IMPACT FEE FACILITIES PLAN

Prepared for

West Jordan City, Utah

May 13, 2013

TischlerBise
Fiscal, Economic & Planning Consultants

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TischlerBise, Inc., certifies that the attached Impact Fee Facilities Plan:

1. includes only the costs of public facilities that are:
    a. allowed under the Impact Fees Act; and
    b. actually incurred; or
    c. projected to be incurred or encumbered within six years after the day on which each impact fee is paid;
2. does not include:
    a. costs of operation and maintenance of public facilities;
    b. costs for qualifying public facilities that will raise the level of service for the facilities, through impact fees, above the level of service that is supported by existing residents;
    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.

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Overview

West Jordan City, Utah, has retained TischlerBise to determine growth-related infrastructure needs and calculate impact fees for the following infrastructure categories:

- Parks
- Fire
- Police
- Stormwater
- Water
- Sewer
- Transportation

This Impact Fee Facility Plan is a companion document to the City's Impact Fee Analysis Report, prepared for West Jordan City, Utah. Whereas the Impact Fee Analysis Report presents the technical analysis, assumptions and impact fee methodology, this Impact Fee Facilities Plan summarizes:

- Demands placed upon existing public facilities by new development
- The proposed means by which the City will meet these demands
- Funding source and cash flow analysis

Impact fees are one-time payments used to construct system improvements needed to accommodate new development. An impact fee represents new growth's fair share of capital facility needs. By law, impact fees can only be used for *capital* improvements, not operating or maintenance costs. Impact fees are subject to legal standards, which require fulfillment of three key elements: need, benefit and proportionality. First, to justify a fee for public facilities, it must be demonstrated that new development will create a **need** for capital improvements. Second, new development must derive a **benefit** from the payment of the fees (i.e., in the form of public facilities constructed within a reasonable timeframe). Third, the fee paid by a particular type of development should not exceed its **proportionate** share of the capital cost for system improvements.

SUMMARY OF IMPACT FEES

Figure 1 provides a summary schedule of the parks and recreation impact fees for West Jordan City.

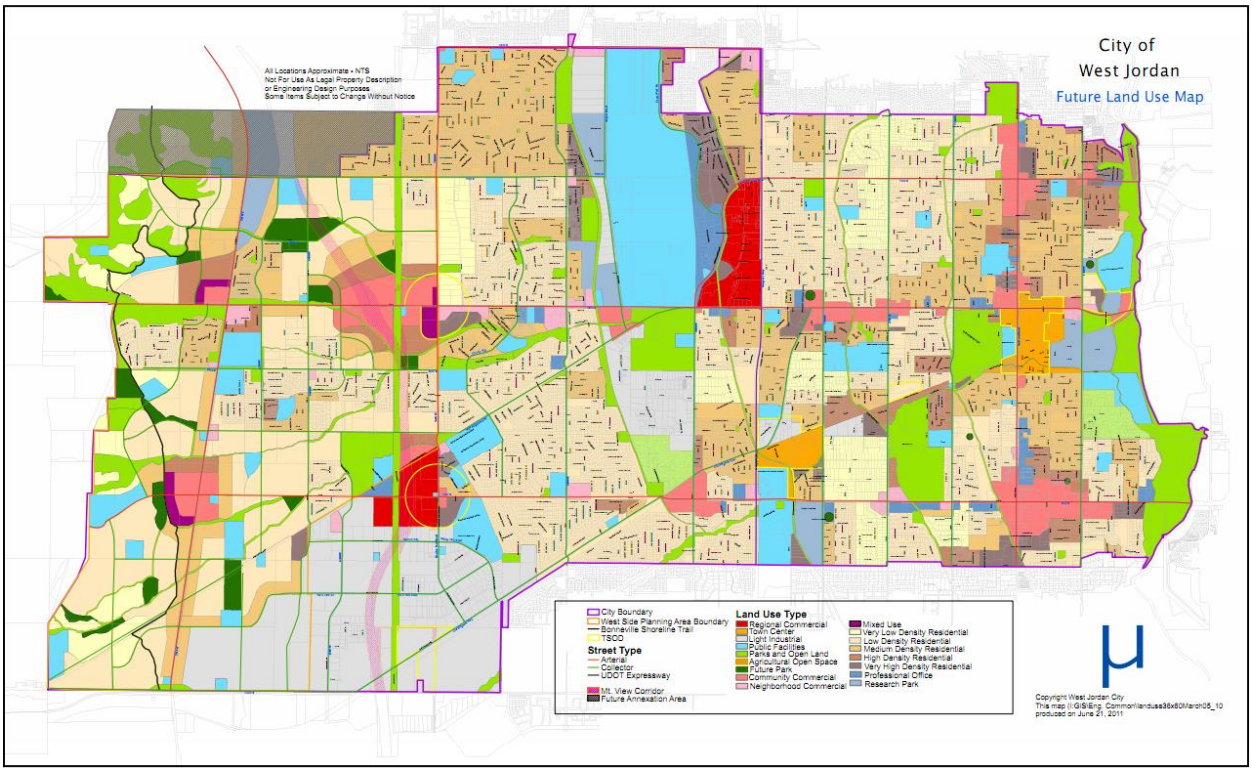
Figure 1. West Jordan City Impact Fees

Residential (per housing unit)	Parks	Fire	Police	Roads	Water	Sewer	Stormwater
Multifamily	$1,374	$92	$89	$1,742	$1,276	$885	Per Acre
Single Family	$2,070	$138	$134	$3,577	$1,922	$1,333	Per Acre
Nonresidential (per 1,000 Sq. Ft.)							
Commercial	$0.00	$122	$182	$4,163	Per Meter	Per Meter	Per Acre
Office	$0.00	$203	$71	$1,784	Per Meter	Per Meter	Per Acre
Industrial	$0.00	$179	$52	$1,314	Per Meter	Per Meter	Per Acre

Demand Placed Upon Existing Public Facilities

In this Impact Fee Facilities Plan, TischlerBise documents the demographic data and development projections used in the impact fee study for the City of West Jordan. Although a long-range plan is necessary for planning capital improvements, a shorter time frame of six years is critical for the impact fees analysis. Infrastructure standards will be calibrated using fiscal year 2010-2011 data and the first projection year for the cash flow model will be fiscal year 2011-2012. The City's fiscal year begins July 1st.

Figure 2. West Jordan General Plan Land Use Map



CURRENT ESTIMATE OF HOUSING UNITS AND HOUSEHOLDS

There were 31,366 housing units in the City at the time of the 2010 Census. Approximately 78% of these units (24,443) were detached housing units, with attached housing units comprising the remaining 22% (6,923). TischlerBise added the number of housing permits issued by the City since April 2010 (532) to the number of housing units from the 2010 Census (31,366) to estimate the current number of housing units in the City (31,898). The current number of households (occupied housing units) is 30,367. This is calculated by applying the vacancy rate from the 2010 Census (4.8%) to the current number of housing units.

Figure 3. July 1, 2011 Estimate of Housing Units and Households in the City of West Jordan

April 1, 2010 Housing Units*		31,366
	*Distribution***	
Detached Units	78%	24,443
Attached Units	22%	6,923
Subtotal		31,366
Permits Issued April 2010 - June 2011***		
Detached Units		144
Attached Units		388
Subotal		532
July 1, 2011 Housing Units		31,898
Vacancy Rate*		4.8%
July 1, 2011 Households		30,367

* 2010 Census.
** Based on housing units from 2010 Census plus permits issued FY2001 through FY2011.
*** West Jordan Community Development Department.

CURRENT ESTIMATE OF POPULATION

TischlerBise estimates the City's current population to be 105,181 persons. The 2010 Census population was 103,712 persons. Based on the number and type of housing permits issued since April 2010 and the number of persons per household, TischlerBise estimates an additional 1,469 persons have been added to the City since the 2010 Census. This number is added to the 2010 Census figure to derive the July 1, 2010 estimate

Figure 4. July, 1 2011 Estimate of Population in the City of West Jordan

April 1, 2010 Population*	103,712
Housing Permits Issued April 2010 - June 2011**	
Detached Units	144
Attached Units	388
Persons per Housing Unit***	
Detached Units	3.66
Attached Units	2.43
Population Added Since April 2010	
Detached Units	528
Attached Units	942
TOTAL	1,469
July 1, 2011 Population	105,181

* 2010 Census.
** West Jordan Community Development Department.
*** Figure A1.

HOUSING UNIT AND POPULATION PROJECTIONS

For future projections of new residential development, TischlerBise analyzed data for the City from the *Wasatch Front Region Small Area Socioeconomic Forecasts: 2007-2040 Technical Report #49* from the Wasatch Front Regional Council. Future growth rates for households from the WFRC are applied to the current estimate of 30,367 to project households and total housing units. The vacancy rate from the 2010 Census is applied to the projected number of households to derive the projected number of housing units. Finally, TischlerBise applied the detached and attached distribution percentages from the past ten years to project future housing units by type.

Figure 5. Housing Unit Projections in City of West Jordan

	Base	2011*	2012	2013	2014	2015	5 Year Increments 2016	2021	2026	2031
Households		30,367	30,618	30,869	31,119	31,370	32,151	36,248	40,262	44,517
Annual Growth Rate**		0.83%	0.82%	0.81%	0.81%	2.49%	2.43%	2.18%	2.04%	2.01%
Vacancy Rate***		4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%
Housing Units		31,898	32,162	32,425	32,689	32,952	33,772	38,076	42,292	46,761
	*Distribution****									
Detached Units	78%	24,587	24,793	24,998	25,203	25,409	26,048	29,402	32,687	36,170
Attached Units	22%	7,311	7,369	7,427	7,485	7,543	7,724	8,674	9,605	10,591

* July 1, 2011 population estimate from TischlerBise.
** Annual growth rates taken from TischlerBise analysis of data from *Wasatch Front Region Small Area Socioeconomic Forecasts: 2007-2040 Technical Report #49* , Wasatch Front Regional Council, July 2010.
*** 2010 Census.
**** Based on housing permits issued FY2001 through FY2011.

Population projections are calculated by applying Persons per Housing Unit from Figure 6 to projected new housing units by type from Figure 5. These projections are then added to the current estimate of 105,181 persons.

Figure 6. Population Projections in City of West Jordan

	Base	2011*	2012	2013	2014	2015	5 Year Increments 2016	2021	2026	2031
Population**		105,181	106,075	106,968	107,861	108,755	111,535	126,128	140,422	155,575
Annual Growth Rate			0.85%	0.84%	0.84%	0.83%	2.56%	2.28%	2.13%	2.09%

* July 1, 2011 population estimate from TischlerBise.
** Growth derived from houeshold projections

NONRESIDENTIAL VEHCILE TRIP AND EMPLOYEE/BUILDING AREA RATIOS

In addition to data on residential development, the calculation of impact fees requires data on employment (number of jobs) and nonresidential square footage in the City of West Jordan.

