ 335,265**	**$ 2,373,233**	**$ -**	**$ 353,747**	**$ -**	**$ 5,072,334**	**$ 993,615**	**$ 1,532,423**	**$ -**

Project	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Collection and Lift Station										
Existing	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Impact Fee Qualifying - 10 Year	6,192	53,642	-	-	35,375	-	20,538	29,808	-	-
Impact Fee Qualifying - Beyond 10	62,608	281,623	-	-	318,373	-	390,216	963,807	-	-
Collection and Lift Station Subtotal	**$ 68,800**	**$ 335,265**	**$ -**	**$ -**	**$ 353,747**	**$ -**	**$ 410,754**	**$ 993,615**	**$ -**	**$ -**
Water Reclamation Facility										
Existing	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Impact Fee Qualifying - 10 Year	-	-	2,091,649	-	-	-	531,114	-	229,863	-
Impact Fee Qualifying - Beyond 10	-	-	281,584	-	-	-	333,379	-	1,302,559	-
Treatment Subtotal	**$ -**	**$ -**	**$ 2,373,233**	**$ -**	**$ -**	**$ -**	**$ 864,494**	**$ -**	**$ 1,532,423**	**$ -**
Storage										
Existing	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Impact Fee Qualifying - 10 Year	-	-	-	-	-	-	1,139,126	-	-	-
Impact Fee Qualifying - Beyond 10	-	-	-	-	-	-	2,657,960	-	-	-
Storage Subtotal	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,797,086	$ -	$ -	$ -
Sewer Building										
Existing	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Impact Fee Qualifying - 10 Year	-	-	-	-	-	-	-	-	-	-
Impact Fee Qualifying - Beyond 10	-	-	-	-	-	-	-	-	-	-
Sewer Building Subtotal	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Capital Projects	**$ 68,800**	**$ 335,265**	**$ 2,373,233**	**$ -**	**$ 353,747**	**$ -**	**$ 5,072,334**	**$ 993,615**	**$ 1,532,423**	**$ -**

Project	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
% to Existing / Project Level	-	-	-	-	-	-	-	-	-	-
% Impact Fee Qualifying - 10 Year	6,192	53,642	2,091,649	-	35,375	-	1,690,778	29,808	229,863	-
% Impact Fee Qualifying - Beyond 10 Year	62,608	281,623	281,584	-	318,373	-	3,381,556	963,807	1,302,559	-
	$ 68,800	$ 335,265	$ 2,373,233	$ -	$ 353,747	$ -	$ 5,072,334	$ 993,615	$ 1,532,423	$ -
A	B	C	D	E	F	G	H	I	J	

APPENDIX D: CALCULATION OF THE IMPACT FEE PER ERU

TABLE D.1: Original System Project Funding

Santaquin City Wastewater Project Funding Summary					
Original Project Funding Source	**Project**	**Amount**	**System Grant**	**Project Cost**	**City**
Interim Interest Income - Connection	Original	$ 9,100	$ -	$ 9,100	
Interim Financing - Connection	Original	435,963	-	435,963	
WPC Loan	Original	2,307,000	-	-	2,307,000
EPA Grant	Original	1,735,741	1,735,741	-	-
FmHA Grant	Original	823,600	823,600	-	-
FmHA Loan	Original	842,200	-	-	842,200
Santaquin City	Original	280,000	-	-	280,000
Lavon Ross - Connection	Original	26,543	-	26,543	-
J.A. Smith - Connection	Original	15,035	-	15,035	-
Santaquin City Additional Hookup Revenue - Connection	Original	24,000	-	24,000	-
Original Project Total		**$ 6,499,182**	**$ 2,559,341**	**$ 510,641**	**$ 3,429,200**
% of Total			**39.379%**	**7.857%**	**52.764%**
2011 WRF Funding Source	**Project**	**Amount**	**Grant**	**Grant**	**City**
Plant	WRF - Treatment	$ 8,786,044	WRF - Treatment	$ 8,786,044	$ -
Collection	WRF - Piping	909,956	WRF - Piping	909,956	-
2011 WRF Total		**$ 9,696,000**	**$ -**	**$ 9,696,000**	**$ -**
% of Total			**0%**	**100%**	**0%**
System Total		**$ 16,195,182**	**$ 2,559,341**	**$ 10,206,641**	**$ 3,429,200**

TABLE D.2: Depreciation Statement

Depreciation Statement	Total	Original Coll/ LS/ Small Pond	New Collection	Water Reclamation Facility	2003 Large Pond #2 126MG	Sewer Building	Other	Total Cost
Land	$ 110,000	$ 50,000	$ 50,000	$ 5,000	$ -	$ 5,000		$ 110,000
Buildings (Pond Pump Station)	64,097				64,097			64,097
Sewer Collection	6,843,385							-
- 1995 Additions to Sewer System (Original)	(261,879)	261,879						261,879
- 1995 Sewer Collection (Original)	(6,440,029)	6,440,029						6,440,029
- 2003 Sewer Pond	(1,501)				1,501			1,501
Net Sewer Collection	139,975		139,975					139,975
Machinery & Equipment	33,626						33,626	33,626
Automobiles and Trucks	198,778						198,778	198,778
Sewer Collection 10 Yrs	545,204		545,204					545,204
Sewer Collection 25 Yrs	20,856,499							-
- 2003 Sewer Pond	(1,055,372)				1,055,372			1,055,372
- 2004 Sewer Pond	(126,712)				126,712			126,712
-Water Reclamation Facility	(18,380,688)			16,655,688				16,655,688
- WRF Piping	(1,725,000)		1,725,000					1,725,000
Net Sewer Collection 25 Yrs	244,180		244,180					244,180
Summit Ridge Collection	1,049,547		1,049,547					1,049,547
Machinery & Equipment	7,400						7,400	7,400
ADDED Public Works Building	632,500					632,500		632,500
Total Costs by Component	$ 29,291,488	$ 6,751,908	$ 3,753,906	$ 16,660,688	$ 1,247,683	$ 637,500	$ 239,804	$ 29,291,488
	Grants	$ (3,069,982)	$ (909,956)	$ (8,786,044)				$ (12,765,982)
	Qualifying Cost	**$ 3,681,927**	**$ 2,843,950**	**$ 7,874,643**	**$ 1,247,683**	**$ 637,500**	**$ 239,804**	**$ 16,525,506**
							Totals	**29,291,488**

