SARATOGA SPRINGS

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DRINKING WATER IMPACT FEE ANALYSIS

(HAL Project No.: 360.63.100)

January 2025

HANSEN ALLEN & LUCE inc
ENGINEERS

CITY OF SARATOGA SPRINGS

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Kai Krieger, P.E.

Project Engineer

HANSEN ALLEN & LUCE INC
ENGINEERS
50 YEARS
1974 - 2024

February 2025

IMPACT FEE CERTIFICATION

The Utah Impact Fee Act (Chapter 11-36a of the Utah Code) requires certifications for the Impact Fee Analysis (IFA). Hansen, Allen & Luce provides these certifications with the understanding that the recommendations in the IFA are followed by City Staff and elected officials. If all or a portion of the IFA is modified or amended, or if assumptions presented in this analysis change substantially, this certification is no longer valid. All information provided to Hansen, Allen & Luce is assumed to be correct, complete, and accurate.

IFFP Certification

Hansen, Allen & Luce, Inc. certifies that the Impact Fee Analysis (IFA) prepared for the drinking water system:

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.

HANSEN, ALLEN & LUCE, INC.

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SUMMARY OF DRINKING WATER IFA

Per Utah Code Section 11-36a-303, this is a summary of the impact fee analysis designed to be understood by a lay person.

The proposed drinking water system impact fee for a single-family residential connection is $2,729, which is an increase of $20 from the previous impact fee of $2,709 from 2022.

The **purpose** of the Impact Fee Analysis (IFA) is to comply with the requirements of the Utah Impact Fees Act (Chapter 11-36a of the Utah Code) by identifying demands placed on the existing drinking water system by new development and by identifying the means by which the City will meet these new demands. This analysis is an update to the Drinking Water System IFA prepared in 2022 to address changes in conditions and assumptions that result in a reduction in the proposed drinking water impact fee. The Drinking Water System Master Plan and Capital Facility Plan have also been updated to support this analysis.

The most significant **change** in this update is increased growth projections. The City has experienced periods of rapid growth since 2000. Zion Public Finance, In. prepared growth projections through 2034 for the City, included in Appendix C. When compared to the growth projections for the 2022 Drinking Water IFA, the updated growth projections anticipate more rapid growth over the coming 10 years. Several large capital facility projects are required to meet this anticipated growth.

Consistent with the last impact fee update, no remaining capacity of groundwater source is available for future growth. It is assumed all future source will be provided by Central Utah Water Conservancy District (CUWCD). The City could accept new groundwater rights after there is a change application approved by the State Engineer that meets drinking water standards. There are developers that have groundwater capacity credit with the City that have not paid impact fees. For this reason, there are two drinking water impact fees. One impact fee is for those with groundwater capacity credit which includes costs for available drinking water well capacity. The other drinking water impact fee includes costs for available CUWCD capacity.

The impact fee **service area** is the drinking water system service area, which includes the current city boundary. The existing system served about 15,578 equivalent residential connections (ERCs) at the beginning of 2024. Projected **growth** adds 12,887 ERCs in the next 10 years for a total of 28,465 ERCs.

There are two **components** to the drinking water impact fee. The first component is indoor water capacity which includes: well source capacity (for those who have drinking water groundwater credit), CUWCD source capacity, storage, and source conveyance. The second component is fire flow.

The resulting fee is $2,465 per typical single-family connection for those with well water credits. The fee is $2,019 per typical single-family connection for those acquiring wholesale contract source water from CUWCD.

The impact fee for a typical single-family residential connection requiring a ¾" water lateral, using well water, and requiring a 1,500 gpm fire flow will have an impact fee of **$2,729** (see the following tables). This includes $2,465 for indoor water capacity and $264 for fire flow capacity. This is an increase from the current impact fee of $2,709.

TOTAL PROPOSED IMPACT FEE PER TYPICAL SINGLE-FAMILY CONNECTION WITH WELL WATER

Component	Per Typical Residential Connection
Indoor Water	$2,465
Fire Flow	$264
TOTAL (source capacity from well water)	**$2,729**

The typical single-family residential connection requiring a ¾" water lateral, purchasing source water capacity from CUWCD, and requiring a 1,500 gpm fire flow would have an impact fee of **$2,283** (see the following table). This includes $2,019 for indoor water capacity and $264 for fire flow capacity. This is an increase from the current impact fee of $2,249.

TOTAL PROPOSED IMPACT FEE PER TYPICAL SINGLE-FAMILY CONNECTION WITH WHOLESALE WATER

Component	Per Typical Residential Connection
Indoor Water	$2,019
Fire Flow	$264
TOTAL (source capacity from CUWCD)	**$2,283**

IMPACT FEE CALCULATION

1 GENERAL

This section relies on the data presented in the Impact Fee Facilities Plan to calculate a proposed impact fee based on the appropriate proportion of costs of projects planned in the next 10 years to increase capacity for new growth and an appropriate buy-in cost of available existing capacity previously purchased by the City.

The drinking water system facility projects planned in the next 10 years to increase capacity for new growth included within the impact fee are presented. Also included in this section are the possible revenue sources that the City may consider to fund the recommended projects. The two components of the impact fee are presented with the proposed fee. The drinking water system impact fee units include the indoor water capacity unit and the fire flow capacity unit.

2 GROWTH PROJECTIONS

The development of impact fees requires growth projections over the next ten years. Growth projections for the City were developed by Zions Public Finance, Inc., and have been provided in Appendix C. The memorandum provided different growth scenarios. The City requested the "Base Case" growth scenario be used for the IFA report. Table 1 presents the growth projections for the City over the next 10 years.

TABLE 1: GROWTH PROJECTIONS

Year	Residential Units Added (ERCs)	Non-Residential Floor Area Added (ft^2)	Non-Residential Units Added* (ERCs)	Total ERCs	Annual Growth Rate
2023	-	-	-	**15,578**	-
2024	1,065	253,217	186	**16,829**	8.0%
2025	1,100	263,255	193	**17,936**	6.6%
2026	1,135	264,293	200	**19,078**	6.4%
2027	1,169	283,332	208	**20,255**	6.2%
2028	1,204	293,370	215	**21,466**	6.0%
2029	1,238	303,409	222	**22,711**	5.8%
2030	1,264	313,447	230	**23,992**	5.6%
2031	1,307	323,485	237	**25,306**	5.5%
2032	1,342	333,524	245	**26,656**	5.3%
2033	1,377	343,562	252	**28,040**	5.2%
2034	592	116,002	85	**28,465**	1.5%

* Per the Saratoga Springs General Plan, the maximum assumed commercial density is 13 ERU's per acre. For every 75,000 square feet of non-residential floor area, the plan assumes 4.2 acres of total property required. 4.2 acres * 13 ERU's per acre = 55 ERUs per 75,000 square feet of non-residential floor area.

The City has been experiencing periods of rapid growth since the beginning of 2000. The driving force behind much of the rapid growth in the City is the development of large properties across the City. As shown in Table 1 above, the City is expected to grow from the existing 15,578 ERCs to 28,465 ERCs by 2034.

3 COST OF EXISTING AND FUTURE FACILITIES

The facilities and costs presented in Table 2 are existing facilities with remaining buy-in capacity. Included in the table are the actual construction costs of existing components of the City's drinking water system. These are not depreciated replacement costs, but the actual cost at the time of construction. Costs and figures depicting these projects are included in Appendix A. The facilities and costs presented in Table 3 are proposed projects essential to maintain the proposed level of service while accommodating future growth within the next 10 years. The facility sizing for the future proposed projects was based on the proposed level of service with growth projections provided by the City and hydraulic modeling. All future projects have a design life greater than 10 years, as required by the Impact Fee Act, and all the projects are 100% growth-related. Each project has a detailed cost for each component of the drinking water impact fee: Wells, Source Conveyance (transmission lines associated with source conveyance and pump stations), Storage (tanks and associated transmission lines), and Fire Suppression. See Appendix B for cost estimate details of future projects.