To convert gross nonresidential floor area to employment, TischlerBise uses average square feet per employee multipliers. The multipliers are shown in on the figure below and are derived from national data published by the Institute of Transportation Engineers (ITE) and the Urban Land Institute (ULI). Trip rates are used to calculate the number of vehicle trips generated by different residential and nonresidential land uses.

Figure 7. Employee and Building Area Ratios

ITE Code	*Land Use / Size*	*Demand Unit*	*Wkdy Trip Ends Per Dmd Unit**	*Wkdy Trip Ends Per Employee**	*Emp Per Dmd Unit***	*Sq Ft Per Emp*
Commercial / Shopping Center						
820	10K gross leasable area	1,000 Sq Ft	152.03	na	3.33	300
820	25K gross leasable area	1,000 Sq Ft	110.32	na	3.03	330
820	50K gross leasable area	1,000 Sq Ft	86.56	na	2.86	350
820	100K gross leasable area	1,000 Sq Ft	67.91	na	2.50	400
820	200K gross leasable area	1,000 Sq Ft	53.28	na	2.22	450
820	**Average**	**1,000 Sq Ft**	**42.94**	**na**	**2.00**	**500**
857	Discount Club	1,000 Sq Ft	41.80	32.21	1.30	771
General Office						
710	10K gross floor area	1,000 Sq Ft	22.66	5.06	4.48	223
710	25K gross floor area	1,000 Sq Ft	18.35	4.43	4.14	241
710	50K gross floor area	1,000 Sq Ft	15.65	4.00	3.91	256
710	100K gross floor area	1,000 Sq Ft	13.34	3.61	3.70	271
710	200K gross floor area	1,000 Sq Ft	11.37	3.26	3.49	287
710	**Average**	**1,000 Sq Ft**	**11.01**	**3.32**	**3.32**	**302**
Other Nonresidential						
770	Business Park***	1,000 Sq Ft	12.76	4.04	3.16	317
760	**Research & Dev Center**	**1,000 Sq Ft**	**8.11**	**2.77**	**2.93**	**342**
610	Hospital	1,000 Sq Ft	16.50	5.20	3.17	315
565	Day Care	student	4.48	28.13	0.16	na
550	University/College	student	2.38	9.13	0.26	na
530	High School	student	1.71	19.74	0.09	na
520	Elementary School	student	1.29	15.71	0.08	na
520	Elementary School	1,000 Sq Ft	15.43	15.71	0.98	1,018
320	Lodging	room	5.63	12.81	0.44	na
254	Assisted Living	bed	2.66	3.93	0.68	na
151	Mini-Warehouse	1,000 Sq Ft	2.50	61.90	0.04	24,760
150	Warehousing	1,000 Sq Ft	3.56	3.89	0.92	1,093
140	Manufacturing	1,000 Sq Ft	3.82	2.13	1.79	558
110	Light Industrial	1,000 Sq Ft	6.97	3.02	2.31	433

* Trip Generation, Institute of Transportation Engineers, 2008.

** Employees per demand unit calculated from trip rates, except for Shopping Center data, which are derived from Development Handbook and Dollars and Cents of Shopping Centers, published by the Urban Land Institute.

*** According to ITE, a Business Park is a group of flex-type buildings served by a common roadway system. The tenant space includes a variety of uses with an average mix of 20-30% office/commercial and 70-80% industrial/warehousing.

The shaded land uses in the above figure represent development types for each category of land use in the City of West Jordan, which will be used in the cash flow analysis to project expenditures and impact fee revenue from future development.

ESTIMATED NONRESIDENTIAL FLOOR AREA

To determine the current nonresidential floor area in the City, TischlerBise started with the number of jobs at the time of the City's previous impact fee study (April 2008) to which is added the number of jobs from nonresidential square footage permitted since the study. Nonresidential square footage permitted

since April 2008 was provided by the City and totals approximately 1.4 million square feet. The nonresidential square footage permitted from April 2008 to June 2011 (1,400,616) is added to the total square footage from the 2008 impact fee study (13,860,000) to estimate the current amount of nonresidential square footage in the City (15,260,616).

Figure 8 - Estimated Nonresidential Floor Area in West Jordan City

	*April 2008**	*Permits Issued***	*June 2011*
Commercial	4,840,000	198,584	5,038,584
Office	6,260,000	444,411	6,704,411
Industrial	2,760,000	757,621	3,517,621
TOTAL	13,860,000	1,400,616	15,260,616

* April 1, 2008 Estimate from TischlerBise's *Impact Fee Study: Water System, Stormwater Facilities and Parks*, 2008.
** West Jordan Community Development Department.

EMPLOYMENT AND NONRESIDENTIAL FLOOR AREA PROJECTIONS

For future projections of employment, TischlerBise utilized data for the City included in the *Wasatch Front Region Small Area Socioeconomic Forecasts: 2000-2030 Technical Report #45* published by the Wasatch Front Regional Council. Figure 7 shows the cumulative totals for three categories as well as the annual increase by sector (e.g., retail, other and industrial). It is interesting to note the Wasatch Front Regional Council is projecting a slight decline in retail employment from 2015 to 2016.

Figure 9. Employment by Type of Job Projections in West Jordan City

						5 Year Increments			
	2011	*2012*	*2013*	*2014*	*2015*	*2016*	*2021*	*2026*	*2031*
Total Jobs By Type*									
Retail	10,849	10,896	10,943	10,990	11,037	10,885	10,987	11,022	11,200
Other**	17,105	17,490	17,875	18,260	18,645	19,138	20,677	22,570	25,117
Industrial	6,312	6,382	6,453	6,524	6,594	6,580	7,086	7,338	7,672
Total	**34,266**	**34,768**	**35,271**	**35,774**	**36,277**	**36,603**	**38,750**	**40,930**	**43,989**
Annual Increase, Jobs by Type									
Retail		47	47	47	47	-152	4	16	113
Other**		385	385	385	385	493	364	438	797
Industrial		71	71	71	71	-15	48	59	97
		503	503	503	503	327	417	513	1,006

*Employment projection from *Wasatch Front Region Small Area Socioeconomic Forecasts: 2000-2030 Technical Report #45*, Wasatch Front Regional Council, July 2007.
**This category is office and institutional

TischlerBise applied employee per square foot assumptions from Figure 7 to the projected number of jobs by type to project future nonresidential floor area.

Figure 10. Nonresidential Floor Area by Type Projections in West Jordan City

							5 Year Increments		
		2012	*2013*	*2014*	*2015*	*2016*	*2021*	*2026*	*2031*
Annual Increase Floor Area by Type (1,000's)									
	*SF/Job**								
Commercial SF	500	24	24	24	24	-76	2	8	56
Office	302	116	116	116	116	149	110	132	241
Industrial SF	433	31	31	31	31	-6	21	26	42
TOTAL		170	170	170	170	67	133	166	339
Total Floor Area by Type (1,000's)									
	Base Year 2011								
Commercial SF	5,039	5,062	5,086	5,109	5,133	5,057	5,108	5,125	5,214
Office SF	6,704	6,821	6,937	7,053	7,169	7,318	7,783	8,355	9,124
Industrial SF	3,518	3,548	3,579	3,609	3,640	3,634	3,853	3,962	4,107
TOTAL	15,261	15,431	15,601	15,772	15,942	16,009	16,744	17,442	18,445

* Taken from Figure A8.

AVERAGE DAILY VEHICLE TRIPS

Residential Vehicle Trip Rates

As an alternative to simply using the national average trip generation rate for residential development, the Institute of Transportation Engineers (ITE) publishes regression curve formulas that may be used to derive custom trip generation rates using local demographic data. Key independent variables needed for the analysis (i.e., vehicles available, housing units, households and persons) are available from the U.S. Census Bureau American Community Survey (ACS) 2005-2009 data for West Jordan. This data was used to derive custom average weekday vehicle trip ends by type of housing, as shown below.

Figure 11. Average Weekday Vehicle Trip Ends by Housing Type in West Jordan City

	Vehicles Available (1)	Households (2) Single Family Detached Units	Households (2) Attached Units	Households (2) Total	Vehicles per Household by Tenure
Owner-occupied	55,762	21,212	2,267	23,479	2.37
Renter-occupied	9,450	1,703	4,028	5,731	1.65
TOTAL	**65,212**	**22,915**	**6,295**	**29,210**	**2.23**
Housing Units (6) =>		23,280	6,603	29,883	

	Persons (3)	Trip Ends (4)	Vehicles by Type of Housing	Trip Ends (5)	Average Trip Ends	Trip Ends per Housing Unit
Single Family Detached Units	91,490	236,795	53,186	307,449	272,122	11.70
Attached Units	7,912	27,390	12,026	47,676	37,533	5.70
TOTAL	**101,394**	**264,185**	**65,212**	**355,124**	**309,655**	**10.40**

(1) Vehicles available by tenure from Table B25046, American Community Survey, 2005-2009.
(2) Households by tenure and units in structure from Table B25032, American Community Survey, 2005-2009.
(3) Persons by units in structure from Table B25033, American Community Survey, 2005-2009.
(4) Vehicle trips ends based on persons using formulas from Trip Generation (ITE 2008). For single family detached housing (ITE 210), the fitted curve equation is EXP(0.91*LN(persons)+1.52). To approximate the average population of the ITE studies, persons were divided by 16 0.75 and the equation result multiplied by 160.75 For single family attached housing (ITE 230), the fitted curve equation is (1.78*persons)+273.89. For multifamily housing (ITE 220), the fitted curve equation is (3.47*persons)-64.48.
(5) Vehicle trip ends based on vehicles available using formulas from Trip Generation (ITE 2008). For single family detached housing (ITE 210), the fitted curve equation is EXP(0.99*LN(vehicles)+1.81). To approximate the average number of vehicles in the ITE studies, vehi cles available were divided by 206 and the equation result multiplied by 206. For single family attached housing (ITE 230), the fitted curve equation is (2.31*persons)+307.36. For multifamily housing (ITE 220), the fitted curve equation is (3.94*vehicles)+293.58.
(6) Housing units from Table B25024, American Community Survey, 2005-2009.

Nonresidential Vehicle Trip Rates

Vehicle trips rates for nonresidential development are from the reference book, *Trip Generation* published by the Institute of Transportation Engineers (ITE) in 2008.

Trip Rate Adjustments

Trip generation rates are adjusted to avoid double counting each trip at both the origin and destination points. Therefore, the basic trip adjustment factor is 50 percent. As discussed below, additional adjustments are made to ensure the fees are proportionate to the infrastructure demand for particular types of development.

Adjustment for Journey-To-Work Commuting

Residential development in the City has a larger trip adjustment factor of 58 percent to account for commuters leaving West Jordan for work. According to the National Household Travel Survey, home-based work trips are typically 31 percent of "production" trips, in other words, out-bound trips (which are 50 percent of all trip ends). Also, data from the US Census Bureau indicates that 52 percent of West Jordan's workers travel outside the City for work. In combination, these factors (0.31 x 0.50 x 0.52 = 0.08) account for 8 percent of additional production trips. The total adjustment factor for residential includes attraction trips (50 percent of trip ends) plus the journey-to-work commuting adjustment (8 percent of production trips) for a total of 58 percent.

