IMPACT FEES

North Logan, Utah

Originally prepared by:

Tischler & Associates, Inc.

Bethesda, MD and Los Angeles, CA

Updated September - October 2006 by

Jeffrey M. Jorgensen P.E.

City Administrator/Recorder North Logan City

This page intentionally left blank

Table of Contents

EXECUTIVE SUMMARY 1

Figure 1: Existing Fee Schedule 3
Figure 2: Impact Fee Schedule 4

LAND USE AND DEMOGRAPHIC ASSUMPTIONS 5

Figure 3: Annual Development Projections 5
Figure 4: Alternative Population Projections 6
Figure 5: Persons Per Household 7
Figure 6: Alternative Projections of Nonresidential Floor Area 8
Figure 7: Nonresidential Floor Area and Job Estimate 9
Figure 8: Employee and Building Area Ratios 10
Figure 9: Average Annual Increase in Development 11

PARKS AND RECREATION 12

Figure 10: Parks and Recreation Methodology 12
Figure 11: LOS for Community Park Land and Improvements - Parks 13
Figure 12: LOS for Community Park Land and Improvements - Trails 14
Figure 13: Parks and Recreation Impact Fees 15

ROADS 17

Figure 14: Road Impact Fee Methodology Chart 17
Figure 15: Roads Capital Facilities Plan Summary 18
Figure 16: Gas Tax Credit 19
Figure 17: Estimated Local Expenditures and Analysis of Gross Taxable Sales 21
Figure 18: Sales Tax Credit per Residential Vehicle Trip 22
Figure 19: Sales Tax Credit per KSF of Commercial / Shopping Center Development 23
Figure 20: Road Impact Fee 25

WATER SYSTEM 26

Figure 21: Water System Impact Fee Methodology Chart 27
Figure 22: Culinary Water Average Daily Demand Factors 27
Figure 23: Annual Water System Demand 28
Figure 24: Water System Capital Facilities Plan Summary 29
Figure 25: Water System Buy-In Cost Component 30
Figure 26: Principal Payment Credit for Water System Improvements 31
Figure 27: Water System Impact Fee 32

WASTEWATER COLLECTION SYSTEM 33

Figure 28: Wastewater Collection Impact Fee Methodology Chart 34
Figure 29: Wastewater Average Daily Demand Factors 34
Figure 30: Annual Wastewater Collection System Demand 35
Figure 31: Wastewater Collection System Capital Facilities Plan Summary 36
Figure 32: Wastewater Collection System Buy-In Cost Component 38
Figure 33: Principal Payment Credit for Sewer System Improvements 39
Figure 34: Wastewater Collection System Impact Fee 40

CASH FLOW ANALYSIS **41**

Figure 35: General Parameters *41*
Figure 36: New Development Profile *42*
Figure 37: Capital Facility Demand and Cost Inputs *42*
Figure 38: Revenue Inputs *43*
Figure 39: Net Capital Facilities Cash Flow Summary *44*

PROPORTIONATE SHARE ANALYSIS **46**

Figure 40: General Fund Expenditures for Capital Improvements *47*

IMPLEMENTATION AND ADMINISTRATION **48**

EXECUTIVE SUMMARY

Impact fees are one-time payments used to construct system improvements needed to accommodate development. As documented in this report, North Logan City has complied with all requirements of Utah's Impact Fees Act.

Impact fees for North Logan City are proportionate and reasonably related to the capital facility service demands of new development. The written analysis of each impact fee methodology and the cash flow analysis found at the end of this report, establish that impact fees are necessary to achieve an equitable allocation of 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. Impact fee methodologies also identify the extent to which newly developed properties are entitled to various types of credits to avoid potential double payment of capital costs.

For each type of public facility included in this Impact Fees report, North Logan City has evaluated and selected an appropriate methodology. Specific costs have been identified using local data and current dollars. After discussions with City staff, Tischler & Associates, Inc. (TA) determined demand indicators for each type of public facility and calculated residential and nonresidential proportionate share factors. These factors are used to allocate costs by type of development. The formulas used to calculate the impact fees are diagrammed in a flow chart for each type of public facility. Also contained in this report are summary tables indicating the specific factors used to derive each component of the impact fees. These factors are also referred to as Level of Service (LOS) standards.

There are three basic approaches used to calculate the impact fees for the public facilities addressed in this report. The first method is a **replacement cost method**. This method documents the current Level of Service (LOS) for each type of public facility in both quantitative and qualitative measures. The term "replacement cost" essentially describes how the LOS standards are determined (i.e., similar to the practice used by property insurance companies). However, in contrast to insurance practices, the City will not use the funds for renewal and/or replacement of existing facilities. Rather, North Logan will use impact fee revenue to expand or provide additional facilities as needed to accommodate new development. A replacement cost method is best suited for public facilities that will be expanded incrementally in the future, with LOS standards based on current conditions in the community. In North Logan, this method has been used for parks and recreation improvements.

The second basic approach used to calculate impact fees is the **plan-based method**. This method is works well for public facilities that have commonly accepted engineering standards to guide capital facilities plans. North Logan has used a plan-

based methodology in the calculation of impact fees for roads, culinary water and wastewater collection systems.

A third impact fee calculation approach is the **buy-in method**. To the extent that new growth and development is served by the previously constructed improvements, Utah's Impact Fee Act allows the City to be reimbursed for the previously incurred public facility costs [see 11-36-202.(3)(b)]. This method is used for facilities that have adequate capacity to accommodate new development, at least for the next five to six years. The rationale for the buy-in approach is that new development is paying for its share of the useful life or remaining capacity of an existing facility. This method has been used for the City's community park land and components of the water and sewer systems.

Another general requirement that is common to development fee methodologies is the evaluation of credits. There are two distinct types of credits that should be considered when implementing impact fees. First, revenue credits should be determined to avoid potential double payment situations arising from the payment of a one-time development impact fee and then subsequent payments of other revenues that may also fund growth-related capital improvements (e.g. gas taxes for roads). Revenue credits for each type of public facility have been evaluated and included in this report.

The second type of credit is a site-specific credit for system improvements that have been included in the impact fee calculations. Specific policies and procedures related to site-specific credits will be addressed in the ordinance that establishes the City's fees. However, the general concept is that developers may be eligible for site-specific credits only if they provide system improvements that have been included in the City's impact fee calculations. Project improvements normally required as part of the development approval process are not eligible for credits against impact fees.

The information set forth in Figure 1 below is included in this study simply for purposes of historical reference and comparison. The City requires the payment of these fees at the time building permits are issued.

Figure 1: Existing Fee Schedule

Current Impact Fees (Effective October 2004 - September 2006)
North Logan, Utah

	Parks and Recreation	*Roads*	*Water System*	*Wastewater Collection*
Residential	Per Housing Unit			
Single Family Detached	$833	$532		
All Other Housing Types	$644	$399		
Nonresidential	Per 1,000 Square Feet			
Com / Shop Ctr < 75,000 Sq Ft	na	$529		
Com/Shop Ctr 75,000-150,000 SI	na	$429		
Com / Shop Ctr > 150,000 Sq Ft	na	$230		
Office / Inst < 17,500 Sq Ft	na	$1,302		
Office / Inst 17,500-37,500 Sq Ft	na	$1,044		
Office / Inst > 37,500 Sq Ft	na	$878		
Business Park	na	$761		
Light Industrial	na	$369		
Warehousing	na	$258		
Manufacturing	na	$203		
All]Size (inches)*			Per Water Meter	
5/8 X 3/4 or 1.00 in. meter			$2,784	$1,022
1.50 in. meter			$5,568	$2,044
2.00 in. meter			$8,909	$3,270

Impact Fees for meters larger than 2.00 must be individually approved by the City Council.
Impact Fees based on relative capacity ratios for these larger meters would be as follows:

3.00 in. meter	$16,704	$6,132
4.00 in. meter	$27,840	$10,220
6.00 in. meter	$55,680	$20,440

Figure 2 provides a schedule of the maximum supportable impact fees for North Logan City. Residential impact fees are calculated on a per-housing-unit basis for parks and roads. Nonresidential impact fees for roads are calculated per 1,000 square feet of building (gross floor area). Impact fees for water and wastewater collection systems are calculated per water meter size for all types of development.

Figure 2: Impact Fee Schedule

	Parks and Recreation	*Roads*	*Water System*	*Wastewater Collection*
Residential	Per Housing Unit			
Single Family Detached	$1,384	$629		
All Other Housing Types	$1,069	$472		
Nonresidential	Per 1,000 Square Feet			
Com / Shop Ctr < 75,000 Sq Ft	na	$585		
Com/Shop Ctr 75,000-150,000 SF	na	$471		
Com / Shop Ctr > 150,000 Sq Ft	na	$242		
Office / Inst < 17,500 Sq Ft	na	$1,494		
Office / Inst 17,500-37,500 Sq Ft	na	$1,197		
Office / Inst > 37,500 Sq Ft	na	$1,007		
Business Park	na	$872		
Light Industrial	na	$423		
Warehousing	na	$296		
Manufacturing	na	$233		
All Development	Size (inches)*		Per Water Meter	
5/8 X 3/4 or 1.00 in. meter			$3,319	$1,047
1.50 in. meter			$6,638	$2,095
2.00 in. meter			$10,621	$3,352

Impact Fees for meters larger than 2.00 must be individually approved by the City Council.
Impact Fees based on the relative capacity ratios for these larger meters would be as follows:

3.00 in. meter	$16,704	$6,132	$22,836
4.00 in. meter	$27,840	$10,220	$38,060
6.00 in. meter	$55,680	$20,440	$76,120

* Impact fees for meters larger than four inches will be based on annualized average day demand and the net capital cost per gallon of capacity.

LAND USE AND DEMOGRAPHIC ASSUMPTIONS

This section of the report documents the demographic and land use assumptions used to calculate impact fees. Figure 3 is a summary of the development projections and demographic data used in the impact fees study. Supporting documentation for these projections can be found in Figures 4 through 9.

Figure 3: Annual Development Projections

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
DEMAND PROJECTIONS (cumulative)											
POPULATION	6,897	7,256	7,615	7,973	8,332	8,691	9,049	9,408	9,767	10,125	10,484
HOUSEHOLDS	2,281	2,400	2,518	2,637	2,755	2,874	2,993	3,111	3,230	3,349	3,467
JOBS	8,258	8,753	9,249	9,744	10,240	10,735	11,231	11,726	12,222	12,717	13,213
POP & JOBS	15,155	16,010	16,864	17,718	18,572	19,426	20,280	21,134	21,989	22,843	23,697
Total Veh Trips	45,231	48,366	51,006	53,645	56,285	58,924	61,564	64,204	66,843	69,483	72,122
Residential Units:	2,347	2,472	2,594	2,716	2,838	2,960	3,082	3,205	3,327	3,449	3,571
Single Family Detach	1,613	1,681	1,764	1,847	1,930	2,013	2,096	2,179	2,262	2,345	2,428
All Other Housing	734	791	830	869	908	947	986	1,025	1,065	1,104	1,143
Res Veh Trips	13,011	13,675	14,351	15,027	15,703	16,379	17,055	17,731	18,407	19,083	19,759
NRes Floor Area:	2,437	2,624	2,773	2,921	3,070	3,218	3,367	3,516	3,664	3,813	3,961
Com/Shpg Ctr KSF	939	1,011	1,068	1,125	1,183	1,240	1,297	1,354	1,412	1,469	1,526
Office/Inst KSF	1,112	1,197	1,265	1,333	1,401	1,469	1,536	1,604	1,672	1,740	1,808
Industrial KSF	386	416	439	463	486	510	533	557	581	604	628
NRes Veh Trips	32,220	34,691	36,655	38,618	40,582	42,545	44,509	46,473	48,436	50,400	52,364
Com/Shpg Ctr Jobs	2,725	2,889	3,052	3,216	3,379	3,543	3,706	3,870	4,033	4,197	4,360
Office/Inst Jobs	4,707	4,989	5,272	5,554	5,837	6,119	6,402	6,684	6,966	7,249	7,531
Industrial Jobs	826	875	925	974	1,024	1,074	1,123	1,173	1,222	1,272	1,321
Nonres Util Connecti	181	192	202	213	224	235	246	257	267	278	289
NR Wtr Dmd (avg m	0.29	0.31	0.33	0.34	0.36	0.38	0.40	0.41	0.43	0.45	0.47
Res Wtr Dmd (avg m	0.82	0.86	0.91	0.95	0.99	1.03	1.08	1.12	1.16	1.20	1.25
Total Wtr Dmd (mgd)	1.11	1.17	1.23	1.29	1.35	1.41	1.47	1.53	1.59	1.65	1.71
NR Swr Dmd (avg m	0.25	0.27	0.28	0.30	0.32	0.33	0.35	0.36	0.38	0.39	0.41
Res Swr Dmd (avg m	0.72	0.75	0.79	0.83	0.87	0.90	0.94	0.98	1.02	1.05	1.09
Total Swr Dmd (mgd	0.97	1.02	1.08	1.13	1.18	1.23	1.29	1.34	1.39	1.44	1.50

TA and City staff evaluated several population projection alternatives (see Figure 4) and selected the linear projection method as the most appropriate for North Logan City. From 1990 through 2006, the City's population has been increasing at a 6.3% growth rate (i.e., average annual simple percentage change). This growth rate has been used in the recommended population projections.

