

ORDINANCE NO. 2014-_____

AN ORDINANCE OF THE CITY OF SOUTH SALT LAKE CITY COUNCIL
ENACTING CHAPTER 15.14, IMPACT FEES, AND IMPOSING IMPACT FEES FOR
CULINARY WATER SERVICE.

WHEREAS: the State of Utah has enacted the Impact Fees Act (the “Act”) to authorize the political subdivisions to collect fees in order to fund public facilities which are made necessary by new development;

WHEREAS: the City of South Salt Lake is a local political subdivision under the Act;
and

WHEREAS: the City properly noticed its intent to prepare a Culinary Water Impact Fee Facilities Plan (“IFFP”) and Culinary Water Impact Fee Analysis (“IFA”) as required by law;
and

WHEREAS: the City has, through its consultants, completed the IFFP and IFA in accordance with applicable provisions of the Act, to appropriately assign capital infrastructure costs to development in an equitable and proportionate manner as more particularly provided herein; and

WHEREAS, the City has provided the required notice and held a public hearing before the City Council regarding the proposed Culinary Water Impact Fees, IFFP, and IFA in accordance with applicable provisions of the Act,

THEREFORE, BE IT ORDAINED by the City Council of the City of South Salt Lake that Chapter 15.14, Impact Fees, of the City of South Salt Lake City Code is enacted, as provided in the attached ordinance draft.

This ordinance will take effect upon execution by the Mayor or after fifteen days from transmission to the office of Mayor if neither approved nor disapproved by the Mayor.

(signatures appear on separate page)

DATED this _____ day of _____, 2014.

BY THE CITY COUNCIL:

Irvin H. Jones, Jr., Council Chair

ATTEST:

Craig D. Burton, City Recorder

City Council Vote as Recorded:

Beverly	_____
Gold	_____
Jones	_____
Rapp	_____
Rutter	_____
Snow	_____
Turner	_____

Transmitted to the Mayor's office on this _____ day of _____, 2014.

Craig D. Burton, City Recorder

MAYOR'S ACTION: _____

Dated this _____ day of _____, 2014.

Cherie Wood, Mayor

ATTEST:

Craig D. Burton, City Recorder

Chapter 15.14
IMPACT FEES

PART I – GENERAL PROVISIONS

15.14.010 Findings and Authority.

The city council finds and determines that:

- A. growth and development activity within the city will create demands upon public facilities, including culinary water production and delivery;
- B. those who are responsible for growth and development activity should pay a proportionate share of the cost of such planned facilities needed to serve the growth and development activity;
- C. the impact fees established by this ordinance are based upon the costs which are generated through the need for new facilities and other capital acquisition costs required, incrementally, by new development in the city, in comparison with benefits already received and yet to be received; and
- D. the impact fees established by this Chapter do not exceed the reasonable cost of providing public facilities occasioned by development projects within the city.

15.14.020 Definitions.

- A. For purposes of this chapter, the following definitions apply:

“City” means the City of South Salt Lake;

“Act” means the Impact Fees Act, contained in chapter 11-36a of the Utah Code, as in existence today or as hereafter amended;

“Building permit” means an official document or certification which is issued by the building officials of the city and which authorizes the construction, alteration, enlargement, conversion, reconstruction, remodeling, rehabilitation, erection, demolition, moving or repair of a building or structure;

“Developer” means an individual, group of individuals, partnership, corporation, limited liability company, association, municipal corporation, state agency or other person undertaking development activity, and their successors and assigns;

“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.

“Development approval” means any written authorization from the city, other than a building permit, which authorizes the commencement of development activity, including, but not limited to, plat approval, planned unit development approval, site plan approval, lot line adjustment, and a conditional use permit.

“Director” means the Director of the Community Development Department for the City of South Salt Lake.

“Encumber” means a pledge to retire a debt, such as through bond payments, or an allocation to a current purchase order or contract.

“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. “Impact fee” does not include a tax, special assessment, building

- permit fee, hookup fee, fee for project improvements, or other reasonable permit or application fee.
- “Impact fee analysis” or “IFA” means the written analysis of each impact fee required by section 11-36a-303 the Act.
- “Impact fee facilities plan” or “IFFP” means the plan required by section 11-36a-301 of the Act.
- “Impact fee account” means a separate account established for a particular category of planned facility for which impact fees are collected, which is an interest-bearing account.
- “Level of service” means the defined performance standard or unit of demand for each capital component of a public facility within a service area.
- “Project improvements” means site improvements and facilities that are: planned and designed to provide service for development resulting from a Development Activity; necessary for the use and convenience of the occupants or users of a development resulting from a Development Activity; and not identified or reimbursed as a system improvement. “Project improvement” does not mean system improvements.
- “Public facilities” means impact fee facilities as defined in the Act that have a life expectancy of ten (10) or more years and are owned or operated by or on behalf of a local political subdivision or private entity. For purposes of this Chapter, and as defined in the Act, impact fee facilities include culinary water for service areas designed by the city.
- “Service area” means the geographic area designated by the city on the basis of planning or engineering principles in which the public facility provides services within the area. Service areas for each impact fee are established in this Chapter.
- “System improvements” means existing public facilities that are: identified in the impact fee analysis under Section 11-36a-304 of the Act, and designed to provide services to service areas within the community at large and future public facilities identified in the impact fee analysis under Section 11-36a-304 that are intended to provide service to service areas within the community at large. “System improvements” do not include project improvements.
- B. Except for any terms which are defined in subsection A of this section, the terms defined in the Act, as amended, are hereby adopted for use in this Chapter.

15.14.030 Authority and applicability.

- A. The collection of impact fees shall apply to all new development activity in the city unless otherwise provided herein. Until any impact fee required by this chapter has been paid in full, no building permit for any development activity shall be issued.
- B. A stop work order shall be issued on any development activity for which the applicable impact fee has not been paid in full.
- C. The movement of a structure onto a lot shall be considered development activity and is subject to the impact fee provisions, unless otherwise provided herein.
- D. Public facilities for which impact fees may be imposed by the city include public facilities for:
1. culinary water.
- E. The city may not impose an impact fee to:
1. cure deficiencies in public facilities serving existing development;

2. raise the established level of service of a public facility serving existing development;
3. recoup more than the local political subdivision's costs actually incurred for excess capacity in an existing system improvement; or
4. include 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.

15.14.040 Service areas.

- A. Impact fees may only be assessed upon development which takes place within established service areas within the city, as it relates to the specific fee.
- B. The city shall establish service areas for each impact fee which is imposed under this Chapter.
- C. Impact fees collected within a service area shall be spent within that service area, only on capital projects identified in the IFFP related to that fee.
- D. Boundaries of service areas may only be revised following a public hearing and all other procedures provided in the Act.

15.14.050 Impact fee facilities plan and impact fee analysis.

- A. Prior to imposing an impact fee for a service area, the city shall prepare or have prepared an impact fee facilities plan for any service area for which an impact fee is proposed.
- B. At the time of acceptance, the IFFP shall comply with the Act, identify the level of service, determine the public facilities required to serve development resulting from new development activity, and contain a written certification by the person or entity who prepared the plan, certifying that the IFFP complies in each and every relevant respect to the Act.
- C. Prior to imposing an impact fee for a service area, the city shall prepare or have prepared an impact fee analysis for any service area for which an impact fee is proposed.
- D. The IFA shall identify the anticipated impact of system improvements required by anticipated development activity in order to maintain the level of service in the service area, demonstrate how the impacts are reasonably related to the anticipated development activity, estimate the proportionate share of the costs for existing capacity that will be recouped and the costs of impacts on system improvements that are reasonably related to new development activity, identify how the impact fee was calculated, and contain a written certification by the person or entity who prepared the plan, certifying that the IFA complies in each and every relevant respect with the Act.