Depreciation Statement Sheet 1	$ 21,409,102
Depreciation Statement Sheet 2	7,249,886
Total Depreciation Statement	**$ 28,658,988**
Plus Public Works Building	632,500
Total Existing Assets	**$ 29,291,488**

TABLE D.3: Collection System Improvements

Depreciation Statement Total		
System (54% of cost)	$ 5,716,216	$ 1,736,278.47
Project (46% of cost)	4,789,598	
	$ 10,505,814	

APPENDIX E: HISTORIC ASSET DATA

Table E.1: Historic Asset Data Summary

System	Collection/ Center Street Lift	Water Reclamation Facility	2003 Large Pond #2 126MG	Sewer Building	Other	Total Cost
Land	100,000	5,000	-	5,000	-	110,000
Buildings	-	-	64,097	-	-	64,097
Sewer Collection System Improvements (54% Collection)	5,716,216	16,655,688	1,183,585	632,500	-	24,187,989
Sewer Collection Project Improvements (46% Collection)	-	-	-	-	4,789,598	4,789,598
Machinery & Equipment	-	-	-	-	41,026	41,026
Automobiles and Trucks	-	-	-	-	198,778	198,778
EPA Grant	-	-		-		-
FmHA Grant	-	-		-		-
Misc. Grants and Payments	(510,641)	(8,786,044)	-	-		(9,296,685)
Project Contributions (Ross, Smith, Hookup Rev)	-	-	-	-	(65,578)	(65,578)
Totals	**$ 5,305,575**	**$ 7,874,643**	**$ 1,247,683**	**$ 637,500**	**$ 4,963,824**	**$ 20,029,225**
						29,291,488
	24%	69%	5%	3%	0%	

Table E.2: Debt Issue by Component

	Collection/ Center Street Lift	Water Reclamation Facility	2003 Large Pond #2 126MG	Sewer Building	Other	Total Cost
Series 1993A Sewer DWQ Loan (No Interest)	$ -	$ -	$ -	$ -	$ -	$ -
Series 1993B Sewer DWQ Loan (No Interest)	-	-	-	-	-	-
Series 1993C Sewer USDA Loan	393,329	-	-	-	-	393,329
Series 1993D Sewer USDA Loan	257,123	-	-	-	-	257,123
Series 2012 Sewer Revenue Refund (Refunded 1993 C&D)	100,993	-	-	-	-	100,993
Series 2011 A-1 DWQ	-	570,635	-	-	-	570,635
Series 2011 A-2 USDA Loan	-	2,143,902	-	-	-	2,143,902
Series 2011B Sewer Revenue Bond DWQ	-	172,290	-	-	-	172,290
Series 2015 Lease Revenue Bonds (25% to Sewer)	-	-	-	309,226	927,679	1,236,905
Totals	**$ 751,445**	**$ 2,886,827**	**$ -**	**$ 309,226**	**$ 927,679**	**$ 4,875,178**

APPENDIX F: OUTSTANDING WATER DEBT

	Series 1993A Sewer DWQ Loan (No Interest)			Series 1993B Sewer DWQ Loan (No Interest)			Series 1993C Sewer USDA Loan		
Table F.1: Existing Annual Debt Payments									
	Principal	**Interest**	**Total D/S**	**Principal**	**Interest**	**Total D/S**	**Principal**	**Interest**	**Total D/S**
1993	$ 109,000	$ -	$ 109,000	$ -	$ -	$ -			$ -
1994	33,000		33,000				9,883	20,609	30,492
1995	33,000	-	33,000	33,000	-	33,000	9,883	20,609	30,492
1996	33,000	-	33,000	33,000	-	33,000	9,883	20,609	30,492
1997	33,000	-	33,000	36,000	-	36,000	9,883	20,609	30,492
1998	33,000	-	33,000	37,000	-	37,000	9,883	20,609	30,492
1999	33,000	-	33,000	46,000	-	46,000	9,883	20,609	30,492
2000	33,000	-	33,000	66,000	-	66,000	9,883	20,609	30,492
2001	33,000	-	33,000	66,000	-	66,000	9,883	20,609	30,492
2002	33,000	-	33,000	66,000	-	66,000	9,883	20,609	30,492
2003	33,000	-	33,000	66,000	-	66,000	9,883	20,609	30,492
2004	33,000	-	33,000	66,000	-	66,000	9,883	20,609	30,492
2005	33,000	-	33,000	66,000	-	66,000	9,883	20,609	30,492
2006	33,000	-	33,000	66,000	-	66,000	9,883	20,609	30,492
2007	33,000	-	33,000	66,000	-	66,000	9,883	20,609	30,492
2008	33,000	-	33,000	66,000	-	66,000	9,883	20,609	30,492
2009	33,000	-	33,000	66,000	-	66,000	9,883	20,609	30,492
2010	33,000	-	33,000	66,000	-	66,000	9,883	20,609	30,492
2011	33,000	-	33,000	66,000	-	66,000	9,883	20,609	30,492
2012	33,000	-	33,000	66,000	-	66,000	9,883	20,609	30,492
2013	33,000	-	33,000	66,000	-	66,000	781	1,760	2,541
2014	33,000	-	33,000	66,000	-	66,000			
2015	33,000		33,000	66,000	-	66,000			
2016	33,000		33,000	66,000	-	66,000			
2017	33,000		33,000			-			
2018	33,000		33,000			-			
2019	33,000		33,000			-			
2020	33,000		33,000			-			
2021									
2022									
2023									
2024									
2025									
2026									
2027									
2028									
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2046									
2047									
2048									
2049									
2050									
2051									
2052									
2053									
Total	$ 1,000,000	$ -	$ 1,000,000	$ 1,307,000	$ -	$ 1,307,000	$ 188,560	$ 393,329	$ 581,889