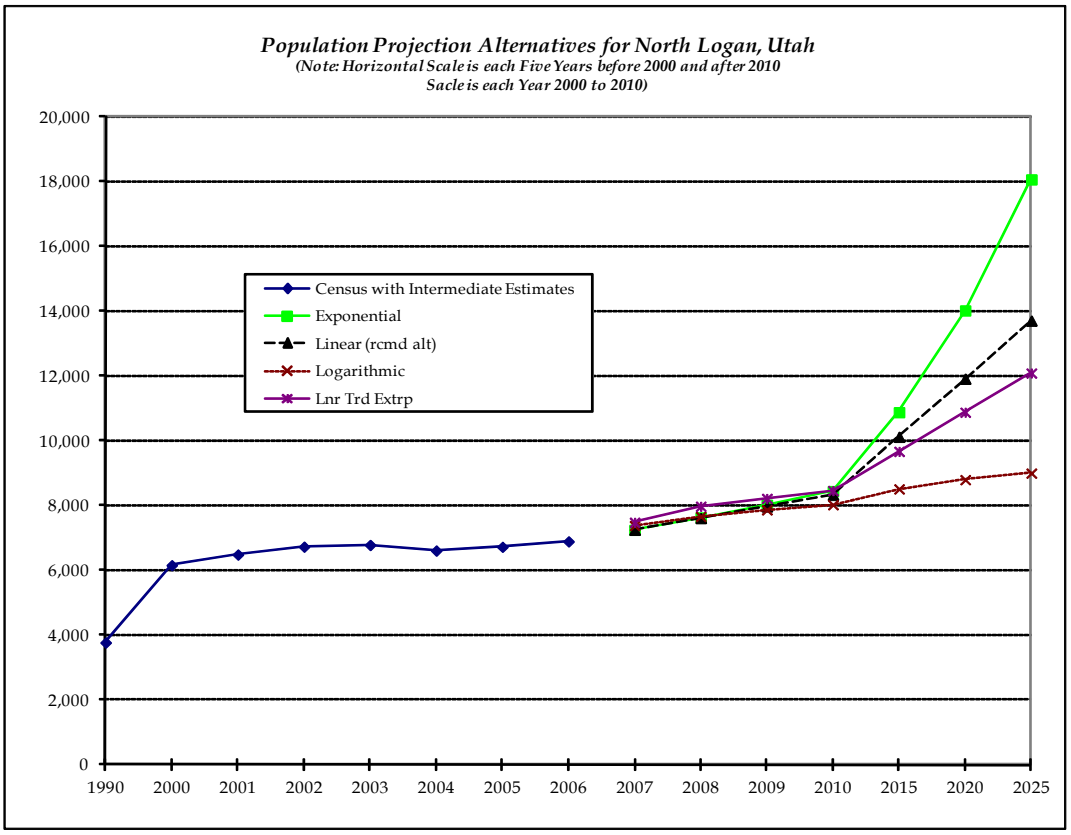
Figure 4: Alternative Population Projections

North Logan City Population

	1990	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2015	2020	2025
Actual Census for 1990 and 2000.	**Census**	**Census**	<= " Census estimates* =>						projection years (x) =>						
2001 to 2005 use Census Estimates	**3,775**	**6,163**	6,491	6,733	6,786	6,613	6,730	6,897							
Annual Change	Value (2006)	Projection Method							1	2	3	4	9	14	19
5.2%	6,897	Exponential							7,256	7,633	8,030	8,448	10,885	14,025	18,071
5.2%	6,897	**Linear (rcmd alt)**							**7,256**	**7,615**	**7,973**	**8,332**	**10,125**	**11,919**	**13,712**
10.2%	6,897	Logarithmic							7,385	7,670	7,873	8,030	8,517	8,803	9,005
3.6%		Lnr Trd Extrp							7,487	7,982	8,224	8,466	9,676	10,886	12,095
	Units permitted ** =>		15	145	48	51	50	182	51	158					

* Annual population estimates after 2003 assume 3% residential vacancy rate and 3.35 persons per household.

** Includes Single Family Residential plus Residential Units within Multiple Family Dwelling Units



The residential impact fees have been calculated on a per-housing-unit basis for Single Family Detached and All Other Housing Units. These residential categories were determined after an evaluation of demographic data for North Logan City, as shown in Figure 5. The difference in household size by type of residential development will be used to make residential impact fees roughly proportionate and reasonably related to service demands, as required by Utah's Impact Fees Act.

Figure 5: Persons Per Household

Household Size
North Logan, Utah

Census Year - 2000

Units in Structure	# Persons	# Households	PPH	Housing Units	
1-Detached	4,532	1,273	3.56	1,310	74%
1-Attached	415	117	3.56	120	7%
2-4	675	190	3.56	195	11%
5-9	42	12	3.56	12	1%
Mobile Homes	218	61	3.56	63	4%
Other	242	68	3.56	70	4%
Total	6,124	1,728	3.56	1778	
			Vacant Units =>	50	
			Residential Vacancy Rate =>	3%	

Persons Per Household by Type

	Persons	Hsehlds	PPH	Hhld Mix
Single Family Detached	4,532	1,273	3.56	74%
All Other Housing Types	1,592	447	3.56	26%

Base Year - 2006 (Estimates based on Census year of 2000)

Units in Structure	# Persons	# Households	PPH	Housing Units	
1-Detached	4,740	1,568	3.02	1,613	69%
1-Attached	391	129	3.02	133	6%
2-4	635	210	3.02	216	9%
5-9	38	13	3.02	13	1%
Mobile Homes	206	68	3.02	70	3%
Other	888	294	3.02	302	13%
Total	6,897	2,281	3.34	2,347	
			Est. Vacant Units =>	66	
			Assumed Residential Vacancy Rate =>	3%	

Persons Per Household by Type

	Persons	Hsehlds	PPH	Hhld Mix	Housing Units
Single Family Detached	4,740	1,568	3.35	69%	1,613
All Other Housing Types	2,157	713	3.35	31%	734

20-yr Forecast - 2026 (Estimates based on Census year of 2000)

Units in Structure	# Persons	# Households	PPH	Housing Units	
1-Detached	9,709	2,898	3.35	3,009	69%
1-Attached	844	252	3.35	262	6%
2-4	1,266	378	3.35	393	9%
5-9	141	42	3.35	44	1%
Mobile Homes	422	126	3.35	131	3%
Other	1,829	546	3.35	567	13%
Total	14,071	4,242	3.35	4,362	
			Est. Vacant Units =>	119	
			Assumed Residential Vacancy Rate =>	3%	

Persons Per Household by Type

	Persons	Hsehlds	PPH	Hhld Mix	Housing Units
Single Family Detached	9,709	2,898	3.35	127%	3,009
All Other Housing Types	4,503	1,344	3.35	59%	1,396

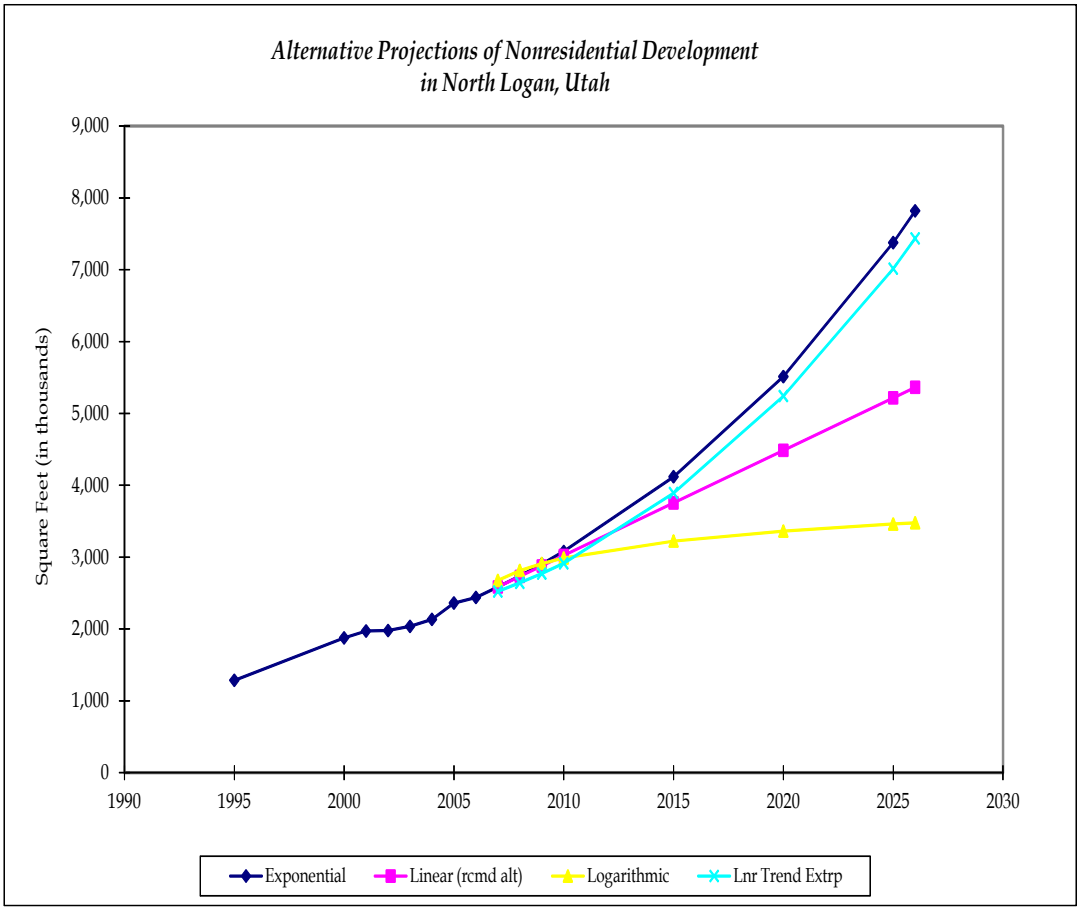
Source: 2000 US Census data from Summary File 1 (SF1)
Computed based on relative percent of persons in each type of housing units. Is slightly different from actual counted population in 2000.

Projections of nonresidential development have been derived from an inventory of nonresidential floor area and building permit data from 1994 through 2006. City staff prepared a complete list of existing nonresidential buildings in North Logan. Using this 2006 inventory of nonresidential floor area, city staff produced the annual floor area estimates and projections shown in Figure 6. The linear trend extrapolation projection, at 6.0% annual growth, has been used in the impact fee study.

Figure 6: Alternative Projections of Nonresidential Floor Area

Nonresidential Floor Area Located in North Logan, Utah
(square feet in thousands)

Annual Change	Base Value (b)	Method	1995	2000	2001	2002	2003	2004	2005	Base for 2006 Revision 2006	2007	2008	2009	2010	2015	2020	2025
											projection years (x) =>						
											1	2	3	4	9	14	19
6.0%	2,439	Exponential	1,286	1,876	1,972	1,977	2,037	2,134	2,362	2,439	2,585	2,740	2,904	3,079	4,120	5,513	7,378
6.0%	2,439	**Linear (rcmd alt)**									**2,585**	**2,731**	**2,877**	**3,024**	**3,755**	**4,487**	**5,218**
14.0%	2,439	Logarithmic									2,675	2,814	2,912	2,988	3,225	3,363	3,461
10.1%	2,439	Lnr Trend Extrp									2,521	2,642	2,770	2,915	3,893	5,243	7,016
		* KSF from building permits =>	105	96	6	59	97	228	77								
										105 Ten-Year Average							



* Base in 1997 study was slightly different at 1,496 vs 1,502 KSF

Employment by place of work (i.e., "Jobs" as shown in Figure 7) was derived from the nonresidential floor area data. The square feet per employee multipliers shown below are based on national data, as documented in Figure 8.

Figure 7: Nonresidential Floor Area and Job Estimate

Nonresidential Floor Area and Job Estimates

North Logan, Utah

	Floor Area (Sq Ft)	Square Feet per Employee	2006 Job Estimate	
Commercial / Shopping Center	1,026,586	350	2,933	36%
Office / Institutional				
Office/Services	369,750			
Government/Schools	199,713			
Institutional (churches, university)	555,602			
Subtotal	1,125,065	240	4,688	57%
Industrial				
Construction/Manufacturing	251,441	433	581	
Warehouse/Storage	44,878	797	56	
Subtotal	296,319	465	637	8%
TOTAL	2,447,970	296	8,258	100%

Nonresidential development impact fees has been determined for the following three general types of development: Commercial / Shopping Center, Office / Institutional and Industrial. General employee and building area ratios used in the impact fees study are presented in Figure 8.

Figure 8: Employee and Building Area Ratios

Employee and Building Area Ratios

North Logan, Utah

Land Use (ITE code)	Wkdy Trip Ends Per 1,000 Sq Ft*	Wkdy Trip Ends Per Employee*	Emp Per 1,000 Sq Ft	Sq Ft Per Emp**
Commercial / Shopping Ctr (820)				
50 KSF GLA	91.65	na	3.33	300
100 KSF GLA	**70.67**	na	**2.86**	**350**
200 KSF GLA	54.50	na	2.50	400
General Office (710)				
10 KSF GFA	24.60	5.32	4.62	216
25 KSF GFA	**19.72**	4.74	**4.16**	**240**
50 KSF GFA	16.58	4.22	3.93	255
Business Park (770)***	14.37	4.58	3.14	319
Light Industrial (110)	**6.97**	3.02	**2.31**	**433**
Warehousing (150)	4.88	3.89	1.25	797
Manufacturing (140)	3.85	2.09	1.84	543

* Trip Generation, Institute of Transportation Engineers, 1991.