15.14.060 Calculation of impact fees.

- A. In calculating impact fees, the city may consider the construction contract price, the cost of acquiring land, improvements, materials and fixtures, planning costs, surveying, engineering fees, and debt service charges.
- B. To the extent that new growth and development will be served by previously constructed improvements, the city's fees may include public facility costs and outstanding bond costs related to system improvements previously incurred by the city.
- C. Unless otherwise provided in this chapter, impact fees shall be imposed as follows:

1. Schedule. The fee published in the city's schedule shall be the means of calculating impact fees for specific development, unless the developer, pursuant to this chapter, requests an independent impact fee calculation, or qualifies for an adjustment or credit.
2. Maximum fee. The fee identified in the IFA represents the maximum fee which may be assessed as a result of development activity.
3. Residential impact fees may be collected by unit, lot size, or utility connection. For purposes of this chapter, mobile and manufactured homes are considered residential.
4. For categories of uses not specified in the applicable impact fee schedule, the director shall apply the category of use set forth in the applicable fee schedule that is deemed to be the most similar to the proposed use.
5. If development approval is sought for a mixed use development, the impact fees shall be calculated separately for each use according to the fee schedule, and the results aggregated.
6. For additions to, remodeling or replacement of existing structures, or for a change of use of an existing structure, the impact fee to be paid shall be the difference, if any, between:
 - (a) the fee, if any, that would be payable for existing development on the site, or in the case of demolition or removal of a structure, the previous development on the site, provided that the demolition or removal has occurred within one (1) year of the date of submittal of the application for which impact fees are assessed; and
 - (b) the fee, if any, that would be payable for the development on the site for the new development.
7. Upon written request of an applicant, the director shall provide an estimate of the current fee based on the data provided by the applicant. However, the director shall not be responsible for determining at such preliminary date the accuracy of the information provided, nor shall such estimate provide any vested rights.

15.14.070 Exemptions.

- A. The following are exempted from payment of impact fees:
 1. Replacement of a structure or mobile home with a new structure or mobile home of the same size and use at the same site or lot, when such replacement occurs within twelve (12) months of the demolition or destruction of the prior structure or removal of the mobile home.
 2. Alterations, expansion, enlargement, remodeling, rehabilitation, or conversion of an existing building or unit where no additional units are created and the use is not changed.
 3. Demolition or moving of a structure.
 4. Construction of accessory structures that do not impact the system improvements.
 5. Miscellaneous accessory improvements to use, such as fences, walls, and signs.
 6. Placing on a lot in the city a temporary construction trailer or office, but only for the life of the building permit issued for the construction served by the trailer or office.
 7. Any use specifically exempted by a Part of this Chapter which addresses a specific impact fee.
- B. The City Council may, on a project-by-project basis, authorize exemption from impact fees for development activity attributable to development activity with a broad public purpose.

Such determinations of exemption shall be by resolution by the City Council, accepting the results of a study conducted under section 10-8-2 of the Utah Code.

- C. Applications for exemptions under subsection B shall be filed with the city at the time the applicant first requests the extension of service to the applicant's development or property.

15.14.080 Adjustment after individual assessment of impact fees.

- A. If a person submitting an application for which payment of an impact fee is a prerequisite to approval believes that the impacts of the proposed development will be substantially less than would be indicated by using the fee schedule, such person may request to perform an individual assessment of the impact of the proposed development. A request for an individual assessment, accompanied by the information, data or studies supporting that assessment, must be made prior to payment of fees for a building permit or final plat approval, as applicable.
- B. The city may make a downward adjustment to impact fees at the time the fee is charged to respond to unusual circumstances in specific cases, to address development activity by the State or school district, to ensure that impact fees are imposed fairly, or to fairly allocate costs associated with impacts created by a development activity or project.
- C. Circumstances are unusual if sufficient written information, studies or data is presented to the city showing a significant discrepancy between the fee being assessed and the actual impact on the system improvement.
- D. The city may issue building permits or plat approvals if the impact fee is tendered by the developer. The fee is subject to partial refund if a downward adjustment is approved by the director. For purposes of appeal or challenge, the date for such appeal or challenge shall run from the date on which the city makes its determination of the individual assessment.

15.14.090 Credits.

A developer is eligible for credits against or a proportionate reimbursement of impact fees if the developer:

- A. dedicates land for a system improvement identified in the IFA;
- B. builds and dedicates some or all of a system improvement identified in the IFA;
- C. dedicates a public facility that the city and the developer agree will reduce the need for a system improvement identified in the IFA;
- D. dedicates land for, improvement to, or new construction of, any system improvements identified in the IFA provided by the developer if the facilities:
 - 1. are system improvements identified in the IFA; or
 - 2. are dedicated to the public and offset the need for an identified system improvement identified in the IFA.

15.14.100 Fund accounting for impact fees.

- A. The city shall establish an impact fee account for each category of impact fee which is collected. Such fees shall be invested by the city and the yield on such fees, at the actual rate of return to the city, shall be credited to such accounting fund periodically in accordance with the accounting policies of the city. Such funds need not be segregated from other city monies for banking purposes.
- B. The city shall maintain and keep financial records for such accounting fund showing the revenues to such fund and the disbursements from such fund, in accordance with normal

city accounting practices. The records of such fund shall be open to public inspection in the same manner as other financial records of the city.

15.14.110 Expenditure of impact fees.

- A. Impact fees shall be expended or encumbered within six (6) years after their receipt, unless the council identifies, in writing, an extraordinary and compelling reason to hold the impact fees longer than six (6) years. Under such circumstances, the council shall establish an absolute date by which the impact fees shall be expended.
- B. Impact fees may only be expended upon the system improvements which have been identified by the IFFP which formed the justification for the specific impact fee collected.
- C. Impact fees may be spent to retire bonds with a term of more than six (6) years, so long as the improvements are included in the IFFP, and the fees are equivalent to the debt service of the six (6) year planning period.
- D. If the city does not spend or encumber an impact fee within the time period established in the Act, it shall return unspent fees, or the unspent portions thereof, to the person or entity which paid the fee.
- E. Unless otherwise provided by state law, if the person or entity which paid the fee is not responsive to the city's written notice of refund, the refund shall be paid to the record owner of the property on the date that the original fee was paid.

15.14.120 Refunds of impact fees.

- A. The city shall refund any impact fee paid by a developer, plus interest earned, when:
 - 1. the developer does not proceed with the development activity and files a written request for a refund;
 - 2. the fees have not been spent or encumbered; and
 - 3. no impact has resulted.
- B. An impact that would preclude a developer from a refund from the city may include any impact reasonably identified by the city, including, but not limited to, the city having sized facilities, paid for, installed, or caused the installation of facilities based in whole or in part upon the developer's planned development activity even though that capacity may, at some future time, be utilized by another development.

15.14.130 Separate fees and costs.

The impact fees authorized by this Chapter are separate from and in addition to user fees and other charges lawfully imposed by the city and other fees and costs that may not be included as itemized component parts of the impact fee. In charging any such fees as a condition of development approval, the city recognizes that the fees must be a reasonable charge for services provided.

15.14.140 Additional fees or refund after development.

Should any developer undertake development activities such that the ultimate acreage or other impact of the development activity is not revealed to the city, either through inadvertence, neglect, a change in plans, or any other cause whatsoever, and the impact fees are not initially charged against all acreage within the development, the city shall be entitled to charge an additional impact fee to the developer or other appropriate person covering the acreage for which an impact fee was not previously paid.

15.14.150 Challenges to impact fees - Generally.

- A. A person or entity required to pay an impact fee who believes that the impact fee does not meet the requirements of law may file a written request for information with the city, which request shall be answered within two (2) weeks after receipt of the request, providing the person or entity with copies of the applicable IFA, IFFP and other relevant information related to the impact fee being questioned.
- B. A person or entity who will potentially be aggrieved by the impact fee may request an advisory opinion by filing a request with the Utah Office of Property Rights Ombudsman, in accordance with Title 13, Chapter 43 of the Utah Code. The aggrieved party requesting an advisory opinion is not required to exhaust administrative appeals procedures prior to requesting an advisory opinion.
- C. Any person or entity which resides in or owns property within a service area, or an organization, association or corporation representing the interests of persons or entities owning property within the service area, may file a declaratory judgment action challenging the validity of an impact fee.
- D. A person who has paid an impact fee imposed under this Chapter may challenge the fees as provided in Title 11, Chapter 36a, Part 7 of the Act. The grounds for appeal, remedies and time restrictions provided in the Act, as amended, are applicable to all challenges filed against impact fees imposed by this Chapter.