J	K	L	J	K	L	J	K	L
Series 1993D Sewer USDA Loan			Series 2012 Sewer Revenue Refund (Refunded 1993 C& Series 2011 A-1 DWQ					
Principal	Interest	Total D/S	Principal	Interest	Total D/S	Principal	Interest	Total D/S
		$ -			$ -			$ -
6,472	13,472	19,944						
6,472	13,472	19,944			-			-
6,472	13,472	19,944			-			-
6,472	13,472	19,944			-			-
6,472	13,472	19,944			-			-
6,472	13,472	19,944			-			-
6,472	13,472	19,944			-			-
6,472	13,472	19,944			-			-
6,472	13,472	19,944			-			-
6,472	13,472	19,944			-			-
6,472	13,472	19,944			-			-
6,472	13,472	19,944			-			-
6,472	13,472	19,944			-			-
6,472	13,472	19,944			-			-
6,472	13,472	19,944			-			-
6,472	13,472	19,944			-			-
6,472	13,472	19,944			-			-
511	1,151	1,662	31,000	14,305	45,305	314,000	52,965	366,965
			34,000	16,103	50,103	317,000	57,200	374,200
			35,000	15,246	50,246	320,000	54,030	374,030
			36,000	14,364	50,364	324,000	50,830	374,830
			102,000	13,457	115,457	328,000	47,590	375,590
			105,000	10,886	115,886	331,000	44,310	375,310
			106,000	8,240	114,240	334,000	41,000	375,000
			109,000	5,569	114,569	338,000	37,660	375,660
			112,000	2,822	114,822	341,000	34,280	375,280
						345,000	30,870	375,870
						348,000	27,420	375,420
						352,000	23,940	375,940
						355,000	20,420	375,420
						359,000	16,870	375,870
						362,000	13,280	375,280
						366,000	9,660	375,660
						369,000	6,000	375,000
						231,000	2,310	233,310
$ 123,474	$ 257,123	$ 380,597	$ 670,000	$ 100,993	$ 770,993	$ 6,034,000	$ 570,635	$ 6,604,635
J	K	L	J	K	L	J	K	L

J	K	L	J	K	L	M	N	O	P
Series 2011 A-2 USDA Loan			Series 2011B Sewer Revenue Bond DWQ			Series 2015 Lease Revenue Bonds (25% to Sewer)			
Principal	Interest	Total D/S	Principal	Interest	Total D/S	Principal	Interest	Total D/S	
		$ -			$ -				1993
									1994
		-			-				1995
		-			-				1996
		-			-				1997
		-			-				1998
		-			-				1999
		-			-				2000
		-			-				2001
		-			-				2002
		-			-				2003
		-			-				2004
		-			-				2005
		-			-				2006
		-			-				2007
		-			-				2008
		-			-				2009
		-			-				2010
		-			-				2011
-	-	-	-	-	-				2012
-	87,360	87,360	-	7,900	7,900				2013
13,800	116,428	130,228	-	9,000	9,000				2014
42,236	86,368	128,604	-	9,000	9,000				2015
43,520	85,084	128,604	-	9,000	9,000	-	52,125	52,125	2016
44,844	83,760	128,604	-	9,000	9,000	82,000	102,540	184,540	2017
46,208	82,396	128,604	-	9,000	9,000	85,000	99,058	184,058	2018
47,613	80,991	128,604	-	9,000	9,000	89,000	95,430	184,430	2019
49,062	79,542	128,604	-	9,000	9,000	93,000	91,636	184,636	2020
50,554	78,050	128,604	-	9,000	9,000	97,000	87,674	184,674	2021
52,091	76,513	128,604	-	9,000	9,000	101,000	83,546	184,546	2022
53,676	74,928	128,604	-	9,000	9,000	105,000	79,251	184,251	2023
55,308	73,296	128,604	-	9,000	9,000	109,000	74,789	183,789	2024
56,991	71,613	128,604	-	9,000	9,000	114,000	70,139	184,139	2025
58,724	69,880	128,604	-	9,000	9,000	119,000	65,281	184,281	2026
60,510	68,094	128,604	-	9,000	9,000	124,000	60,215	184,215	2027
62,351	66,253	128,604	-	9,000	9,000	129,000	54,940	183,940	2028
64,247	64,357	128,604	-	9,000	9,000	135,000	49,435	184,435	2029
66,201	62,403	128,604	142,000	9,000	151,000	141,000	43,681	184,681	2030
68,215	60,389	128,604	377,000	7,580	384,580	146,000	37,697	183,697	2031
70,290	58,314	128,604	381,000	3,810	384,810	153,000	31,463	184,463	2032
72,428	56,176	128,604				159,000	24,957	183,957	2033
74,631	53,973	128,604				166,000	18,181	184,181	2034
76,901	51,703	128,604				173,000	11,113	184,113	2035
79,240	49,364	128,604				180,000	3,753	183,753	2036
81,650	46,954	128,604							2037
84,133	44,471	128,604							2038
86,692	41,912	128,604							2039
89,329	39,275	128,604							2040
92,046	36,558	128,604							2041
94,846	33,758	128,604							2042
97,731	30,873	128,604							2043
100,703	27,901	128,604							2044
103,766	24,838	128,604							2045
106,922	21,682	128,604							2046
110,174	18,430	128,604							2047
113,526	15,078	128,604							2048
116,979	11,626	128,604							2049
120,537	8,067	128,604							2050
124,203	4,401	128,604							2051
79,124	842	79,966							2052
					-				2053
$ 2,912,000	$ 2,143,902	$ 5,055,902	$ 900,000	$ 172,290	$ 1,072,290	$ 2,500,000	$ 1,236,905	$ 3,736,905	
J	K	L	J	K	L	M	N	O	P

APPENDIX G: OUTSTANDING AND FUTURE DEBT ALLOCATION

Table G.1: Series 1993A DWQ Sewer Loan 3,058,802

Series 1993A DWQ Sewer Loan	Bond Proceeds Expended	% to Non-Impact Fee Qualifying	% to Collection	% to Treatment	% to Storage	% to Building	% to Other	$ to Non-Impact Fee Qualifying	% to Collection	% to Treatment	% to Storage	% to Lift Station	Totals
Original Collection System plus Lift Station	1,000,000	0%	100%	0%	0%	0%	0%	$ -	$ 1,000,000	$ -	$ -	$ -	$ 1,000,000
GRAND TOTAL	$ 1,000,000							$ -	$ 1,000,000	$ -	$ -	$ -	$ 1,000,000
								0%	100%	0%	0%	0%	