** Square feet per employee 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/warehouse.

The projected increase in both population and nonresidential floor area was converted to annual development projections, as shown in Figure 9. The average annual increase in housing units and nonresidential floor area (in thousands of square feet, or KSF) is consistent with recent development trends in North Logan City.

Figure 9: Average Annual Increase in Development

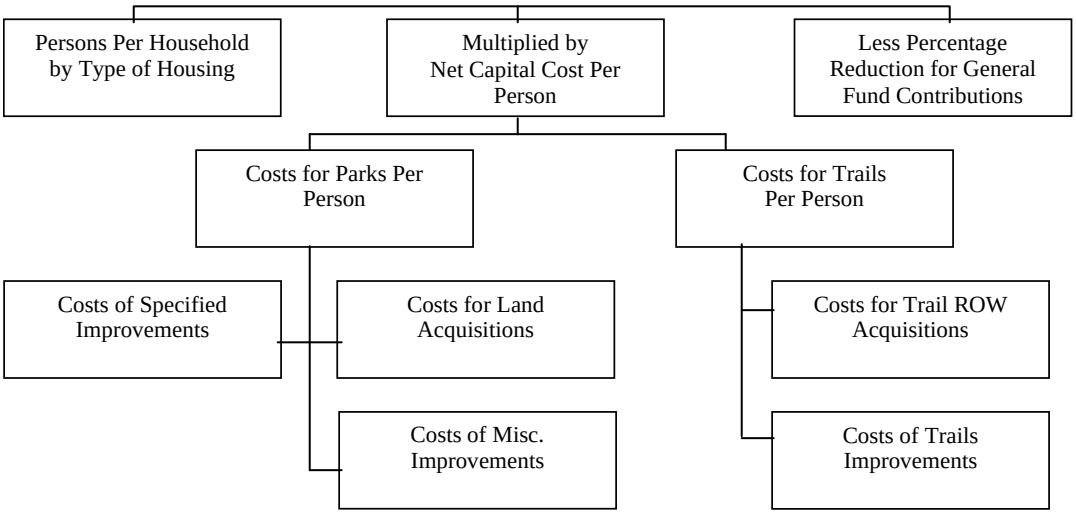
North Logan, Utah		Year =>	1	2	3	4	5	6	7	8	9	10
TREND ANALYSIS DATA		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
(Enter Independent Cumulative Data)												
	Population	6,897	7,256	7,615	7,973	8,332	8,691	9,049	9,408	9,767	10,125	10,484
	Persons Per Household	3.02	3.02	3.02	3.02	3.02	3.02	3.02	3.02	3.02	3.02	3.02
Average Annual Increase	Households	2,281	2,400	2,518	2,637	2,755	2,874	2,993	3,111	3,230	3,349	3,467
	Pop & Jobs	15,155	16,010	16,864	17,718	18,572	19,426	20,280	21,134	21,989	22,843	23,697
	Jobs	8,258	8,753	9,249	9,744	10,240	10,735	11,231	11,726	12,222	12,717	13,213
123 units	*Housing Units*	2,347	2,472	2,594	2,716	2,838	2,960	3,082	3,205	3,327	3,449	3,571
80 units	Single Family Detached	1,613	1,681	1,764	1,847	1,930	2,013	2,096	2,179	2,262	2,345	2,428
43 units	All Other Housing	734	791	830	869	908	947	986	1,025	1,065	1,104	1,143
146 KSF	*Nonres Floor Area*	2,439	2,585	2,731	2,877	3,024	3,170	3,316	3,463	3,609	3,755	3,902
60 KSF	Com/Shpg Ctr KSF	939	1,011	1,068	1,125	1,183	1,240	1,297	1,354	1,412	1,469	1,526
71 KSF	Office/Inst KSF	1,112	1,197	1,265	1,333	1,401	1,469	1,536	1,604	1,672	1,740	1,808
25 KSF	Industrial KSF	386	416	439	463	486	510	533	557	581	604	628
	BLANK	0										
	BLANK	0										

PARKS AND RECREATION

New residential development creates a need for additional park land and recreation improvements in North Logan City. The methodology used to calculate the development impact fees for parks and recreation is shown in Figure 10. Household size, by type of housing, is multiplied by the per-capita capital cost of land and improvements to derive the park and recreation impact fee.

Capital costs include community parks and trails land, plus park/recreation and trails improvements. The recommended replacement cost methodology will enable North Logan to maintain its current Level of Service (LOS) standards by incrementally providing additional park and recreation improvements.

Figure 10: Parks and Recreation Methodology



The Parks and Recreation impact fee uses a methodology based on the existing inventory of park land and improvements, as shown in Figure 11 and trails as shown in Figure 12. The existing inventory of park land includes 44.7 acres of improved parks and 66.8 acres of undeveloped park land. Also shown in Figure 11 is the capital improvement plan to maintain roughly the same LOS for park land and facilities. As shown in Figure 12, the existing inventory of trails includes 5.14 miles of trails of which 2.60 miles are improved. The trails include land either owned by the city for planned trails or places where the city owns trail easements on privately owned properties. The capital improvement plan includes the City's plan to acquire additional park land and trails to accommodate future development as well as developing existing land. The replacement cost approach has been used for the Parks and Recreation impact fee maintaining the current LOS and using the population of North Logan in the year 2026.

Figure 11: LOS for Community Park Land and Improvements - Parks

Parks and Recreation Facilities Inventory and 20-yr Capital Facilities Plan

North Logan, Utah

Park/Facility	Total Acerage	Improved Acreage	Acerage of Un-improved Park Land	Restrooms (Male & Female Combo)	Baseball, Soccer or Softball Fields	Picnic Tables (In pavilions or stand alone)	Tennis Courts	Basketball Courts	Volleyball Courts	Playground Areas with Equipment	Other Misc. Improve-ments*	
Current LOS 2006												
Elk Ridge (East of Canal)	24	23.8	0.0	3	6	24	1	1	2	2	$296,850	
Elk Ridge (West of Canal)	10	0.0	10.1								$15,383	
Meadow View	20	16.0	3.5	1	1	9				1	$5,996	
Green Canyon (Trailhead Area & 1st Trough Campground)	5	4.9	0.0	2		18					$2,000	
Library Park (part of total parcel purchased*)	1	0.0	1.4								$0	
Nature Park mouth Green Canyon	20	0.0	19.5								$0	
Memorial Park	22	0.0	22.0								$0	
Canyon Ridge Open Spaces	10	0.0	10.3								$0	
Total Current (LOS)	**112**	**44.7**	66.8	6	7	51	1	1	2	3	**$ 320,229**	
Current LOS Per Person	0.01617	0.00648	0.00968	0.00087	0.00101	0.00739	0.00014	0.00014	0.00029	0.00043		
Assumed Unit Cost for Specified Improvements				$45,000	$40,000	$600	$80,000	$10,000	$25,000	$60,000		
Calculated Cost of Specified Improvements				$270,000	$280,000	$30,600	$80,000	$10,000	$50,000	$180,000		
Calculated Per Acre Cost of Misc. Improvements		**$7,161**										
Equivalent LOS for 2026	228	91	136	12	14	104	2	2	4	6		
Elk Ridge (East of Canal)	24	23.8	0.0	2	6	30	1	1	2	2		
Elk Ridge (West of Canal)	10	10.1	0.0	1	3							
Meadow View	20	19.5	0.0	1	2	9	1	1		1		
Green Canyon (Trailhead Area & 1st Trough Campground)	5	4.9	0.0	2		18			1			
Library Park (part of total parcel purchased*)	1	1.4	0.0			5				1		
Nature Park mouth Green Canyon	20	5.0	14.5	1		12			1			
Memorial Park	33	10.0	23.0	1		15				1		
Canyon Ridge Open Spaces	10	0.0	10.3									
Elk Ridge (South of Existing Park)	12	12.0	0.0	1	2							
Peterson Nature Park	16	5.0	11.0	1		5						
Town Center Park	8	8.0	0.0	1		10				1		
Park on Embry Property	4	4.1	0.0	1	1							
Park in Johnson's Gravel Pit	18	0.0	17.6									
TOTAL	**180**	**103.8**	76.43	12	14	104	2	2	4	6		
Added 2007 through 2026	69	**59.1**	9.6	6	7	53	1	1	2	3	Total Cost of All Specified Improve-ments 2007 to 2026	
Calculated Cost of Additional Land	**$ 1,189,000**											
Assumed Unit Cost for Specified Improvements				$45,000	$40,000	$600	$80,000	$10,000	$25,000	$60,000		
Calculated Cost of Added Specified Improvements				$270,000	$280,000	$31,800	$80,000	$10,000	$50,000	$180,000	**$901,800**	
Calculated Cost of Misc. Improvement 2007 - 2026		**$423,201**										

	2006	2026	Increased Population 2007 to 2026
Population	6,897	14,071	7,173

Cost of Land Acquisitions 2007 - 2026 per capita	$ 165.75
Cost of Misc. Improvements 2007 - 2026 per capita	$ 59.00
Cost of Specified Improvements 2007 - 2026 per capita	$ 125.72
Total Per Capita Park Costs	$ 350.46

* Includes items such as buildings, pavillions, grading, irrigation, landscaping and parking lots.

Figure 12: LOS for Community Park Land and Improvements - Trails

Trails Inventory and 20-yr Capital Facilities Plan

North Logan, Utah

Current LOS 2006

Trails	Total Miles in Planned Trail	Miles of Improved Trails	Cost of Trail Improve-ments per mile	Cost of Trail Improve-ments Made	Miles of Un-Improved Trails	Cost of Future Trail Improve-ments (Total Plan)	Miles of the Trail ROW Owned by City	Miles of Trail ROW Still to be Acquired (Total Plan)	Cost to Acquire Trail ROW (Does not include cost to improve)
Bonneville Shoreline Trail	2.65	0.40	$17,500	$7,000	2.25	$39,375	0.40	2.25	$174,545
Green Canyon Trail (Forest Service Boundary to Trail Head and to 1st Trough)	0.70	0.40	$20,000	$8,000	0.30	$6,000	0.70	0.00	$0
East Bench Powerline Trail	1.58	0.00			1.58	$0	0.41	1.17	$90,764
Green Canyon Road Trail (The Non-sidewalk trail along 1800/1900 N to Forest Service Boundary)	1.60	1.10	$45,455	$50,000	0.50	$22,727	1.60	0.00	$0
Upper Canal Trail	2.50	0.00			2.50	$122,552	0.30	2.20	$170,667
Middle Canal Trail	2.38	0.30	$25,000	$7,500	2.08	$52,000	0.30	2.08	$161,358
Twin Ditches Canal Trail	2.08	0.40	$19,500	$7,800	1.68	$32,760	0.40	1.68	$130,327
Canyon Ridge Trail	0.98	0.00			0.98	$48,041	0.50	0.48	$37,236
Beef Hollow Trail	1.00	0.00			1.00	$49,021	0.13	0.87	$67,491
Mohogony Ridge Trail	0.70	0.00			0.70	$34,315	0.40	0.30	$23,273
					0.00	$0		0.00	$0
					0.00	$0		0.00	$0
TOTAL	**16.17**	**2.60**		**$80,300**	13.57	$406,791	**5.14**	**11.03**	$855,661
Weighted Average Cost of Trail Improvements per mile			$49,021						

Total Current Miles of Trail (Current LOS)	**2.60**		**5.14**	
Current LOS Per Household	**0.0004**		**0.0007**	
Equivalent Miles in 2026 for Same LOS	**5.30**		**10.49**	
Added Miles 2007 to 2026 for Same LOS	**2.70**		**5.35**	
Cost for Added ROW / Improvements 2007 to 2026	**$ 132,553**	For Trail Improvements	**$ 414,689**	For Trail ROW Acquisitions

Trails Inventory Summary		
	Planned	16.17
	Acquired	5.14
	Not Yet Acquired	11.03
	Improved	2.60
	Un-Improved	13.57

Assumed Cost of Land per acre for Acquisition for Trails	$40,000	
Acqusition cost per mile assuming 16-foot ROW for Trails	$77,576	
Total Cost per mile for Improvements plus ROW Acquisitions	**$126,597**	
	2006	2026
NLC Population	6,897	14,071
Population Added 2007 to 2026		7,173

Cost of Trail ROW Acquisitions 2007 - 2026 per capita	$ 18.48
Cost of Trail Improvements 2007 - 2026 per capita	$ 57.81
Total Per Capita Trails Costs	$ 76.29

The cost of maintaining the current LOS standards upon which the Parks and Recreation impact fee is based is shown in Figure 13. The impact fee varies by type of housing and is based on the respective household size for Single Family Detached and All Other housing units per the 2000 census.