TABLE 2: COST OF EXISTING FACILITIES

Project Number	Project	CUWCD	Wells	Source Conveyance	Storage	Fire	Water Rights[1]	TOTAL
1	Lake Mountain Mutual Purchase		$2,700,000	$10,216,000	$4,710,000	$2,240,000	$1,134,000	**$21,000,000**
2	Lake Mountain Development Purchase (2005 Bond)		$417,014	$1,262,621	$639,500	$755,047		**$3,074,183**
3	Tank 5 and Waterline - 2006 Bond				$2,645,796	$2,236,090		**$4,881,886**
4	Zone 2 South SID (2009 Bond)				$1,579,763	$547,938		**$2,127,701**
5	Water Right Purchases						$2,088,825	**$2,088,825**
6	400 North Pipeline			$186,278		$310,809		**$497,087**
7	Saratoga Road Pipeline			$575,780				**$575,780**
8	Booster Pump Station 1 Upgrade			$140,862				**$140,862**
9	1200 North Pipeline			$26,659		$65,022		**$91,681**
10	Fox Hollow Zone 3			$1,189,127	$1,405,223	$191,621		**$2,785,971**
11	Talus Ridge Pipeline Upsizes			$65,294	$422,604	$106,690		**$594,588**
12	Legacy Farms			$29,388		$167,612		**$197,000**
13	Walmart SR-73 Pipeline			$45,079		$27,421		**$72,500**
14	Fox Hollow N6 Pipeline Looping			$43,990		$45,451		**$89,441**
15	Zone 2 North Source			$738,383		$339,974		**$1,078,357**
16	CUWCD Connection	$120,000						**$120,000**
17	Redwood Rd Transmission Line			$806,894		$820,849		**$1,627,743**
18	Additional Land Acquisition Cost for Well 4		$124,968					**$124,968**

Project Number	Project	CUWCD	Wells	Source Conveyance	Storage	Fire	Water Rights[1]	TOTAL
19	Thrive Upsize			$1,876		$10,701		**$12,577**
20	Harvest Hills Booster #3 Upgrade			$207,374				**$207,374**
21	The Crossing Upsize			$21,577		$123,065		**$144,642**
22	Beacon Point Waterline			$516,223		$474,179		**$990,402**
23	Gas Chlorination Study		$170,032					**$170,032**
24	Northshore 3- Phase 3 Improvements			$73,729	$73,730	$73,729		**$221,188**
25	Well #3 Purchase		$383,400					**$383,400**
26	Mt Saratoga Built Improvements			$909,485	$909,485	$909,485		**$2,728,455**
27	Mt Saratoga Tank and Booster Station SDC			$12,050				**$12,050**
28	Source Protection Plans		$15,000					**$15,000**
29	New Water Meters and Radio Read			$243,980				**$243,980**
30	Source Protection Plans- Wells		$36,650					**$36,650**
31	VFD's for Grandview Booster			$157,218				**$157,218**
32	Loch Lomond PRV			$92,425				**$92,425**
33	Saratoga Hills Zone Change			$122,375				**$122,375**
34	FEMA Generator Grant		$316,507					**$316,507**
35	Northshore Drive Waterline					$24,007		**$24,007**
36	Quarterdeck Way Waterline			$1,879		$10,716		**$12,595**
37	Saratoga Springs Commercial Plat E			$603		$3,438		**$4,041**

Project Number	Project	CUWCD	Wells	Source Conveyance	Storage	Fire	Water Rights[1]	TOTAL
38	Northgate Pipelines			$573,931		$191,421		**$765,352**
39	Alpine School Dist, Harbor Point Elem			$1,956		$11,173		**$13,128**
40	Wellspring - Security Home Mortgage							**$0**
41	Wildflower			$3,578,554	$1,302,199	$1,387,079		**$6,267,832**
42	Brixton Park/Canton Ridge			$117,984		$108,346		**$226,330**
43	Brixton Ridge Plat A			$161,153		$147,989		**$309,142**
44	Popeyes			$967		$5,523		**$6,490**
45	Market Street Pad E			$1,809		$10,333		**$12,142**
46	The Springs			$20,356		$116,292		**$136,648**
47	Saratoga Dignity Care			$3,575		$20,425		**$24,000**
48	Viviano			$258,580		$237,457		**$496,037**
49	Northshore 16" Line			$62,446		$57,345		**$119,791**
50	Northshore CUWCD Connection	$40,779						**$40,779**
51	Tank 9			$1,043,660	$3,071,327	$889,488		**$5,004,475**
52	Mountain View Corr CUWCD Connection			$2,709,700		$656,900		**$3,366,600**
53	Redwood Road Crossing			$590,466		$196,936		**$787,402**
54	DW15.A - Mt. Saratoga Pipeline			$20,396		$6,804		**$27,200**
55	Booster 8			$5,050,423				**$5,050,423**
	TOTAL	**$160,779**	**$4,163,571**	**$31,883,105**	**$16,759,627**	**$13,527,355**	**$3,222,825**	**$69,717,260**

1. There are minimal historical water rights costs as many of the water rights have been water right transfers from incoming developers.

TABLE 3: COST OF FUTURE FACILITIES

Project	Map ID[1]	CUWCD	Source Conveyance	Storage	Fire	Well	Total[2]
Well 7 Pipeline	DW01	$0	$0	$0	$0	$448,000	**$448,000**
Tank 13	DW02	$0	$3,940,000	$2,272,000	$1,759,000	$0	**$7,971,000**
Tank 8	DW03	$0	$1,266,000	$12,080,000	$4,530,000	$0	**$17,876,000**
Zone 1 16-inch Pipeline	DW04	$0	$298,000	$0	$273,000	$0	**$571,000**
TOTAL[2]		**$0**	**$5,504,000**	**$14,352,000**	**$6,562,000**	**$448,000**	**$26,866,000**

2. See Figure 1 (Additional details on cost estimates are in Appendix B).
3. Total costs rounded to nearest $100.

Legend

- Future Tank
- Future Pump Station
- Booster - Active
- CUWCD Turn-Out - Active
- Tank - Active
- Well - Active
- Existing Pipeline
- Zone 1
- Zone 2
- Zone 3
- Zone 4
- Zone 5
- Zone 6
- Outside Service Area

[DW01]
ZONE 1
375 LF 10-INCH
WELL 7 PIPELINE

[DW03]
ZONE 1
5.0 MG TANK 8
5,300 LF 24-INCH PIPELINE

[DW04]
ZONE 1
1,400 LF 16-INCH PIPELINE

[DW02]
ZONE 3 SOUTH
1.0 MG TANK 13
1,000 GPM PUMP STATION 12
2,400 LF 12-INCH PIPELINE
1,800 LF 18-INCH PIPELINE

N

0 2,000 4,000 8,000 Feet

Date: 1/28/2025
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HANSEN ALLEN & LUCE INC ENGINEERS

SARATOGA SPRINGS DRINKING WATER SYSTEM

FUTURE IMPACT FEE IMPROVEMENT PROJECTS

FIGURE 1

Only those costs attributed to the new growth in the next 10 years can be included in the impact fee. Table 4 is a summary of the existing and future facility costs by drinking water system component and by time period. Existing costs are those costs attributed to capacity currently being used by existing connections. Costs attributed to the next 10 years are costs for the existing capacity or new capacity for the assumed growth in the next 10 years. Costs attributed to beyond 10 years are costs for the existing capacity or new capacity for the assumed growth beyond 10 years.

TABLE 4: FACILITY COST BY TIME PERIOD

	Existing	Next 10 Years	Beyond 10 Years	Total
CUWCD	$70,055	$62,159	$28,564	**$160,779**
Wells	$3,310,165	$1,301,406	$0	**$4,611,571**
Source Conveyance	$19,809,942	$17,577,163	$0	**$37,387,105**
Storage	$9,447,517	$8,382,687	$13,281,423	**$31,111,627**
Fire	$3,397,147	$4,776,287	$11,915,920	**$20,089,354**
TOTAL	**$36,034,826**	**$32,099,702**	**$25,225,908**	**$93,360,435**

4 REVENUE OPTIONS

Revenue options for the recommended projects include: revenue bonds, State/Federal grants and loans, user fees, and impact fees. Although this analysis focuses on impact fees, the City may need to consider a combination of these funding options. The following discussion describes each of these options.