Table G.2: Series 1993B DWQ Sewer Loan

Series 1993B DWQ Sewer Loan	Bond Proceeds Expended	% to Non-Impact Fee Qualifying	% to Collection	% to Treatment	% to Storage	% to Building	% to Other	$ to Non-Impact Fee Qualifying	% to Collection	% to Treatment	% to Storage	% to Lift Station	Totals
Original Collection System plus Lift Station	1,307,000	0%	100%	0%	0%	0%	0%	$ -	$ 1,307,000	$ -	$ -	$ -	$ 1,307,000
GRAND TOTAL	$ 1,307,000							$ -	$ 1,307,000	$ -	$ -	$ -	$ 1,307,000
								0%	100%	0%	0%	0%	

Table G.3: Series 1993C DWQ Sewer Loan

Series 1993C DWQ Sewer Loan	Bond Proceeds Expended	% to Non-Impact Fee Qualifying	% to Collection	% to Treatment	% to Storage	% to Building	% to Other	$ to Non-Impact Fee Qualifying	% to Collection	% to Treatment	% to Storage	% to Lift Station	Totals
Original Collection System plus Lift Station	188,560	0%	100%	0%	0%	0%	0%	$ -	$ 188,560	$ -	$ -	$ -	$ 188,560
GRAND TOTAL	$ 188,560							$ -	$ 188,560	$ -	$ -	$ -	$ 188,560
								0%	100%	0%	0%	0%	

Table G.4: Series 1993D DWQ Sewer Loan

Series 1993D DWQ Sewer Loan	Bond Proceeds Expended	% to Non-Impact Fee Qualifying	% to Collection	% to Treatment	% to Storage	% to Building	% to Other	$ to Non-Impact Fee Qualifying	% to Collection	% to Treatment	% to Storage	% to Lift Station	Totals
Original Collection System plus Lift Station	123,474	0%	100%	0%	0%	0%	0%	$ -	$ 123,474	$ -	$ -	$ -	$ 123,474
GRAND TOTAL	$ 123,474							$ -	$ 123,474	$ -	$ -	$ -	$ 123,474
								0%	100%	0%	0%	0%	

Table G.5: Series 2012 Sewer Revenue Refunding (Refunded 1993 C&D)

Series 2012 Sewer Revenue Refunding (Refunded 1993 C&D)	Bond Proceeds Expended	% to Non-Impact Fee Qualifying	% to Collection	% to Treatment	% to Storage	% to Building	% to Other	$ to Non-Impact Fee Qualifying	% to Collection	% to Treatment	% to Storage	% to Lift Station	Totals
Original Collection System plus Lift Station	670,000	0%	100%	0%	0%	0%	0%	$ -	$ 670,000	$ -	$ -	$ -	$ 670,000
GRAND TOTAL	$ 670,000							$ -	$ 670,000	$ -	$ -	$ -	$ 670,000
								0%	100%	0%	0%	0%	

Table G.6: Series 2011 A-1 DWQ

Series 2011 A-1 DWQ	Bond Proceeds Expended	% to Non-Impact Fee Qualifying	% to Collection	% to Treatment	% to Storage	% to Building	% to Other	$ to Non-Impact Fee Qualifying	% to Collection	% to Treatment	% to Storage	% to Lift Station	Totals
Wastewater Treatment Plant	6,034,000	0%	0%	100%	0%	0%	0%	$ -	$ -	$ 6,034,000	$ -	$ -	$ 6,034,000
GRAND TOTAL	$ 6,034,000							$ -	$ -	$ 6,034,000	$ -	$ -	$ 6,034,000
								0%	0%	100%	0%	0%	

Table G.7: Series 2011 A-2 USDA Loan

Series 2011 A-2 USDA Loan	Bond Proceeds Expended	% to Non-Impact Fee Qualifying	% to Collection	% to Treatment	% to Storage	% to Building	% to Other	$ to Non-Impact Fee Qualifying	% to Collection	% to Treatment	% to Storage	% to Lift Station	Totals
Wastewater Treatment Plant	$ 2,912,000	0%	0%	100%	0%	0%	0%	$ -	$ -	$ 2,912,000	$ -	$ -	$ 2,912,000
GRAND TOTAL	$ 2,912,000							$ -	$ -	$ 2,912,000	$ -	$ -	$ 2,912,000
								0%	0%	100%	0%	0%	

Table G.8: Series 2011B Sewer Revenue Bond DWQ

Series 2011B Sewer Revenue Bond DWQ	Bond Proceeds Expended	% to Non-Impact Fee Qualifying	% to Collection	% to Treatment	% to Storage	% to Building	% to Other	$ to Non-Impact Fee Qualifying	% to Collection	% to Treatment	% to Storage	% to Lift Station	Totals
Wastewater Treatment Plant	$ 900,000	50%	0%	50%	0%	0%	0%	$ 450,000	$ -	$ 450,000	$ -	$ -	$ 900,000
GRAND TOTAL	$ 900,000							$ 450,000	$ -	$ 450,000	$ -	$ -	$ 900,000
								50%	0%	50%	0%	0%	

Table G.9: Series 2015 Lease Revenue Bonds

Series 2011B Sewer Revenue Bond DWQ	Bond Proceeds Expended	% to Non-Impact Fee Qualifying	% to Collection	% to Treatment	% to Storage	% to Building	% to Other	$ to Non-Impact Fee Qualifying	% to Collection	% to Treatment	% to Storage	% to Lift Station	Totals
Public Works Building	$ 2,500,000	75%	0%	0%	0%	25%	0%	$ 1,875,000	$ -	$ -	$ -	$ 625,000	$ 2,500,000
GRAND TOTAL	$ 2,500,000							$ 1,875,000	$ -	$ -	$ -	$ 625,000	$ 2,500,000

APPENDIX H: OUTSTANDING AND FUTURE WATER DEBT

Table H.1: Outstanding Bond Summary

Bond Issue	Total Par Amount	Interest	Total Debt Service
Series 1993A Sewer DWQ Loan (No Interest)	$ 1,000,000	$ -	$ 1,000,000
Series 1993B Sewer DWQ Loan (No Interest)	1,307,000	-	1,307,000
Series 1993C Sewer USDA Loan	188,560	393,329	581,889
Series 1993D Sewer USDA Loan	123,474	257,123	380,597
Series 2012 Sewer Revenue Refund (Refunded 1993 C&D)	670,000	100,993	770,993
Series 2011 A-1 DWQ	6,034,000	570,635	6,604,635
Series 2011 A-2 USDA Loan	2,912,000	2,143,902	5,055,902
Series 2011B Sewer Revenue Bond DWQ	900,000	172,290	1,072,290
Series 2015 Lease Revenue Bonds (25% to Sewer)	2,500,000	1,236,905	3,736,905
Totals	**$ 15,635,034**	**$ 4,875,178**	**$ 20,510,212**