Adjustment for Pass-By Trips and Diverted Link Trips

Commercial development has a trip factor of less than 50% due to two characteristics unique to this land use. First, commercial development attracts vehicles as they pass-by on arterial and collector roads ("pass-by" trips). For example, when someone stops at a convenience store on their way home from work, the convenience store is not their primary destination.

A second adjustment for diverted linked trips is made to the commercial category. Diverted linked trips are trips that are attracted from the traffic volume on roads in the vicinity of commercial development but require a diversion from one road to another road to gain access to the commercial development. These trips add traffic to streets adjacent to the development, but do not add trips to a community's transportation network.

Figure 12 below summarizes the commercial trip adjustments for pass-by trips and diverted linked trips.

Figure 12. Adjustment for Pass-by and Diverted Link Trips for Commercial Land Uses

Floor Area in thousands (KSF)	All Commercial Trips (a)	Comm. Pass-by Trips (b)*	Comm. Diverted-Link Trips (c)**	Primary Comm. Trips (d=(a-(b+c))	Origin - Destination Adj. Factor (e)***	Commercial Trip Adj Factor (d x e)
10	100%	52%	24%	24%	50%	12%
25	100%	45%	24%	31%	50%	16%
50	100%	39%	24%	37%	50%	19%
100	100%	34%	24%	42%	50%	21%
328	100%	25%	24%	51%	50%	26%
400	100%	23%	24%	53%	50%	27%
800	100%	18%	24%	58%	50%	29%

* Based on data published by ITE in *Trip Generation Handbook* (2004), the best trendline correlation between pass-by trips and floor area is a logarithmic curve with the equation ((-7.6967*LN(KSF)) + 69.448).
** Based on data published by ITE in *Trip Generation Handbook* (2004).
*** To account for the origin-destination relationship of a trip, an adjustment factor of 50% is applied to the primary trips to account for only the trip destinations, i.e. the trips attracted to a land use.

A basic trip adjustment factor of 50 percent is applied to the office, public sector, and industrial land use categories.

Estimated Vehicle Trips in West Jordan

As shown in Figure 13 there are an average of 313,588 vehicle trips generated by existing development in West Jordan on an average weekday. As the table indicates, residential development is estimated to generate 191,018 vehicle trips compared to 122,569 vehicle trips generated by nonresidential development. An example of the calculation is as follows for detached units: 24,587 single family units x 11.70 vehicle trips per day per unit x 58% adjustment factor = 166,849 total vehicle trips per day from detached units in the City.

Figure 13. Average Daily Trips

Residential Vehicle Trip Ends on an Average Weekday

Residential Units	Assumptions	
Detached Housing	24,587	
Attached Housing	7,311	
Average Weekday Vehicle Trip Ends per Unit	Trip Rate	Trip Factor
Single Family*	11.70	58%
Multi-family*	5.70	58%
Residential Vehicle Trip Ends of an Average Weekday		
Detached Housing	166,849	
Attached Housing	24,169	
Total Residential Trip Ends	**191,018**	

Nonresidential Vehicle Trips Ends on an Average Weekday

Nonresidential Gross Floor Area (1,000 sq. ft.)	Assumptions	
Commercial	5,039	
Office/Institutional	6,704	
Industrial	3,518	
Average Weekday Vehicle Trips Ends per 1,000 Sq. Ft.**	Trip Rate	Trip Factor
Commercial	42.94	33%
Office/Institutional	11.01	50%
Industrial	8.11	50%
Nonresidential Vehicle Trip Ends on an Average Weekday		
Commercial	71,398	
Office/Institutional	36,908	
Industrial	14,264	
Total Nonresidential Trip Ends	**122,569**	
TOTAL TRIP ENDS	**313,588**	

*Custom trip rates derived by TischlerBise using PUMS data for the City of West Jordan.
** Trip rates are from the Institute of Transportation Engineers(ITE) *Trip Generation Manual* (2008)

DEMOGRAPHIC SUMMARY

Annual demographic and development projections for the study are summarized in Figure 14 below. Demographic data estimates for 2011 are used in the impact fee calculations primarily to quantify current levels-of-service being provided to existing development. The development *projections* are used for the purpose of having an understanding of the future pace of service demands and cash flows resulting from revenues and expenditures associated with those service demands.

Figure 14. Detailed Demographic Data

		1	2	3	4	5	6	5-Year Increments			Cumulative Increase	Average Annual Increase
	2011	2012	2013	2014	2015	2016	2017	2022	2027	2031	2011-31	Increase
Population	105,181	106,075	106,968	107,861	108,755	111,535	114,315	128,943	143,345	155,575	**50,394**	**2,520**
Households	30,367	30,618	30,869	31,119	31,370	32,151	32,932	37,039	41,083	44,517	**14,150**	**708**
Detached Housing Units	24,587	24,793	24,998	25,203	25,409	26,048	26,687	30,049	33,359	36,170	**11,583**	**579**
Attached Housing Units	7,311	7,369	7,427	7,485	7,543	7,724	7,905	8,858	9,795	10,591	**3,281**	**164**
TOTAL	31,898	32,162	32,425	32,689	32,952	33,772	34,592	38,906	43,154	46,761	**14,863**	**743**
Commercial Jobs	10,849	10,896	10,943	10,990	11,037	10,885	10,910	10,992	11,038	11,200	**352**	**18**
Office/Institutional Jobs	17,105	17,490	17,875	18,260	18,645	19,138	19,432	21,041	23,007	25,117	**8,012**	**401**
Industrial Jobs	6,312	6,382	6,453	6,524	6,594	6,580	6,694	7,134	7,398	7,672	**1,360**	**68**
TOTAL	34,266	34,768	35,271	35,774	36,277	36,603	37,036	39,167	41,443	43,989	**9,724**	**486**
Nonresidential Square Footage (1,000's)	15,261	15,431	15,601	15,772	15,942	16,009	16,159	16,877	17,608	18,445	**3,184**	**159**
Commercial SF (1,000's)	5,039	5,062	5,086	5,109	5,133	5,057	5,069	5,110	5,133	5,214	**176**	**9**
Office SF (1,000's)	6,704	6,821	6,937	7,053	7,169	7,318	7,407	7,893	8,487	9,124	**2,420**	**121**
Industrial SF (1,000's)	3,518	3,548	3,579	3,609	3,640	3,634	3,683	3,874	3,988	4,107	**589**	**29**
TOTAL	15,261	15,431	15,601	15,772	15,942	16,009	16,159	16,877	17,608	18,445	**3,184**	**159**
Residential Vehicle Trips	191,018	192,604	194,190	195,776	197,361	202,296	207,231	233,195	258,758	280,466	**89,447**	**4,472**
Nonresidential Vehicle Trips	122,569	123,667	124,765	125,863	126,961	126,679	127,541	131,570	136,578	143,062	**20,492**	**1,025**
TOTAL	313,588	316,272	318,955	321,639	324,323	328,975	334,772	364,765	395,337	423,527	**109,940**	**5,497**

ANNUAL INCREASES

	2012	2013	2014	2015	2016	2017	2022	2027	2031
Population	893	893	893	893	2,780	2,780	2,815	2,924	3,191
Housing Units	264	264	264	264	820	820	830	862	941
Jobs	503	503	503	503	327	433	417	513	1,006
Nonresidential SF (1,000's)	170	170	170	170	67	150	133	166	339

Parks and Recreation Impact Fee Facilities Plan

West Jordan has determined that past and future growth is placing demands on the various services and facilities provided by the City, including parks and recreation. Growth will continue to create a need for additional parks, trails and ball fields.

PARKS AND RECREATION FUNDING SOURCES

The City has studied various ways of providing the funding Parks and Recreation facilities. The sources of revenue for Parks and Recreation are General Fund revenues, grants or impact fees. In comparing an equitable allocation to the costs borne in the past and to be borne in the future, in comparison to the benefits already received and yet to be received, the City has determined that impact fees are the most equitable way of financing the growth-related Parks and Recreation facilities.

EXISTING LEVELS OF SERVICE

The park land component of the parks and recreation impact fee includes parks (and trails) that are assumed to have Citywide benefit. *(It is important to note that the City's minipark inventory is not included as part of the impact fee calculation. These parks have a very limited service area and do not provide Citywide benefit. F*igure 15 indicates the current inventories and existing level of service standards for West Jordan City parks with Citywide benefit. This includes neighborhood parks (136.24 acres), community parks (192.66 acres) and trails (109,906 linear feet). These inventories are compared against the existing population base (105,181 person) to determine level of service standards.

Figure 15. Level of Service for Citywide Park Land

Classification	Inventory	LOS Standard
MiniParks	4.92 Acres	Not Included in Calculations
Neighborhood Parks	136.24 Acres	1.30 Acres Per 1,000 Residents
Community Parks	192.66 Acres	1.83 Acres Per 1,000 Residents
Trails	109,906 Linear Feet	1.04 Linear Fee Per Person

Figure 16 provides detail on the level of service standard used for improvements to parks with Citywide benefit. As shown in Figure 16, West Jordan has 152 recreation improvements on parks with Citywide benefit. When this is compared to the most current number of neighborhood and community parks, the current level of service is 0.4 improvements per acre, or 1.4 improvements per 1,000 residents. (152 improvements / 105,181 persons / divided by 1,000 = 1.4 improvements per 1,000 persons).

Figure 16. Level of Service for Citywide Park Improvements

Improvement Type	*Total Units*	*Unit Cost*	*Total*
Pavillions	36	$28,000	$1,008,000
Bathrooms	8	$15,000	$120,000
Water Fountains	19	$4,000	$76,000
Playgrounds	42	$50,000	$2,100,000
Basketball Courts	8	$50,000	$400,000
Tennis Courts	7	$95,000	$665,000
Softball Fields	7	$750,228	$5,251,596
Baseball Fields	12	$750,228	$9,002,736
Parking	13	$38,000	$494,000
Total	*152*	*$1,780,456*	*$19,117,332*

Level of Service (LOS) Standards

Number of Improvements	152
Number of Improved Acres	350
Number of Improvements per Acre	0.4
2011 West Jordan Population	105,181
Current LOS: Improvements per 1,000 Persons	***1.4***

PROJECTED NEED FOR PARK FACILITIES AND IMPROVEMENTS

The need for additional growth-related park infrastructure, based on projected population growth over the next six years (see Figure 14) and the level of service standards as discussed above, is shown in Figure 17. It is projected that West Jordan will need to spend approximately $1.7 million to develop new community parks, $1.2 million to develop new neighborhood parks and $1.5 million for recreation improvements. Over the next six years, it is projected that the City will provide 9,545 linear feet of trails costing an estimated $816,000.