Revenue Bonds

This form of debt financing is also available to the City for utility-related capital improvements. Unlike General Obligation (G.O.) bonds, revenue bonds are not backed by the City as a whole, but constitute a lien against the water service charge revenues of a Water Utility. Revenue bonds present a greater risk to the investor than G.O. bonds, since repayment of debt depends on an adequate revenue stream, legally defensible rate structure /and sound fiscal management by the issuing jurisdiction.

Due to this increased risk, revenue bonds generally require a higher interest rate than G.O. bonds. This type of debt also has very specific coverage requirements in the form of a reserve fund specifying an amount, usually expressed in terms of average or maximum debt service due in any future year. This debt service is required to be held as a cash reserve for annual debt service payment to the benefit of bondholders. Typically, voter approval is not required when issuing revenue bonds. For growth-related projects, this type of revenue places an unfair burden on existing residents as they had previously paid for their level of service.

State/Federal Grants and Loans

Historically, both local and county governments have experienced significant infrastructure funding support from state and federal government agencies in the form of block grants, direct

grants in aid, interagency loans, and general revenue sharing. Federal expenditure pressures and virtual elimination of federal revenue sharing dollars are clear indicators that local government may be left to its own devices regarding infrastructure finance in general. However, state/federal grants and loans should be further investigated as a possible funding source for needed water system improvements.

It is also important to assess likely trends regarding federal/state assistance in infrastructure financing. Future trends indicate that grants will be replaced by loans through a public works revolving fund. Local governments can expect to access these revolving funds or public works trust funds by demonstrating both the need for and the ability to repay the borrowed monies, with interest. As with the revenue bonds discussed earlier, the ability of infrastructure programs to wisely manage their own finances will be a key element in evaluating whether many secondary funding sources, such as federal/state loans, will be available to the City.

User Fees

Similar to property taxes on existing residents, user fees to pay for improvements related to new growth-related projects places an unfair burden on existing residents as they had previously paid for their level of service.

Impact Fees

As discussed in Section 1, an impact fee is a one-time charge to a new development for the purpose of raising funds for the construction of improvements required by the new growth and to maintain the current level of service. Impact fees in Utah are regulated by the Impact Fee Statute and substantial case law. Impact fees are a form of a development exaction that requires a fee to offset the burdens created by the development on existing municipal services. Funding the future improvements required by growth through impact fees does not place the burden on existing residents to provide funding for these new improvements.

5 IMPACT FEE UNIT CALCULATION

It is recommended that the City have two components to the impact fee for drinking water system facilities—indoor water use and fire flow capacity. Each component is discussed separately in the following sections.

Indoor Impact Fee Unit

The indoor impact fee has been calculated based on 1 ERC which would correspond to a standard ¾" lateral. Larger laterals are assumed to serve more than 1 ERC and will have a higher corresponding impact fee. Tables 5 and 6 indicate the impact fee rate schedule based on water lateral size for the Well and CUWCD impact fees. The ERC factor is calculated based on American Water Works Association (AWWA) rated capacity for each lateral size.

TABLE 5: WELL IMPACT FEE BASED ON LATERAL SIZE

Water Lateral Size	ERC	Impact Fee Component
¾"	1.00	$2,465
1"	1.67	$4,118
1 ½"	3.33	$8,211

Water Lateral Size	ERC	Impact Fee Component
2”	5.33	$13,143
3”	10.00	$24,658
4”	16.67	$41,105
6”	33.33	$82,186
8”	53.33	$131,503

TABLE 6: CUWCD IMPACT FEE BASED ON LATERAL SIZE

Water Lateral Size	ERC	Impact Fee Component
¾”	1.00	$2,019
1”	1.67	$3,372
1 ½”	3.33	$6,724
2”	5.33	$10,763
3”	10.00	$20,192
4”	16.67	$33,661
6”	33.33	$67,301
8”	53.33	$107,686

The Indoor Water Impact Fee per unit is based on the documented cost of the excess capacity in the indoor water components of the drinking water system and the cost of future projects for the predicted development in the next 10 years. Table 7 is a summary of the capacity cost included in the impact fee calculation by indoor water component.

TABLE 7: INDOOR WATER CAPACITY COST

Indoor Water Component	Existing		Next 10 Years		Beyond 10 Years		TOTAL	
	ERC*	Cost	ERC	Cost	ERC	Cost	ERC*	Cost
CUWCD	14,524	$70,055	12,887	$62,159	5,922	$28,564	33,333	$160,779
Wells	7,333	$3,310,165	2,883	$1,301,406	0	$0	10,216	$4,611,571
Source Conveyance	14,524	$19,809,942	12,887	$17,577,163	0	$0	27,411	$37,387,105
Storage	14,524	$9,447,517	12,887	$8,382,687	20,418	$13,281,423	47,829	$31,111,627
TOTAL COST	**$32,637,679**		**$27,323,415**		**$13,309,988**		**$73,271,081**	

Currently, the drinking water system has excess capacity for both source and storage. Table 8 is a summary of the indoor water capacity cost per ERC using the totals of the column in “Next 10 Years” from Table 7. The unit costs calculated in Table 8 only include cost and capacity attributed

to future connections anticipated in the next 10 years. The indoor water impact fee is calculated based on whether the new development has well water or if water will be purchased from CUWCD. This will allow for developments to pay their fair share of the facilities used for the source water available to the development. The cost per ERC for development with well water credit is $2,465 per ERC. The cost for developments that purchase CUWCD capacity is $2,019 per ERC, since this source is cheaper than the City's wells. Note that the cost of purchasing source water capacity from CUWCD is not included in this impact fee. See Appendix D for details on the CUWCD wholesale water contract.

TABLE 8: INDOOR WATER CAPACITY COST PER ERC

Indoor Water Component	Cost Attributed to Component	Total ERC Capacity	Cost per ERC
CUWCD	$62,159	12,887	$5
Wells	$1,301,406	2,883	$451
Source Conveyance	$17,577,163	12,887	$1,364
Storage	$8,382,687	12,887	$650
TOTAL (Wells)			**$2,465**
TOTAL (CUWCD)			**$2,019**

Fire Flow Impact Fee Unit

Capacity attributed to fire flow is based on the fire suppression requirement specified by the International Fire Code (IFC), issued by the International Code Council. The level of service is equal to 0.18 million gallons (MG) (1,500 gpm for 2 hours) which is the IFC fire suppression requirement for most single-family homes and non-residential buildings with fire suppression systems. It is recommended that a building requiring greater than 0.18 MG of fire suppression be assigned an equitable cost of providing the additional capacity. Assigning an impact fee cost unit by ERC does not work in the case of fire flow capacity because everyday water use is not related to fire flow requirement. Assigning an impact fee cost unit based on the storage volume required for a typical single-family residence does not work because every home and building needs the minimum 0.18 MG for fire suppression. There is a greater distribution of the cost for the minimum storage.

When a higher fire flow capacity is required, there are fewer buildings needing that higher volume to distribute the cost of supplying the greater capacity. A fire flow impact fee unit was therefore calculated to represent the equitable distribution of the fire flow capacity cost. The fee unit is based on an analysis of the existing capacity in the storage facilities versus the existing number of buildings within each fire flow requirement. It was assumed that the excess fire flow storage capacity will be distributed by the same ratio of buildings within each fire flow category. This cost distribution fee unit for each IFC fire flow requirement is shown in Table 9. See Appendix B for distribution fee calculations.

