

CITY OF SAN JOAQUIN

FIVE-YEAR CAPITAL IMPROVEMENT PROGRAM

JULY 2004

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PREPARED BY

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I. INTRODUCTION

A. Purpose

The City of San Joaquin has long recognized the importance of planning to guide the orderly development of the community. The purpose of this Five-Year Capital Improvement Program is to anticipate future infrastructure needs, identify sources of funding, and provide a time table for construction.

The program should be a dynamic document which is updated on a yearly basis. As such it will prove an invaluable budgeting tool.

B. Growth

The 1996 San Joaquin General Plan projects an annual growth rate between 4% and 6%. The average population increase for the past ten years has been 2.76% and the average increase for the most recent five years has been 3.0%. For the purpose of this program an annual population growth rate of 3.0% is used. Figure 1 shows the population for the past 10 years and projections for the next ten years. The population figures are also listed on Tables 1 and 3.

The amount of revenue from Development Impact Fees is projected based upon income for the past year. The fee revenue for FY 03-04 was equivalent to approximately 25 family residential units. Thirty units are estimated for FY 04-05. Income for each subsequent year is estimated to increase by 3% annually. The estimated amount of each fee is shown on Table A on page 3.

The need for construction of major facilities (i.e. water wells, sewage treatment plant expansion, and parks) will be directly proportional growth. If the rate of growth is slow the improvements, as well as the developer fees to pay for them, will be delayed. However, it is important to anticipate needs to allow adequate planning for major improvements in the event growth continues at the average or above average rates.

TABLE A

ESTIMATED DEVELOPMENT IMPACT FEE REVENUE

ESTIMATED DEVELOPED ACREAGE = 8 ACRES
 ESTIMATED NUMBER OF UNITS DEVELOPED = 30 UNITS

FEE	UNITS	RATE	EXTENSION
WATER MAJOR FAC.	30 UN	1,000	30,000
WATER OVERSIZE	8 AC	684	5,472
WATER FRONT FOOT	330 LF	10.60	3,498
SEWER MAJOR FAC.	30 UN	1,537	46,110
SEWER OVERSIZE	8 AC	250	2,000
SEWER FRONT FOOT	330 LF	12.20	4,026
PARKS - QUIMBY	30 UN	481	14,430
PARKS - DEVELOPMENT	30 UN	1,263	37,890
PUBLIC BUILDING FAC.	8 AC	964	7,712
MAJOR STREET	8 AC	1,060	8,480
STREET SIGNALS	8 AC	400	3,200
RAILROAD CROSSING	8 AC	415	3,320
STORM DRAIN FAC.	8 AC	2,450	19,600
STORM DRAIN BASIN	8 AC	488	3,904