Figure 17 - Park and Recreation Facility and Improvement Needs Analysis

Community Parks LOS	1.83	acres per 1,000 persons
Community Park Development	$102,268	per acre
Neighborhood Park LOS	1.30	acres per 1,000 persons
Recreation Improvements	$125,772	per improvement
Trails Level of Service	1.04	linear feet per person
Trails Cost	$85	per linear foot

			Infrastructure Needed			
	Year	*West Jordan Population*	*Community Park Development*	*Neighborhood Park Development*	*Recreation Improvments*	*Linear Feet of Trails*
Base	FY11-12	105,181	192.7	136.2	136	109,906
1	2012	106,075	194.3	137.4	137	110,840
2	2013	106,968	195.9	138.6	139	111,773
3	2014	107,861	197.6	139.7	140	112,707
4	2015	108,755	199.2	140.9	141	113,640
5	2016	111,535	204.3	144.5	145	116,545
6	2017	114,315	209.4	148.1	148	119,451
Six-Yr Increase		9,134	16.7	11.8	11.9	9,545
Cost of Community Park Development						$1,711,959
Cost of Neighborhood Park Development						$1,209,974
Cost of Recreation Improvements						$1,496,686
Cost of Trail Improvements						$816,054
						$5,234,673

IMPACT FEE ELIGIBLE PROJECTS

Figure 17 above identified park improvement and trail needs over the next six years based on current levels of service and projected population growth. Figure 18 identifies park and trail improvements that are impact fee eligible expenditures.

Figure 18. Identified Impact Fee Eligible Projects

Year	*Project*	*Project Cost*	*Growth Share*
FY13	Ron Woods Phase II	$2,887,555	$2,887,555
FY14-15	Maple Hills Park *	1,620,800	1,620,800
FY17-18	Foothills Park	1,600,000	1,600,000
FY-16	Ron Woods Phase III	3,082,421	3,082,421
		$9,190,776	**$9,190,776**

**Cost of 1/2 Collector Roads (7400 S. & 6400 W.) included*
Source: Project cost and growth share from City's Strategic Plan

FUNDING STRATEGY FOR PARKS INFRASTRUCTURE

The cash flow summary for park improvements shown in Figure 19 indicates impact fee revenue and expenditures necessary to meet the demand for growth-related park facilities. As indicated in Figure 19, park impact fees are projected to yield a revenue stream that averages $919,000 per year. To the extent the rate of development either accelerates or slows down, there will be a corresponding change in the impact fee revenue and capital costs.

Figure 19. Cash Flow Summary for Parks and Recreation

	Year =>	1	2	3	4	5	6	*Cumulative*	*Average*
(2012$ in thousands)	2011	2012	2013	2014	2015	2016	2017	*Total*	*Annual*
REVENUES									
Parks Fee-SF		$421	$419	$421	$419	$1,307	$1,307	$4,294	$716
Parks Fee-MF		$120	$119	$120	$119	$372	$372	$1,222	$204
Parks Impact Fees		*$540*	*$538*	*$540*	*$538*	*$1,679*	*$1,679*	*$5,515*	*$919*
CAPITAL COSTS									
Comm. Parks		$168	$167	$168	$167	$521	$521	$1,712	$285
Neigh. Parks		$119	$118	$119	$118	$368	$368	$1,210	$202
Rec. Improvements		$147	$146	$147	$146	$456	$456	$1,497	$249
Trails		$80	$80	$80	$80	$248	$248	$816	$136
Parks Capital Cost		*$513*	*$511*	*$513*	*$511*	*$1,593*	*$1,593*	*$5,235*	*$872*
NET CAPITAL FACILITIES CASH FLOW - Parks									
Annual Surplus or (Deficit)		$28	$27	$28	$27	$85	$85	$281	$46.80
Cumulative Surplus or (Deficit)		$28	$55	$82	$110	$195	$281		

Fire Impact Fee Facilities Plan

West Jordan has determined that past and future growth is placing demands on the various services and facilities provided by the City, including fire services and facilities. Growth will continue to create a need for additional station space, wither through a stand-alone station or additional bays at existing stations.

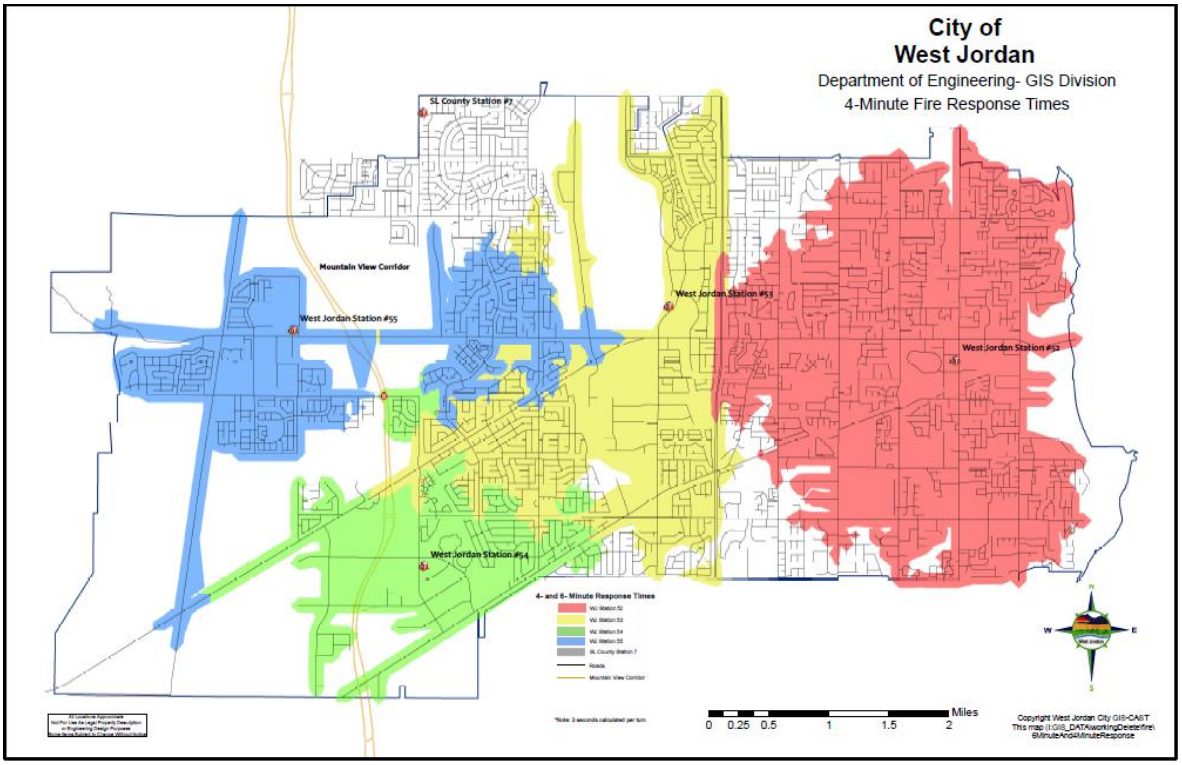
FIRE FUNDING SOURCES

The City has studied various ways of providing the funding Fire facilities. The sources of revenue for Fire are General Fund revenues, grants or impact fees. In comparing an equitable allocation to the costs borne in the past and to be borne in the future, in comparison to the benefits already received and yet to be received, the City has determined that impact fees are the most equitable way of financing the growth-related Fire facilities.

FIRE STATION LEVELS OF SERVICE STANDARDS

The West Jordan City Fire Department strives to maintain a four minute fire response time relative to the locations for the City's four fire stations. This is shown below in Figure 20.

Figure 20. 4 Minute Response Time Map



West Jordan currently has four fire stations of various sizes. Figure 21 below indicates each fire station and their square footage. Figure 21 indicates current employment base, residential/nonresidential

proportionate share factors (see Impact Fee Report) and resulting level of service (LOS) standards. The current residential level of service is derived by multiplying the total square footage of fire stations by the proportionate share of fire calls and dividing by the total population (39,425 X 65.5% / 105,181) resulting in a .25 sq. ft. per person. Similarly, nonresidential level of service (LOS) is derived by multiplying total square footage by the proportionate share and dividing by total jobs (39,425 X 34.5% /34,266) resulting in .40 sq. ft. per job.

Figure 21. Current Level of Service and Cost Factors for Fire Stations

Site	Current Sq. Ft.
Station 52	10,000
Station 53	18,000
Station 54	5,425
Station 55	6,000
TOTAL Sq. Ft.	39,425

Cost per Sq. Ft. for New Station[1] ==> $203

	Proportionate Share	2011 Demand Units	Sq. Ft. per Demand
Residential	65.5%	105,181 Population	0.25
Nonresidential	34.5%	34,266 Jobs	0.40

1. Building cost is assumed to be $193.33 per sq. ft. for construction which is based on Very Good Class C construction from Marshall & Swift Valuation Service. According to the City of West Jordan, land cost for a new fire station is $10 per sq. ft.

PROJECTED NEED FOR FIRE STATION SPACE

Figure 22 depicts projected demand for fire station space over the next six years. Demand from population and nonresidential growth will require 3,343 square feet of new fire station space for a total cost of $678,629 over the next six years. Residential growth demand will require 2,243 square feet of new space and nonresidential demand will require 1,100 square feet over the next six years.

Figure 22. Fire Station Needs Analysis

Fire Station - Residential	0.25	square feet per person	
Fire Station - Nonresidential	0.40	square feet per job	
Fire Station Cost	$203	per square foot	

		West Jordan		*Infrastructure Needed* Station SF	Station SF	TOTAL
	Year	Population	Jobs	Residential	Nonresidential	Station SF
Base	2011	105,181	34,266	25,829	13,596	39,425
Year 1	2012	106,075	34,768	26,048	13,796	39,844
Year 2	2013	106,968	35,271	26,267	13,995	40,262
Year 3	2014	107,861	35,774	26,487	14,195	40,682
Year 4	2015	108,755	36,277	26,706	14,394	41,100
Year 5	2016	111,535	36,603	27,389	14,524	41,913
Year 6	2017	114,315	37,036	28,072	14,696	42,768
Six-Year Increase =>		9,134	2,770	2,243	1,100	3,343
Total Growth-Related Cost of Fire Stations =>						$678,629

IMPACT FEE FACILITIES PLAN

This Impact Fee Facilities Plan establishes projects that should be completed in the near-term based on discussions with City staff. There are no new fire stations in the City's Strategic Plan. However, there is the reconstruction of Fire Station 54, which the City anticipates using impact fees for the growth-related portion. The existing Station 54 is 4,761 sq. ft. The new combination fire & police station building will be 14,048 sq. ft. It is proportioned with 10,245 sq. ft. for fire and 3,803 sq. ft. is for police. This is a net increase in area of 5,484 sq. ft. for fire and 3,803 sq. ft. for police.