Figure 13: Parks and Recreation Impact Fee

Parks and Recreation Impact Fee

North Logan, Utah

	Census 2000
Persons per Household in NLC (2000 Census)	
Single Family Detached	4.130
All Other Residential	3.190

		Total
Costs to Maintain Current Levels Of Service		
PARKS		
Cost of Land Acquisitions 2007 - 2026 per capita	$ 165.75	
Cost of Misc. Improvements 2007 - 2026 per capita	$ 59.00	
Cost of Specified Improvements 2007 - 2026 per capita	$ 125.72	
Total Per Capita Park Costs		$ 350.46
TRAILS		
Cost of Trail ROW Acquisitions 2007 - 2026 per capita	$ 18.48	
Cost of Trail Improvements 2007 - 2026 per capita	$ 57.81	
Total Per Capita Trails Costs		$ 76.29
Sales Tax Credit per Capita		$73.64
Net Capital Cost Per Capita		$ 353.11
Reduction for General Fund Contributions		5.0%

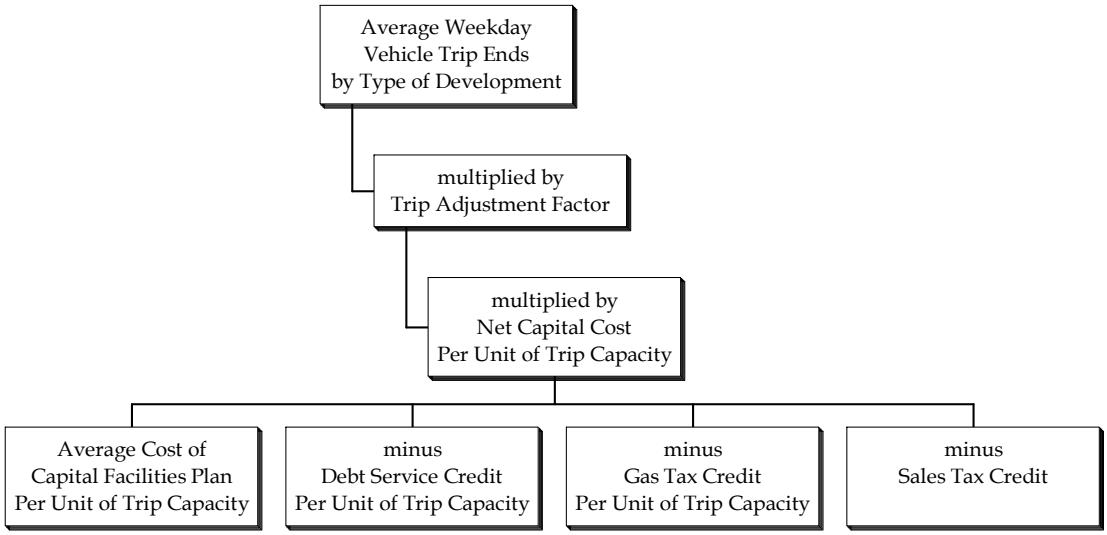
Maximum Supportable Impact Fee	Per Household
Single Family Detached	$1,384
All Other Housing Types	$1,069

To accommodate projected development in North Logan over the next twenty years and to maintain the city's current level of service for parks and trails, the City will need to spend approximately $153,000 per year for park and recreation land acquisitions, improvements to existing sites, plus trails acquisitions and improvements.

ROADS

The road impact fee for North Logan uses a plan-based methodology. Projected costs for road improvements were provided by City staff. As shown in Figure 14, trip generation rates, by type of development, are multiplied by the net capital cost per unit of trip capacity to yield the impact fees. Capital costs included in the impact fee calculations reflect only the local share to be paid by North Logan City. The cost of improving State and Federal highways is not part of the impact fee analysis. Road impact fees have been reduced by appropriate gas tax and sales tax credits. The sales tax credit has been included by North Logan in recognition of the fact that most commercial development is located along Highway 91 and therefore a majority of the commercial patrons are not City residents.

Figure 14: Road Impact Fee Methodology Chart



The demand for additional roads will be generated by vehicle trips. Figure 15 lists the road segments and bridges that will need improvements to accommodate the transportation demand in North Logan over the next twenty years. The total cost of the road improvements, was divided by the projected total number of vehicle trips on an average daily basis, to yield the average cost of $144 per unit of trip capacity. The average cost approach conservatively allocates the cost of road improvements to all vehicle trips (i.e., trips from existing development plus trips from new development over the 2006 to 2026 time frame).

Figure 15: Roads Capital Facilities Plan Summary

North Logan, Utah

Fiscal Year (begins 7/1) =>	FY2007-2012	FY2013-2018	FY2019-2026		
Project	*Short Range (6 yrs)*	*Mid Range (6 yrs)*	*Long Range (8 yrs)*	20-Yr Total	Year or priority
Bridge at 2500 N 1900 E. Includes building Road Base for 2500 N - 1850 E to End of Cemetery Property	$150,000			$150,000	2007
1600 E - 2700 to 3100 N (East Half)	$252,000			$252,000	2008
Acquire ROW for 2500 N - 1250 to 1600 E	$240,000			$240,000	2008
2300 N - 1600 to 1900 E	$396,000			$396,000	2009
Bridge at 2300 N 1800 E	$150,000			$150,000	2009
Acquire House for ROW for 2500 N - 1250 to 1600 E	$200,000			$200,000	2009
Bridge at 3100 N 1150 E	$150,000			$150,000	2009
Bridge at 1780 N 1700 E	$150,000			$150,000	2010
2500 N - 1250 to 1600 E	$462,000			$462,000	2010
600 E - 2200 to 2500 N	$396,000			$396,000	2011
2500 N - 800 to 1250 E	$594,000			$594,000	2011
1780 N - 1600 to 1700 E	$132,000			$132,000	2012
100 E - 1900 to 2200 N	$396,000			$396,000	2012
600 E - 2500 to 2700 N	$264,000			$264,000	2012
200 E - 1500 to 3000 N (NLC's Share of CMPO Project)		$300,000		$300,000	a
2100 N - 100 to 200 E		$132,000		$132,000	a
1900 E - 2300 to 2500 N		$264,000		$264,000	b
200 W - 2500 to 2850 N		$462,000		$462,000	b
200 W - 2850 to 3100 N		$330,000		$330,000	b
2500 N - 1900 E to Pwr Line Rd		$250,000		$250,000	b
2600 N - 1700 to 1900 E		$264,000		$264,000	c
2750 N - 1250 to 1000 E		$330,000		$330,000	c
2850 N - Main to 600 W		$792,000		$792,000	c
400 W - 2500 to 2850 N		$462,000		$462,000	c
1600 E - 2300 to 2700 N (West Half)		$264,000		$264,000	c
1600 E - 2700 to 3100 N (West Half)		$264,000		$264,000	c
Bridge at 2100 N 1700 E		$150,000		$150,000	c
1200 E - 2300 to 2500 N		$264,000		$264,000	c
1200 E - 2500 to 2750 N			$330,000	$330,000	d
1900 E - 2500 to 2900 N			$528,000	$528,000	d
2900 N - 1000 to 1250 E			$198,000	$198,000	d
2900 N - 1200 to 1600 E			$528,000	$528,000	d
Bridge at 1200 E 2800 N			$150,000	$150,000	d
Bridge at 600 E 2550 N			$150,000	$150,000	d
2500 N - 1600 to 1900 E			$396,000	$396,000	e
2100 N - 1600 E to Pwr Line Rd			$594,000	$594,000	e
3100 N - 1200 to 1600 E			$528,000	$528,000	e
400 W - 2850 to 3100 N			$330,000	$330,000	e
Bridge at 1900 N 1000 E			$150,000	$150,000	e
Bridge at 2600 N 1800 E			$150,000	$150,000	e
1900 E - 1900 to 2300 N			$528,000	$528,000	f
2300 N - 1900 E to Pwr Line Rd			$462,000	$462,000	f
2600 N - 1900 E to Pwr Line Rd			$462,000	$462,000	f
3100 N - 2000 to 2200 E			$264,000	$264,000	f
Fiscal Year (begins 7/1) =>	FY2007-2012	FY2013-2018	FY2019-2026	$14,208,000	
Project	*Short Range (6 yrs)*	*Mid Range (6 yrs)*	*Long Range (8 yrs)*	20-Yr Total	
			Average Weekday Vehicle Trips in 2026	98,518	
			Capital Cost per Unit of Trip Capacity	$144.22	

The impact fee methodology for roads includes a credit for future gas tax revenue that will be used by North Logan for capacity projects. Figure 16 indicates the projected gas tax revenue over the next twenty years that will be used for road improvements. Annual revenues were divided by average daily vehicle trips to yield the gas tax credit per unit of trip capacity. A net present value calculation was used to account for the time value of money.

Figure 16: Gas Tax Credit

FY	10% of Gas Taxes Used For Capacity Projects	Average Daily Vehicle Trips	Gas Tax Per Trip
2007	$25,000	48,366	$0.52
2008	$24,385	51,006	$0.48
2009	$23,975	53,645	$0.45
2010	$25,020	56,285	$0.44
2011	$24,374	58,924	$0.41
2012	$24,452	61,564	$0.40
2013	$25,237	64,204	$0.39
2014	$24,725	66,843	$0.37
2015	$24,813	69,483	$0.36
2016	$25,023	72,122	$0.35
2017	$25,138	74,762	$0.34
2018	$25,097	77,401	$0.32
2019	$25,283	80,041	$0.32
2020	$25,323	82,681	$0.31
2021	$25,313	85,320	$0.30
2022	$25,486	87,960	$0.29
2023	$25,554	90,599	$0.28
2024	$25,606	93,239	$0.27
2025	$25,680	95,879	$0.27
2026	$25,769	98,518	$0.26
	$501,253		
		Net Present Value	$6.50

Although sales tax revenue is part of the General Fund and is not legally restricted to road construction projects, North Logan City has included a sales tax credit in the road impact fee methodology. This additional credit acknowledges that sales tax revenue has been a major source of the General Fund contribution to road improvements. Two methods have been used to calculate the sales tax credit. For residential development, the sales tax credit is calculated on the basis of residential vehicle trips. For commercial and shopping center development, the sales tax credit is allocated per 1,000 square feet of development.

In order to derive the sales tax credit, the projected sales tax revenue dedicated for road improvements over the next 20 years was allocated 12% to residential development and 88% to commercial / shopping center development. This allocation was based on an estimate of local expenditures from the 2001-02 Consumer Expenditure Survey of the western region of the United States, published by the Bureau of Labor Statistics (BLS). With this adjustment, it is estimated that approximately 24% of household income (before taxes) will be spent locally. This estimated percentage of local expenditures has been used in the analysis of gross taxable sales, shown in Figure 17. Median household income data from the 2000 Census was inflated to 2006 dollars and then multiplied by the number of households in North Logan to yield the 2006 aggregate household income of approximately $139 million. If 24% of this income were spent locally, then North Logan households accounted for approximately 12% of the gross taxable sales in North Logan in 2006.

Figure 17: Estimated Local Expenditures and Analysis of Gross Taxable Sales

Estimated Local Expenditures

Local Expenditures	
Food	$5,590
Other Vehicle Expenses (not gas or purchases)	$2,713
Entertainment	$2,339
Health Care	$2,221
Apparel and Services	$1,786
Household Furnishings and Equipment	$1,737
Housekeeping Supplies	$525
Personal Care Products and Services	$545
Alcoholic Beverages	$410
Tobacco Products	$238
Reading	$160
	$18,264
Income Before Taxes	$51,003
Percent of Income on Local Expenditures	36%
Pct of Local Expenditures Without Food	24%

Source: Western Region Consumer Expenditure Survey, US Bureau of Labor Statistics, 2001-02.

Analysis of Gross Taxable Sales

North Logan Median Household Income in 1999*		$51,750
Implicit Price Deflator, 1999		98.4
Implicit Price Deflator, 2006		115.9
Median Household Income in 2006		$60,933
2006 Households in North Logan		2,281
Aggregate Household Income in 2004		$138,988,548
Estimated Local Expenditures	24%	$33,357,252
Gross Taxable Sales in North Logan**		$283,979,600
Percentage of Sales to North Logan Households		12%

* 2000 Census data.

** Utah State Tax Commission - Gross Taxable Sales, most recent report - 2005

Figure 18 indicates residential development's allocation of projected sales tax revenue to be used for road capacity improvements and the projected increase in average daily residential vehicle trips over the next twenty years. The net present value of the annual sales tax contribution per vehicle trip results in a credit of $22.21 per unit of trip capacity.