Table H.2: Outstanding Bond Allocation - Interest Only

System	Collection	Treatment	Storage	Sewer Building	Non-Qualifying	% Total
Series 1993A Sewer DWQ Loan (No Interest)	100%	0%	0%	0%	0%	100%
Series 1993B Sewer DWQ Loan (No Interest)	100%	0%	0%	0%	0%	100%
Series 1993C Sewer USDA Loan	100%	0%	0%	0%	0%	100%
Series 1993D Sewer USDA Loan	100%	0%	0%	0%	0%	100%
Series 2012 Sewer Revenue Refund (Refunded 1993 C&D)	100%	0%	0%	0%	0%	100%
Series 2011 A-1 DWQ	0%	100%	0%	0%	0%	100%
Series 2011 A-2 USDA Loan	0%	100%	0%	0%	0%	100%
Series 2011B Sewer Revenue Bond DWQ	0%	100%	0%	0%	0%	100%
Series 2015 Lease Revenue Bonds (25% to Sewer)	0%	0%	0%	25%	75%	100%
Total Outstanding Interest Cost	**$ 751,445**	**$ 2,886,827**	**$ -**	**$ 309,226**	**$ 927,679**	**$ 4,875,178**

Table H.3: Existing Debt Proportion to Ten Year Growth

Proportion to Ten Year Growth	Collection	Treatment	Storage	Sewer Building
Existing Demand	77.10%	20.00%	58.53%	16.17%
10 Year Demand	11.82%	13.25%	41.47%	15.57%
Demand Beyond 10 Year	11.08%	66.75%	0.00%	68.26%
	100%	**100%**	**100%**	**100%**

Table H.4: Outstanding Bond Allocation 10 Year Growth

System	Collection 10 Year	Treatment 10 Year	Storage 10 Year	Sewer Building 10 Year	Beyond Ten Years	Existing/ Non-Qualifying	% Total
Series 1993A Sewer DWQ Loan (No Interest)	11.82%	0.00%	0.00%	0.00%	11.08%	77.10%	100%
Series 1993B Sewer DWQ Loan (No Interest)	11.82%	0.00%	0.00%	0.00%	11.08%	77.10%	100%
Series 1993C Sewer USDA Loan	11.82%	0.00%	0.00%	0.00%	11.08%	77.10%	100%
Series 1993D Sewer USDA Loan	11.82%	0.00%	0.00%	0.00%	11.08%	77.10%	100%
Series 2012 Sewer Revenue Refund (Refunded 1993 C&D)	11.82%	0.00%	0.00%	0.00%	11.08%	77.10%	100%
Series 2011 A-1 DWQ	0.00%	13.25%	0.00%	0.00%	66.75%	20.00%	100%
Series 2011 A-2 USDA Loan	0.00%	13.25%	0.00%	0.00%	66.75%	20.00%	100%
Series 2011B Sewer Revenue Bond DWQ	0.00%	13.25%	0.00%	0.00%	66.75%	20.00%	100%
Series 2015 Lease Revenue Bonds (25% to Sewer)	0.00%	0.00%	0.00%	3.89%	17.06%	79.04%	100%
Total Outstanding Interest Cost	**$ 88,852**	**$ 382,562**	**$ -**	**$ 48,159**	**$ 2,221,194**	**$ 2,134,410**	**$ 4,875,178**

APPENDIX I: DEBT SERVICE CREDIT

CALCULATION OF PROJECT CREDITS

Year	ERUs	Public Works Sewer Portion	Total Debt Service to Existing	Credit per ERU
2015	3,013		$ -	$ -
2016	3,199	3,258	**3,258**	1.02
2017	3,400	11,534	**11,534**	3.39
2018	3,613	11,504	**11,504**	3.18
2019	3,840	11,527	**11,527**	3.00
2020	4,081	11,540	**11,540**	2.83
2021	4,235	11,542	**11,542**	2.73
2022	4,394	11,534	**11,534**	2.62
2023	4,559	11,516	**11,516**	2.53
2024	4,730	11,487	**11,487**	2.43
2025	4,977	11,509	**11,509**	2.31
2026	5,238	11,518	**11,518**	2.20
2027	5,512	11,513	**11,513**	2.09
2028	5,800	11,496	**11,496**	1.98
2029	6,103	11,527	**11,527**	1.89
2030	6,422	11,543	**11,543**	1.80
2031	6,699	11,481	**11,481**	1.71
2032	6,987	11,529	**11,529**	1.65
2033	7,287	11,497	**11,497**	1.58
2034	7,644	11,511	**11,511**	1.51
2035	8,000	11,507	**11,507**	1.44
2036	8,357	11,485	**11,485**	1.37
2037	8,714	-	-	-
2038	9,071	-	-	-
2039	9,427	-	-	-
2040	9,784	-	-	-
		$ 233,557	**$ 233,557**	**$ 45.26**