As shown below in Figure 23, the estimated cost of the new fire/police substation is $2,851,744. As shown above in Figure 22, new development over the next six years is projected to generate the need for an additional 3,343 square feet, based on current levels of service. This is well below planned net increase in fire station space of 5,484. This Impact Fee Facilities Plan indicates the total cost of the reconstructed Station No. 54. The growth-related cost of this facility for the Fire Department is $1,113,252 (5,484 square feet multiplied by a cost per square foot of $203 from Impact Fee Report).

Figure 23. Summary of Fire Impact Fee Facilities Plan

Project	Past Years	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	TOTAL
Reconstruction of Station No.54	$0	$0	$0	$0	$2,851,744	$0	$0	**$2,851,744**
	$0	**$0**	**$0**	**$0**	**$2,851,744**	**$0**	**$0**	**$2,851,744**

FUNDING STRATEGY FOR FIRE INFRASTRUCTURE

The cash flow summary for fire infrastructure shown in Figure 24 indicates impact fee revenue and expenditures necessary to meet the demand for growth-related fire facilities. As indicated in Figure 24, fire impact fees are projected to yield a revenue stream that averages $92,000 per year. Total Fire infrastructure needs are estimated at $2.85 million, based on the reconstruction of Fire Station No.54. Cost will exceed impact fee revenue over the six years for several reasons. First, a portion of the cost ($772,009) is attributable to the Police Department. Second, $966,483 (4,761 square feet multiplied by $203 per square foot) of the total costs is replacement of existing square footage.

To the extent the rate of development either accelerates or slows down, there will be a corresponding change in the impact fee revenue and capital costs.

Figure 24. Cash Flow Summary for Fire

	Year =>	1	2	3	4	5	6	*Cumulative*	*Average*
(2012$ in thousands)	2011	2012	2013	2014	2015	2016	2017	*Total*	*Annual*
REVENUES									
Fire Fee-SF		$28	$28	$28	$28	$87	$87	$286	$48
Fire Fee-MF		$8	$8	$8	$8	$25	$25	$82	$14
Fire Fee-Retail/Rest.		$3	$3	$3	$3	$0	$1	$13	$2
Fire Fee-All Other Serv.		$24	$24	$24	$24	$30	$18	$143	$24
Fire Fee-Industrial		$5	$6	$5	$6	$0	$8	$30	$5
Fire Impact Fees		*$68*	*$68*	*$68*	*$68*	*$142*	*$139*	*$553*	*$92*
CAPITAL COSTS									
Fire IFFP		$0	$0	$0	$2,852	$0	$0	$2,852	$475
Fire Capital Cost		*$0*	*$0*	*$0*	*$2,852*	*$0*	*$0*	*$2,852*	*$475*
NET CAPITAL FACILITIES CASH FLOW - Fire									
Annual Surplus or (Deficit)		$68	$68	$68	($2,784)	$142	$139	($2,299)	($383.13)
Cumulative Surplus or (Deficit)		$68	$136	$204	($2,580)	($2,438)	($2,299)		

Police Impact Fee Facilities Plan

West Jordan has determined that past and future growth is placing demands on the various services and facilities provided by the City, including Police services and facilities. Growth will continue to create a need for additional station space.

POLICE FUNDING SOURCES

The City has studied various ways of providing the funding Police facilities. The sources of revenue for Police are General Fund revenues, grants or impact fees. In comparing an equitable allocation to the costs borne in the past and to be borne in the future, in comparison to the benefits already received and yet to be received, the City has determined that impact fees are the most equitable way of financing the growth-related Police facilities.

POLICE STATION LEVELS OF SERVICE STANDARDS

The West Jordan Justice Center is the main law enforcement facility in the City. Additional administrative offices handle responsibilities not associated with law enforcement services, and therefore will not be included in the law enforcement fee calculation. As stated in the separate *Impact Fee Report*, the existing Justice Center is estimated to have 10 years of capacity if no additional facility is built. The City projects a need for a satellite law enforcement facility in the western part of the city to proportionately handle new residential and nonresidential growth.

The total square footage of the West Jordan Justice Center is 48,000 square feet. Of this, 42,196 square feet are used for police functions. The additional square footage is allocated for functions not related to police services, such as administrative uses, and is not included in the police impact fee calculation.

Figure 25 indicates current employment base, residential/nonresidential proportionate share factors and current level of service (LOS) standards. The current residential level of service is derived by multiplying the total square footage of the West Jordan Justice Center (used for law enforcement functions) by the proportionate share of incident responses by land use and dividing by the total population (42,196 sq. ft. X 70% proportionate share / 105,181 persons) resulting in a .28 sq. ft. per person. Similarly, nonresidential level of service (LOS) is derived by multiplying total square footage by the proportionate share and dividing by total nonresidential vehicle trips (42,196 sq. ft. X 30% proportionate share / 122,569 vehicle trips) resulting in 0.10 sq. ft. per nonresidential vehicle trip.

Figure 25. Current Level of Service and Cost Factors for Police Facilities

Site	Current Sq. Ft.	Police Square Footage
West Jordan Justice Center	48,000	42,196
TOTAL Sq. Ft.		*42,196*

Cost per Sq. Ft. for New Station[1] ==> $203

	Proportionate Share	2011 Demand Units	Sq. Ft. per Demand Unit
Residential	70%	105,181 Population	0.28
Nonresidential	30%	122,569 Vehicle Trips	0.10

1. Total building cost is assumed to be $203.33 per sq. ft. Construction cost is assumed to be $193.33 which is based on Good Class C construction from Marshall & Swift Valuation Service. Land purchase cost of $10 per sq. ft. for a new fire facility is applied to the land cost for a Law Enforcement Facility.

PROJECTED NEED FOR POLICE STATION SPACE

Figure 26 depicts projected demand for Police space over the next six years. Demand from population and nonresidential growth will require 3,077 square feet of new law enforcement space for a total cost of $626,000 over the next six years. Residential growth demand will require 2,563 square feet of new space while nonresidential demand will require 514 square feet over the next six years.

Figure 26. Police Facility Need Analysis

Police Building Space - Residential	0.28 SF per Person
Police Building Space - Nonresidential	0.10 SF per Job
Police Buidling Cost per S.F.	$203

		West Jordan		Infrastructure Needed		
	Year	Population	NonRes Vehicle Trips	Police SF Residential	Police SF Non Residential	Total Police SF
Base Year	2011	105,181	122,569	29,510	12,686	42,196
Year 1	2012	106,075	123,667	29,761	12,799	42,560
Year 2	2013	106,968	124,765	30,012	12,913	42,925
Year 3	2014	107,861	125,863	30,262	13,027	43,289
Year 4	2015	108,755	126,961	30,513	13,140	43,653
Year 5	2016	111,535	126,679	31,293	13,111	44,404
Year 6	2017	114,315	127,541	32,073	13,200	45,273
Six-Yearr Increase =>		8,240	3,874	2,563	514	3,077

Total Growth-Related Cost of Police Facilities => $626,000

IMPACT FEE FACILITIES PLAN

This Impact Fee Facilities Plan establishes projects that should be completed in the near-term based on discussions with City staff. There are no new stand-alone police stations in the City's Strategic Plan. However, there is new police station space planned as part of the reconstruction of Fire Station 54. The new combination fire & police station building (Reconstructed Fire Station No. 54) will be 14,048 sq. ft. The Police Department will occupy 3,803 sq. ft. of this facility, which is 726 square feet more than the growth-related space need shown above in Figure 26, which the City will use impact fees for.

The estimated cost of the new fire/police substation is $2,851,744. The growth-related Police cost of this facility is $772,009 (3,803 square feet multiplied by a cost per square foot of $203 from Impact Fee Report). This is shown in Figure 27 below.

Figure 27. Summary of Police Impact Fee Facilities Plan

Project	Past Years	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	TOTAL
Police Space included with Reconstruction of Station No.54	$0	$0	$0	$0	$772,009	$0	$0	**$772,009**
	$0	**$0**	**$0**	**$0**	**$772,009**	**$0**	**$0**	**$772,009**

FUNDING STRATEGY FOR POLICE INFRASTRUCTURE

The cash flow summary for police infrastructure shown in Figure 28 indicates impact fee revenue and expenditures necessary to meet the demand for growth-related police facilities. As indicated in Figure 28, police impact fees are projected to yield a revenue stream that averages $72,000 per year. The Police infrastructure needs, based on space included in the reconstructed Fire Station No. 54 total $772,009. Costs will exceed impact fee revenue over the six years due to the need to "upfront" the facility. However, the City will be able to continue to collect impact fees toward this facility for a number of years beyond the 6-year IFFP period.

To the extent the rate of development either accelerates or slows down, there will be a corresponding change in the impact fee revenue and capital costs.

Figure 28. Cash Flow Summary for Police

	Year =>	1	2	3	4	5	6	*Cumulative*	*Average*
(2012$ in thousands)	2011	2012	2013	2014	2015	2016	2017	*Total*	*Annual*
REVENUES									
Police Fee-SF		$27	$27	$27	$27	$84	$84	$277	$46.24
Police Fee-MF		$8	$8	$8	$8	$24	$24	$79	$13.16
Police Fee-Retail/Rest.		$4	$4	$4	$4	$0	$2	$19	$3.22
Police Fee-All Other Serv.		$8	$8	$8	$8	$11	$6	$50	$8.31
Police Fee-Industrial		$2	$2	$2	$2	$0	$2	$9	$1.44
Police Impact Fees		*$49*	*$49*	*$49*	*$49*	*$119*	*$119*	*$434*	*$72*
CAPITAL COSTS									
Police IFFP		$0	$0	$0	$772	$0	$0	$772	$129
Police Capital Cost		*$0*	*$0*	*$0*	*$772*	*$0*	*$0*	*$772*	*$129*
NET CAPITAL FACILITIES CASH FLOW - Police									
Annual Surplus or (Deficit)		$49	$49	$49	($723)	$119	$119	($338)	($56.30)
Cumulative Surplus or (Deficit)		$49	$98	$147	($576)	($457)	($338)		

Transportation Impact Fee Facilities Plan

West Jordan City has determined that the growth within the City is placing demands on various services provided by the City, including Transportation. The City is expected to continue to grow from a population of approximately 105,200 in 2011 to approximately 155,000 people by the year 2030. Due to this expansive growth, many of the transportation facilities throughout the City are experiencing increasing congestion and may soon become obsolete and in need of improvements.

TRANSPORTATION FUNDING SOURCES

The City has studied various ways of providing the funding for Transportation facilities. Most Utah cities utilize general fund revenues for their transportation programs. Many augment general fund revenue with impact fees. Another option for transportation funding includes the creation of special improvement districts. These districts are organized for the purpose of funding a single specific project that benefits an identifiable group of properties. In many cases, cities utilize bonds for projects that benefit the entire community. In comparing an equitable allocation to the costs borne in the past and to be borne in the future, in comparison to the benefits already received and yet to be received, the City has determined that impact fees are the most equitable way of financing the growth-related Transportation facilities.