Figure 18: Sales Tax Credit per Residential Vehicle Trip

FY	12% of Sales Taxes Dedicated For Road Improvements	Residential Trips	Sales Tax Per Vehicle Trip
2007	$17,706	13,675	$1.29
2008	$18,519	14,351	$1.29
2009	$19,331	15,027	$1.29
2010	$20,144	15,703	$1.28
2011	$20,957	16,379	$1.28
2012	$21,769	17,055	$1.28
2013	$19,544	17,731	$1.10
2014	$22,680	18,407	$1.23
2015	$23,433	19,083	$1.23
2016	$24,186	19,759	$1.22
2017	$24,939	20,435	$1.22
2018	$25,692	21,111	$1.22
2019	$26,445	21,787	$1.21
2020	$27,198	22,462	$1.21
2021	$27,951	23,138	$1.21
2022	$28,704	23,814	$1.21
2023	$29,457	24,490	$1.20
2024	$30,210	25,166	$1.20
2025	$31,157	25,842	$1.21
2026	$31,767	26,518	$1.20
	$491,787		
		Net Present Value	$22.21

North Logan receives sales tax revenue from commercial establishments located within the City. Based on the analysis of gross taxable sales, 88% of the sales tax dedicated for road improvements will be credited against the road impact fees for commercial and shopping center development. As shown in Figure 19, the projected increase in sales tax revenue has been divided by the projected increase in commercial floor area to derive the sales tax credit of $2,169.38 per 1,000 square feet of development.

Figure 19: Sales Tax Credit per KSF of Commercial / Shopping Center Development

FY	88% of Sales Tax Dedicated For Road Improvements	Commercial / Shopping Center KSF	Sales Tax Per KSF
2007	$133,032	1,011	$131.58
2008	$139,137	1,068	$130.25
2009	$145,243	1,125	$129.05
2010	$151,348	1,183	$127.97
2011	$157,453	1,240	$126.98
2012	$163,559	1,297	$126.09
2013	$146,837	1,354	$108.42
2014	$170,398	1,412	$120.71
2015	$176,056	1,469	$119.86
2016	$181,714	1,526	$119.07
2017	$187,371	1,583	$118.34
2018	$193,029	1,641	$117.66
2019	$198,687	1,698	$117.03
2020	$204,345	1,755	$116.44
2021	$210,002	1,812	$115.88
2022	$215,660	1,869	$115.36
2023	$221,318	1,927	$114.87
2024	$226,976	1,984	$114.41
2025	$234,092	2,041	$114.69
2026	$238,677	2,098	$113.74
	$3,694,934		
		Net Present Value	$2,169.38

Maximum supportable development impact fees for roads are shown in Figure 20. The LOS standards include Average Weekday Vehicle Trip Ends from the reference book, Trip Generation, published by the Institute of Transportation Engineers (ITE, 5th edition, 1991). A "trip end" represents a vehicle either entering or exiting a development (as if a traffic counter were placed across a driveway). For trip generation rates not shown below, North Logan staff may use the most appropriate rates from the Trip Generation manual, or rates from approved local transportation studies. Residential trip generation rates reflect larger household sizes and local travel characteristics.

To calculate road impact fees, trip generation rates are adjusted to avoid double counting each trip at both the origin and destination points. For Office/Institutional and Industrial development, the trip factor is 50%. For Commercial/Shopping Center development, the trip factor ranges from 23-34%. Trip adjustment factors are less than 50% because retail uses attract vehicles as they pass by on arterial and collector roads. For example, when someone stops at a convenience store on the way home from work, the convenience store is not their primary destination. The Trip Generation manual

indicates that on average, 43% of the vehicles entering shopping centers, in the size range of 75,000-150,000 square feet, are passing by on their way to some other primary destination. The remaining 57% of attraction trips have the shopping center as their primary destination. Because attraction trips are half of all trips, the Commercial / Shopping Center trip adjustment factor is 57% multiplied by 50%, or approximately 29% of the trip ends.

For Residential uses, the trip adjustment factor is 62% because many of the employed residents of North Logan go to work outside of the City. Half of the trips attributed to residential uses are production trips (leaving home) and half are attraction trips (returning home). Therefore, the basic trip factor is 50%. To this is added 12% to account for North Logan residents working outside the City. According to 2000 census data, approximately 87% of North Logan workers were employed outside of the City. Because home-based work trips generally account for 28% of all productions trips (see National Personal Transportation Study, US Dept. of Transportation, 1984), these three factors may be multiplied together (0.50 x 0.28 x 0.87) to indicate the percentage of home-based work trips to locations outside of North Logan. The resulting 12% of trips have been added to the residential trip adjustment factor to account for increased road impact due to commuting patterns.

The road impact fee methodology includes a 8.96% reduction for discretionary General Fund taxes. As shown in Figure 40, this reduction is based on the expenditure of locally generated taxes that may be spent at the discretion of City Council.

Figure 20 indicates the sales tax credit for commercial/shopping center development is $2,169.38 per 1,000 square feet of building. This credit is <u>not</u> given on a per trip basis due to the lack of development projections by shopping center size.

Figure 20: Road Impact Fee

	Residential	Commercial / Shopping Centers	Other Nonresidential
Average Weekday Vehicle Trip Ends			
Residential (per Housing Unit)			
Single Family Detached	10.00		
All Other Housing Types	7.50		
Nonresidential (per 1,000 Sq Ft)			
Com / Shop Ctr Less Than 75,000 Sq Ft		91.65	
Com / Shop Ctr 75,000 - 150,000 Sq Ft		70.67	
Com/Shop Ctr Greater Than 150,000 SF		54.50	
Office / Inst < 17,500 Sq Ft			24.60
Office / Inst 17,500-37,500 Sq Ft			19.72
Office / Inst > 37,500 Sq Ft			16.58
Business Park			14.37
Light Industrial			6.97
Warehousing			4.88
Manufacturing			3.85
Trip Adjustment Factors			
Residential	62%		
Com / Shop Ctr Less Than 75,000 Sq Ft		23%	
Com / Shop Ctr 75,000 - 150,000 Sq Ft		29%	
Com/Shop Ctr Greater Than 150,000 SF		34%	
All Other Nonresidential			50%
Level Of Service			
Capital Cost per Unit of Trip Capacity	$144.22	$144.22	$144.22
Debt Credit per Unit of Trip Capacity	($4.28)	($4.28)	($4.28)
Gas Tax Credit per Unit of Trip Capacity	($6.50)	($6.50)	($6.50)
Sales Tax Credit Unit of Trip Capacity (Residential)	($22.21)		
Net Capital Cost per Unit of Trip Capacity	$111.22	$133.43	$133.43
Sales Tax Credit per 1,000 Sq Ft		($2,169.38)	
Reduction for General Fund Taxes	8.96%	8.96%	8.96%

Maximum Supportable Impact Fee			
Residential	Per Housing Unit		
Single Family Detached	$629		
All Other Housing Types	$472		
Nonresidential		Per 1,000 Sq. Ft.	
Com / Shop Ctr Less Than 75,000 Sq Ft		$585	
Com / Shop Ctr 75,000 - 150,000 Sq Ft		$471	
Com / Shop Ctr Greater Than 150,000 Sq Ft		$242	
Office / Inst < 17,500 Sq Ft			$1,494
Office / Inst 17,500-37,500 Sq Ft			$1,197
Office / Inst > 37,500 Sq Ft			$1,007
Business Park			$872
Light Industrial			$423
Warehousing			$296
Manufacturing			$233

WATER SYSTEM

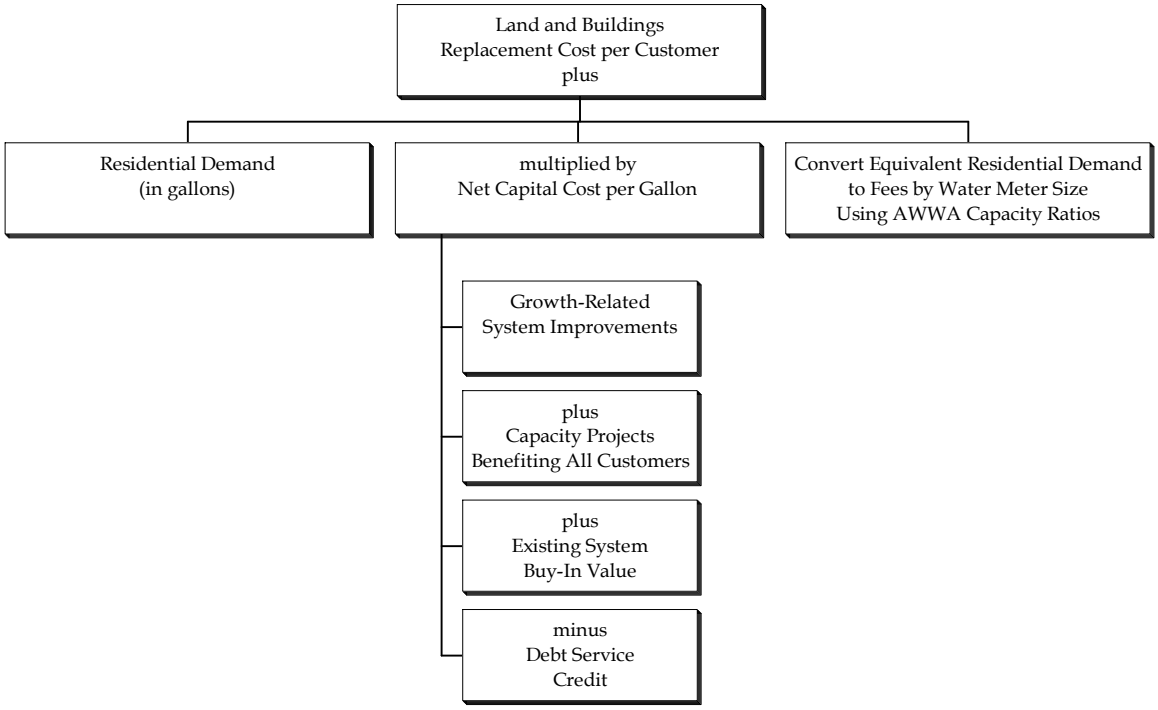
The Water System impact fees are primarily determined by the capital cost per gallon of capacity for distribution system improvements. As shown in Figure 21, four basic steps have been used to determine the net capital cost per gallon of capacity. The major cost factor is for growth-related capital improvements needed to accommodate additional demands on the water system. Capital projects are summarized in a five-year Capital Facilities Plan (CFP). If North Logan were to stop growing, these growth-related projects would not be constructed. The cost of growth-related capital improvement projects was divided by the incremental increase from the current water system average daily usage to the future water system average daily usage at the end of the CFP time frame.

In recognition of the value of the City's existing water system, the second component in the impact fee methodology is the buy-in component. The city has included the cost of recent water system improvements that were oversized to accommodate future development.

The third major step in calculating utility impact fees was the evaluation of funding mechanisms for capital improvements. To avoid any potential double payments, the one-time impact fees were reduced to account for future principal payments from monthly utility bills. The credit for principal payments on existing bonds was subtracted from the cost factors to yield the net capital cost per gallon of water system capacity.

As shown in the chart below, the net capital cost was multiplied by a consumption standard to yield the proportionate impact fee for a one-inch water meter. Impact fees for all other meter sizes were derived from capacity ratios published by the American Water Works Association.

Figure 21: Water System Impact Fee Methodology Chart



Water use for residential and nonresidential customers was determined from 1996 billing records. The water use data shown in Figure 22 were used to project future water demand from both residential and nonresidential development.

Figure 22: Culinary Water Average Daily Demand Factors

	Gallons Per Day	%**	Connections	%	Gallons Per Day Per Connection	Gallons Per Capita Per Day*
Single-Family Residential	767,412	56%	1,667	88%	460	137
Multi-Family Residential	239,318	17%	64	3%	3,739	
Non-residential	361,412	26%	164	9%	2,204	
TOTAL	1,368,142		1,895			

* Based on an average household size of 3.35 Persons.

** Relative Gallons Per Day in each category is based on the following wintertime use for the period between October 31, 2005 and April 30, 2006.

Single-Family Residential	402,267	56%
Multi-Family Residential	125,447	17%
Non-residential	189,447	26%
	717,161	

The residential and nonresidential demand factors discussed above were developed from the actual and projected water usage in North Logan summarized in the annual water demand data shown in Figure 23.

Figure 23: Annual Water System Demand

Logan, Utah

Year		Million Gallons Per Day (average)
Base	2006	1.368
1	2007	1.416
2	2008	1.450
3	2009	1.483
4	2010	1.517
5	2011	1.551
6	2012	1.584
7	2013	1.618
8	2014	1.651
9	2015	1.685
10	2016	1.718
11	2017	1.752
12	2018	1.785
13	2019	1.819
14	2020	1.853
15	2021	1.886
16	2022	1.920
17	2023	1.953
18	2024	1.987
19	2025	2.020
20	**2026**	**2.054**
21	2027	2.088
22	2028	2.121
23	2029	2.155
24	2030	2.188
25	2031	2.222
26	2032	2.255
		20-yr Increase
		685,826

A summary of North Logan's water system Capital Facilities Plan (CFP) is shown in Figure 24. Capital projects have been placed in three categories. At the top of the CFP summary are water distribution and storage projects that are necessary to accommodate new water connections over the next twenty years. These growth-related projects have a projected total cost of approximately $3.41 million. The second category is for projects which will increase the city's water production with a projected cost of $475,000. The third category is for the cost of acquiring water rights sufficient to maintain the same relative amount of water rights currently possessed by the city for wells only. Based on these factors, the total cost per gallon of system capacity is $5.89.