per lot 189,642
 6,321

TABLE B
CITY OF SAN JOAQUIN

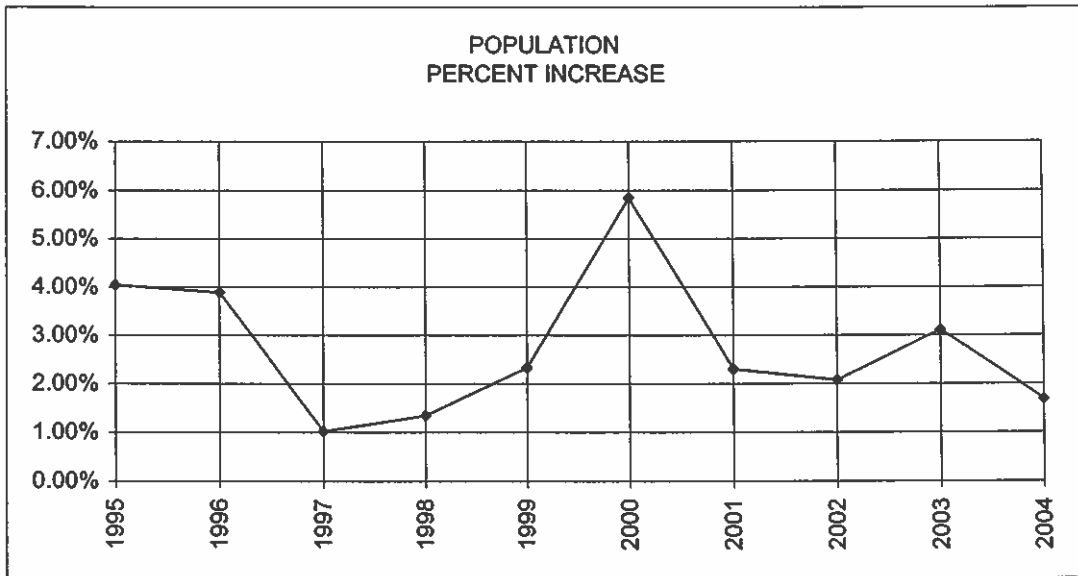
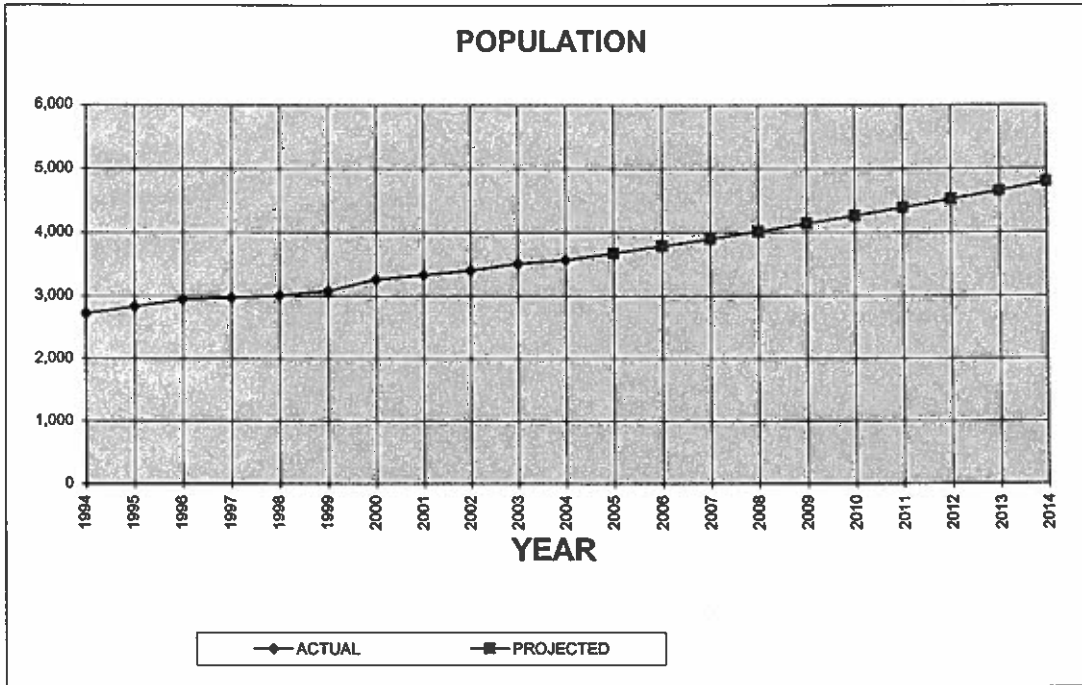
ESTIMATED FUND BALANCES AS OF JUNE 30, 2004

FUND	NAME	BALANCE
301	MAJOR STREET FEES	1,870
302	TRAFFIC SIGNAL	4,169
303	RAILROAD CROSSING	3,492
304	WATER MAJOR FACILITIES	32,940
305	WATER OVERSIZE	2,994
306	SEWER FRONT FOOTAGE	5,030
307	SEWER MAJOR FACILITIES	37,316
308	SEWER OVERSIZE	1,568
309	STORM DRAIN ACQUISITION	3,716
310	STORM DRAIN MAJOR FACILITIES	13,771
311	PARK DEVELOPMENT	39,759
312	PUBLIC BUILDING FACILITIES	13,163
314	WATER FRONT FOOTAGE	4,297
	PARK QUIMBY FEES	7,696
500	WATER OPERATIONS	195,056
510	SEWER OPERATIONS	62,303
200	MEASURE C	40,450
205	GAS TAX	101,800
210	LTF	117,600

**TABLE C
CITY OF SAN JOAQUIN - POPULATION DATA**

YEAR	POPULATION	ANNUAL INCREASE	PERCENT
1994	2,720		
1995	2,830	110	4.04%
1996	2,940	110	3.89%
1997	2,970	30	1.02%
1998	3,010	40	1.35%
1999	3,080	70	2.33%
2000	3,260	180	5.84%
2001	3,335	75	2.30%
2002	3,404	69	2.07%
2003	3,510	106	3.11%
2004	3,569	59	1.68%
2005	3,676	107	3.00%
2006	3,786	110	3.00%
2007	3,900	114	3.00%
2008	4,017	117	3.00%
2009	4,137	121	3.00%
2010	4,262	124	3.00%
2011	4,389	128	3.00%
2012	4,521	132	3.00%
2013	4,657	136	3.00%
2014	4,796		