APPENDIX J: CALCULATION OF THE IMPACT FEE PER ERU

TABLE J.1: IMPACT FEE CALCULATION

Component	Total Cost to Component	% That will Serve Ten Year Demand	Dollar Amount that will Serve Ten Year Demand	Ten Year Demand (ERU)	Cost per ERU
Collection and Lift Station					
Future 10 Year Capital Projects	$ 2,162,182	6.73%	$ 145,555	2,039	$ 71
Future Collection Related Debt to be Issued - INTEREST ONLY	855,549	6.73%	57,594	2,039	28
Existing Collection Projects + Land	5,716,216	12.37%	$829,420	2,039	407
Existing Collection Related Debt - INTEREST ONLY	751,445	12.37%	88,852	2,039	44
Minus Collection Grants	(3,979,938)	12.37%	(492,154)	2,039	(241)
Collection Subtotal	**$ 5,505,453**		**$ 629,268**		**$ 308.62**
Water Reclamation Facility					
Future 10 Year Capital Projects	$ 4,770,150	59.80%	$ 2,852,627	2,039	$ 1,399
Future Treatment Related Debt to be Issued - INTEREST ONLY	2,694,605	59.80%	1,611,418	2,039	790
Existing Treatment Projects + Land	16,660,688	13.25%	2,207,874	2,039	1,083
Existing Treatment Related Debt - INTEREST ONLY	2,886,827	13.25%	382,562	2,039	188
Minus WRF Grants	(8,786,044)	13.25%	(1,164,327)	2,039	(571)
Treatment Subtotal	**$ 18,226,226**		**$ 5,890,155**		**$ 2,888.75**
Storage					
Future 10 Year Capital Projects	$ 3,797,086	30.00%	$ 1,139,126	2,039	$ 559
Future Storage Related Debt to be Issued - INTEREST ONLY	2,313,204	30.00%	693,961	2,039	340
Existing Storage Projects + Land	1,247,683	41.47%	517,369	2,039	254
Existing Storage Related Debt - OUTSTANDING INTEREST	-	0.00%	-	2,039	-
Minus Grants					
Storage Subtotal	**$ 7,357,973**		**$ 2,350,456**		**$ 1,152.75**
Sewer Building					
Future 10 Year Capital Projects	$ -	0.00%	$ -	2,039	$ -
Future Sewer Building Related Debt to be Issued - INTEREST ONLY	-	0.00%	-	2,039	-
Existing Sewer Building Projects + Land	637,500	15.57%	99,284	2,039	49
Existing Lift Sewer Building Related Debt - OUTSTANDING INTEREST	309,226	15.57%	48,159	2,039	24
Minus Grants	-	0.00%	-	-	-
Transmission Subtotal	**$ 946,726**		**$ 147,443**		**$ 72.31**
Professional Services/ Credits					
Unspent Impact Fee Funds	-	0.00%	$ -	2,039	$ -
Professional Services - Master Plan	52,000	100%	52,000	2,039	25
Professional Services - Engineering	20,000	100%	20,000	2,039	10
Professional Services - IFA	8,250	100%	8,250	2,039	4
Sewer Building Rate Credits					(45)
Professional Services/Credits Subtotal	**$ 80,250**		**$ 80,250**		**$ (6.88)**
Total Impact Fee Per ERU	**$ 32,116,629**		**$ 9,097,573**		**$ 4,415.54**

APPENDIX K: MAXIMUM SANITARY SEWER IMPACT FEES

Table K.1: Sewer Impact Fee by Property Type

Unit Type	ERU Equivalent	Price per ERU	Proposed Fee
Single Family Residential	1.00	$ 4,415.54	$ 4,415.54
Multi-Family/ Non-Residential (16 Fixture Units)*	1.00	4,415.54	4,415.54

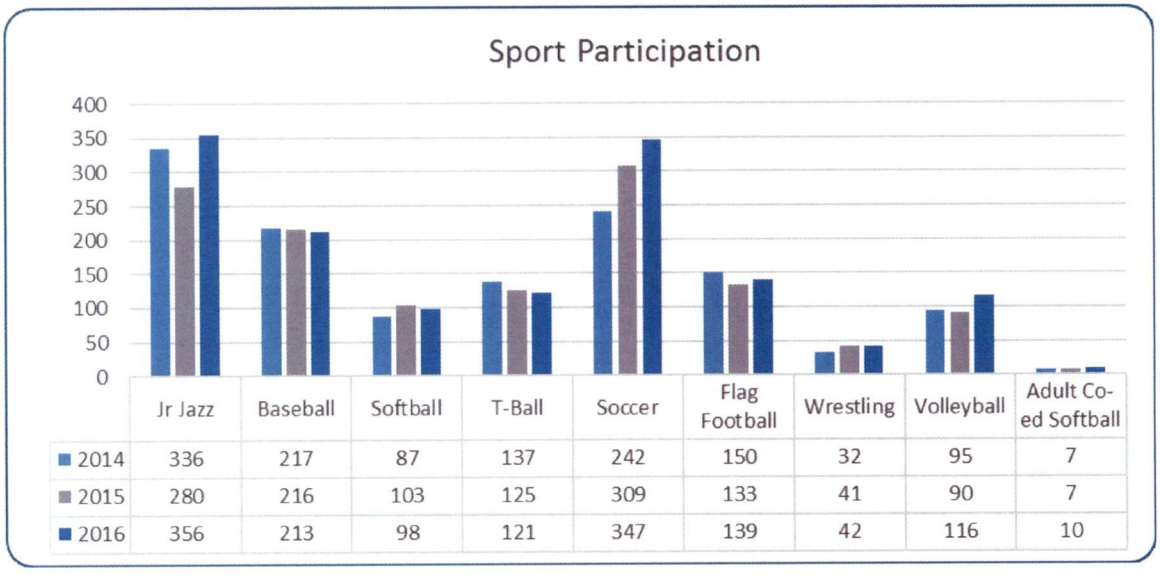
* Fixture units are based upon the 2015 IRC

TABLE K.2: NON-STANDARD IMPACT FEE CALCULATION

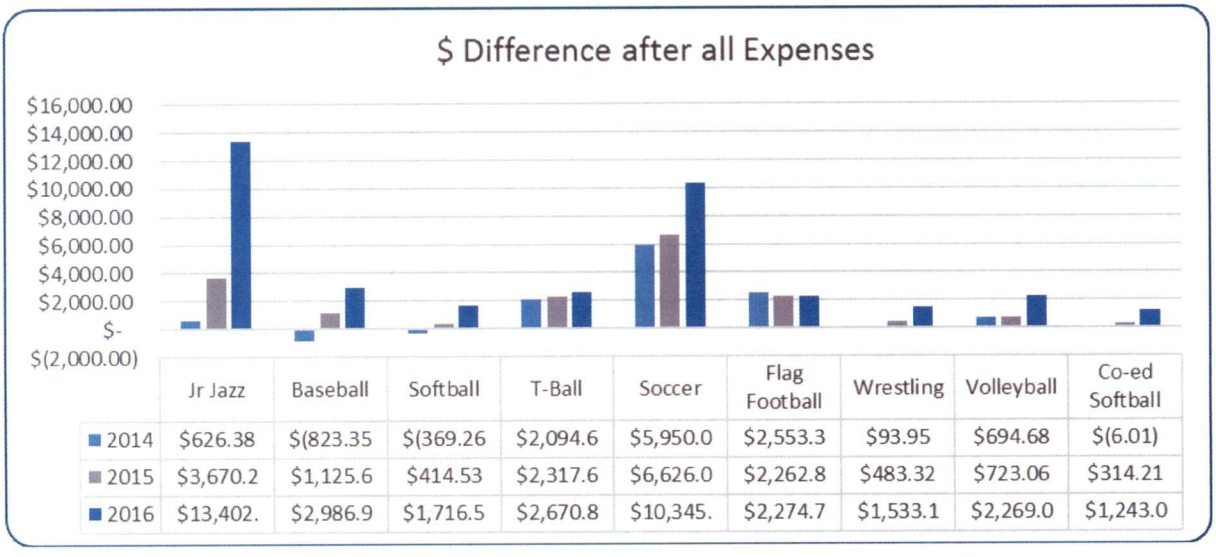
Non-Standard Users Impact Fee Formula
Step 1: Identify Estimated Average Day Gallons per Day Divided by 200 for an ERU Count
Step 2: Multiply ERUs Calculated in Step 1 by $4,415.54 per ERUs