Figure 24: Water System Capital Facilities Plan Summary

Fiscal Year (begins 7/1) =>	FY07-11	FY12-16	FY17-26	20-Year
Distribution Grid Projects				
Main - 2900 to 3100 N	$59,400			$59,400
3100 N - Main to 200 W	$59,400			$59,400
2850 W - Main to 200 W	$59,400			$59,400
200 W - 2500 to 2850 W	$103,950			$103,950
2300 N - 1600 to 1800 E	$59,400			$59,400
2000 E - 3050 to 3150 N	$29,700			$29,700
Main - 1850 to 2100 N	$74,250			$74,250
200 E - 1800 to 2200 N	$118,800			$118,800
200 E - 2200 to 2500 N	$89,100			$89,100
400 W - 2500 to 2850 N	$103,950			$103,950
400 W - 2850 to 3100 N	$103,950			$103,950
2850 N - 200 to 400 W	$59,400			$59,400
3100 N - 200 to 400 W	$59,400			$59,400
200 W - 2850 to 3100 N		$103,950		$103,950
2000 N - 100 to 200 E		$29,700		$29,700
400 E - 1800 to 2200 N		$121,500		$121,500
2200 N - 400 to 600 E		$59,400		$59,400
PRV @ 2200 N 500 E		$30,000		$30,000
3300 N - 1200 to 1400 E		$59,400		$59,400
1400 E - 3100 to 3300 N			$59,400	$59,400
1400 E - 2700 to 2800 N			$29,700	$29,700
2500 N - 1250 to 1600 E			$103,950	$103,950
1600 N - 800 to 1000 E			$59,400	$59,400
1800 E - 2100 to 2500 N			$118,800	$118,800
1800 E - 2500 to 2900 N			$118,800	$118,800
2300 N - 1800 to East Bench Line			$89,100	$89,100
2500 N - 1800 to East Bench Line			$49,500	$49,500
2600 N - 1800 to East Bench Line			$59,400	$59,400
2000 E - 3200 to 3400 N			$59,400	$59,400
2200 E - 3200 to 3400 N			$59,400	$59,400
2400 E - 3200 to 3400 N			$59,400	$59,400
3200 N - 2000 to 2400 E			$118,800	$118,800
3400 N - 2000 to 2400 E			$118,800	$118,800
1 M Gal Water Tank NW Quad			$800,000	$800,000
Pump Station NW Quad			$120,000	$120,000
Subtotal	$980,100	$403,950	$2,023,850	$3,407,900
20-Year Net Increase in Water Usage (gallons per day)				686,000
Capital Cost per Gallon				**$4.96**
Water Production Projects				
Pump, Station and Line for GC Well #3	$190,000			$190,000
Backup Power 1st West Well		$70,000		$70,000
Variable Speed Pump GC Well #1		$20,000		$20,000
Variable Speed Pump GC Well #2		$20,000		$20,000
18-inch Well Near GC Well #3			$175,000	$175,000
Subtotal	$190,000	$110,000	$175,000	$475,000
20-Year Net Increase in Water Usage (gallons per day)				686,000
Capital Cost per Gallon				**$0.69**
Water Rights Acquisition				
Purchase 134 ac-ft of Water Rights**	$168,000			$168,000
Subtotal	$168,000	$0	$0	$168,000
20-Year Net Increase in Water Usage (gallons per day)				686,000
Capital Cost per Gallon				**$0.24**

* Assumes water distribution grid will be installed along with wastewater collection lines, at an average cost of $45 per linear foot.

** Assumes water rights are available and can be purchased at 2006 cost of $2,000 per acre foot. Water rights needed to maintain same LOS with well rights is

Utah's Impact Fee Act states that local political subdivisions may impose an impact fee for public facility costs previously incurred by a local political subdivision to the extent that new growth and development will be served by the previously constructed improvement (see 11-36-202.(3)(b)). Almost every year North Logan City makes improvements to the water system in which elements are oversized to accommodate future development. The buy-in cost component shown in Figure 25 is based on the added value of the system improvements for the past eleven years (those below the line) divided by the system capacity in the year 2026.

Figure 25: Water System Buy-In Cost Component

Description	AcqYr	UsefulYrs	OrigCost	CostIndex	CurrentCost	CurrentValue
Sys Cost as of 1984	1984	40	$1,285,866	1.8724	$2,407,711	$1,685,398
System Improvements	1985	40	$103,958	1.8506	$192,382	$91,381
System Improvements	1986	40	$24,488	1.8075	$44,262	$22,131
System Improvements	1987	40	$856,871	1.7619	$1,509,764	$792,626
System Improvements	1988	40	$44,600	1.7179	$76,618	$42,140
System Improvements	1989	40	$117,268	1.6822	$197,263	$113,426
System Improvements	1990	40	$422,877	1.6406	$693,757	$416,254
System Improvements	1991	40	$44,744	1.6056	$71,842	$44,901
System Improvements	1992	40	$18,418	1.5573	$28,682	$18,644
System Improvements	1993	40	$13,373	1.4900	$19,926	$13,450
System Improvements	1994	40	$302,619	1.4355	$434,408	$304,085
System Improvements	1995	40	$0	1.4190	$0	$0
Storage Reservoirs	1996	40	$858,800	1.3813	$1,186,298	$889,723
System Improvements	1997	40	$646,975	1.3325	$862,095	$668,123
System Improvements	1998	40	$465,166	1.3113	$609,992	$487,994
System Improvements	1999	40	$121,732	1.2813	$155,970	$128,675
System Improvements	2000	40	$1,174,494	1.2479	$1,465,644	$1,245,798
System Improvements	2001	40	$16,650	1.2256	$20,407	$17,856
System Improvements	2002	40	$136,729	1.1874	$162,351	$146,115
System Improvements	2003	40	$0	1.1596	$0	$0
System Improvements	2004	40	$144,427	1.0911	$157,586	$149,707
Storage Reservoir	2005	40	$706,619	1.0426	$736,718	$718,300
System Improvements	2006	40	$81,577	1.0000	$81,577	$81,577
Total			$7,588,251			$8,078,304
Improvements over past 11 years			$4,353,169			$4,533,868
					System Capacity in 2025 (avg gal/day)	2,053,968
					Buy-In Cost per Gallon	$2.20

North Logan City has outstanding debt obligations for water system improvements. Total principal payments were divided by the projected average daily water demand to yield annual principal payments per gallon of capacity. To account for the time value of money, a net present value calculation was used at an annual discount rate 6%, to derive the credit of $0.88 per gallon of average daily water demand.

Figure 26: Principal Payment Credit for Water System Improvements

FY	Principal Payment	Water Demand (gallons/day)	Payment Per Gallon
2006	$125,000	1,368,142	$0.09
2007	$130,000	1,416,305	$0.09
2008	$135,000	1,449,866	$0.09
2009	$140,000	1,483,427	$0.09
2010	$145,000	1,516,989	$0.10
2011	$150,000	1,550,550	$0.10
2012	$160,000	1,584,111	$0.10
2013	$165,000	1,617,672	$0.10
2014	$170,000	1,651,233	$0.10
2015	$180,000	1,684,795	$0.11
2016	$190,000	1,718,356	$0.11
2017	$200,000	1,751,917	$0.11
2018	$210,000	1,785,478	$0.12
2019	end	n/a	
		Net Present Value	$0.88

The LOS standards used to derive the Water System impact fee are shown in the boxed area of Figure 27. The net cost of capital improvements for new growth is $7.21 per gallon of capacity or usage. The typical usage per residential connection is 460 gallons. Multiplying these two numbers provides the impact fee for a typical residential customer. Water system impact fees for users requiring larger meters are based on the water meter sizes and their capacity relative to a standard one-inch meter. The capacity ratios by meter size are from the American Water Works Association.

Figure 27: Water System Impact Fee

	Standards:
Level Of Service	
Gallons per Day per Residential Connection	460
Distribution Grid Cost per Gallon of Capacity	$4.96
Water Production Projects Cost per Gallon	$0.69
Water Rights Cost per Gallon	$0.24
Buy-In Cost per Gallon for System Improvements	$2.20
Principal Payment Credit per Gallon	($0.88)
Net Capital Cost per Gallon of Capacity	$7.21

Maximum Supportable Impact Fees

All Development			Per Meter
*Meter Size (inches)**	*Type*	*Capacity Ratio*	
0.75 or 1.00	Displacement	1.0	$3,319
1.50	Displacement	2.0	$6,638
2.00	Dsplcmnt/Cmpnd	3.2	$10,621
3.00	Compound	6.0	$19,914
4.00	Compound	10.0	$33,191

* Impact fees for meters larger than four inches will be based on annualized average day demand and the net capital cost per gallon of capacity.

WASTEWATER COLLECTION SYSTEM

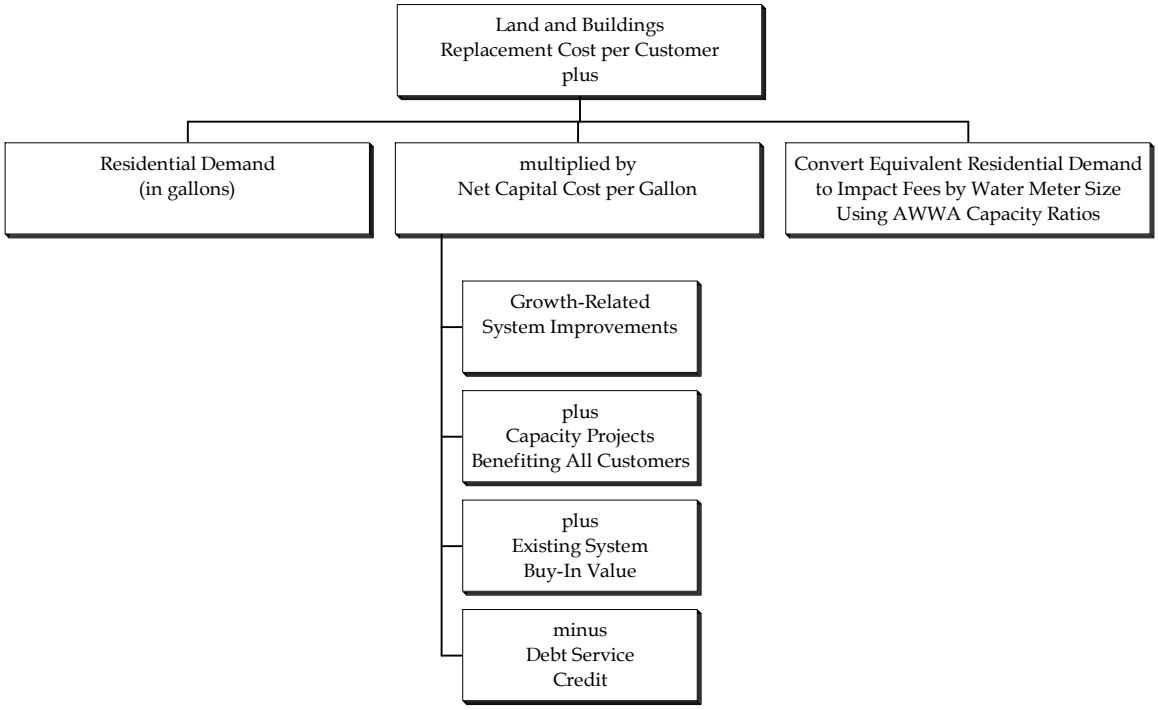
Wastewater collection system impact fees are based on the net capital cost per gallon of system capacity. As shown in Figure 28, three basic steps have been used to determine the net capital cost per gallon of capacity. The major cost factor is for growth-related capital improvements needed to accommodate additional demands on the wastewater collection system. The cost of growth-related capital improvement projects was divided by the incremental increase in system capacity (i.e., a marginal cost approach).

In recognition of the value of the City's existing wastewater collection system, the second component in the impact fee methodology is the buy-in component. North Logan City has included major wastewater collection system improvements, constructed during the past 24 years, that were oversized to accommodate future development.

The third major step in calculating utility impact fees was the evaluation of funding mechanisms for capital improvements. To avoid any potential double payments, the one-time impact fees were reduced to account for future principal payments on existing sewer bonds. This credit was subtracted from the cost factors to yield the net capital cost per gallon of sewer system capacity.

As shown below, the net capital cost was multiplied by a wastewater generation rate for a typical residential unit. Wastewater collection impact fees are derived from capacity ratios according to the size of the new connection's water meter.

Figure 28: Wastewater Collection Impact Fee Methodology Chart



Total wastewater generation from residential and nonresidential customers was determined from the City's wastewater treatment bills for the years from 2000 through 2006. The proportionate share factors by type of development are based on the water billing records as of September 2006.

Figure 29: Wastewater Average Daily Demand Factors

Average Daily Wastewater Demand Factors in 2006

North Logan, Utah

	Gallons Wastewater Per Day*	% **	Connections	%	Gallons Per Day Per Connection
Single-Family Residential	438,098	56%	1,635	89%	268
Multi-Family Residential	136,621	17%	64	3%	2,135
Non-residential	206,322	26%	143	8%	1,443
TOTAL	781,041		1,842		

* Total is Based on eight-year average of actual wastewater flow (1999 - 2006)

** Percentage in each category is based on relative amounts of wintertime use of water for the period between October 31, 2005 and April 30, 2006. Assume relative amounts of wastewater correlates to water usage during non-irrigation periods.

The residential and nonresidential wastewater generation rates discussed above were multiplied by projected development in North Logan to yield the annual wastewater demand data shown in Figure 30. Wastewater demand is projected for a 25-year time frame. However, the cash flow analysis for this report only reflects a five-year schedule of improvements.