FIGURE 1



II. WATER SYSTEM

A. Water Usage

Total water usage for the past nine years has fluctuated between 152 million gallons (mg) and 226 mg, with an upward trend. While the total demand is tending upward, the average water use per person has held steady. The average water use for the last five years has been 168 gallons per capita per day (gpcd). While the population rose by almost 1.7% last year, the total water consumption increased by 6.5%. Assuming the average per capita water use is maintained at 168 gpcd, total water demand the water for the next ten years has been estimated.

See Table I and Figure 2

Evaluation of a water system must include maximum as well as average flows. Two types of higher flow rates must be met:

1. Maximum Day plus Fire Flow – 2.5 times the average flow plus 2,000 gpm fire flow.
2. Peak Hour – 3.5 times average flow.

Table 1 summarizes population and water usage for 1994 to 2014. Figures show total demand, average demand, maximum day and peak hour.

B. Water Supply

San Joaquin has two existing wells with the following production capabilities:

<u>Well No.</u>	<u>HP</u>	<u>Location</u>	<u>Design Discharge (gpm)</u>
3	150	Corporation Yard	1,200
4	150	Main & California	1,200
TOTAL			2,400

The City is currently upgrading the existing system through a CVIG Grant from the State of California. This upgrade will add a new Well No. 5 with a projected with a projected capacity of 1,110 gpm.

With the addition of Well No. 5, the water supply will be able to meet demand through 2014. However, common practice is for a city to be capable of meeting its highest demand with one well off line. With that being the case, the City should plan for a new well within the next two years.

C. Recommended Improvements

1. **Sand Separator Well No. 4.** Install a separator to prevent sand and gravel from entering the system.
2. **Railroad Avenue Main.** Install a 12-inch water main in Railroad Avenue from Pine Avenue to the north end of the RNA property. Currently RNA and OPC receive water service through the James Irrigation District Site. This main will provide service to both properties. Both companies will share in the cost.
3. **Well No. 5 –** Install pump and motor. Complete construction.
4. **Well No. 6 –** Drill new well in the northwest area of the city.

D. Deferred Maintenance

The city should begin accumulating funds to replace existing wells as they deteriorate over their expected 20-year life. Pumps, motors, pump shafts and columns must also be replaced about every 10 years.

E. Funding

Funding for the sand separator and Railroad Avenue main will come from water operations. Well No. 6 will be paid for by development impact fees and a low-interest loan from U.S.R.D.A.