To: Mayor Hunsaker and City Council
From: Amy Johnson, Recreation and Events Manager
Date: January 4, 2017
RE: 2016 End of year report

Sports

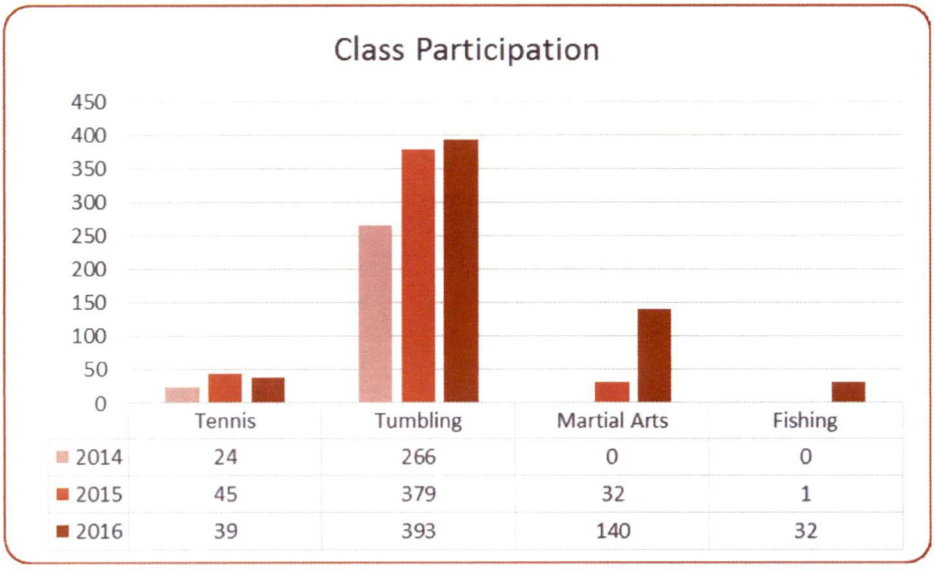


	Jr Jazz	Baseball	Softball	T-Ball	Soccer	Flag Football	Wrestling	Volleyball	Adult Co-ed Softball
2014	336	217	87	137	242	150	32	95	7
2015	280	216	103	125	309	133	41	90	7
2016	356	213	98	121	347	139	42	116	10

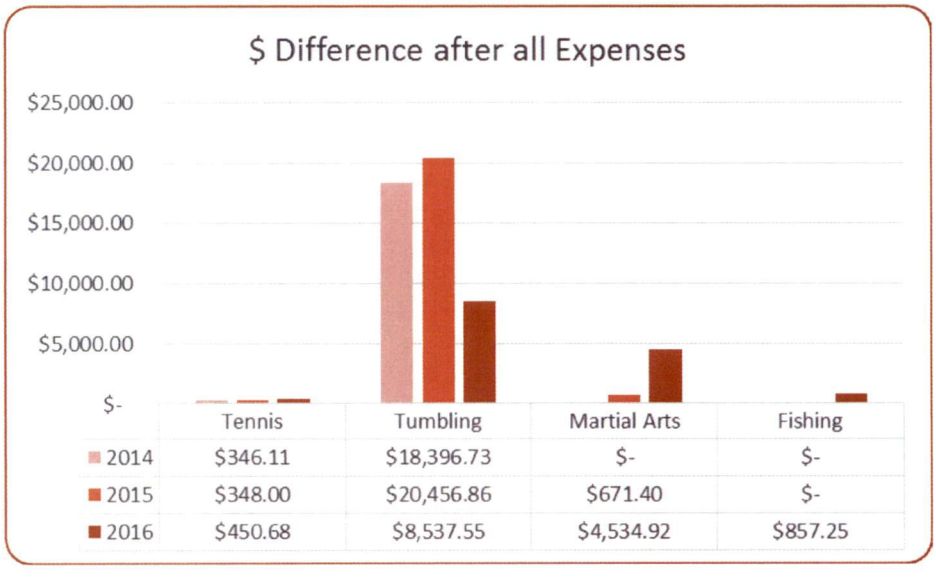


	Jr Jazz	Baseball	Softball	T-Ball	Soccer	Flag Football	Wrestling	Volleyball	Co-ed Softball
2014	$626.38	$(823.35	$(369.26	$2,094.6	$5,950.0	$2,553.3	$93.95	$694.68	$(6.01)
2015	$3,670.2	$1,125.6	$414.53	$2,317.6	$6,626.0	$2,262.8	$483.32	$723.06	$314.21
2016	$13,402.	$2,986.9	$1,716.5	$2,670.8	$10,345.	$2,274.7	$1,533.1	$2,269.0	$1,243.0