15.14.160 Administrative appeals.

- A. An administrative appeal may be initiated by a person or entity which has paid an impact fee imposed under this chapter by filing written notice of the administrative appeal with the City Recorder within thirty (30) days after the day on which the person or entity paid the fee.
- B. The notice of appeal shall set forth the grounds for the appeal and shall include applicable filing fees, as established by the consolidated fee schedule.
- C. Upon receiving written notice of appeal, the Recorder shall set a date for the Administrative Law Judge to consider the appeal. The procedures established in Chapter 2.22 of this Code shall apply to appeals, except that the Administrative Judge shall render a decision within thirty (30) days after the date the challenge of appeal is filed, the person filing the appeal requests or agrees to an extension of that time.

15.14.170 Mediation for specified public agencies.

In addition to challenges and appeals, specified public agencies may file a request for mediation in accordance with section 11-36a-705 of the Act, which proceedings are governed by the Act.

15.14.180 Remedies for challenges, appeals or mediation.

- A. A person or entity who successfully challenges an impact fee due to defects with the notice requirements or procedural requirements may receive the remedy of requiring the city to correct the defective notice or procedure and repeat the process.
- B. A person or entity who challenges an impact fee may receive the remedy of 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.
- C. Attorney fees may only be awarded to the extent provided in the Act.

15.14.190 Effective date of impact fees.

- A. Pursuant to section 11-36a-401 of the Act, this ordinance shall not take effect until ninety (90) days after the day on which the ordinance is approved by the council.
- B. Additional categories of impact fees shall have an effective date of ninety (90) days after the day on which the additional category is approved by the council.

PART II – SPECIFIC IMPACT FEES

15.14.200 Culinary water impact fee – Service Area, IFFP & IFA.

- A. *Service Area.* The service area for culinary water impact fees includes Pressure Zone 1 (shaded red) on the South Salt Lake City Drinking Water System Master Plan, which was previously adopted by this council, as shown at Figure 1.

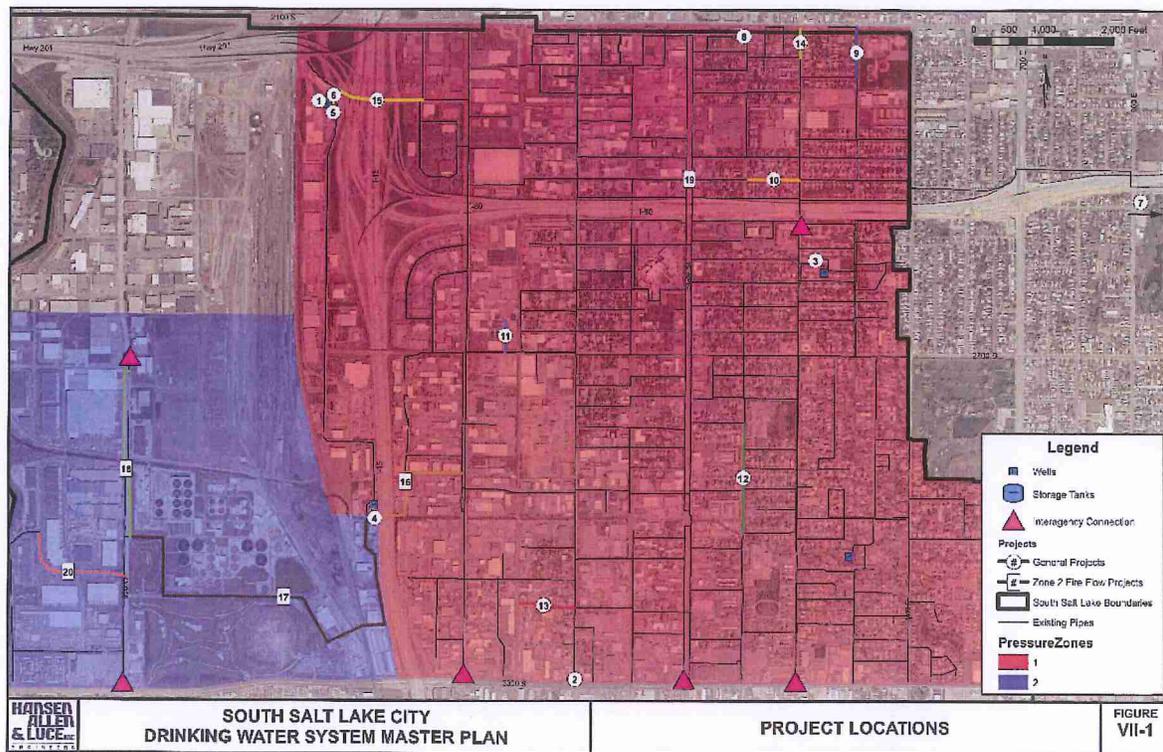


Figure 1

- B. *Culinary Water Impact Fee Facilities Plan.* Pursuant to section 15.14.050 of this Chapter and section 11-36a-302 of the Act, the City has, through its consultants, researched and analyzed the factors set forth in the Act and caused to be prepared a Culinary Water Impact Fee Facilities Plan, as part of the Culinary Water Impact Fee Facilities Plan and Impact Fee Analysis: City of South Salt Lake. The Culinary Water IFFP establishes the current and proposed level of service. The city currently maintains a system which meets the state’s requirements for drinking water systems related to peak and average distribution, and future development will require the city to expand its water source, distribution and storage

systems in a manner which continues to meet the state's standards for drinking water systems. The Culinary Water Impact Fee Facilities Plan and Impact Fee Analysis: City of South Salt Lake, is attached as Exhibit A to this ordinance, is hereby adopted in its entirety by the city in accordance with applicable provisions of this Chapter and the Act.

- C. *Impact Fee Analysis*. Pursuant to section 15.14.050 of this Chapter, and section 11-36a-303 of the Act, the city has, through its consultants, researched and analyzed the factors set forth in the Act and prepared a Culinary Water Impact Fee Analysis, as part of the Culinary Water Impact Fee Facilities Plan and Impact Fee Analysis: City of South Salt Lake, which is attached as Exhibit A to this ordinance, is hereby adopted in its entirety by the city in accordance with the applicable provisions of this Chapter and the Act.

15.14.210 Culinary water impact fee – calculation.

- A. Based upon the Culinary Water IFA, equivalent residential connections in the city are those which connect to the city's culinary water system within the service area with a three-quarter-inch (3/4") or smaller water meter.
- B. The maximum impact fee for culinary water for each equivalent residential connection is \$733.
- C. The city council may, by amending the consolidated fee schedule, implement impact fees for development within the service area, with fees based upon the number of equivalent residential connections for a development, which fee shall be determined by the size of meter or meters installed for the development.

EXHIBIT A
Culinary Water Impact Fee Facilities Plan and Impact Fee Analysis

CULINARY WATER
IMPACT FEE FACILITIES PLAN (IFFP)
AND IMPACT FEE ANALYSIS (IFA)

CITY OF SOUTH SALT LAKE

NOTICE
DRAFT



OCTOBER 2014



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IMPACT FEE CERTIFICATION

The Impact Fee Act requires certification of the Impact Fee Facilities Plan ("IFFP") and Impact Fee Analysis ("IFA"). Lewis Young Robertson and Burningham Inc. has provided the required certification with the understanding that it is the intent of the City to execute the recommendations for future projects proposed in the Master Plan and IFFP. If all or a portion of the IFFP or IFA are modified or amended, or if the assumption utilized in this analysis change substantially, the IFFP and IFA should be reviewed and updated to reflect these changes.