FIGURE 2

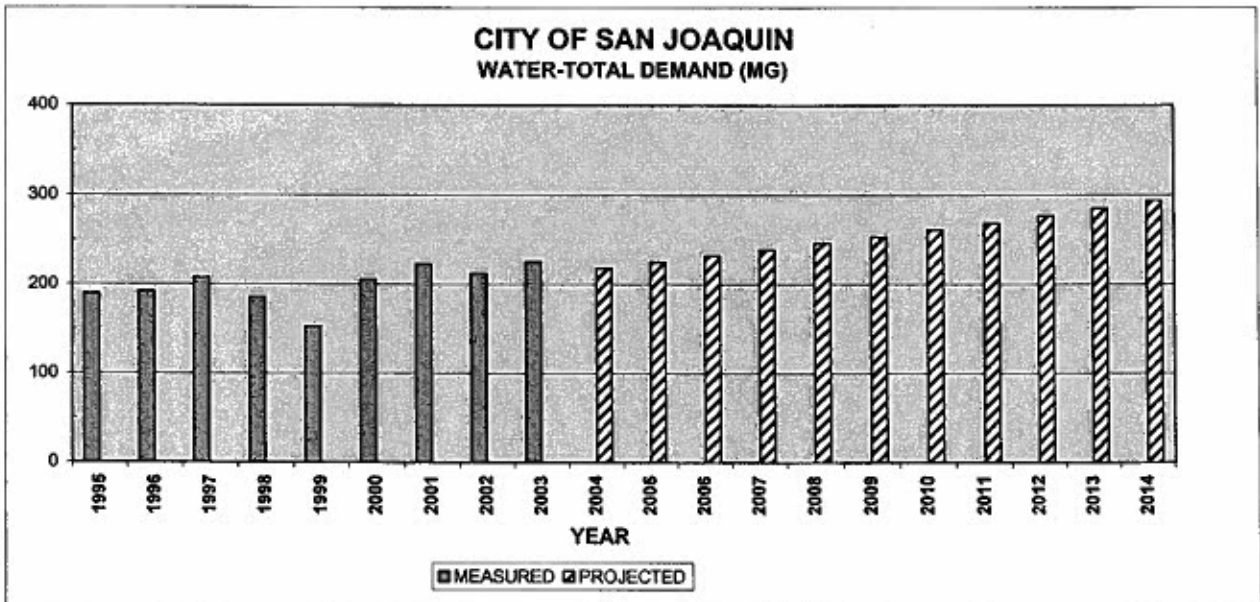
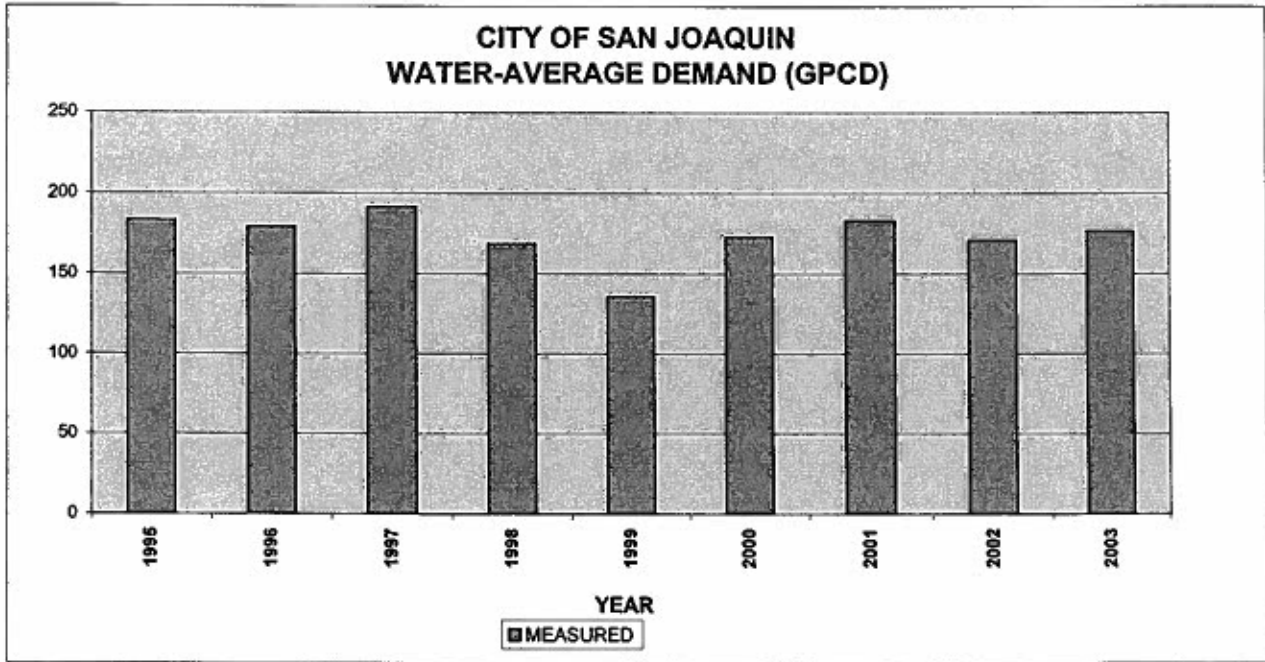