TABLE 9: FIRE FLOW CAPACITY IMPACT FEE COST DISTRIBUTION UNIT

Fire Flow Requirement (gpm)	Fire Flow Duration Requirement (hours)	Fire Volume Requirement (MG)	Cost Distribution Units	Fee per Connection
1,500	2	0.18	1	$264
1,750	2	0.21	3	$446
2,000	2	0.24	5	$901
2,250	2	0.27	9	$1,538
2,500	2	0.30	14	$2,476
2,750	2	0.33	25	$4,247
3,000	3	0.54	144	$26,402
3,250	3	0.59	174	$34,446
3,500	3	0.63	212	$46,513
3,750	3	0.68	263	$62,602
4,000	4	0.96	769	$215,445

Water Right Impact Fee Unit

The current level of service for water rights is 267 gpd per ERC. An assessment of available water rights and physical groundwater capacity of drinking water quality is limited. There are not enough water rights or ground water available to meet future demands. Additional source and water right capacity will need to come from CUWCD. There are three existing connections to CUWCD with one more planned to meet future demands. There may be a small amount of additional groundwater rights available from private owners that may be used in lieu of paying for CUWCD water, but this is anticipated to be limited. It is recommended that the City not collect impact fees for water rights and require future connections to use credit, buy existing credit, or buy on the market and transfer to the City (including CUWCD water). See Appendix D for details on CUWCD water cost.

The additional CUWCD water, in addition to existing excess capacity in the City water system (including credits held by developers) is sufficient to meet demands for the next ten years (see Tables 10 and 11). All water right volumes are annual diversions in acre-feet.

TABLE 10: WATER RIGHTS NEEDED BY 2034

	Acre-Feet
Predicted Demand in 2034 at the Proposed Level of Service	8,513
Existing Demand at the Proposed Level of Service	4,659
Annual CUWCD Delivery in 2034	6,180
Additional Demand Expected by 2034	**3,854**

TABLE 11: WATER RIGHTS EXCESS CAPACITY

	Acre-Feet
Water Rights Owned	8,352
Existing Demand at the Proposed Level of Service	4,659
Excess Capacity	**3,693**

The City currently has enough water rights to meet the demand at the proposed level of service in 2034. The City is also projected to have at least 6,180 acre-feet of water available from CUWCD by the year 2034. It is recommended that the City accept water rights to maintain its level of service in one of three ways: Use of developer credit, deed the City an underground water right approved by the City Attorney, or provide CUWCD capacity sufficient to meet the level of service for the proposed development.

6 TOTAL IMPACT FEE CALCULATION FOR A SINGLE-FAMILY RESIDENCE

Adding the proposed drinking water system impact fee units together, the total proposed impact fee for a typical single family residential connection requiring a ¾" water lateral, using well water, and requiring a 1,500 gpm fire flow would have an impact fee of **$2,729** (see Table 12). This includes $2,465 for indoor water capacity and $264 for fire flow capacity.

TABLE 12: TOTAL PROPOSED IMPACT FEE PER TYPICAL SINGLE-FAMILY CONNECTION WITH WELL WATER

Component	Per Typical Residential Connection
Indoor Water	$2,465
Fire Flow	$264
TOTAL (source capacity from well water)	**$2,729**

The typical single-family residential connection requiring a ¾" water lateral, purchasing source water capacity from CUWCD, and requiring a 1,500 gpm fire flow would have an impact fee of **$2,283** (see the Table 13). This includes $2,019 for indoor water capacity and $264 for fire flow capacity.

TABLE 13: TOTAL PROPOSED IMPACT FEE PER TYPICAL SINGLE-FAMILY CONNECTION WITH WHOLESALE WATER

Component	Per Typical Residential Connection
Indoor Water	$2,019
Fire Flow	$264
TOTAL (source capacity from CUWCD)	**$2,283**

APPENDIX A

Existing Facilities Costs

DRINKING WATER SYSTEM COST

1 Lake Mountain Mutual Purchase

Wells	Wells 1,2,4,6 (7,8)	$2,700,000		Wells	$450,000
Source	2 Boosters, and pipelines	$10,216,000		Transmission for wells and boosters	$1,050,000
Storage	Tank 1,3,4 and pipelines	$4,710,000		Booster station	$500,000
Fire	Tank 1,3,4 and pipelines	$2,240,000		Storage per gallon	$1
Water Rights	378 acre-feet	$1,134,000		Water rights per ac-ft	$3,000
TOTAL		**$21,000,000**		Total	$21,000,000

2 Lake Mountain Development Purchase (2005 Bond)

Wells	Well 3, Booster and pipelines	$417,014		Well 3	$417,014
Source	Booster and pipelines	$1,262,621		Tank 2	$519,828
Storage	Tank 2 and Pipelines	$639,500		Booster 1	$180,966
Fire	Tank 2 and Pipelines	$755,047		Pipeline B & D	$132,294
TOTAL		**$3,074,183**		Pipeline C	$907,975
				2005 Bond Interest	$916,106
				Total	$3,074,183

3 Tank 5 and Waterline - 2006 Bond

Storage	Tank 5 and pipeline	$2,645,796		Tank 5 and Pipeline	$3,500,000
Fire	Tank 5 and pipeline	$2,236,090		2006 Bond Interest	$1,381,886
TOTAL		**$4,881,886**		Total	$4,881,886

4 Zone 2 South SID (2009 Bond)

Storage	Tank 6 and pipeline	$1,579,763		Tank 6	$1,588,650
Fire	Tank 6 and pipeline	$547,938		Pipeline	$539,051
TOTAL		**$2,127,701**		Total	$2,127,701

5 Water Right Purchases

Water Rights	150 acre-feet from L&V Properties	**$450,000**
Water Rights	75 acre-feet from L&V Properties	**$225,000**
Water Rights	225 acre-feet from L&V Properties	**$675,000**
Water Rights	225 acre-feet from Jeff Neilson	**$350,000**
Water Rights	225 acre-feet from Jeff Neilson	**$275,000**
Water Rights	225 acre-feet from Jeff Neilson	**$113,825**
TOTAL		**$2,088,825**

6 400 North Pipeline

Source	Pipeline	$186,278		400 North 14" Pipeline	$497,087
Fire	Pipeline	$310,809		Total	$497,087
TOTAL		**$497,087**			

7 Saratoga Road Pipeline

Source	Pipeline	$575,780		Saratoga Road Pipeline	$575,780
TOTAL		**$575,780**		Total	$575,780

8 Booster Pump Station 1 Upgrade

Source	Booster Upgrade	$140,862		Booster Pump Station 1 Upgrade	$140,862
TOTAL		**$140,862**		Total	$140,862

9 1200 North Pipeline

Source	Pipeline	$26,659		1200 North 12" Pipeline	$91,681
Fire	Pipeline	$65,022		Total	$91,681
TOTAL		**$91,681**			

10 Fox Hollow Zone 3

Source	Booster	$1,189,127		Tank 7	$1,596,844
Storage	Tank 7 and pipelines	$1,405,223		Fox Hollow Booster	$1,189,127
Fire	Tank 7 and pipelines	$191,621		Total	$2,785,971
TOTAL		**$2,785,971**			

11 Talus Ridge Pipeline Upsizes

Source	Pipeline Upsizes	$65,294		Plat A	$259,214
Storage	Pipeline Upsizes	$422,604		Plat B	$125,747
Fire	Pipeline Upsizes	$106,690		Plat D	$55,310
TOTAL		**$594,588**		Plat F	$45,578
				Plat G	$108,739
				Total	$594,588

12 Legacy Farms

Source	Pipeline Upsizes	$29,388		Legacy Farms Pipe Upsize VP2	$197,000
Fire	Pipeline Upsizes	$167,612		Total	$197,000
TOTAL		**$197,000**			

13 Walmart SR-73 Pipeline

Source	Pipeline	$45,079		SR-73 18-inch Pipeline	$72,500
Fire	Pipeline	$27,421		Total	$72,500
TOTAL		**$72,500**			

14 Fox Hollow N6 Pipeline Looping

Fire	Pipeline Looping	$45,451		Pipeline Looping	$89,441
Source	Pipeline Looping	$43,990		Total	$89,441
TOTAL		**$89,441**			

15 Zone 2 North Source

Source	Booster Station and Pipeline	$738,383		Booster Station	$738,383
Fire	18" U-73 Pipeline	$339,974		18" U-73 Pipeline	$339,974
TOTAL		**$1,078,357**		Total	$1,078,357