IFFP CERTIFICATION

Lewis Young Robertson & Burningham, Inc. and the City of South Salt Lake jointly certify that the Impact Fee Facilities Plan prepared for culinary water services:

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

LEWIS YOUNG ROBERTSON & BURNINGHAM, INC.
CITY OF SOUTH SALT LAKE

IFA CERTIFICATION

Lewis Young Robertson & Burningham, Inc. certifies that the Impact Fee Analysis prepared for culinary water services:

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;
 - d. offsets costs with grants or other alternate sources of payment; and
3. complies in each and every relevant respect with the Impact Fees Act.

LEWIS YOUNG ROBERTSON & BURNINGHAM, INC.

SECTION 1: EXECUTIVE SUMMARY

The purpose of this Culinary Water Impact Fee Facilities Plan (IFFP), with supporting Impact Fee Analysis (IFA), is to fulfill the requirements established in Utah Code Title 11 Chapter 36a, the "Impact Fees Act," and help the City of South Salt Lake (the "City") fund necessary capital improvements for future growth. This document will address the future culinary water infrastructure needed to serve the City through the next six to ten years, as well as the appropriate impact fees the City may charge to new growth to maintain the level of service (LOS). The **South Salt Lake Drinking Water System Master Plan, December 2013** (the "Master Plan"), along with information provided in an updated memorandum dated May 16, 2014 (See Appendix A) serve as the basis for this analysis for the purposes of calculating impact fees.

- ☞ **Impact Fee Service Area:** The Service Area for the culinary water impact fees includes all areas within Zone 1. Figure 1-1 of the Master Plan illustrates the proposed Zone 1 Service Area. This document identifies the necessary future system improvements for the Service Area that will maintain the existing LOS into the future.
- ☞ **Demand Analysis:** The demand unit utilized in this analysis is equivalent residential connections ("ERCs"). The primary impact on the system will be growth in residential and commercial ERCs through redevelopment. As redevelopment occurs within the City, it generates increased demand on the culinary water system, above the current demand. The system improvements identified in this study are designed to maintain the existing level of service for any new or redeveloped property within the City.
- ☞ **Level of Service:** The existing LOS is defined for source, storage and distribution within the Master Plan. The existing and proposed LOS for source is based on peak day indoor demand of 0.556 gallons per minute (gpm) per ERC. The existing and proposed level of service for the storage component is 400 gallons of equalization storage, plus 20 percent for emergency storage. The distribution system LOS is based on maintaining 50 psi and 110 psi for minimum and maximum pressures.¹
- ☞ **Excess Capacity:** Based on the existing LOS, there is no source excess capacity available for new growth. The excess capacity related to storage is 0.83 million gallons (MG), or 12 percent of the total system storage capacity. The original value of the excess capacity is estimated at \$172,430. A buy-in for distribution has not been included in this analysis.
- ☞ **Outstanding Debt:** The City currently has one piece of outstanding debt related to culinary water improvements. These bonds, in the original amount of \$3,000,000, were issued in 2001 by the Utah State Division of Drinking Water. The proceeds of the bonds were used to upgrade a portion of the City's water distribution system, specifically to replace 4" water mains with 8" water mains in various parts of the system. Since a buy-in for the distribution system is not included in this analysis, the buy-in associated with any outstanding bond obligations is also excluded from the calculation of the impact fee.
- ☞ **Capital Facilities Analysis:** Due to the projected redevelopment within the City, approximately \$2,558,000 of future system improvements will be needed in the next ten years. Approximately \$1,335,321 is attributed to growth within the next ten years, with the remaining \$1,222,679 considered as non-impact fee eligible costs.
- ☞ **Funding of Future Facilities:** This analysis assumes future growth related facilities will be funded through a combination of utility revenues and impact fee revenues.

PROPOSED CULINARY WATER IMPACT FEE

The culinary water impact fees proposed in this analysis will be assessed within the Service Area. Tables 1.1 and 1.2 illustrate the appropriate fee associated with culinary water projects occurring within the next ten years.

¹ Source: Master Plan Table I-2. See also p.II-1 (Source), p.IV-3 (Storage) and p.V-2 (Distribution)



TABLE 1.1: IMPACT FEE PER ERC

	MASTER PLAN COST	COST TO GROWTH	ERCs SERVED	FEE PER ERC
Source Buy-in	NA	-	2,071	-
Storage Buy-in	NA	\$172,430	2,071	\$83
Source Future Facilities	\$2,018,000	\$1,157,121	2,071	\$559
Storage Future Facilities	\$540,000	\$178,200	2,071	\$86
Outstanding Debt	NA	-	2,071	-
Impact Fee Fund Balance	NA	-	2,071	-
Professional Expense	\$10,200	\$10,200	2,071	\$5
Total	\$2,568,200	\$1,517,951		\$733

TABLE 1.2: IMPACT FEE PER METER

METER SIZE	CITY MULTIPLIER	IMPACT FEE PER METER SIZE
0.75	1.00	\$733
1.00	2.12	\$1,557
1.50	7.76	\$5,690
2.00	10.38	\$7,611
3.00	22.73	\$16,664
4.00	38.96	\$28,558
6.00	63.68	\$46,676

Multipliers based on 2014 City usage data and AWWA M6 Water Manual statistics

NON-STANDARD CULINARY WATER IMPACT FEES

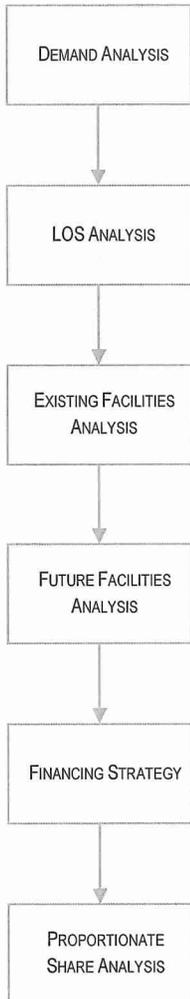
The City reserves the right under the Impact Fees Act to assess an adjusted fee that more closely matches the true impact that the land use will have upon public facilities.² This adjustment could result in a lower impact fee if the City determines that a particular user may create a different impact than what is standard for its land use.

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² 11-36a-402(1)(c)

SECTION 2: GENERAL IMPACT FEE METHODOLOGY

FIGURE 2.1: IMPACT FEE METHODOLOGY



The purpose of this study is to fulfill the requirements of the Impact Fees Act regarding the establishment of an IFFP and IFA³. The IFFP is designed to identify the demands placed upon the City's existing facilities by future development and evaluate how these demands will be met by the City, as well as the future improvements required to maintain the existing LOS. The purpose of IFA is to proportionately allocate the cost of the new facilities and any excess capacity to new development, while ensuring that all methods of financing are considered. The following elements are important considerations when completing an IFFP and IFA.

DEMAND ANALYSIS

The demand analysis serves as the foundation for the IFFP. This element focuses on a specific demand unit related to each public service – the existing demand on public facilities and the future demand as a result of new development that will impact system facilities.

LEVEL OF SERVICE ANALYSIS

The demand placed upon existing public facilities by existing development is known as the existing LOS. Through the inventory of existing facilities, combined with the growth assumptions, this analysis identifies the level of service which is provided to a community's existing residents and ensures that future facilities maintain these standards. Any excess capacity identified within existing facilities can be apportioned to new development. Any demand generated from new development that overburdens the existing system beyond the existing capacity justifies the construction of new facilities.

EXISTING FACILITY INVENTORY

In order to quantify the demands placed upon existing public facilities by new development activity, to the extent possible the IFFP provides an inventory of the City's existing system facilities. The inventory valuation should include the original construction cost and estimated useful life of each facility. The inventory of existing facilities is important to properly determine the excess capacity of existing facilities and the utilization of excess capacity by new development.