Figure 30: Annual Wastewater Collection System Demand

Projected Wastewater System Demand
North Logan, Utah

Year		Population Projections	Gallons Per Day (average)
Base	**2006**	**6,897**	**961,201**
1	2007	7,256	961,201
2	2008	7,615	1,006,241
3	2009	7,973	1,051,281
4	2010	8,332	1,096,321
5	2011	8,691	1,141,361
6	2012	9,049	1,186,401
7	2013	9,408	1,231,441
8	2014	9,767	1,276,481
9	2015	10,125	1,321,521
10	2016	10,484	1,366,561
11	2017	10,843	1,411,600
12	2018	11,201	1,456,640
13	2019	11,560	1,501,680
14	2020	11,919	1,546,720
15	2021	12,277	1,591,760
16	2022	12,636	1,636,800
17	2023	12,995	1,681,840
18	2024	13,353	1,726,880
19	2025	13,712	1,771,920
20	**2026**	**14,071**	**1,816,960**
21	2027	14,429	1,862,000
22	2028	14,788	1,907,040
23	2029	15,147	1,952,080
24	2030	15,505	1,997,120
			20-yr Increase
			855,760

A summary of North Logan's wastewater collection system Capital Facilities Plan (CFP) is shown in Figure 31. Capital projects to accommodate new growth are shown in Figure 31. The CFP summary includes only growth-related projects that are necessary to accommodate new wastewater connections. Growth-related projects, with a total

cost of approximately $3.2 million will expand to cover the wastewater collection system average day need (capacity) by 855,760 gallons per day over the next 20 years. These factors represent a LOS standard of $3.75 per gallon of system capacity.

Figure 31: Wastewater Collection System Capital Facilities Plan Summary

North Logan, Utah

Fiscal Year (begins 7/1) =>	FY07-11	FY12-16	FY17-26	20-Year Total
Growth-Related System Improvements				
2200 N - 500 E to Main	$204,600			$204,600
400 E - 2350 to 2200 N	$61,380			$61,380
200 E - 2350 to 2200 N	$61,380			$61,380
400 E - 2150 to 2200 N	$20,460			$20,460
200 E - 2150 to 2200 N	$20,460			$20,460
2850 N 400 to 600 W	$49,600			$49,600
2850 N 200 to 400 W	$86,800			$86,800
2850 N Main to 200 W	$74,400			$74,400
200 W 2550 to 2500 N	$18,600			$18,600
2100/2000 N - 800 to 600 E	$62,000			$62,000
400 W 2550 to 2850 N	$111,600			$111,600
200 E - 2100 to 2000 N	$40,920			$40,920
200 E - 1850 to 2000 N	$61,380			$61,380
2500 N - 1850 to 1550 E	$122,760			$122,760
200 W 2550 to 2850 N	$105,400			$105,400
1200 E 3400 to 3100 N		$122,760		$122,760
2100/2000 N - 600 to 100 E		$224,440		$224,440
3100 N 400 to 600 W		$49,600		$49,600
3100 N 200 to 400 W		$86,800		$86,800
3100 N Main to 200 W		$74,400		$74,400
400 W 2900 to 3100 N		$80,600		$80,600
400 E - 2100 to 2000 N		$40,920		$40,920
400 E - 1850 to 2000 N		$61,380		$61,380
2500 N - Powerline Rd to 1850 E		$184,140		$184,140
200 W 2900 to 3100 N		$80,600		$80,600
1400 E - 3100 to 2900 N		$81,840		$81,840
2900 N - 1550 to 1200 E		$122,760		$122,760
2500 N - 1450 to 1250 E		$81,840		$81,840
2300 N - Powerline Rd to 1600 E			$204,600	$204,600
2100 N - Powerline Rd to 1650 E			$184,140	$184,140
3200 N 2300 to 2100 E			$81,840	$81,840
2100 E 3500 to 3150 N			$143,220	$143,220
2100 E 3100 to 3200 N			$40,920	$40,920
2300 E 3500 to 3200 N			$122,760	$122,760
2300 E 3100 to 3200 N			$40,920	$40,920
Subtotal	$1,101,740	$1,292,080	$818,400	$3,212,220
Net Increase in System Capacity After Improvements (gallons per day)				855,760
Average Capital Cost per Gallon				**$3.75**

Utah's Impact Fee Act states that local political subdivisions may impose an impact fee for public facility costs previously incurred by a local political subdivision to the extent that new growth and development will be served by the previously constructed improvement (see 11-36-202.(3)(b)). Recent sewer line projects that were oversized for future growth are listed in Figure 32. The cost of oversizing was allocated to the projected wastewater collection system's capacity in 2025. This 20-year time frame represents 40 percent of the typical useful life of major sewer lines.

Figure 32: Wastewater Collection System Buy-In Cost Component

Sewer System Buy-In Cost Component

North Logan, Utah

Description	AcqYr	UsefulYrs	CumVal	OrigCost	CostIndex	CurrentCost	CurrentValue
Original System Costs	1982	50	$2,721,546	$2,721,546	2.0296	$5,523,600	$3,976,992
Collection Sys Imprvmnts	1983	50	$2,738,159	$16,613	1.9093	$31,719	$23,472
Collection Sys Imprvmnts	1984	50	$2,780,476	$42,317	1.8724	$79,236	$60,219
Collection Sys Imprvmnts	1985	50	$3,017,158	$236,682	1.8506	$437,997	$254,038
Collection Sys Imprvmnts	1986	50	$3,052,214	$35,056	1.8075	$63,363	$38,018
Collection Sys Imprvmnts	1987	50	$3,125,841	$73,627	1.7619	$129,727	$80,431
Collection Sys Imprvmnts	1988	50	$3,160,049	$34,208	1.7179	$58,766	$37,610
Collection Sys Imprvmnts	1989	50	$3,193,606	$33,557	1.6822	$56,448	$37,256
Collection Sys Imprvmnts	1990	50	$3,223,498	$29,892	1.6406	$49,040	$33,347
Collection Sys Imprvmnts	1991	50	$3,237,238	$13,740	1.6056	$22,061	$15,443
Collection Sys Imprvmnts	1992	50	$3,242,238	$5,000	1.5573	$7,787	$5,606
Collection Sys Imprvmnts	1993	50	$3,246,373	$4,135	1.4900	$6,161	$4,559
Collection Sys Imprvmnts	1994	50	$3,456,108	$209,735	1.4355	$301,073	$228,816
Collection Sys Imprvmnts	1995	50	$3,486,445	$30,337	1.4190	$43,047	$33,577
Collection Sys Imprvmnts	1996	50	$3,557,574	$71,129	1.3813	$98,254	$78,603
Collection Sys Imprvmnts	1997	50	$3,652,609	$95,035	1.3325	$126,634	$103,840
Collection Sys Imprvmnts	1998	50	$3,735,508	$82,899	1.3113	$108,709	$91,316
Collection Sys Imprvmnts	1999	50	$3,735,508	$0	1.2813	$0	$0
Collection Sys Imprvmnts	2000	50	$3,927,395	$191,887	1.2479	$239,455	$210,720
Collection Sys Imprvmnts	2001	50	$3,951,555	$24,160	1.2256	$29,611	$26,650
Collection Sys Imprvmnts	2002	50	$3,951,555	$0	1.1874	$0	$0
Collection Sys Imprvmnts	2003	50	$4,006,373	$54,818	1.1596	$63,567	$59,753
Collection Sys Imprvmnts	2004	50	$4,073,358	$66,985	1.0911	$73,088	$70,164
Collection Sys Imprvmnts	2005	50	$4,627,591	$554,233	1.0426	$577,841	$566,284
Collection Sys Imprvmnts	2006	50	$4,627,932	$341	1.0000	$341	$341
Total				$4,627,932			$6,037,055
Improvements over past 11 years				$1,141,487			$1,207,671
						System Capacity in 2025 (avg gal/day)	1,907,040
						Buy-In Cost per Gallon	$0.63

North Logan City is making payments on a bond used for wastewater collection system improvements. Principal payments were divided by the projected average daily wastewater flow to yield annual payments per gallon of capacity. To account for the time value of money, a net present value calculation was uses, at an annual discount rate of 6%, to derive the credit of $0.47 per gallon of average daily wastewater demand.

Figure 33: Principal Payment Credit for Sewer System Improvements

Credit for Existing Sewer Bonds

North Logan, Utah

FY	Principal Payment	Wastewater Flow (gallons/day)	Payment Per Gallon
2007	$43,894	961,201	$ 0.046
2008	$45,970	1,006,241	$ 0.046
2009	$48,339	1,051,281	$ 0.046
2010	$50,831	1,096,321	$ 0.046
2011	$53,452	1,141,361	$ 0.047
2012	$56,207	1,186,401	$ 0.047
2013	$59,105	1,231,441	$ 0.048
2014	$62,152	1,276,481	$ 0.049
2015	$65,357	1,321,521	$ 0.049
2016	$68,727	1,366,561	$ 0.050
2017	$72,270	1,411,600	$ 0.051
2018	$75,997	1,456,640	$ 0.052
2019	$79,915	1,501,680	$ 0.053
2020	$159,247	1,546,720	$ 0.103
2021	end	1,591,760	$ -
		Net Present Value	**$ 0.471**

The LOS standards used to derive the wastewater collection system impact fee are shown in the boxed area of Figure 34. Fees for the 0.75 and 1.00 inch water meters are based on the assumption that most single-family residences will have either the standard 3/4 - 5/8 inch or a 1.00 inch water meter. The fees for sewer connections for locations with larger than this standard sizes water meter are based on the relative capacity of the larger water meter with respect to the base size 1.00 inch meter.

Figure 34: Wastewater Collection System Impact Fee

Wastewater Collection System Impact Fee
North Logan, Utah

	Standards:
Level Of Service	
Gallons per Residential Connection Per Day	268
Collection System Cost per Gallon of Capacity	$3.75
Buy-In Cost per Gallon for System Improvements	$0.63
Principal Payment Credit per Gallon	($0.47)
Net Capital Cost per Gallon of Capacity	$3.91

Maximum Supportable Impact Fees

All Development			Per Meter
*Meter Size (inches)**	*Type*	*Capacity Ratio*	
0.75 or 1.00	Displacement	1.0	$1,047
1.50	Displacement	2.0	$2,095
2.00	Dsplcmnt/Cmpnd	3.2	$3,352
3.00	Compound	6.0	$6,286
4.00	Compound	10.0	$10,476

* Impact fees for meters larger than four inches will be based on annualized average day demand and the net capital cost per gallon of capacity.

CASH FLOW ANALYSIS

Utah's Impact Fee Act requires the Capital Facilities Plan to consider all revenue sources, including impact fees, to finance the impact on system improvements. The cash flow analysis presented in this section documents the projected capital costs and revenues pertaining to the types of public facilities included in the Impact Fees study.

The general parameters shown in Figure 35 are used to calibrate TA's proprietary software program that uses local demographic and fiscal data to analyze cash flow to North Logan City over the next five years. The demand base data are derived from 2006 estimates of population and nonresidential floor area in North Logan City.

Figure 35: General Parameters

PART I: GENERAL SYSTEM INPUT

Project/Analysis:	Impact Fee Cash Flow Analysis	
Scenario:	General Plan Projections	
Location:	North Logan, Utah	
Analysis Type (T or P):	T	=Trend
First Projection Year:	2007	(Note: Fiscal Year begins 7/1)
Scale Factor:	1,000	
Universal Inflation Rate:	0.00%	
Years to Model:	20	

PART II: DEMAND BASIS

STUDY AREA DATA

Code	Base Name	Base Year Quantity
P	POPULATION	6,897
H	HOUSEHOLDS	2,281
J	JOBS	8,258
PJ	POP & JOBS	15,155
RT	TOTAL HSG UNITS	2,347
R1	Single Family Detached	1,613
R2	All Other Housing	734
R3	BLANK	
R4	BLANK	
R5	BLANK	
R6	BLANK	
NRT	TOTAL NRES KSF	2,439
NR1	Com/Shpg Ctr KSF	939
NR2	Office/Inst KSF	1,112
NR3	Industrial KSF	386

CUSTOM DATA

Code	Name	Base Yr Amt
DB1	Com/Shpg Ctr Jobs	2,725
DB2	Office/Inst Jobs	4,707
DB3	Industrial Jobs	826
DB4	Nonres Util Connections	181
DB5	NR Wtr Dmd (avg mgd)	0.29
DB6	Res Wtr Dmd (avg mgd)	0.82
DB7	Total Wtr Dmd (mgd)	1.11
DB8	NR Swr Dmd (avg mgd)	0.25
DB9	Res Swr Dmd (avg mgd)	0.72
DB10	Total Swr Dmd (mgd)	0.97
DB11	RVT in West Area	884
DB12	NRVT in West Area	14,822
DB13	TVT in West Area	15,706
DB14	RVT in East Area	7,957
DB15	NRVT in East Area	4,941

A profile of new development characteristics is presented in Figure 36. The five development categories were selected as being representative of the majority of new developments expected in North Logan City over the next five years. Data are consistent with the assumptions used in the Impact Fees study.