Private interests often provide resources for transportation improvements. Developers construct the local streets within subdivisions and often dedicate right-of-way and participate in the construction of collector/arterial streets adjacent to their developments. Developers can also be considered a possible source of funds for projects through the use of impact fees. These fees are assessed as a result of the impacts a particular development will have on the surrounding roadway system, such as the need for traffic signals or street widening.

EXISTING LEVELS OF SERVICE FOR TRANSPORTATION

Within West Jordan City there are currently 8.1 centerline miles of arterial roads and 67.52 centerline miles of collector streets. These roads are highlighted in Figure 29 below.

Figure 29. Inventory of City Arterials and Collectors

Right-of-Way	Lanes	Miles	Lane Miles
60' Collector	2	3.64	7.2
66' Collector	2	24.57	49
80' Collector	3	39.31	118
Total Collectors		***67.52***	***174.2***
Right-of-Way	**Lanes**	**Miles**	**Lane Miles**
106' Arterial	5	7.29	36.5
126' Arterial	5	0.81	4.1
Total Arterials		***8.1***	***40.5***
Total		**75.62**	**214.7**

Source: West Jordan City

Level of Service (LOS) is a traffic engineering term for describing and measuring the level of travel delay experienced by vehicles. LOS ranges from free-flow traffic conditions (LOS A) to extremely congested travel (LOS F). Since traffic and overall travel is generally most congested at morning and afternoon peak periods, typical practice generally allows for some driver discomfort during these peak periods while providing better LOS throughout the remainder of the day. According to discussions with West Jordan staff and the City's *Master Transportation Plan*, the City's transportation network presently operates at a minimum of LOS D on arterial and collector streets.

Figure 30 shows the calibration of existing development to the current City arterial and collector street network. Knowing the current lane miles (214.7), TischlerBise determined the weighted-average trip length of 5.22 using a series of spreadsheet iterations. As shown in Figure 30 below, existing development within West Jordan attracted an estimated 1,668,967 Vehicle Miles of Travel (VMT) in 2011, based on the trip generation, trip adjustment, trip length factor and other assumptions contained in the Impact Fee Report. Therefore, the current infrastructure standard is 1.29 lane miles per 10,000 vehicle miles of travel (i.e. 214.7 lane miles divided by 1,668,967 VMT expressed in ten-thousands). The impact fee calculation is based on maintaining this level of service through the population horizon used in the City's *Master Transportation Plan* (approximately 170,500 persons).

Figure 30. Existing Level of Service on City Arterial and Collector Network

	ITE Code	*Dev Type*	*Weekday VTE*	*Dev Unit*	*Trip Adj*
R1	210	Single Family	11.70	HU	58%
R2	220	Multifamily	5.70	HU	58%
NR1	857	Retail/Restaurant	42.94	KSF	33%
NR2	710	All Other Services	11.01	KSF	50%
NR3	140	Industrial	8.11	KSF	50%

Avg Trip Length (miles)	**5.22**
Capacity Per Lane	**7,775**
Year->	*Base*
West Jordan, Utah	*2011*
Single Family HU	24,587
Multifamily HU	7,311
Retail KSF	5,039
Office/Institutional KSF	6,704
Industrial KSF	3,518
Single Family Trips	166,847
Multifamily Trips	24,170
Retail/Resturant Trips	71,398
All Other Services Trips	36,908
Industrial Trips	14,264
Total Vehicle Trips	313,587
Vehicle Miles of Travel (VMT)	1,668,967
LANE MILES	**214.7**
ANL LN MI	
Lane Miles per 10,000 VMT	1.29

IMPACT FEE FACILITIES PLAN

This Impact Fee Facilities Plan establishes projects that should be completed in the near-term based on the most recently adopted Transportation Master Plan (TMP) prepared by Wilbur Smith & Associates. This Impact Fee Facilities Plan indicates the total cost of transportation projects the City plans to use impact fees to fully or partially fund. As Figure 31 indicates, the total cost of these projects is $18 million. As detailed in the separate Impact Fee Report, the growth-related portion of these costs total $15.8 million.

Figure 31. Summary of Road Impact Fee Facilities Plan

Project	Past Years	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	TOTAL
9000 South	$257,778	$0	$0	$0	$0	$0	$0	**$257,778**
5600 West	$1,013,288	$3,890,489	$2,172,200	$0	$0	$0	$0	**$7,075,977**
7800 South	$131,267	$9,715,437	$0	$0	$450,000	$0	$0	**$10,296,704**
7000 South	$0	$0	$0	$375,000	$0	$0	$0	**$375,000**
	$1,402,333	**$13,605,926**	**$2,172,200**	**$375,000**	**$450,000**	**$0**	**$0**	**$18,005,459**

FUNDING STRATEGY FOR TRANSPORTATION SYSTEM IMPROVEMENTS

The cash flow summary shown in Figure 32 provides an indication of the road impact fee revenue and expenditures necessary to meet the demand for system improvements over the next six years. Road impact fee revenue averages $1.8 million annually over the six years (cumulative total of $10.8 million). Road improvements will require an average annual expenditure of approximately $2.7 million (a cumulative six-year total of $16.6 million).

Revenue projections shown below assume implementation of the proposed road impact fees listed above. To the extent the rate of development either accelerates or slows down, there will be a corresponding change in the impact fee revenue.

Figure 32. Cash Flow Summary for Roads

	Year =>	1	2	3	4	5	6	*Cumulative*	*Average*
(2012$ in thousands)	2011	2012	2013	2014	2015	2016	2017	*Total*	*Annual*
REVENUES									
Road Fee-SF		$727	$724	$727	$724	$2,259	$2,259	$7,420	$1,237
Road Fee-MF		$152	$151	$152	$151	$471	$471	$1,549	$258
Road Fee-Retail/Rest.		$96	$100	$96	$100	$0	$50	$441	$74
Road Fee-All Other Serv.		$209	$207	$207	$207	$266	$159	$1,254	$209
Road Fee-Industrial		$39	$41	$39	$41	$0	$57	$217	$36
Road Impact Fees		*$1,223*	*$1,223*	*$1,221*	*$1,223*	*$2,996*	*$2,995*	*$10,881*	*$1,813*
CAPITAL COSTS									
Road IFFP		$13,606	$2,172	$375	$450	$0	$0	$16,603	$2,767
Road Capital Cost		*$13,606*	*$2,172*	*$375*	*$450*	*$0*	*$0*	*$16,603*	*$2,767*
NET CAPITAL FACILITIES CASH FLOW - Roads									
Annual Surplus or (Deficit)		($12,383)	($949)	$846	$773	$2,996	$2,995	($5,722)	($953.69)
Cumulative Surplus or (Deficit)		($12,383)	($13,332)	($12,486)	($11,713)	($8,717)	($5,722)		

Water Impact Fee Facilities Plan

West Jordan City has determined that the growth within the City is placing demands on various services provided by the City, including the Water system. The City is expected to continue to grow from a population of approximately 105,200 in 2011 to approximately 155,000 people by the year 2030. Demand for the City's water system is projected to increase from 16.5 million gallons per day to 28.1 million gallons per day over the next twenty years. Due to this expansive growth, the City will need to make incremental expansions to the water system over the same time frame.

WATER FUNDING SOURCES

The City has studied various ways of providing the funding for water facilities. West Jordan City funds operations and capital maintenance through rates and relies heavily on impact fees to fund growth-related capital needs. In comparing an equitable allocation to the costs borne in the past and to be borne in the future, in comparison to the benefits already received and yet to be received, the City has determined that impact fees are the most equitable way of financing the growth-related water facilities.

Private interests often provide resources for water improvements. Developers often participate in the construction of distribution lines adjacent or within their developments for which they receive a discounted impact fee rate or enter into a development agreement for repayment through collection of future impact fees.

EXISTING LEVELS OF SERVICE FOR WATER SYSTEM

The West Jordan City water distribution network is made up of a variety of components including pumps, storage facilities, valves, and pipes. The City water system must be capable of responding to daily and seasonal variations in demand while concurrently providing adequate capacity for firefighting and other emergency needs. In order to meet these goals, each of the distribution system components must be designed and operated properly. Furthermore, careful planning is required in order to ensure that the distribution system is capable of meeting the City's needs over the next several decades.

The West Jordan City water system has been designed with the Level of Service required by the Utah Division of Drinking Water. Future water needs in the Drinking Water System Master Plan, prepared by MWH Americas, Inc., were estimated by identifying locations where development is expected and adding the incremental increase in water demand associated with the development to the current demand.

Although the City's water system has been designed to meet certain mandated demand criteria, the impact fees are calculated based on actual consumption, rather than peak demand criteria. Water use by current customers was determined from the City's utility billing records. The number of water customers and use over the past calendar year is shown in Figure 33. Residential water demand is currently averaging 761 gallons per day per customer. Based on an average of 3.34 persons per housing

unit, the City's Level-Of-Service (LOS) for water for residential development is 187 gallons of drinking water per person on an average day. Nonresidential water demand is currently averaging 3,737,515 gallons per day. Based on the 1,309 current nonresidential customers, the City's LOS for water for nonresidential development is 2,855 gallons of drinking water per connection on an average day.

Figure 33. Utility System Demand Factors

	Gallons/Day#	*Customers*	*Gallons/ Customer*	*Gallons Per Day Per Capita**
Residential	12,772,088	20,398	626	187
Nonresidential	3,737,515	1,309	2,855	
Total	16,509,603	21,707	761	

#Provided by City of West Jordan Public Works

*Gallons per day per capita based on average persons per housing unit of 3.34

IMPACT FEE FACILITIES PLAN

This Impact Fee Facilities Plan establishes projects that should be completed in the near-term based on the most recently adopted Water Master Plan prepared by MWH Americas Inc. This Impact Fee Facilities Plan indicates the total cost of water projects the City plans to use impact fees to fully or partially fund. As Figure 34 indicates, the total cost of these projects is $21.8 million. As detailed in the separate Impact Fee Report, the growth-related portion of these costs total $14.7 million.