FUTURE CAPITAL FACILITIES ANALYSIS

The demand analysis, existing facility inventory and LOS analysis allow for the development of a list of capital projects necessary to serve new growth and to maintain the existing system. This list includes any excess capacity of existing facilities as well as future system improvements necessary to maintain the level of service. Any demand generated from new development that overburdens the existing system beyond the existing capacity justifies the construction of new facilities.

FINANCING STRATEGY

This analysis must also include a consideration of all revenue sources, including impact fees, future debt costs, alternative funding sources and the dedication of system improvements, which may be used to finance system improvements.⁴ In conjunction with this revenue analysis, there must be a determination that impact fees are necessary to achieve an equitable allocation of the costs of the new facilities between the new and existing users.⁵

PROPORTIONATE SHARE ANALYSIS

The written impact fee analysis is required under the Impact Fees Act and must identify the impacts placed on the facilities by development activity and how these impacts are reasonably related to the new development. The written impact fee analysis must include a proportionate share analysis, clearly detailing each cost component and the methodology used to calculate each impact fee. A local political subdivision or private entity may only impose impact fees on development activities when its plan for financing system improvements establishes that impact fees are necessary to achieve an equitable allocation of the costs borne in the past and to be borne in the future (UCA 11-36a-302).

³UC 11-36a-301,302,303,304

⁴UC 11-36a-302(2)

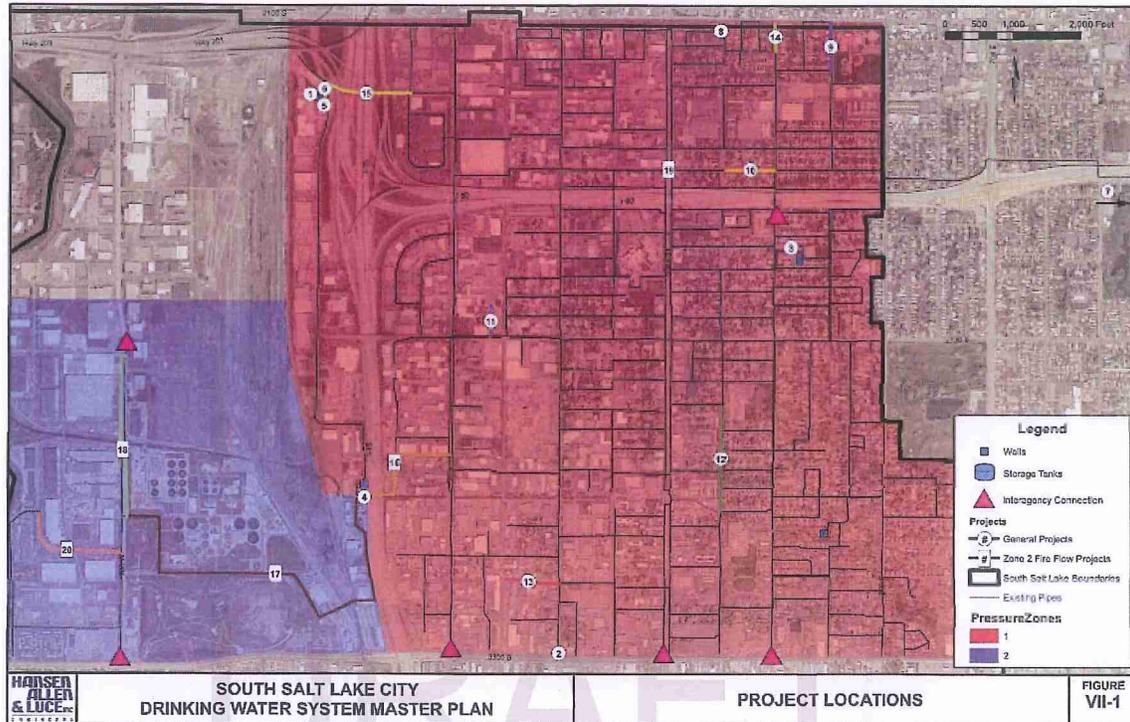
⁵UC 11-36a-302(3)

SECTION 3: OVERVIEW OF SERVICE AREA, DEMAND, AND LOS

SERVICE AREAS

Utah Code requires the impact fee enactment to establish one or more service areas within which impact fees will be imposed.⁶ The Service Area for the culinary water impact fees includes all areas within Zone 1. Figure 1-1 of the Master Plan illustrates the proposed Zone 1 Service Area, and is shown below. This document identifies the necessary future system improvements for the Service Area that will maintain the existing level of service (LOS) into the future.

MASTER PLAN FIGURE I-1



DEMAND UNITS

The demand unit utilized in this analysis is equivalent residential connections, or ERCs. The primary impact on the system will be growth in residential and commercial ERCs through redevelopment. As redevelopment occurs within the City, it generates increased demand on the culinary water system, above the current demand. The system improvements identified in this study are designed to maintain the existing level of service for any new or redeveloped property within the City. If growth assumptions change substantially, the impact fee analysis should be updated to reflect these changes.

TABLE 3.1: SERVICE AREA ERC GROWTH PROJECTIONS

	ERCs	CHANGE IN ERCs
2013	5,542	
2024	7,613	2,071

Source: HAL Memo Dated May 16, 2014 (Project No. 126.01.100)

LEVEL OF SERVICE STANDARDS

Impact fees cannot be used to finance an increase in the level of service to current or future users of capital improvements. Therefore, it is important to identify the culinary water level of service to ensure that the new capacities of projects financed through impact fees do not exceed the established standard.

The Master Plan identifies the existing LOS for source, storage and distribution. The existing and proposed LOS for source is based on peak day indoor demand of .556 gallons per minute (gpm) per ERC. According to the Master Plan, redevelopment is not

⁶ UC 11-36a-402(1)(a)



expected to increase the amount irrigated acreage in the City. Therefore, only indoor demands were considered in calculating the number of ERCs that will be served by the added flow.

The existing and proposed level of service for the storage component is 400 gallons of equalization storage, plus 20 percent for emergency storage. The distribution system LOS is based on maintaining 50 psi and 110 psi for minimum and maximum pressures.⁷ Redevelopment is not expected to increase the amount irrigated acreage in the City. Accordingly, only indoor demands were considered in calculating the proposed LOS and the number of ERCs that will be served by future improvements.

TABLE 3.2: EXISTING & BUILD-OUT SYSTEM REQUIREMENTS BASED ON LOS AS DEFINED IN THE MASTER PLAN (P.I-3)

	EXISTING	BUILD-OUT	CHANGE TO BUILD-OUT	CRITERIA
ERCs	6,337	12,677	6,340	
Source				
Peak Day Demand (gpm)	5,779	9,301	3,522	R309-510
Average Yearly Demand (Ac-Ft)	4,550	7,391	2,841	R309-510
Storage				
Equalization (MG)	4.16	6.70	2.54	R309-510
Fire Suppression (MG)	1.50	1.50	-	Highest fire flow volumes
Emergency (MG)	1.33	1.64	0.31	20% of Fire and Eq.
Total	6.99	9.84	2.85	
Distribution				
Peak Instantaneous (gpm)	9,246	14,882	5,636	1.6 x Peak Day Demand
Minimum Fire Flow (gpm)	1,200	1,200	-	@ 20 psi
Max Operating Pressure (psi)	110	110	-	City Preference
Min. Operating Pressure (psi)	50	50	-	City Preference

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⁷ Source: Master Plan Table I-2. See also p.II-1 (Source), p.IV-3 (Storage) and p.V-2 (Distribution)



SECTION 4: EXISTING FACILITIES INVENTORY

EXCESS CAPACITY

Based on the existing LOS, there is no source excess capacity available for new growth. The Excess capacity related to storage is .83 million gallons (MG), or 12 percent of the total system storage capacity. The value of the excess capacity value is estimated at \$172,430, based on the original cost of system improvements. A buy-in for distribution has not been included in this analysis.