16 CUWCD Connection

CUWCD	Connection	$120,000		Transmission Lines	$120,000
TOTAL		**$120,000**		Total	$120,000

17 Redwood Rd Transmission Line

Source	Redwood Rd Transmission Line	$806,894		Redwood Rd Transmission Line	$806,894
Fire	Redwood Rd Transmission Line	$820,849		2014 Bond Interest	$820,849

	TOTAL		**$1,627,743**	Total	$1,627,743
18	**Additional Land Acquisition Cost for Well 4**				
	Wells	Land Acquisition	$124,968	Land Acquisition	$124,968
	TOTAL		**$124,968**	Total	$124,968
19	**Thrive Upsize**				
	Source	Transmission Line	$1,876	Transmission Line	$12,577
	Fire	Transmission Line	$10,701	Total	$12,577
	TOTAL		**$12,577**		
20	**Harvest Hills Booster #3 Upgrade**				
	Source	Booster Station and Pipeline	$207,374	Booster Station	$207,374
	TOTAL		**$207,374**	Total	$207,374
21	**The Crossing Upsize**				
	Source	Transmission Lines	$21,577	Transmission Lines	$144,642
	Fire	Transmission Lines	$123,065	Total	$144,642
	TOTAL		**$144,642**		
22	**Beacon Point Waterline**				
	Source	Pipeline	$516,223	16" Waterline	$990,402
	Fire	Pipeline	$474,179	Total	$990,402
	TOTAL		**$990,402**		
23	**Gas Chlorination Study**				
	Wells	Chlorination Study	$170,032	Well Chlorination Study	$170,032
	TOTAL		**$170,032**	Total	$170,032
24	**Northshore 3- Phase 3 Improvements**				
	Storage	Phase 3 Improvements	$73,730	Phase 3 Improvements	$221,188
	Source	Phase 3 Improvements	$73,729	Total	$221,188
	Fire	Phase 3 Improvements	$73,729		
	TOTAL		**$221,188**		
25	**Well #3 Purchase**				
	Wells	Purchase	$383,400	Well Purchase	$383,400
	TOTAL		**$383,400**	Total	$383,400
26	**Mt Saratoga Built Improvements**				
	Storage	Improvements	$909,485	Built Improvements	$2,728,455
	Source	Improvements	$909,485	Total	$2,728,455
	Fire	Improvements	$909,485		
	TOTAL		**$2,728,455**		
27	**Mt Saratoga Tank and Booster Station SDC**				
	Source	Source	$12,050	Master Planning, CFP, IFFP, IFFA	$12,050
	TOTAL		**$12,050**	Total	$12,050
28	**Source Protection Plans**				
	Wells	Updates	$15,000	Source Protection Plans	$38,880
	TOTAL		**$15,000**	Total	$38,880
29	**New Water Meters and Radio Read**				
	Source	Water Meters	$243,980	Master Planning, CFP, IFFP, IFFA	$243,980
	TOTAL		**$243,980**	Total	$243,980
30	**Source Protection Plans- Wells**				
	Wells	Source Protection	$36,650	Source Protection Plans	$36,650
	TOTAL		**$36,650**	Total	$36,650
31	**VFD's for Grandview Booster**				
	Source	VFD's	$157,218	Grandview Booster VFD's	$157,218
	TOTAL		**$157,218**	Total	$157,218
32	**Loch Lomond PRV**				
	Source	PRV	$92,425	Loch Lomond PRV	$92,425
	TOTAL		**$92,425**	Total	$92,425
33	**Saratoga Hills Zone Change**				
	Source	Zone Change	$122,375	Saratoga Hills Zone Change	$122,375
	TOTAL		**$122,375**	Total	$122,375
34	**FEMA Generator Grant**				
	Wells	Generator Grant	$316,507	Fema Generator Grant	$316,507
	TOTAL		**$316,507**	Total	$316,507
35	**Northshore Drive Waterline**				
	Fire	Waterline	$24,007	Northshore Drive Waterline	$24,007
	TOTAL		**$24,007**	Total	$24,007
36	**Quarterdeck Way Waterline**				
	Source	Transmission Line	$1,879	Quarterdeck Way Waterline	$12,595
	Fire	Transmission Line	$10,716	Total	$12,595
	TOTAL		**$12,595**		
37	**Saratoga Springs Commercial Plat E**				
	Source	Transmission Line	$603	Saratoga Springs Commercial Plat E	$4,041
	Fire	Transmission Line	$3,438	Total	$4,041

	TOTAL		**$4,041**			
38	**Northgate Pipelines**					
	Source	Transmission Line	$573,931		Northgate Pipelines	$765,352
	Fire	Transmission Line	$191,421		Total	$765,352
	TOTAL		**$765,352**			
39	**Alpine School Dist, Harbor Point Elem**					
	Source	Transmission Line	$1,956		Alpine School Dist, Harbor Point Elem	$13,128
	Fire	Transmission Line	$11,173		Total	$13,128
	TOTAL		**$13,128**			
40	**Wellspring - Security Home Mortgage**					
	Source	Transmission Line	$0		Wellspring - Security Home Mortgage	$0
	Fire	Transmission Line	$0		Total	$0
	TOTAL		**$0**			
41	**Wildflower**					
	Source		$3,578,554		Wildflower	$6,267,832
	Storage		$1,302,199		Total	$6,267,832
	Fire		$1,387,079			
	Wells		$0			
	TOTAL		**$6,267,832**			
42	**Brixton Park/Canton Ridge**					
	Source	Transmission Line	$117,984		Brixton Park/Canton Ridge	$226,330
	Fire	Transmission Line	$108,346		Total	$226,330
	TOTAL		**$226,330**			
43	**Brixton Ridge Plat A**					
	Source	Transmission Line	$161,153		Brixton Ridge Plat A	$309,142
	Fire	Transmission Line	$147,989		Total	$309,142
	TOTAL		**$309,142**			
44	**Popeyes**					
	Source	Transmission Line	$967		Popeyes	$6,490
	Fire	Transmission Line	$5,523		Total	$6,490
	TOTAL		**$6,490**			
45	**Market Street Pad E**					
	Source	Transmission Line	$1,809		Market Street Pad E	$12,142
	Fire	Transmission Line	$10,333		Total	$12,142
	TOTAL		**$12,142**			
46	**The Springs**					
	Source	Transmission Line	$20,356		The Springs	$136,648
	Fire	Transmission Line	$116,292		Total	$136,648
	TOTAL		**$136,648**			
47	**Saratoga Dignity Care**					
	Source	Transmission Line	$3,575		Saratoga Dignity Care	$24,000
	Fire	Transmission Line	$20,425		Total	$24,000
	TOTAL		**$24,000**			
48	**Viviano**					
	Source	Transmission Line	$258,580		Viviano	$496,037
	Fire	Transmission Line	$237,457		Total	$496,037
	TOTAL		**$496,037**			
49	**Northshore 16" Line**					
	Source	Transmission Line	$62,446		Northshore 16" Line	$119,791
	Fire	Transmission Line	$57,345		Total	$119,791
	TOTAL		**$119,791**			
50	**Northshore CUWCD Connection**					
	CUWCD	Transmission Line	$21,257		Northshore CUWCD Connection	$40,779
	CUWCD	Transmission Line	$19,521		Total	$40,779
	TOTAL		**$40,779**			
51	**Tank 9**					
	Storage	Tank	$3,071,327		Tank 9	$5,004,475
	Source	Transmission Line	$1,043,660		Total	$5,004,475
	Fire	Transmission Line	$889,488			
	TOTAL		**$5,004,475**			
52	**Mountain View Corr CUWCD Connection**					
	Source	Transmission Line	$2,709,700		Mountain View Corr CUWCD Connection	$3,366,600
	Fire	Transmission Line	$656,900		Total	$3,366,600
	TOTAL		**$3,366,600**			
53	**Redwood Road Crossing**					
	Source	Transmission Line	$590,466		Redwood Road Crossing	$787,402
	Fire	Transmission Line	$196,936		Total	$787,402
	TOTAL		**$787,402**			
54	**DW15.A - Mt. Saratoga Pipeline**					
	Source	Transmission Line	$20,396		DW15.A - Mt. Saratoga Pipeline	$27,200
	Fire	Transmission Line	$6,804		Total	$27,200
	TOTAL		**$27,200**			
55	**Booster 8**					
	Source	Transmission Line	$5,050,423		Booster 8	$4,498,000
	Fire	Transmission Line	$0		Total	$4,498,000
	TOTAL		**$5,050,423**			