Figure 34. Summary of Water Impact Fee Facilities Plan

Project	Past Years	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	TOTAL
SCADA Upgrades	$40,000	$49,428	$40,000	$40,000	$40,000	$40,000	$40,000	**$289,428**
OBH-Bangerter to 40W	$931,066	$0	$0	$0	$0	$0	$0	**$931,066**
90 South Water Pipeline	$0	$707,375	$0	$0	$0	$0	$0	**$707,375**
MVC Water Line Upgrades	$0	$571,813	$0	$0	$0	$0	$0	**$571,813**
4000 West 12 Inch Water Line	$0	$350,000	$1,007,575	$0	$0	$0	$0	**$1,357,575**
2700 W 10-inch Water Line	$0	$0	$323,838	$0	$0	$0	$0	**$323,838**
3rd Pump U111 Booster	$0	$0	$271,500	$0	$0	$0	$0	**$271,500**
5600 West 12 inch Water Line	$0	$0	$900,000	$0	$0	$0	$0	**$900,000**
7800 South 12 inch Water Line	$0	$0	$200,000	$0	$0	$0	$0	**$200,000**
Drill Exploratory Wells	$0	$0	$200,000	$0	$0	$0	$0	**$200,000**
Pressure Relief Valve Zone 3	$0	$0	$200,000	$0	$0	$0	$0	**$200,000**
Relocate Pressure Relief Valve	$0	$0	$0	$250,000	$0	$0	$0	**$250,000**
Copperton Reservoir	$0	$0	$0	$3,050,000	$0	$0	$0	**$3,050,000**
Emergency Generator Well 6	$0	$0	$0	$180,000	$0	$0	$0	**$180,000**
Pressure Relief Valve-Zone 4	$0	$0	$0	$194,000	$0	$0	$0	**$194,000**
Fuellner Rd. Water Line	$0	$0	$0	$384,990	$0	$0	$0	**$384,990**
OBH Water Line	$0	$0	$0	$371,000	$0	$0	$0	**$371,000**
3 MG Terminal Res. Design	$0	$0	$0	$0	$100,000	$0	$0	**$100,000**
78 South Water Line	$0	$0	$0	$0	$301,200	$0	$0	**$301,200**
New Well Pump House	$0	$0	$0	$0	$750,000	$0	$0	**$750,000**
5200 West Water Line	$0	$0	$0	$0	$295,000	$0	$0	**$295,000**
Prosperity Way 10 inch Loop	$0	$0	$0	$0	$101,000	$0	$0	**$101,000**
Pressure Relief Valve Zone 7	$0	$0	$0	$0	$148,000	$0	$0	**$148,000**
Transmission Line to NBH	$0	$0	$0	$0	$0	$1,133,940	$0	**$1,133,940**
Zone 3 Transmission Line	$0	$0	$0	$0	$0	$2,085,000	$0	**$2,085,000**
3 MG Reservoir Zone 3	$0	$0	$0	$0	$0	$3,050,000	$0	**$3,050,000**
Zone 6 Water Line	$0	$0	$0	$0	$0	$180,870	$0	**$180,870**
Brown Meadow Loop	$0	$0	$0	$0	$0	$180,000	$0	**$180,000**
Ranch Rd. Water Line	$0	$0	$0	$0	$0	$261,000	$0	**$261,000**
3 MG Reservoir Zone 4	$0	$0	$0	$0	$0	$0	$2,685,000	**$2,685,000**
Pressure Relief Valve Zone 8	$0	$0	$0	$0	$0	$0	$148,000	**$148,000**
	$971,066	**$1,678,616**	**$3,142,913**	**$4,469,990**	**$1,735,200**	**$6,930,810**	**$2,873,000**	**$21,801,595**

FUNDING STRATEGY FOR WATER SYSTEM IMPROVEMENTS

The cash flow summary shown in Figure 35 provides an indication of the water impact fee revenue and expenditures necessary to meet the demand for system improvements over the next six years. Water impact fee revenue averages $1.1 million annually over the six years (cumulative total of $6.6 million). Water improvements will require an average annual expenditure of approximately $3.4 million (a cumulative six-year total of $20.8 million). Infrastructure expenditures exceed water impact fee revenue by a cumulative total of $14.1 million over the six-year period. This occurs for two reasons. First, approximately 67 percent ($14.7 million) of the infrastructure costs are impact fee eligible. Second, these six-year costs were allocated over ten years' worth of demand, which artificially dilutes the impact fee amount.

Revenue projections shown below assume implementation of the proposed road impact fees listed above. To the extent the rate of development either accelerates or slows down, there will be a corresponding change in the impact fee revenue.

Figure 35. Cash Flow Summary for Water

	Year =>	1	2	3	4	5	6	*Cumulative*	*Average*
(2012$ in thousand	2011	2012	2013	2014	2015	2016	2017	*Total*	*Annual*
REVENUES									
Water Fee-SF		$391	$389	$391	$389	$1,213	$1,213	$3,986	$664
Water Fee-MF		$111	$111	$111	$111	$345	$345	$1,134	$189
Water Fee-Retail/Rest.		$20	$20	$20	$20	$10	$10	$102	$17
Water Fee-All Other Serv.		$153	$153	$153	$153	$143	$143	$896	$149
Water Fee-Industrial		$96	$96	$96	$96	$64	$64	$513	$86
Water Impact Fees		*$771*	*$769*	*$771*	*$769*	*$1,776*	*$1,776*	*$6,632*	*$1,105*
CAPITAL COSTS									
Water IFFP		$1,679	$3,143	$4,470	$1,735	$6,931	$2,873	$20,831	$3,472
Water Capital Cost		*$1,679*	*$3,143*	*$4,470*	*$1,735*	*$6,931*	*$2,873*	*$20,831*	*$3,472*
NET CAPITAL FACILITIES CASH FLOW - Water									
Annual Surplus or (Deficit)		($907)	($2,374)	($3,699)	($966)	($5,155)	($1,097)	($14,199)	($2,366)
Cumulative Surplus or (Deficit)		($907)	($3,281)	($6,980)	($7,946)	($13,101)	($14,199)		

Wastewater Impact Fee Facilities Plan

West Jordan City has determined that the growth within the City is placing demands on various services provided by the City, including the Wastewater system. The City is expected to continue to grow from a population of approximately 105,200 in 2011 to approximately 155,000 people by the year 2030. Demand for the City's wastewater system is projected to increase from 16.5 million gallons per day to 28.1 million gallons per day over the next twenty years. Due to this expansive growth, the City will need to make incremental expansions to the wastewater system over the same time frame.

WASTEWATER FUNDING SOURCES

The City has studied various ways of providing the funding for wastewater facilities. West Jordan City funds operations and capital maintenance through rates and relies heavily on impact fees to fund growth-related capital needs. In comparing an equitable allocation to the costs borne in the past and to be borne in the future, in comparison to the benefits already received and yet to be received, the City has determined that impact fees are the most equitable way of financing the growth-related wastewater facilities.

Private interests often provide resources for water improvements. Developers often participate in the construction of collection lines adjacent or within their developments for which they receive a discounted impact fee rate or enter into a development agreement for repayment through collection of future impact fees.

EXISTING LEVELS OF SERVICE FOR WASTEWATER SYSTEM

The West Jordan City sanitary sewer system is made up of a variety of components including pumps, treatment facilities, meters, and pipes. The City's sanitary sewer system must be capable of responding to daily and seasonal variations in demand. In order to meet these goals, each of the distribution system components must be designed and operated properly.

The existing piping system capacity is generally adequate under current demand conditions; however, there are a few areas that need relief due to over-capacity or that are approaching overcapacity. Modeled system capacity, and calculated existing system flows for each pipe in the model were used to develop the Impact Fee Facilities Plan and the growth-related percentages contained in the Impact Fee Report.

Although the City's sewer system has been designed to meet certain mandated demand criteria, the impact fees are calculated based on actual consumption, rather than peak demand criteria. Water use by current customers was determined from the City's utility billing records. The number of utility customers and use over the past calendar year is shown in Figure 36. Residential water demand is currently averaging 761 gallons per day per customer. Based on an average of 3.34 persons per housing

unit, the City's Level-Of-Service (LOS) for sewer for residential development is 187 gallons per person on an average day. Nonresidential sewer demand is currently averaging 3,737,515 gallons per day. Based on the 1,309 current nonresidential customers, the City's LOS for water for nonresidential development is 2,855 gallons of demand per connection on an average day.

Figure 36. Utility System Demand Factors

	Gallons/Day#	*Customers*	*Gallons/ Customer*	*Gallons Per Day Per Capita**
Residential	12,772,088	20,398	626	187
Nonresidential	3,737,515	1,309	2,855	
Total	16,509,603	21,707	761	

#Provided by City of West Jordan Public Works

*Gallons per day per capita based on average persons per housing unit of 3.34

IMPACT FEE FACILITIES PLAN

This Impact Fee Facilities Plan establishes projects that should be completed in the near-term based on the recently adopted Sanitary Sewer Master Plan prepared by the West Jordan City Engineering Division of the Public Works Department. This Impact Fee Facilities Plan indicates the total cost of wastewater projects the City plans to use impact fees to fully or partially fund. As Figure 37 indicates, the total cost of these projects is $18.3 million. As detailed in the separate Impact Fee Report, the growth-related portion of these costs total $11.9 million.

Figure 37. Summary of Wastewater Impact Fee Facilities Plan

Project	Past Years	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	TOTAL
Dixie Valley Sewer Line	$102,432	$0	$0	$0	$0	$0	$0	**$102,432**
Airport Sewer Line	$250,000	$0	$0	$0	$0	$0	$0	**$250,000**
Slip Line Project	$0	$349,900	$0	$0	$0	$0	$0	**$349,900**
Treatment Plant Capital	$1,186,830	$1,675,000	$1,675,000	$1,675,000	$1,675,000	$1,700,000	$1,700,000	**$11,286,830**
5600 W Sewer Line	$0	$0	$500,000	$0	$0	$0	$0	**$500,000**
Farm Rd. Pipe Upsizing	$0	$0	$111,000	$0	$0	$0	$0	**$111,000**
7800 S Bypass Pipe	$0	$0	$225,000	$0	$0	$0	$0	**$225,000**
Jordan Valley 18 In. Line	$0	$0	$1,341,000	$0	$0	$0	$0	**$1,341,000**
Garnder Vill. Pipe	$0	$0	$0	$613,000	$0	$0	$0	**$613,000**
OBH Sewer Line	$0	$0	$0	$600,000	$0	$0	$0	**$600,000**
1300 W Pipe Upgrade	$0	$0	$0	$0	$900,000	$0	$0	**$900,000**
OBH Pipe Upsizing	$0	$0	$0	$0	$0	$973,000	$0	**$973,000**
Mountain Md. Pipe Upsize	$0	$0	$0	$0	$0	$69,000	$0	**$69,000**
Center Park Pipe Upsize	$0	$0	$0	$0	$0	$0	$1,071,000	**$1,071,000**
	$1,539,262	**$2,024,900**	**$3,852,000**	**$2,888,000**	**$2,575,000**	**$2,742,000**	**$2,771,000**	**$18,392,162**

FUNDING STRATEGY FOR WASTEWATER SYSTEM IMPROVEMENTS

The cash flow summary shown in Figure 38 provides an indication of the projected wastewater impact fee revenue and expenditures necessary to meet the demand for system improvements over the next six years. Wastewater impact fee revenue averages $886,000 annually over the six years (cumulative total of $5.3 million). Water improvements will require an average annual expenditure of approximately $2.8 million (a cumulative six-year total of $16.8 million). Infrastructure expenditures exceed wastewater impact fee revenue by a cumulative total of $11.5 million over the six-year period. This occurs for two reasons. First, approximately 65 percent ($11.9 million) of the infrastructure costs are impact fee eligible. Second, these six-year costs were allocated over ten years' worth of demand, which artificially dilutes the impact fee amount.