TABLE 4.1: ILLUSTRATION OF SOURCE EXCESS CAPACITY

ZONE 1	
Existing Physical Capacity (gpm, Less Redundancy)	4,275
Existing Source Requirements (gpm)	5,054
Excess Capacity (gpm) ⁽¹⁾	(779)
Percent Excess Capacity	(11%)
ERCs Served by Excess Capacity ⁽¹⁾	(1,403)
ERCs In IFFP Window	2,071
ERCs Exceeding Excess Capacity	2,071

In order to provide for redundancy and ensure that no single source is indispensable, the source capacity was evaluated with the largest individual source assumed to be inactive. With this stipulation the capacity is reduced to 4,275 gpm.

1. Based on indoor water usage only
Source: LYRB, SSL Master Plan p.III-4, Table III-4, HAL Memo Dated May 16, 2014 (Project No. 126.01.100)
gpm = gallons per minute

TABLE 4.2: ILLUSTRATION OF STORAGE EXCESS CAPACITY

ZONE 1	
Existing Physical Capacity (MG)	7.00
Existing Storage Requirements (MG)	6.17
Excess Capacity (MG)	0.83
Percent Excess Capacity	12%
ERCs Served by Excess Capacity ⁽¹⁾	1,729
ERCs In IFFP Window	2,071
ERCs Exceeding Excess Capacity	342
Percent to IFFP	12%
Value to IFFP ⁽²⁾	\$172,430

1. Based on indoor storage only
Source: LYRB, SSL Master Plan p.IV-2, Table IV-2, HAL Memo Dated May 16, 2014 (Project No. 126.01.100)
2. Value calculated based on original estimate of storage system value according to City's depreciation statements. Original storage system value shown at \$1,454,229 (excluding improvements with a useful life of less than 10 years). $\$1,454,229 \times 12\% = \$172,430$.
MG = Million Gallons

As shown in the tables above, there is capacity related to storage. However, based on the forecasted growth in ERCs, the City will need to construct additional facilities to serve the demand within the next ten years. Section 5 addresses the proposed capital improvements and the proportion of impact fee eligible costs.

MANNER OF FINANCING EXISTING PUBLIC FACILITIES

The City has funded its existing capital infrastructure through a combination of different revenue sources, including general utility fund revenues, the issuance of debt, and revenues received from other governmental agencies. This analysis has removed all funding that has come from federal grants and donations from non-resident citizens to ensure that none of those infrastructure items are included in the level of service.

The City has one piece of outstanding debt related to the system's capacity: the 2001 Water Revenue Bonds. These bonds, in the original amount of \$3,000,000, were issued in 2001 by the Utah State Division of Drinking Water. The proceeds of the bonds were used to upgrade a portion of the City's water distribution system, specifically to replace 4" water mains with 8" water mains in various parts of the system. Since a buy-in for the distribution system is not included in this analysis, the buy-in associated with any outstanding bond obligations is also excluded from the calculation of the impact fee.



SECTION 5: CAPITAL FACILITY ANALYSIS

The estimated costs attributed to new growth were analyzed based on existing development versus future development patterns. From this analysis, a portion of future development costs were attributed to new growth and included in this impact fee analysis as shown in Table 5.1. Capital projects related to curing existing deficiencies were not included in the calculation of the impact fees. The costs of projects related to curing existing deficiencies cannot be funded through impact fees.

Based on existing needs and the projected redevelopment within the City, approximately \$2,558,000 of future system improvements will be needed in the next ten years. Approximately \$1,335,321 is attributed to the new growth within the next ten years, with the remaining \$1,222,679 considered as non-impact fee eligible costs

TABLE 5.1: ILLUSTRATION OF CAPITAL IMPROVEMENTS SCHEDULED TO BE COMPLETED IN THE NEXT 10 YEARS

PROJ. #	PROJECT	COST	TOTAL CAPACITY	UNIT	EXISTING USED CAPACITY	CAPACITY TO GROWTH	PERCENT TO GROWTH
Source							
1	Replacement for Bolinder Well	\$945,000	2,000	GPM	779	1,221	61%
6	New booster pump station at Bolinder Tank	\$844,000	2,000	GPM	779	1,221	61%
15	Install 1,465 feet of 12" pipeline	\$229,000	2,000	GPM	779	1,221	61%
	Subtotal	\$2,018,000					
Storage							
5	Expand the existing Bolinder Tank by 0.5 MG	\$540,000	0.5	MG	-	0.5	100%
	Subtotal	\$540,000					
	Total	\$2,558,000					

Source: Master Plan Table VII-1, HAL Memo Dated May 16 2014 (Project No. 126.01.100) p.3-4

TABLE 5.2: ILLUSTRATION OF CAPITAL IMPROVEMENTS RELATED TO GROWTH SCHEDULED TO BE COMPLETED IN THE NEXT 10 YEARS

PROJ. #	COST TO GROWTH	ERCs SERVED BY GROWTH CAPACITY	ERCs REMAINING IN IFFP	% GROWTH COST TO IFFP	COST TO IFFP
Source					
1	\$576,450	2,198	2,071	94%	\$541,863
6	\$514,840	2,198	2,071	94%	\$483,950
15	\$139,690	2,198	2,071	94%	\$131,309
	Subtotal				\$1,157,121
Storage					
5	\$540,000	1,042	342	33%	\$178,200
	Subtotal				\$178,200
	Total				\$1,335,321

Source: Master Plan Table VII-1, HAL Memo Dated May 16 2014 (Project No. 126.01.100) p.3-4

SYSTEM VS. PROJECT IMPROVEMENTS

System improvements are defined as existing and future public facilities designed to provide services to service areas within the community at large.⁸ Project improvements are improvements and facilities that are planned and designed to provide service for a specific development (resulting from a development activity) and considered necessary for the use and convenience of the occupants or users of that development.⁹ To the extent possible, this analysis only includes the costs of system improvements related to new growth within the proportionate share analysis.

FUNDING OF FUTURE FACILITIES

The IFFP must also include a consideration of all revenue sources, including impact fees and the dedication of system improvements, which may be used to finance system improvements.¹⁰ In conjunction with this revenue analysis, there must be a

⁸ 11-36a-102(21)

⁹ 11-36a-102(14)

¹⁰ 11-36a-302(2)

determination that impact fees are necessary to achieve an equitable allocation of the costs of the new facilities between the new and existing users.¹¹

In considering the funding of future facilities, the City has determined the portion of future projects that will be funded by impact fees as growth-related, system improvements. No other revenues from other government agencies, grants or developer contributions have been identified within the Master Plan or IFFP to help offset future capital costs. If these revenues become available in the future, the impact fee analysis should be revised. It is anticipated that future project improvements will be funded by the developer. These costs have not been included in the calculation of the impact fee.

Other revenues such as utility rate revenues will be necessary to fund non growth related projects and to fund growth related projects when sufficient impact fee revenues are not available. In the latter case, impact fee revenues will be used to repay utility rate revenues for growth related projects. A brief description of alternative financing options is included below.

- ☞ **Utility Rate Revenues:** Utility rate revenues serve as the primary funding mechanism within enterprise funds. Rates are established to ensure appropriate coverage of all operations and maintenance expenses, debt service coverage, and capital project needs. Impact fee revenues are generally considered non-operating revenues and help offset future capital costs.
- ☞ **Property Tax Revenues:** Property tax revenues are not specifically identified in this analysis as a funding source for growth-related capital projects, but inter-fund loans can be made from the general fund which would ultimately include some property tax revenues. Inter-fund loans would be repaid once sufficient impact fee revenues have been collected. The City does not currently assess interest on money borrowed from the general fund; however, the City may adopt a policy to do so.
- ☞ **Grants, Donations and Other Contributions:** Grants and donations are not expected as a future funding source. The impact fees should be adjusted if grant monies are received. New development may be entitled to a reimbursement for any grants or donations received by the City for growth related projects, or for developer funded IFFP projects.
- ☞ **Debt Financing:** In the event the City has not amassed sufficient impact fees to pay for the construction of time sensitive or urgent capital projects needed to accommodate new growth, the City must look to revenue sources other than impact fees for funding. The Impact Fees Act allows for the costs related to the financing of future capital projects to be included in the impact fee. This allows the City to finance and quickly construct infrastructure for new development and reimburse itself later from impact fee revenues for the costs of principal and interest. However, financing costs are not included in this analysis as a means to fund future projects.