APPENDIX B

Cost Estimates

Saratoga Springs Impact Fee Facility Plan
Drinking Water System
Preliminary Engineers Cost Estimates

	Item	Unit	Pipe Diameter	2024 Unit Price	Quantity	Total Price	Category
DW01	***Well 7 Pipeline***						
	Install 10-inch pipeline	LF	10	$ 270	375	$ 101,250	Wells
	Directional drill10-inch HDPE pipeline	LF	10	$ 1,600	170	$ 272,000	Wells
					Total	$ 373,250	
					Engineering & Admin. (10%)	$ 37,325	
					Contingency (10%)	$ 37,325	
					Total to Well 7 Pipeline	**$ 448,000**	
DW02	***Tank 13***						
	Construct 1 MG Tank	GAL	NA	$ 2.60	1,000,000	$ 2,600,000	Storage
	Construct 1,000 gpm Pump Station	LS	NA	$ 3,000,000	1	$ 3,000,000	Source Conveyance
	Install 16-inch Pipeline	LF	16	$ 340	1,800	$ 612,000	Source Conveyance
	Install 12-inch Pipeline	LF	12	$ 300	2,400	$ 720,000	Source Conveyance
					Total	$ 6,932,000	
					Engineering & Admin. (10%)	$ 693,200	
					Contingency (5%)	$ 346,600	
					Total to Tank 13	**$ 7,971,000**	
DW03	***Tank 8***						
	Construct 5 MG Tank	GAL	NA	$ 2.60	5,000,000	$ 13,000,000	Storage
	Install 24-inch pipeline	LF	24	$ 480	5,300	$ 2,544,000	Source Conveyance
					Total	$ 15,544,000	
					Engineering & Admin. (10%)	$ 1,554,400	
					Contingency (5%)	$ 777,200	
					Total to Tank 8	**$ 17,876,000**	
DW04	***Zone 1 16-Inch Pipeline***						
	Install 16-inch pipeline	LF	16	$ 340	1,400	$ 476,000	Source Conveyance
					Total	$ 476,000	
					Engineering & Admin. (10%)	$ 47,600	
					Contingency (10%)	$ 47,600	
					Total to Zone 1 16-Inch Pipeline	**$ 571,000**	

Total By Category	
Wells	$ 447,900
Source Conveyance	$ 5,503,726
Storage	$ 14,352,000
Fire	$ 6,562,874
Total	$ 26,866,500

APPENDIX C

Growth Projections Memorandum

ZIONS PUBLIC FINANCE, INC.

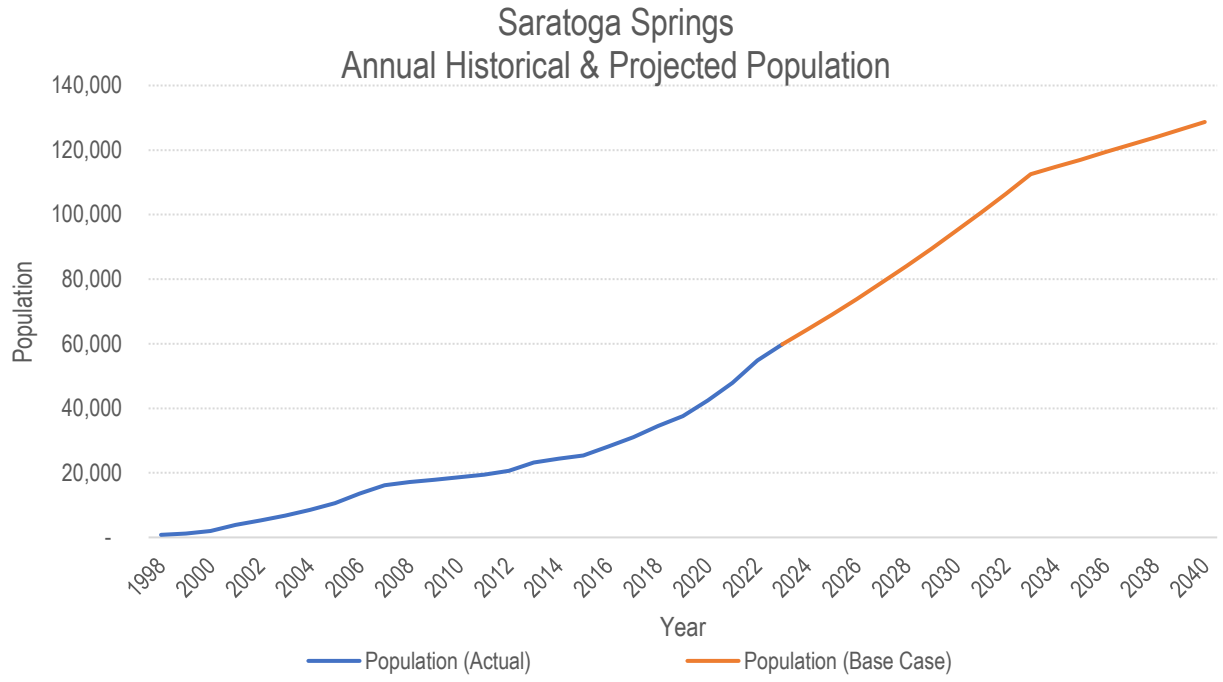
GROWTH PROJECTIONS MEMORANDUM

Historic and Projected Growth

Saratoga Springs continues its historically robust pace of growth as of March 2024. Indeed, over the trailing five-year period from 2018-2023, the City's population has increased at an average annual growth rate of 11.6 percent, reaching a new record population of 59,812 as of 2023. This comprises an absolute increase of 25,288 people since the close of 2018.

Zions projects Saratoga Springs to grow at an average annual growth rate of 6.1 percent, or 4,996 people, per-year over the period 2024-2034. Over the longer period of 2035-2040, Zions projects an average annual growth rate of 4.8 percent, at 4,157 people per year. In the year 2040 this would place Saratoga Springs total population at approximately 130,000 people.

CHART 1: SARATOGA SPRINGS ANNUAL HISTORICAL AND PROJECTED POPULATION



In generating these projections, Zions implemented a linear model coupled with upper and lower prediction intervals calculated at the 95% probability level to provide a base case long-term population growth scenario.

- Base Case – this scenario projects forward population levels assuming the mean growth of the City throughout its history. This is Zions recommended scenario.

The total population scenario is provided in the table below.

TABLE 1: HISTORIC ACTUAL AND PROJECTED POPULATION SCENARIO

Year	Population (Actual)	Projected Population (Base Case)
1998	795	-
1999	1,240	-
2000	1,984	-
2001	3,898	-
2002	5,267	-
2003	6,714	-
2004	8,520	-
2005	10,645	-
2006	13,574	-
2007	16,162	-
2008	17,135	-
2009	17,817	-
2010	18,624	-
2011	19,452	-
2012	20,663	-
2013	23,180	-
2014	24,403	-
2015	25,401	-
2016	28,138	-
2017	31,059	-
2018	34,524	-
2019	37,581	-
2020	42,449	-
2021	47,840	-
2022	54,875	-
2023	59,812	-
2024	-	64,334
2025	-	69,022
2026	-	73,877
2027	-	78,898
2028	-	84,085
2029	-	89,438
2030	-	94,958
2031	-	100,644
2032	-	106,496
2033	-	112,514
2034	-	114,764
2035	-	117,035
2036	-	119,328
2037	-	121,641
2038	-	123,974
2039	-	126,327
2040	-	128,698

Next, considering the recommended population scenario, we highlight annual percentage changes in the table below.