TABLE 1
CITY OF SAN JOAQUIN
WATER USAGE

YEAR	POPULATION	TOTAL DEMAND (mg)	% CHANGE	AVG. DEMAND (gpcd)	AVG. DEMAND (gpm)	MAX DAY (gpm)	MAX DAY + F.F. (gpm)	PEAK HOUR (gpm)
1994	2,720							
1995	2,830	189.5		183	361	901	2,901	1,262
1996	2,940	192.1	1.4%	179	365	914	2,914	1,279
1997	2,970	207.5	8.0%	191	395	987	2,987	1,382
1998	3,010	185.4	-10.7%	169	353	882	2,882	1,235
1999	3,080	152.4	-17.8%	136	290	725	2,725	1,015
2000	3,260	205.5	34.8%	173	391	977	2,977	1,368
2001	3,335	222.8	8.4%	183	424	1060	3,060	1,484
2002	3,404	212.3	-4.7%	171	404	1010	3,010	1,414
2003	3,510	226.0	6.5%	176	430	1075	3,075	1,505
2004	3,569	218.5	-3.3%	168	416	1039	3,039	1,455
2005	3,676	225.0	3.0%	168	428	1070	3,070	1,499
2006	3,786	231.8	3.0%	168	441	1102	3,102	1,543
2007	3,900	238.7	3.0%	168	454	1136	3,136	1,590
2008	4,017	245.9	3.0%	168	468	1170	3,170	1,637
2009	4,137	253.3	3.0%	168	482	1205	3,205	1,687
2010	4,262	260.9	3.0%	168	496	1241	3,241	1,737
2011	4,389	268.7	3.0%	168	511	1278	3,278	1,789
2012	4,521	276.8	3.0%	168	527	1316	3,316	1,843
2013	4,657	285.1	3.0%	168	542	1356	3,356	1,898
2014	4,796	293.6		168	559	1397	3,397	1,955

1999-2003 AVERAGE = 168 gpcd
 POPULATION GROWTH = 3.0 %
 FIRE FLOW DEMAND = 2,000 gpm
 MAX. DAY FACTOR = 2.50
 PEAK HOUR FACTOR = 3.5

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5/1/2004

TABLE 2

CITY OF SAN JOAQUIN

WATER - FIVE YEAR CAPITAL IMPROVEMENT PLAN

	04/05	05/06	06/07	07/08	08/09
REVENUE					
Beginning Balances		\$249,490	\$309,804	\$372,249	\$436,890
Water Operations	\$195,056				
Water Front Footage	5,030				
Water Oversize	2,994				
Water Major Facilities	32,940				
	\$236,020				
Anticipated Income					
Major Facilities Fee	30,000	30,900	31,827	32,782	33,765
Oversize Fees	5,472	5,636	5,805	5,979	6,159
CVIG	196,500				
Front Footage Fee	3,498	3,603	3,711	3,822	3,937
Operating Carryover	30,000	30,900	31,827	32,782	33,765
USRDA Loan			450,000		
TOTAL	\$501,490	\$320,529	\$832,974	\$447,615	\$514,516
CONSTRUCTION					
Well No. 5	221,500				
Sand Seperator Well 4	10,000				
Railroad Ave. Main	10,000				
Well No. 6			450,000		
DEFERRED MAINTENANCE					
Well	7,500	7,725	7,725	7,725	7,725
Pump & Motor	3,000	3,000	3,000	3,000	3,000
TOTAL	\$252,000	\$10,725	\$460,725	\$10,725	\$10,725
Ending Balance	\$249,490	\$309,804	\$372,249	\$436,890	\$503,791

Assumed Growth Rate = 3.00%

04-135
7/1/2004

III. SEWER SYSTEM

A. Sewage Flow

The total average sewer flow at the treatment plant for the City of San Joaquin has steadily fluctuated between 0.174 million gallons per day (mgd) and 0.250 mgd over the last 7 years. The average flow per person for the past 5 years has been 72 gallons per person per day.

Using the population projection of 3.0% annual growth, future sewage flows have been estimated for the next 10 years. See Table 3 and Figure 3.

B. Treatment Plant

The existing Wastewater Treatment Plant (WWTP) has a rated capacity of 0.252 mgd. The city has applied for an increase to 0.35 mgd. The increase requires land application of the treated effluent on adjacent farm lands. The city is negotiating with the adjacent land owners to secure an agreement to receive the treated effluent.

The city should begin accumulating funds to purchase additional property for future disposal ponds.

C. Recommended Improvements

1. Upgrade Lift Station No. 1 – The pump capacity at Lift Station No. 1 on Manning Avenue needs to be increased and the measuring flume removed and replaced with a digital model.
2. Repair Manning Avenue Trunk Line – The 16-inch sewer main along Manning Avenue has some breaks that have been repaired temporarily. Permanent Pipe replacement is needed.
3. Upgrade Lift Station No. 2 – Lift Station No. 2 at Colorado Avenue and Fifth Street needs to be upgraded with new electrical equipment, pump seals and overflow pipe.
4. Video Inspection of Sewer Mains – The collector mains in Manning Avenue, Ninth Street and Colorado Avenue need to be inspected with a new video camera. Low spots, pipe breaks and pipe condition will be reviewed.
5. Disposal Pump at WWTP – A pump is needed to lift treated effluent from the disposal ponds to the irrigated fields.