PROPOSED CREDITS OWED TO DEVELOPMENT

The Impact Fees Act requires a local political subdivision or private entity to ensure that the 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.¹² The facilities must be considered system improvements or be dedicated to the public, and offset the need for an improvement identified in the IFFP.

EQUITY OF IMPACT FEES

Impact fees are intended to recover the costs of capital infrastructure that relate to future growth. The impact fee calculations are structured for impact fees to fund 100 percent of the growth-related facilities identified in the proportionate share analysis as presented in the impact fee analysis. Even so, there may be years that impact fee revenues cannot cover the annual growth-related expenses. In those years, other revenues such as general fund revenues will be used to make up any annual deficits. Any borrowed funds are to be repaid in their entirety through impact fees.

¹¹ 11-36a-302(3)

¹² 11-36a-402(2)



NECESSITY OF IMPACT FEES

An entity may only impose impact fees on development activity if the entity's plan for financing system improvements establishes that impact fees are necessary to achieve parity between existing and new development. This analysis has identified the improvements to public facilities and the funding mechanisms to complete the suggested improvements. Impact fees are identified as a necessary funding mechanism to help offset the costs of new capital improvements related to new growth. In addition, alternative funding mechanisms are identified to help offset the cost of future capital improvements.

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SECTION 6: CULINARY WATER IMPACT FEE CALCULATION

Impact fees are calculated based on many variables centered on proportionality and level of service. The previous sections identified the future demand, the existing and proposed level of service, the availability of excess capacity and the needed future facilities to serve new development. The following section identifies the appropriate impact fee to be assessed to new development to maintain the existing LOS.

PROPOSED CULINARY WATER IMPACT FEE

PLAN BASED IMPACT FEE CALCULATION

Impact fees can be calculated based on a defined set of costs specified for future development, usually defined within the Master Plan, Capital Improvement Plan and IFFP. The total project costs are divided by the total demand units the projects are designed to serve. Under this methodology, it is important to identify the existing level of service and determine any excess capacity in existing facilities that could serve new growth. Impact fees are then calculated based on many variables centered on proportionality share and level of service.

The culinary water impact fees proposed in this analysis will be assessed within the Zone 1 Service Area. The table below illustrates the appropriate impact fee to maintain the existing LOS, based on the assumptions within this document. The fee below represents the maximum allowable impact fee assignable to new development.

TABLE 6.1: IMPACT FEE PER ERC

	MASTER PLAN COST	COST TO GROWTH	ERCs SERVED	FEE PER ERC
Source Buy-in	NA	-	2,071	-
Storage Buy-in	NA	\$172,430	2,071	\$83
Source Future Facilities	\$2,018,000	\$1,157,121	2,071	\$559
Storage Future Facilities	\$540,000	\$178,200	2,071	\$86
Outstanding Debt	NA	-	2,071	-
Impact Fee Fund Balance	NA	-	2,071	-
Professional Expense	\$10,200	\$10,200	2,071	\$5
Total	\$2,568,200	\$1,517,951		\$733

Due to the projected redevelopment within the City, approximately \$2,558,000 of future system improvements will be needed in the next ten years. Approximately \$1,335,321 of the future facilities are attributed to growth within the next ten years. In addition, a total of \$172,430 of buy-in storage value is applied to new growth, based on the original value of system assets. These costs, along with the professional expense result in a total cost to growth of \$1,517,951. The professional expense includes the current cost to update the IFFP and IFA. The professional expense and the costs for future projects are apportioned based on the demand anticipated to be served by these facilities. The total fee per ERC is \$733. The impact fee per meter is shown below.

TABLE 6.2: IMPACT FEE PER METER

METER SIZE	MULTIPLIER	IMPACT FEE PER METER SIZE
0.75	1.00	\$733
1.00	2.12	\$1,557
1.50	7.76	\$5,690
2.00	10.38	\$7,611
3.00	22.73	\$16,664
4.00	38.96	\$28,558
6.00	63.68	\$46,676

Multipliers based on 2014 City usage data and AWWA M6 Water Manual statistics

NON-STANDARD IMPACT FEES

The City reserves the right under the Impact Fees Act¹³ to assess an adjusted fee that more closely matches the true impact that the land use will have upon the City's culinary water system. This adjustment could result in a lower impact fee if evidence suggests a particular user will create a different impact than what is standard for its category.

CONSIDERATION OF ALL REVENUE SOURCES

The Impact Fees Act requires the proportionate share analysis to demonstrate that impact fees paid by new development are the most equitable method of funding

growth-related infrastructure. See Section 5 for further discussion regarding the consideration of revenue sources.

¹³ 11-36a-402(1)(c)



EXPENDITURE OF IMPACT FEES

Legislation requires that impact fees should be spent or encumbered within six years after each impact fee is paid. Impact fees collected in the next five to six years should be spent only on those projects outlined in the IFFP as growth related costs to maintain the LOS.

GROWTH-DRIVEN EXTRAORDINARY COSTS

The City does not anticipate any extraordinary costs necessary to provide services to future development.

SUMMARY OF TIME PRICE DIFFERENTIAL

The Impact Fees Act allows for the inclusion of a time price differential to ensure that the future value of costs incurred at a later date are accurately calculated to include the costs of construction inflation. While an inflation component may be included in the impact fee analysis to reflect the future cost of facilities, at the request of the City it is not considered in the cost estimates in this study. However, the impact fee analysis should be updated regularly to account for changes in costs estimates over time.

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APPENDIX A: MASTER PLAN MEMORANDUM

NOTICE
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DATE: May 16, 2014
 TO: Dennis Pay, P.E.
 Director of Public Works
 195 W Oakland Ave
 South Salt Lake, Utah 84115
 FROM: Marv Allen, P.E.
 Hansen, Allen & Luce, Inc. (HAL)
 6771 South 900 East
 Midvale, Utah 84047
 SUBJECT: Future ERC Projections
 PROJECT NO.: 126.01.100



BACKGROUND

Hansen, Allen & Luce has recently completed a master plan of the City's drinking water system. A portion of the master plan focused on identifying system deficiencies and providing solutions for each shortcoming. Within the master plan, projects were classified as "existing" or "future" depending on when the project would need to be constructed.

South Salt Lake is currently preparing an impact fee facilities plan (IFFP). As an aid in preparing the IFFP, the City has asked HAL to determine the expected date when each of the future projects will be required. This report has been prepared in order to identify the projects which address future needs and to provide the requested timeline for each project. Additionally, the methodology used in determining project dates is described.

PROJECT DATES

A full listing of the recommended projects was originally provided in Table VII-1 of the 2013 Drinking Water Master Plan (Master Plan). A relisting of the Master Plan projects is provided below in Table 1.