TABLE 2: ANNUAL PERCENT CHANGE IN PROJECTED POPULATION GROWTH

Year	Projected Population (Base Case)	YoY% Growth
2024	64,334	7.6%
2025	69,022	7.3%
2026	73,877	7.0%
2027	78,898	6.8%
2028	84,085	6.6%
2029	89,438	6.4%
2030	94,958	6.2%
2031	100,644	6.0%
2032	106,496	5.8%
2033	112,514	5.7%
2034	114,764	2.0%
2035	117,035	2.0%
2036	119,328	2.0%
2037	121,641	1.9%
2038	123,974	1.9%
2039	126,327	1.9%
2040	128,698	1.9%

Additionally, we provide year-over-year growth figures in count of people below in table 3.

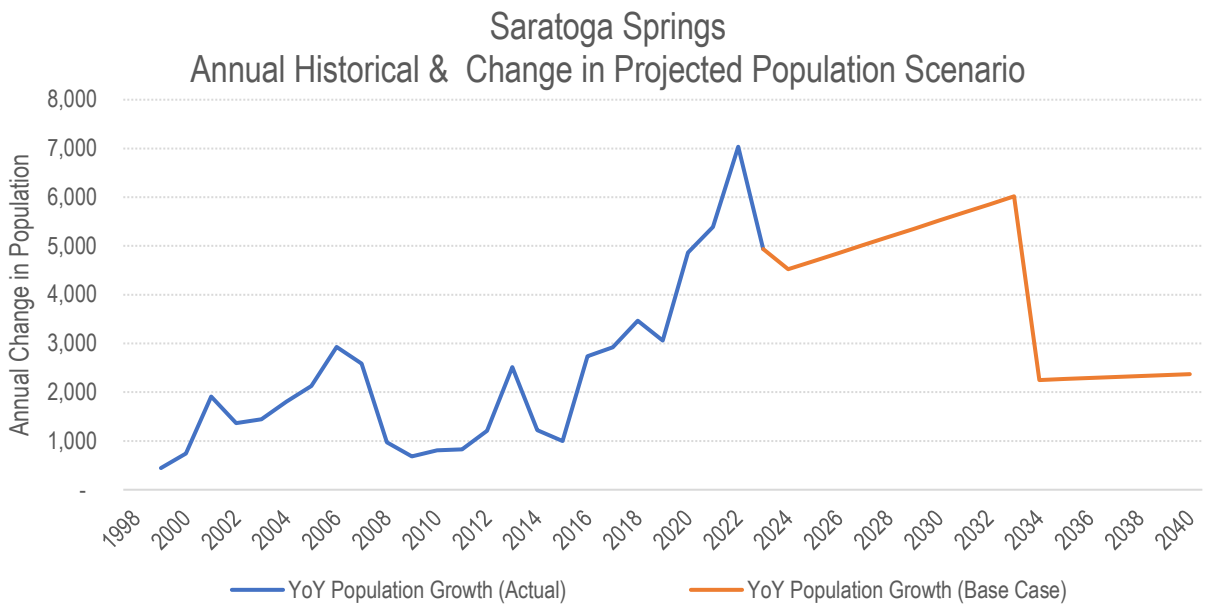
TABLE 3: ANNUAL CHANGE IN HISTORIC AND PROJECTED POPULATION GROWTH

Year	YoY Population Growth (Actual)	YoY Population Growth (Base Case)
1998	-	-
1999	445	-
2000	744	-
2001	1,914	-
2002	1,369	-
2003	1,447	-
2004	1,806	-
2005	2,125	-
2006	2,929	-
2007	2,588	-
2008	973	-
2009	682	-
2010	807	-
2011	828	-
2012	1,211	-
2013	2,517	-
2014	1,223	-
2015	998	-
2016	2,737	-
2017	2,921	-

Year	YoY Population Growth (Actual)	YoY Population Growth (Base Case)
2018	3,465	-
2019	3,057	-
2020	4,868	-
2021	5,391	-
2022	7,035	-
2023	4,937	
2024	-	**4,522**
2025	-	**4,688**
2026	-	**4,855**
2027	-	**5,021**
2028	-	**5,187**
2029	-	**5,353**
2030	-	**5,520**
2031	-	**5,686**
2032	-	**5,852**
2033	-	**6,018**
2034	-	**2,249**
2035	-	**2,271**
2036	-	**2,292**
2037	-	**2,313**
2038	-	**2,333**
2039	-	**2,353**
2040	-	**2,372**
Avg. Forward Growth/Year		**4,052**

Next, utilizing historical data regarding residential units added annually, we can understand the relationship between population growth and the growth of residential units in the community. This historical record of residential units added annually with forward projections is provided below.

CHART 2: SARATOGA SPRINGS HISTORICAL & PROJECTED RESIDENTIAL UNITS ADDED ANNUALLY



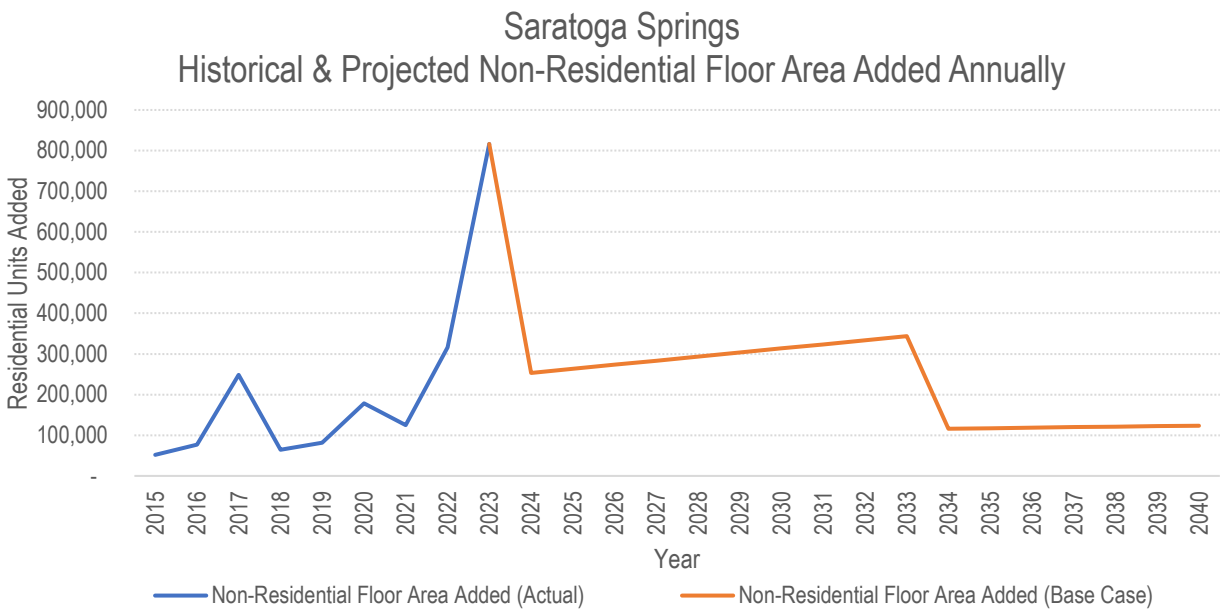
When analyzing the forward growth of residential units within Saratoga Springs, we again note the recommended base case scenario. This data is provided in table 4 below.

TABLE 4: HISTORICAL AND PROJECTED RESIDENTIAL UNITS ADDED ANNUALLY

Year	Residential Units Added (Actual)	Residential Units Added (Base Case)
2013	438	-
2014	315	-
2015	382	-
2016	812	-
2017	620	-
2018	666	-
2019	730	-
2020	1,536	-
2021	1,763	-
2022	1,091	-
2023	1,161	-
2024	-	**1,065**
2025	-	**1,100**
2026	-	**1,135**
2027	-	**1,169**
2028	-	**1,204**
2029	-	**1,238**
2030	-	**1,273**
2031	-	**1,307**
2032	-	**1,342**
2033	-	**1,377**
2034	-	**592**
2035	-	**597**
2036	-	**601**
2037	-	**606**
2038	-	**610**
2039	-	**614**
2040	-	**618**
Avg. Forward Growth/Year		**968**

Finally, we also provide a forecast of non-residential floor area added annually. We note that 2023 added non-residential floor area in an amount of 816,317 square feet, which stands 5.7x the historical average from 2015-2022. This is above trend, and while certainly possible to continue in the future, 2024 floor area constructed thus far is 151,770 square feet. Our statistical calculations predict 2024 to end with 322,719 square feet constructed in total. However, we acknowledge that the City has additional tangible, on-the-ground, knowledge regarding permitted construction that may diverge from this figure. Please see the historical chart and projections below.