Classes

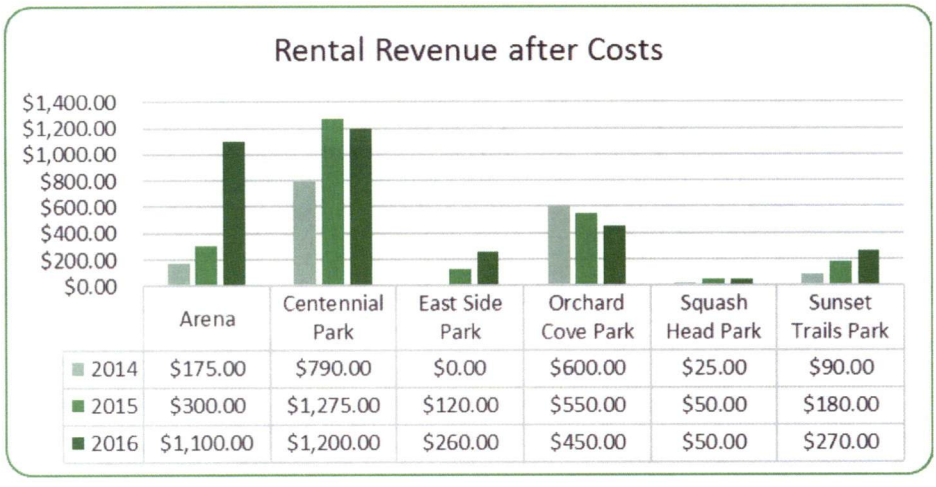


	Tennis	Tumbling	Martial Arts	Fishing
2014	24	266	0	0
2015	45	379	32	1
2016	39	393	140	32

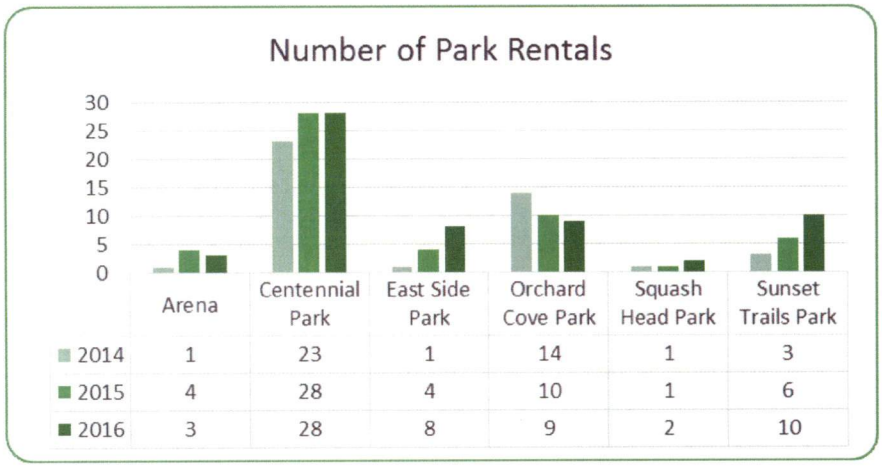


	Tennis	Tumbling	Martial Arts	Fishing
2014	$346.11	$18,396.73	$-	$-
2015	$348.00	$20,456.86	$671.40	$-
2016	$450.68	$8,537.55	$4,534.92	$857.25

Park Trends



	Arena	Centennial Park	East Side Park	Orchard Cove Park	Squash Head Park	Sunset Trails Park
2014	$175.00	$790.00	$0.00	$600.00	$25.00	$90.00
2015	$300.00	$1,275.00	$120.00	$550.00	$50.00	$180.00
2016	$1,100.00	$1,200.00	$260.00	$450.00	$50.00	$270.00



	Arena	Centennial Park	East Side Park	Orchard Cove Park	Squash Head Park	Sunset Trails Park
2014	1	23	1	14	1	3
2015	4	28	4	10	1	6
2016	3	28	8	9	2	10

2016 Events

Orchard Days	
Revenue:	$79,629.58
Expenditures:	($75,178.44)
Difference:	$4,451.14

Orchard Days events:	Revenue:	Expenditures:	Difference:
Rodeo	$26,106.21	($32,571.25)	($6,465.04)
Buck-a-roo	$4,276.86	($5,863.42)	($1,586.56)
Fireworks	$0.00	($8,000.00)	($8,000.00)
Horse Shoe Tournament	$276.78	($403.41)	($126.63)
Home Run Derby	$554.30	($252.50)	$301.80
Booth Rental	$3,233.70	($590.00)	$2,643.70
Parade	$416.10	($192.05)	$224.05
Baby Contest	$163.35	$0.00	$163.35
Supplies	$0.00	($5.25)	($5.25)
Misc	$394.98	$0.00	$394.98
Art Show	$54.00	($253.26)	($199.26)
Donations	$44,153.30	($1,059.00)	$43,094.30
Ad Booklet	$0.00	($21,204.08)	($21,204.08)
Piano Festival	$0.00	($121.17)	($121.17)
Permits	$0.00	($200.00)	($200.00)
Family Night	$0.00	($3,599.08)	($3,599.08)

Easter Egg Hunt	
Revenue:	$2,070.00
Wages:	($3,913.21)
Breakfast:	($515.51)
Egg Hunt:	($442.82)
Difference:	($2,801.54)

Golf Tournament	
Revenue:	$1,200.00
Expenditures:	($1,063.48)
Difference:	$136.52

What to Expect in 2017

Adult Sports	Ages
Men's Spring Softball	18+
Women's Spring Volleyball	18+
Adult Co-ed Kickball	18+
Adult Co-ed Softball	18+
Men's Basketball	18+

Youth Sports	For grades:
T-ball	Prek & Kinder
Coach Pitch	1st/2nd
UGSA Softball	3rd-9th
UBBA Baseball	3rd-8th
Soccer	Prek-8th
Flag Football	1st-7th
Wrestling	Prek-6th
Volleyball	3rd-9th
Basketball	1st-8th

Youth/Adult Classes	Ages
Tumbling	3-Teen
Martial Arts (Youn Wha Tae Kwon Do)	4-Adult
Vanguard Krav Maga	13-Adult
Zumba	Teen-Adult
STRONG by Zumba	Teen-Adult
Aerobics and Strength/Conditioning	Teen-Adult
Youth Urban Fishing	6 to 13
Tennis	5-Adult
Hunter Safety	8-Adult

Events	Date(s) held
Easter Egg Hunt	TBD
Spring Swing Golf Tournament	13-May
Little Miss Orchard Days Pageant (5-16 yrs)	Sat in June
Music Festival	TBD
Beehive Drive	TBD
Orchard Days	7/29-8/5
Long Drive Golf Tournament	23-Sep
Halloween Carnival	Sat in October
Turkey Bowl Flag Football Tournament	18-Nov
Light Parade	TBD