**TABLE 1
SOUTH SALT LAKE RECOMMENDED PROJECTS**

MAP ID	RECOMMENDED PROJECT	TYPE OF NEED ADDRESSED
1	Construct a replacement for Bolinder Well	Existing & Future
NA	Construct a new Zone 1 well	Future
2	Install a new JWCD connection at 3300 South West Temple	Future
3	Construct a new booster pump station with a rated capacity of 1,160 gpm at the 300 East Tank	Existing

MAP ID	RECOMMENDED PROJECT	TYPE OF NEED ADDRESSED
4	Construct a new booster pump station at Davis Tank, with a capacity of 4,640 gpm	Existing
5	Expand the existing Bolinder Tank by 0.5 MG by either building a new 0.5 MG Tank, or by replacing the existing 1.0 MG tank with a 1.5 MG tank (cost estimate for new 0.5 MG tank)	Future
6	Construct a new booster pump station at Bolinder Tank, with a rated capacity of 3,200 gpm	Existing & Future
7	Construct a new 1.0 MG Zone 1 storage facility by the existing 1300 East Tanks	Future
8	Install fire hydrant at 200 East and approximately 2115 South	Existing
9	Replace existing pipe with 725 feet of 8" pipeline in 400 East from Utopia Ave. to 2100 South	Existing
10	Replace existing pipe with 725 feet of 8" pipeline in Burton Ave. from 250 East to 300 East	Existing
11	Replace existing pipe with 450 feet of 10" pipeline in the alley at approximately 230 West from 2700 South to approximately 2620 South	Existing
12	Replace existing pipe with 1,550 feet of 10" pipeline in 200 East from Gregson Ave. to Sunset Ave.	Existing
13	Replace existing pipe with 785 feet 8" pipeline in Angelo Ave. from West Temple to approximately 200 West	Existing
14	Replace existing pipe with 410 feet of 8" pipeline in 300 East from 2100 South to Commonwealth Ave.	Existing
15	Install 1,465 feet of 12" pipeline in Andy Ave. between 600 West and 300 West parallel to the existing 10" pipeline.	Existing & Future
16	Install 1,900 feet of new 16" pipeline parallel to existing pipeline, through parking lot at about 2920 S from 300 W to 400 W, in 400 W from 2920 S to 2970 S, Under I-15 from 400 West to the existing Davis Booster Station	Existing
17	Install 6,500 feet of new parallel 16" pipeline south from Davis Pump Station in 465 W until about 3180 S, southwest across train tracks following the existing 12-inch line to Central Valley Road, in Central Valley Road from 650 W to about 850 W, in 850 W from Central Valley Road to 3100 S, and in 3100 S from 850 W to 900 W	Existing
18	Install 2,480 feet of 18" pipeline along 900 W from 3100 S to 2780 S	Existing
19	Connection across State Street at intersection of State Street and Truman Ave	Existing
20	Install 1,740 feet of 10" pipeline parallel to the existing pipeline in 3160 S from 900 W to 1030 W, and in 1030 W from 3160 S to 3120 S	Existing

Within the Master Plan, projects were originally categorized as "existing" or "future" based on the recommended date of construction. In Table 1, projects were reevaluated using the criteria of whether the project is needed to meet existing or future demands. Several projects which

were recommended for immediate construction in order to meet existing needs will also contribute substantially to meeting future needs. For that reason, a number of the projects originally categorized as "existing" within the master plan have been recategorized in Table 1. In all, seven projects were identified as contributing to meeting future needs. Three of those projects are directly related to source capacity and two are directly related to Zone 1 storage. Of the remaining two projects, one is a booster station and one is a transmission pipeline.

Source and storage requirements are determined by the number of ERCs the distribution system serves. Moreover, future ERC projections are dependent on city growth. As a result, the proposed timeline of source capacity improvements is based on population projections. In order to maintain consistency with the recently completed Master Plan, projections that were prepared in 2008 by the Governor's Office of Planning & Budget (GOPB) were used.

Source Projects

At present, the City's total Zone 1 source capacity is 7,175 gpm. However, in order to provide for redundancy and ensure that no single source is indispensable, the source capacity was evaluated with the largest individual source assumed to be inactive. With this stipulation the capacity is reduced to 4,275 gpm. The City's existing peak day demand is 5,054 gpm, giving a deficit of 779 gpm. It was assumed that Bolinder Well would be the first source project, followed by an additional Zone 1 well, and the new JVVCD connection.

While operational, Bolinder Well previously had a capacity of 2,000 gpm. Assuming a replacement well would have similar capacity, about 39% of the proposed well would supply existing needs while the remaining 61% (1,221 gpm) of the capacity would meet future needs. Because South Salt Lake is already substantially built out, it was assumed that the primary driver of growth will be the redevelopment of existing improvements to higher densities. Redevelopment is not expected to increase the amount irrigated acreage in the City. Accordingly, only indoor demands were considered in calculating the number of ERCs that will be served by the added flow. Based on a per ERC indoor demand of 0.556 gpm, the additional flow would supply enough capacity to serve about 2,201 additional ERCs in Zone 1. Population projections available from the GOPB show that the ERCs served by Zone 1 of the South Salt Lake distribution system will increase by 2,071 ERCs to a total of 7,613 ERCs by 2024, which is the end of the 10-year period under consideration for the IFFP. Therefore, based on these projections, 39% of the capacity of Bolinder Well will contribute to meeting existing demands, 57% will contribute to meeting the future demand of 2,071 ERCs within the next 10 years, and 4% will contribute to meeting the future demand of 130 ERCs beyond 2024.

Additional sources are projected to become necessary as redevelopment continues. Based on GOPB population projections, the new Zone 1 well will be needed in about 2025 and the new JVVCD connection will be needed in 2031. Additional analysis is not provided for these sources because they fall outside of the 10-year IFFP period.

Storage Projects

The existing Zone 1 storage for South Salt Lake is 7.0 million gallons while the existing storage requirement is 6.17 million gallons. As with source capacity, only indoor needs were considered when calculating future storage. The indoor storage requirement is 400 gallons per ERC of equalization storage, plus 20% for emergency storage. Therefore, under existing conditions, there is sufficient storage to provide for an additional 1,729 ERCs in Zone 1. Storage for an additional 342 ERCs will be needed in order to reach the total of 2,071 ERCs planned within the 10-year IFFP period. It was previously recommended within the Master Plan that Bolinder Tank

should be returned to service and expanded by 0.5 MG (Project #5). The expanded Bolinder Tank will provide sufficient storage to serve the additional 342 ERCs.

After Projects #1 and #5 have been completed, the Zone 1 storage will have increased by 1.5 million gallons. Current population projections indicate that additional storage beyond that provided by the expanded Bolinder Tank will not be needed until 2041. At that time Project #7, the additional 1 million gallon tank, should be completed.

Additional Projects

Aside from the previously listed Source and Storage projects, there are two additional projects related to future demands. The first, Project #6, is closely related to replacement of the Bolinder Well. It is planned that the new Bolinder Well will pump into a storage tank before being pumped out into the system by means of a booster pump station. Adding the tank and booster station will allow the well capacity to be fully utilized in meeting peak instantaneous demands.

Based on a peaking factor of 1.6 and an assumed well capacity of 2,000 gpm, the capacity recommended for the booster pump station is 3,200 gpm. In terms of existing and future demands, the booster pump station will have the same break down as the well: 39% of the capacity will contribute to meeting existing demands, 57% will contribute to meeting the future demand of 2,071 ERCs within the next 10 years, and 4% will contribute to meeting the future demand of 130 ERCs beyond 2024.

The second of the two additional projects is Project #15. The purpose of this project is to increase the capacity in the transmission pipelines between the Bolinder Tank and the distribution system east of 400 West. Increasing the capacity of the Bolinder pump station to 3,200 gpm causes high flow velocities in the existing 10-inch pipeline in Andy Avenue. Without the pipeline, velocities in the 10-inch pipeline reach over 8 fps and headloss between Bolinder pump station and 400 West is excessive, at about 46 feet (20 psi). As a result, this project should be completed along with the other improvements in the Bolinder Well area. Since this project is closely associated with the Bolinder Well and Bolinder pump station improvements, the same cost breakdown as used for those projects is recommended for Project #15.

A listing of the projected dates for the future projects is included in Table 2.

**TABLE 2
IFFP ERC PROJECTIONS**

MAP ID	FUTURE PROJECT OR EXISTING IMPROVEMENT	IFFP PERIOD ERCs
1	Construct a replacement for Bolinder Well	2,071
NA	Existing Storage Surplus	1,729
5	Expand the existing Bolinder Tank by 0.5 MG by either building a new 0.5 MG Tank, or by replacing the existing 1.0 MG tank with a 1.5 MG tank (cost estimate for new 0.5 MG tank)	342
6	Construct a new booster pump station at Bolinder Tank, with a rated capacity of 3,200 gpm	2,071
15	Install 1,465 feet of 12" pipeline in Andy Ave. between 600 West and 300 West parallel to the existing 10" pipeline.	2,071