CHART 3: SARATOGA SPRINGS HISTORICAL & PROJECTED NON-RESIDENTIAL FLOOR AREA ADDED ANNUALLY



Regarding non-residential floor area added, the Mid-Upper Range growth scenario is again selected. Over the future period from 2024-2040 we project an annual average of 224,844 square feet of non-residential floor area added annually. This data is provided directly in table 5 below.

TABLE 5: HISTORICAL AND PROJECTED NON-RESIDENTIAL FLOOR AREA ADDED ANNUALLY

Year	Non-Residential Floor Area Added (Actual)	Non-Residential Floor Area Added (Base Case)
2015	51,777	-
2016	76,676	-
2017	248,586	-
2018	64,614	-
2019	81,699	-
2020	178,188	-
2021	125,249	-
2022	316,469	-
2023	816,317	-
2024	-	**253,217**
2025	-	**263,255**
2026	-	**273,293**
2027	-	**283,332**

Year	Non-Residential Floor Area Added (Actual)	Non-Residential Floor Area Added (Base Case)
2028	-	**293,370**
2029	-	**303,409**
2030	-	**313,447**
2031	-	**323,485**
2032	-	**333,524**
2033	-	**343,562**
2034	-	**116,002**
2035	-	**117,318**
2036	-	**118,598**
2037	-	**119,843**
2038	-	**121,056**
2039	-	**122,239**
2040	-	**123,392**
Avg. Forward Growth/Year		**224,844**

Additional Considerations

As part of this analysis, Zions implemented a linear regression model coupled with prediction intervals calculated using Saratoga Springs historical data, including a prediction for year 2024 which is yet to close. As mentioned above, we acknowledge that the City may have additional tangible, on-the-ground, knowledge regarding growth in 2024 that is yet to be reflected in data.

APPENDIX D

CUWCD Water Costs

EXHIBIT A

February, 2017

Take-Down Schedule - Purchased Water Take-Down Schedule (By Volume) for Purchased Water Under this Agreement

COLUMN	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)
Fiscal Year (ie FY2008-09 = July 1, 2008 - June 30, 2009)	Annual Volume (Block) of Purchased Water For Which One-Time Development Fee is Due (AF)	One Time Development Charge for Blocks of Purchased Water (per AF)	Annual Volume of Purchased Water Subject to Capital Recovery Component of Annual Fee (AF)	*Actual* and Estimated Capital Recovery Component of Annual Fee for Volume of Water in Column C (per AF)	Annual Volume of Purchased Water which becomes Deliverable Water (AF)	Cumulative Annual Volume of Deliverable Water (AF)	*Actual* and Estimated OM&R Component of Annual Fee for Deliverable Water in Column (F) (per AF)	*Actual* and Estimated Future Annual Fee (As set annually by the District) (Fee includes the OM&R and Capital Recovery Components in Columns D & G
2008-09	0	*$6,200*	0		0	0		*$300*
2009-10	0	*$6,200*	0		0	0		*$314*
2010-11	0	*$6,200*	0		0	0		*$328*
2011-12	0	*$6,200*	0		0	0		*$343*
2012-13	0	*$6,200*	0		0	0		*$358*
2013-14	0	*$6,200*	0		0	0		*$374*
2014-15	0	*$6,200*	0	*$222*	0	0	*$169*	*$391*
2015-16	0	*$6,200*	0	*$203*	0	0	*$205*	*$408*
2016-17	0	*$6,200*	0	*$252*	0	0	*$175*	*$427*
2017-18	50	$6,200	50	$280	50	50	$166	$446
2018-19	50	$6,200	100	$310	50	100	$156	$466
2019-20	9900	$6,200	10,000	$346	380	480	$141	$487
2020-21	0		10,000	$364	380	860	$145	$509
2021-22	0		10,000	$383	380	1,240	$149	$532
2022-23	0		10,000	$400	380	1,620	$156	$556
2023-24	0		10,000	$421	380	2,000	$160	$581
2024-25	0		10,000	$442	380	2,380	$165	$607
2025-26	0		10,000	$464	380	2,760	$170	$634
2026-27	0		10,000	$484	380	3,140	$179	$663
2027-28	0		10,000	$508	380	3,520	$185	$693
2028-29	0		10,000	$530	380	3,900	$194	$724
2029-30	0		10,000	$556	380	4,280	$200	$756
2030-31	0		10,000	$583	380	4,660	$207	$790
2031-32	0		10,000	$609	380	5,040	$217	$826
2032-33	0		10,000	$639	380	5,420	$224	$863
2033-34	0		10,000	$668	380	5,800	$234	$902
2034-35	0		10,000	$702	380	6,180	$241	$943
2035-36	0		10,000	$733	380	6,560	$252	$985
2036-37	0		10,000	$7	380	6,940	$259	$266
2037-38	0		10,000	$8	380	7,320	$271	$279
2038-39	0		10,000	$11	380	7,700	$280	$291
2039-40	0		10,000	$12	380	8,080	$293	$305
2040-41	0		10,000	$16	380	8,460	$302	$318
2041-42	0		10,000	$16	380	8,840	$316	$332
2042-43	0		10,000	$20	380	9,220	$327	$347
2043-44	0		10,000	$21	380	9,600	$342	$363
2044-45	0		10,000	$25	400	10,000	$355	$380

- Actual previous or present fee amounts are in Italics and Blue as set by District Board of Trustees

Continues at 10,000 AF

- Fee amounts are estimated amounts and set annually by District Board of Trustees

CWP-Saratoga Springs Exhibit A Summary and Calculation

Fiscal Year (ie FY2008-09 = July 1, 2008 - June 30, 2009)	CWP One Time Development Charge Removed from Reserved Status (AF)	Actual and Estimated Capital Recovery Portion of Annual Fee (per AF)	Actual and Estimated OM&R Portion of Annual Fee (per AF)	Actual and Estimated Future Annual Fee (As set annually by the District) (Fee Includes the OM&R and Capital Recovery Components (per AF)	Capital Prepayment No Discount (per AF)	Capital Prepayment with 2.5% Discount (per AF)	Cost per Discounted Typical Single Family = .45 AF = WFSU .40
2008-09	$5,850				$15,949	$12,827	$5,772
2009-10	$6,200				$16,299	$13,168	$5,926
2010-11	$7,000				$17,099	$13,949	$6,277
2011-12	$7,800				$17,899	$14,729	$6,628
2012-13	$8,400				$18,499	$15,314	$6,891
2013-14	$8,500				$18,599	$15,412	$6,935
2014-15	$9,100	$222	$169	$391	$19,199	$15,997	$7,199
2015-16	$9,370	$203	$205	$408	$19,247	$16,222	$7,300
2016-17	$9,600	$252	$175	$427	$19,274	$16,426	$7,391
2017-18	$9,840	$280	$166	$446	$19,262	$16,590	$7,466
2018-19	$10,090	$310	$156	$466	$19,232	$16,736	$7,531
2019-20	$10,340	$346	$141	$487	$19,172	$16,850	$7,582
2020-21	$10,600	$364	$145	$509	$19,086	$16,935	$7,621
2021-22	$10,870	$383	$149	$532	$18,992	$17,008	$7,654
2022-23	$11,140	$400	$156	$556	$18,879	$17,058	$7,676
2023-24	$11,420	$421	$160	$581	$18,759	$17,095	$7,693
2024-25	$11,720	$442	$165	$607	$18,638	$17,126	$7,707