Figure 36: New Development Profile

PART III: NEW DEVELOPMENT PROFILE

						Residential Vacancy Rate 3%	
RESIDENTIAL:	Trip Rate	Trip Adj Factor	Avg New Unit Mkt Value	Personal Property Val/Hshld	Density (units/ac)	Persons Per HsHld	Alloctn Distrib
Single Family Detached	10.00	62%			4.0	4.13	68%
All Other Housing	7.50	62%			8.0	3.19	32%
NON-RESIDENTIAL:	Trip Rate	Trip Adj Factor	Mkt Value Per SF (new)	Bus Prop Per Sq Ft	Floor Area Ratio	Sq Ft Per Worker	Job Allocation
Com/Shpg Ctr KSF	70.67	30%			0.25	350	33%
Office/Inst KSF	19.72	50%			0.25	240	57%
Industrial KSF	6.97	50%			0.25	475	10%

The capital facility demand and cost inputs for parks and recreation are shown in Figure 37. The CFP for the water system, wastewater collection system and roads have been direct entered into the model using the capital cost data already presented in the Impact Fees report. All capital facilities will be funded on a pay-as-you-go or cash basis.

Figure 37: Capital Facility Demand and Cost Inputs

				One Facility Serves			Bond Financing	
Type of Financing	CF#	Capital Facility Name	Cost Per Facility	Base Code	Base Name	Number	Term	Rate
Cash	1	Com Park Land	$1	D	Drct Entry	1		
Cash	2	Trail Land & Improvements	$1	D	Drct Entry	1		
Cash	3	Park Improvements	$1	D	Drct Entry	1		
Cash	4	Roads CFP	$1	D	Drct Entry	1		
Cash	5	Water System CFP	$1	D	Drct Entry	1		
Cash	6	Wastewater Col Sys CFP	$1	D	Drct Entry	1		
Bond A	17	BLANK		P	POPULATIO	1		

Revenue inputs used in the cash flow model are shown in Figure 38. Rows 1-13 are the Impact Fee (IF) amounts from the maximum supportable fee schedule (see Figure 2). The water and sewer impact fee amounts for all nonresidential development are derived using an equivalent residential connection approach. Based on the AWWA capacity ratios, most nonresidential connections will require either a 1.0 or 1.5 inch water meter.

Rows 14-19 in the table below indicate the non-impact fee revenues that will be used to fund capital improvements. The base year budget amounts are projected to increase over time at the same rate of growth as new development.

Figure 38: Revenue Inputs

	Revenue Name	Base Year Bdgt Amt (in $000's)	Revenue Base	Revenue Yield	Base Unit	Demand Base or Revenue Yield Multiplier	T=Total A=Annual
1	Pk & Rec IF - R1		R1	$1,384	Per Single Family Detached	100%	A
2	Pk & Rec IF - R2		R2	$1,069	Per All Other Housing	100%	A
3	Road IF - R1		R1	$629	Per Single Family Detached	100%	A
4	Road IF - R2		R2	$472	Per All Other Housing	100%	A
5	Road IF - NR1		NR1	$471	Per Com/Shpg Ctr KSF	100%	A
6	Road IF - NR2		NR2	$1,197	Per Office/Inst KSF	100%	A
7	Road IF - NR3		NR3	$423	Per Industrial KSF	100%	A
8	Water IF - Res		R1	$3,319	Per Single Family Detached	100%	A
10	Water IF - Nonres		DB4	$100	Per Nonres Util Connections	100%	A
11	Sewer IF - Res		R1	$1,047	Per Single Family Detached	100%	A
13	Sewer IF - Nonres		DB4	$500	Per Nonres Util Connections	100%	A
14	General Fund - Pk & Rec	$6.000		#VALUE!	#VALUE!	100%	T
15	Water Fund	$0.000		#VALUE!	#VALUE!	100%	T
16	Sales Tax for Road Construction	$164.574		#VALUE!	#VALUE!	100%	T
17	Gas Tax for Road Construction	$24.551		#VALUE!	#VALUE!	100%	T
18	General Fund - Roads	$190.000		#VALUE!	#VALUE!	100%	T
19	Sewer Fund	$211.000		#VALUE!	#VALUE!	100%	T
	TOTAL	$596.125					

The cash flow analysis summary is presented in Figure 39. The top portion of this table indicates projected revenues from impact fees, general fund contributions, utility rates and gas taxes. The summary of expenses, shown in the middle of Figure 39, indicates the cost of capital facilities for parks and recreation, roads and the City's water and wastewater collection systems.

The net capital facilities cash flow for parks and recreation, water and sewer systems, and roads can be found at the bottom of Figure 39. Dollar amounts in the cash flow analysis are in thousands of constant dollars (i.e., not inflated over time). Annual deficits are indicated by parentheses ($) around the dollar amount.

Figure 39: Net Capital Facilities Cash Flow Summary

North Logan, Utah				Year =>	1	2	3	4	5	5 Yr Average
(Constant 2006 $ in thousands)				2006	2007	2008	2009	2010	2011	Annual
			REVENUES							
I	F	1	Pk & Rec IF - R1		$94	$115	$115	$115	$115	$111
M	E	2	Pk & Rec IF - R2		$61	$42	$42	$42	$42	$46
P	E		Park & Rec Impact Fee Subtotal		$155	$157	$157	$157	$157	$156
A	S	3	Road IF - R1		$43	$52	$52	$52	$52	$50
C		4	Road IF - R2		$27	$18	$18	$18	$18	$20
T		5	Road IF - NR1		$34	$27	$27	$27	$27	$28
		6	Road IF - NR2		$102	$81	$81	$81	$81	$85
		7	Road IF - NR3		$13	$10	$10	$10	$10	$10
			Road Impact Fee Subtotal		$218	$189	$189	$189	$189	$195
		8	Water IF - Res		$225	$276	$276	$276	$276	$266
		10	Water IF - Nonres		$1	$1	$1	$1	$1	$1
			Water Impact Fee Subtotal		$226	$277	$277	$277	$277	$267
		11	Sewer IF - Res		$71	$87	$87	$87	$87	$84
		13	Sewer IF - Nonres		$5	$5	$5	$5	$5	$5
			Sewer Impact Fee Subtotal		$76	$92	$92	$92	$92	$89
O	R	14	General Fund - Pk & Rec	$6	$6	$6	$6	$6	$6	$6
T	E	15	Water Fund	$0	$0	$0	$0	$0	$0	$0
H	V	16	Sales Tax for Road Construction	$165	$165	$165	$165	$165	$165	$165
E		17	Gas Tax for Road Construction	$25	$25	$25	$25	$25	$25	$25
R		18	General Fund - Roads	$190	$205	$170	$425	$328	$95	$245
		19	Sewer Fund	$211	$130	$130	$130	$130	$130	$130
Subtotal: Parks & Rec Revenues					$161	$163	$163	$163	$163	$162
Subtotal: Roads Revenues					$612	$548	$803	$706	$473	$628
Subtotal: Water Revenues					$226	$277	$277	$277	$277	$267
Subtotal: Sewer Revenues					$206	$222	$222	$222	$222	$219
TOTAL ANNUAL REVENUES:					$998	$987	$1,242	$1,145	$912	$1,057
			CAPITAL COSTS							
			Parks & Rec CF		$158	$160	$196	$148	$148	$162
			Roads CF		$150	$492	$896	$612	$990	$628
			Water CF		$178	$358	$267	$312	$223	$268
			Sewer CF		$205	$213	$242	$214	$228	$220
TOTAL ANNUAL COSTS:					$691	$1,223	$1,601	$1,286	$1,589	$1,278

(Constant 2006 $ in thousands)

NET CAPITAL FACILITIES CASH FLOW - PARKS & RECREATION					
Annual Surplus or (Deficit)	$3	$3	($33)	$15	$15	$0
Cumulative Surplus or (Deficit)	$3	$5	($28)	($13)	$2	
NET CAPITAL FACILITIES CASH FLOW - ROADS						
Annual Surplus or (Deficit)	$462	$56	($93)	$94	($517)	$0
Cumulative Surplus or (Deficit)	$462	$518	$425	$519	$2	
NET CAPITAL FACILITIES CASH FLOW - WATER						
Annual Surplus or (Deficit)	$48	($81)	$10	($35)	$54	($1)
Cumulative Surplus or (Deficit)	$48	($34)	($24)	($59)	($5)	
NET CAPITAL FACILITIES CASH FLOW - SEWER						
Annual Surplus or (Deficit)	$2	$9	($19)	$9	($6)	($1)
Cumulative Surplus or (Deficit)	$2	$11	($9)	($0)	($6)	

PROPORTIONATE SHARE ANALYSIS

Impact fees for North Logan City are proportionate and reasonably related to the capital facility service demands of new development. The written analysis of each impact fee methodology and the cash flow analysis have established that impact fees are necessary to achieve an equitable allocation of 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 Impact Fees Act requires that certain factors are used in evaluating the fairness of the impact fees to be charged. The analysis of these factors is discussed below.

1) The impact fees for North Logan City are based on the cost of existing public facilities. The water and wastewater collection impact fees include minor buy-in components that were derived from the actual construction costs of specific capital improvements by North Logan City. All of the impact fees are primarily based on Capital Facilities Plans that were prepared using local cost factors and construction practices typical to North Logan City. The Parks and Recreation section contains a detailed inventory of existing facilities and the cost of improvements. This inventory of existing facilities was used to derive level of service standards. These standards were then used to project the need for future park and recreation improvements in order to maintain a similar level of service.

2) The impact fee analysis has identified the manner of financing existing public facilities, which includes user charges, bonds, general taxes, and intergovernmental transfers. These revenue sources are summarized in the cash flow analysis found at the end of this report.

3) The extent to which properties in the municipality may have already contributed to the cost of existing public facilities has been estimated and a credit for past contributions has been addressed in the impact fee methodology. The maximum supportable impact fees include a percentage reduction for General Fund contributions. This reduction is based on an analysis of North Logan's budget over the past five years, as shown below in Figure 40.

4) The relative extent to which properties will make future contributions to the cost of existing public facilities has also been addressed in the principal payments credits that have been included in the impact fee calculations. These credits for water system improvements and wastewater collection system improvements lower the maximum supportable impact fees for new development.

5) North Logan City will evaluate the extent to which newly developed properties are entitled to a credit for common facilities that have been provided by owners or developers as compared to common facilities provided by the City in other parts of the municipality. These "site-specific" credits will be available for system improvements identified in the Capital Facilities Plans, as summarized in this report. Administrative procedures for site-specific credits will be addressed in the impact fee ordinance.

6) Citywide service areas are appropriate for the types of public facilities included in the impact fees study. Therefore, separate geographic zones for the collection and expenditure of impact fees are not necessary in North Logan. Extraordinary costs, if any, in servicing the newly developed properties will be addressed through administrative procedures that allow independent studies to be submitted to the City. These procedures will be addressed in the impact fee ordinance.

7) The time-price differential inherent in fair comparisons of amounts paid at different times has been addressed in the evaluation of credits for each type of impact fee. All costs in the impact fee calculations are given in current dollars with no assumed inflation rate over time. Necessary cost adjustments can be made as part of the annual evaluation and update of impact fees.

Figure 40: General Fund Expenditures for Capital Improvements

Fiscal Year =>	1999	2000	2001	2002	2003	2004	2005	2006	*Reduction for Capital Improvements Funding*
Discretionary Tax Revenue	$ 1,083,486	$ 1,154,361	$ 1,266,005	$ 1,411,972	$ 1,330,964	$ 1,360,321	$ 1,420,941	$ 1,585,000	
General Fund Revenues Used for Capital Improvements									
Parks & Recreation Facilities	$ 82,196	$ 268,176	$ 20,485	$ 61,733	$ 9,407	$ 23,903	$ 13,871	$ -	
	8%	23%	2%	4%	1%	2%	1%	0%	5.03%
Road Capacity Improvements	$ 125,211	$ 63,313	$ 78,892	$ 144,658	$ 124,168	$ 59,148	$ 277,077	$ 79,570	
	12%	5%	6%	10%	9%	4%	19%	5%	8.96%
									Eight Year Average

IMPLEMENTATION AND ADMINISTRATION

Impact fees should be evaluated and updated to reflect recent data. One approach is to adjust for inflation in construction costs by means of an index like the Engineering News Record (ENR). This index would be applied against the calculated impact fee. If cost estimates change significantly the City should evaluate an adjustment to the fee.

Another possible change in calculation will occur if the City begins financing any of the facilities included in this impact fee report, through the issuance of new bonds. Should that take place, new development should be credited for the debt service it will pay for these capital facilities. Those credits will need to be deducted from the maximum supportable impact fees.

As specified in the Impact Fees Act, there are certain accounting requirements that will be met by North Logan City. Impact Fees must be deposited in separate interest bearing ledger accounts. Fees must be spent within six years of when they are collected, with the expenditures limited to system improvements identified in the CFP.

There are also administrative procedures required by the Impact Fees Act. For example, a local political subdivision shall ensure that the impact fee enactment contains a provision authorizing adjustment of the standard impact fee in response to unusual circumstances in specific cases and to ensure that the impact fees are imposed fairly. Also, there may be adjustment of the amount of the impact fee based upon studies and data submitted by the developer.