D. Deferred Maintenance

Replacement of the WWTP aerators and lift station pumps should be planned for at 10 year intervals.

F. Funding

The upgrade to Lift Stations 1 and 2, repair to the Manning Avenue sewer main, disposal pump and land purchase will be paid for by development impact fees.

The video inspection will be paid for by operation revenues.

FIGURE 3

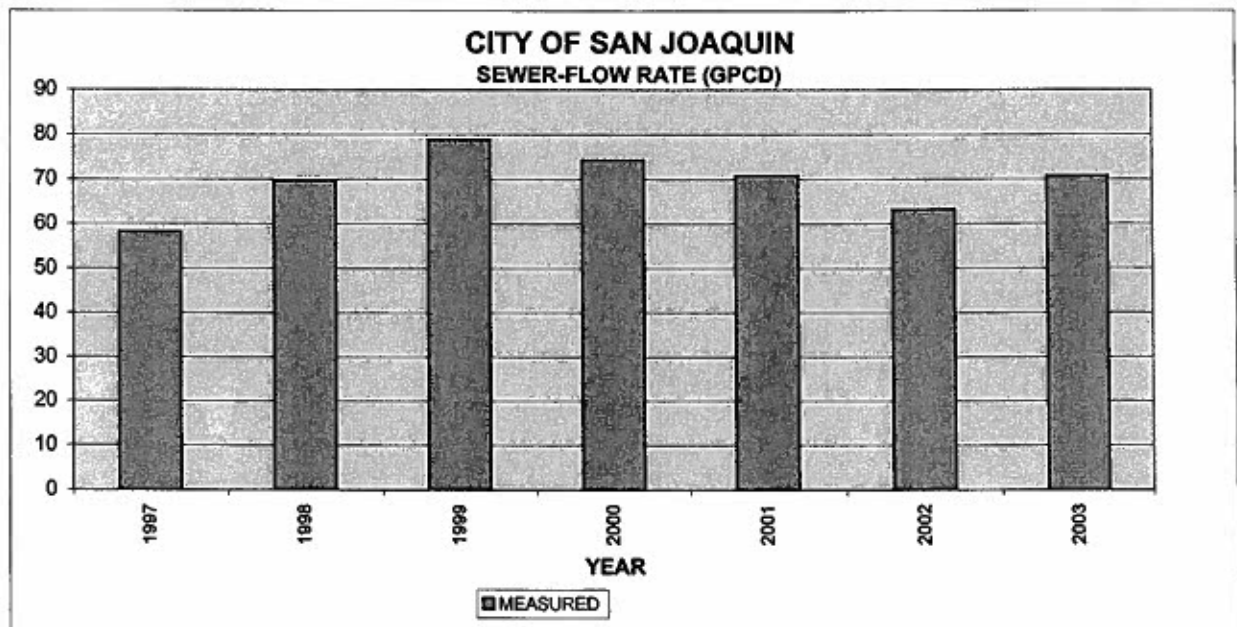
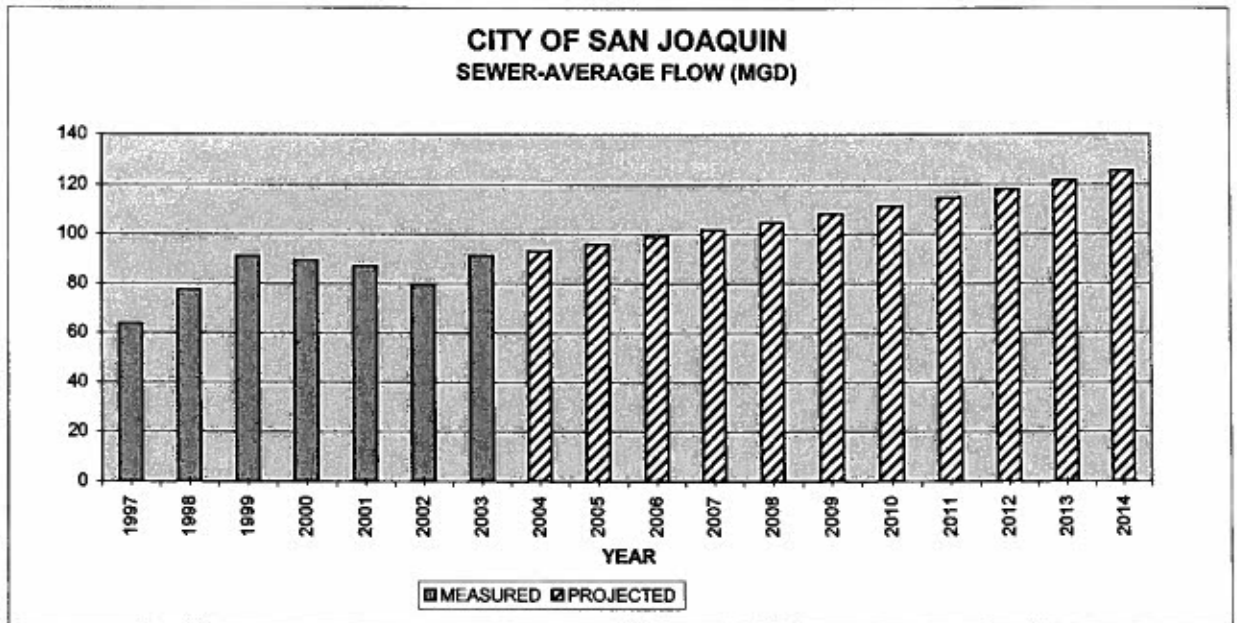