Revenue projections shown below assume implementation of the proposed wastewater impact fees listed above. To the extent the rate of development either accelerates or slows down, there will be a corresponding change in the impact fee revenue.

Figure 38. Cash Flow Summary for Wastewater

	Year =>	1	2	3	4	5	6	*Cumulative*	*Average*
(2012$ in thousands)	2011	2012	2013	2014	2015	2016	2017	*Total*	*Annual*
REVENUES									
Sewer Fee-SF		$272	$271	$272	$271	$844	$844	$2,771	$462
Sewer Fee-MF		$77	$77	$77	$77	$240	$240	$789	$131
Sewer Fee-Retail/Rest.		$29	$29	$29	$29	$14	$14	$143	$24
Sewer Fee-All Other Serv.		$214	$214	$214	$214	$200	$200	$1,258	$210
Sewer Fee-Industrial		$67	$67	$67	$67	$45	$45	$357	$59
Sewer Impact Fees		*$659*	*$657*	*$659*	*$657*	*$1,343*	*$1,343*	*$5,318*	*$886*
CAPITAL COSTS									
Sewer IFFP		$2,025	$3,852	$2,888	$2,575	$2,742	$2,771	$16,853	$2,809
Sewer Capital Cost		*$2,025*	*$3,852*	*$2,888*	*$2,575*	*$2,742*	*$2,771*	*$16,853*	*$2,809*
NET CAPITAL FACILITIES CASH FLOW - Sewer									
Annual Surplus or (Deficit)		($1,366)	($3,195)	($2,229)	($1,918)	($1,399)	($1,428)	($11,535)	($1,923)
Cumulative Surplus or (Deficit)		($1,366)	($4,561)	($6,790)	($8,707)	($10,107)	($11,535)		

Stormwater Impact Fee Facilities Plan

West Jordan City has determined that the growth within the City is placing demands on various services provided by the City, including the Stormwater system. The City is expected to continue to grow from a population of approximately 105,200 in 2011 to approximately 155,000 people by the year 2030. Due to this expansive growth, the City will need to make expansions to the stormwater system over the same time frame.

STORMWATER FUNDING SOURCES

The City has studied various ways of providing the funding for stormwater facilities. West Jordan City funds operations and capital maintenance through a stormwater utility fee and relies heavily on impact fees to fund growth-related capital needs. In comparing an equitable allocation to the costs borne in the past and to be borne in the future, in comparison to the benefits already received and yet to be received, the City has determined that impact fees are the most equitable way of financing the growth-related stormwater facilities.

Private interests often provide resources for stormwater improvements. Developers often participate in the construction of detention basins adjacent or within their developments for which they receive a discounted impact fee rate or enter into a development agreement for repayment through collection of future impact fees.

EXISTING LEVELS OF SERVICE FOR STORMWATER SYSTEM

The Stormwater system consists of all gutters, grates, detention ponds, storm inlets, pipes, culverts and any drainage system used to collect rainwater and snowmelt, and deliver it to appropriate streams in order to prevent flooding and property damage throughout the city.

The improvements identified in this Impact Fee Facility Plan and accompanying Impact Fee Report are based on a modeling effort completed as part of the West Jordan City Master Drainage Plan. The criteria used as a basis for evaluating the adequacy of these facilities include the following:

- Storm drain trunklines were evaluated based on the capacity to convey storm water runoff generated by a 10-year cloudburst event with a three-hour duration.

- Storm water detention facilities were evaluated based on the capacity to store the peak volume generated by a 100-year cloudburst event with a three-hour duration.

- Irrigation canals that collect storm water runoff were evaluated based on the capacity to convey storm water runoff generated by a 10-year, three-hour cloudburst event in addition to the projected summer season peak irrigation flows.

- Creeks and Washes (major natural drainage corridors) and associated pipe culverts were evaluated based on capacity to convey storm water discharge generated by a 100-year, three-hour cloudburst event.

- All recommended improvements should accommodate design storm peak discharges generated from projected full build-out development conditions.

- In terms of storm water, the canals are considered tributary to the major natural drainages and storm drain trunklines. All storm water collected in the canals should ultimately discharge to a creek or major storm drain.

- All creeks and major storm drains should ultimately discharge to the Jordan River.

In addition to these criteria, the drainage system evaluation was completed with two additional goals in mind. These were: first, to restore (to the extent feasible) natural storm water conveyance facilities which ultimately discharge to the Jordan River; and second, to minimize the use of irrigation facilities for storm water collection and conveyance.

The drainage system evaluation was completed and drainage system deficiencies were identified based on the above criteria. The evaluation was conducted for both existing and ultimate build-out development scenarios. The ultimate build-out analysis was completed under the assumption that storm water runoff in areas of new development would be restricted to a rate less than or equal to 0.2 cfs per acre, unless noted otherwise.

The West Jordan City Master Drainage Plan established the level of service for which the impact fees are based, which are consistent with Salt Lake County's regional drainage master plan for the area (2003 Southwest Canal and Creek Plan).

- All new development in areas where development was anticipated as part of the West Jordan Master Drainage Plan should detain storm water discharge such that runoff to a City storm drainage facility is less than or equal to 0.2 cfs per acre per City ordinance.

- All new development in areas where development was not anticipated as part of this study shall detain storm water discharge such that runoff to a City storm drainage facility is less than or equal to the runoff generated under the existing undeveloped condition.

- Storm drain catch basins should be sufficient in number and size to collect the 10-year peak runoff based on ultimate projected development conditions. The maximum interval between storm drain inlets on new storm drain pipe construction should be 400 feet.

- Storm drain pipes and trunklines should be designed to convey a flow greater than or equal to the 10-year peak runoff based on ultimate projected development conditions unless that pipeline acts as the primary conveyance for a natural creek or drainage. All pipes that convey runoff from large, natural drainage basins shall be sized to convey water from a storm with a 100-year return interval.

- Storm drain pipes should be designed with slopes that will provide flow velocities greater than or equal to 2 feet per second at the design discharge. The minimum size for new storm drain pipes should be 18 inches.

- All new storm water detention basins should be designed to store a volume greater than or equal to the peak volume resulting from the 100-year storm based on ultimate projected development conditions.

IMPACT FEE FACILITIES PLAN

This Impact Fee Facilities Plan establishes projects that should be completed in the near-term based on the most recent adopted West Jordan City Master Drainage Plan, prepared by Bowen & Collins. This Impact Fee Facilities Plan indicates the total cost of stormwater projects the City plans to use impact fees to fully or partially fund. As Figure 39 indicates, the total cost of these projects is $10 million.

Figure 39. Summary of Stormwater Impact Fee Facilities Plan

Project	Past Years	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	TOTAL
32 W 70-74 Trunkline	$0	$425,000	$0	$0	$0	$0	$0	**$425,000**
4000 West Trunkline	$0	$479,572	$906,643	$0	$0	$0	$0	**$1,386,215**
7800 S Trunkline	$0	$56,200	$0	$0	$0	$0	$0	**$56,200**
Airport Rd 30 Inch Pipeline	$0	$0	$0	$200,000	$0	$0	$0	**$200,000**
OBH to Bingham Trunkline	$0	$0	$0	$500,000	$0	$0	$0	**$500,000**
Axel Park Improvements	$0	$0	$0	$0	$0	$510,500	$0	**$510,500**
Bagley/Wildflower Det. Basin	$180,147	$45,000	$0	$0	$0	$0	$0	**$225,147**
Constitution Park Outlet	$189,090	$0	$150,000	$0	$0	$0	$0	**$339,090**
Festival Detention Retrofit	$0	$50,000	$400,000	$0	$0	$0	$0	**$450,000**
Barney's Crk W Det. Basin	$0	$0	$50,000	$0	$75,000	$0	$1,000,000	**$1,125,000**
Cougar Det. Basin Outlet	$0	$0	$185,350	$0	$0	$0	$0	**$185,350**
Detention Realignment 66S	$0	$0	$400,000	$0	$0	$0	$0	**$400,000**
Dry Wash Det. Basin	$0	$0	$0	$2,618,800	$0	$0	$0	**$2,618,800**
Det. Basin Exp. Const. Park	$0	$0	$0	$0	$1,400,000	$0	$0	**$1,400,000**
Bingham Creek Box Culvert	$0	$25,000	$25,000	$400,235	$0	$0	$0	**$450,235**
	$369,237	**$1,080,772**	**$2,116,993**	**$3,719,035**	**$1,475,000**	**$510,500**	**$1,000,000**	**$10,271,537**

FUNDING STRATEGY FOR STORMWATER SYSTEM IMPROVEMENTS

The cash flow summary shown in Figure 40 provides an indication of the projected stormwater impact fee revenue and expenditures necessary to meet the demand for system improvements over the next six years. Stormwater impact fee revenue averages $1.07 million annually over the six years (cumulative total of $6.4 million). Stormwater improvements will require an average annual expenditure of

approximately $1.6 million (a cumulative six-year total of $9.9 million). Infrastructure expenditures exceed wastewater impact fee revenue by a cumulative total of $3.4 million over the six-year period. This is due to the fact that not all stormwater project costs are 100 percent growth-related. The deficit represents the share required by the existing development base through the use of general revenue.

Revenue projections shown below assume implementation of the proposed stormwater impact fees listed above. To the extent the rate of development either accelerates or slows down, there will be a corresponding change in the impact fee revenue.

Figure 40. Cash Flow Summary for Stormwater

	Year =>	1	2	3	4	5	6	*Cumulative*	*Average*
(2012$ in thousands)	2011	2012	2013	2014	2015	2016	2017	*Total*	*Annual*
REVENUES									
Stormwater Fee-SF		$351	$349	$351	$349	$1,090	$1,090	$3,580	$597
Stormwater Fee-MF		$150	$150	$150	$150	$467	$467	$1,534	$256
Stormwater Fee-Retail/Rest.		$40	$42	$40	$42	$0	$21	$186	$31
Stormwater Fee-All Other Serv.		$162	$161	$161	$161	$207	$123	$975	$162
Stormwater Fee-Industrial		$33	$34	$33	$34	$0	$48	$183	$31
Stormwater Impact Fees		*$737*	*$737*	*$736*	*$737*	*$1,763*	*$1,749*	*$6,458*	*$1,076*
CAPITAL COSTS									
Stormwater IFFP		$1,081	$2,117	$3,719	$1,475	$511	$1,000	$9,902	$1,650
Stormwater Capital Cost		*$1,081*	*$2,117*	*$3,719*	*$1,475*	*$511*	*$1,000*	*$9,902*	*$1,650*
NET CAPITAL FACILITIES CASH FLOW - Stormwater									
Annual Surplus or (Deficit)		($344)	($1,380)	($2,983)	($738)	$1,253	$749	($3,444)	($573.98)
Cumulative Surplus or (Deficit)		($344)	($1,724)	($4,707)	($5,446)	($4,193)	($3,444)		