TABLE 3
CITY OF SAN JOAQUIN
SEWER SYSTEM

YEAR	POPULATION		TOTAL FLOW		AVG. FLOW (mgd)	AVG. FLOW (gpcd)
	(As of January 1)	% CHANGE	(mg)	% CHANGE		
1994	2,720					
1995	2,830	4.0%				
1996	2,940	3.9%				
1997	2,970	1.0%	63.6		0.174	58
1998	3,010	1.3%	77.4	21.7%	0.212	70
1999	3,080	2.3%	91.2	17.8%	0.250	79
2000	3,260	5.8%	89.4	-2.0%	0.245	74
2001	3,335	2.3%	87.0	-2.7%	0.238	71
2002	3,404	2.1%	79.7	-8.4%	0.218	63
2003	3,510	3.1%	91.3	14.5%	0.250	71
2004	3,569	1.7%	93.2	2.1%	0.255	
2005	3,676	3.0%	96.0	3.0%	0.263	
2006	3,786	3.0%	98.9	3.0%	0.271	
2007	3,900	3.0%	101.8	3.0%	0.279	
2008	4,017	3.0%	104.9	3.0%	0.287	
2009	4,137	3.0%	108.0	3.0%	0.296	
2010	4,262	3.0%	111.3	3.0%	0.305	
2011	4,389	3.0%	114.6	3.0%	0.314	
2012	4,521	3.0%	118.0	3.0%	0.323	
2013	4,657	3.0%	121.6	3.0%	0.333	
2014	4,796	3.0%	125.2	3.0%	0.343	

1999-2003 AVERAGE = 72 gpcd
POPULATION GROWTH = 3.0 %

TABLE 4

CITY OF SAN JOAQUIN

SEWER - FIVE YEAR CAPITAL IMPROVEMENT PLAN

	04/05	05/06	06/07	07/08	08/09
REVENUE					
Beginning Balances		\$83,853	\$164,118	\$278,927	\$397,180
Sewer Operations	\$62,303				
Sewer Front Footage	5,030				
Sewer Oversize	1,568				
Sewer Major Facilities	37,316				
Sub-total	\$106,217	\$83,853	\$164,118	\$278,927	\$397,180
Anticipated Income					
Major Facilities Fee	46,110	47,493	48,918	50,386	51,897
Oversize Fees	2,000	2,060	2,122	2,185	2,251
Front Footage Fee	4,026	4,147	4,271	4,399	4,531
Operating Carryover		31,200	64,272	66,200	68,186
TOTAL	\$158,353	\$168,753	\$283,701	\$402,098	\$524,046
CONSTRUCTION					
Upgrade Lift Station No. 1	20,000				
Repair Manning Trunk Line	15,000				
Upgrade Lift Station No. 2	5,000				
Video Inspection of Sewer Mains	5,000				
WWTP					
Disposal Pump	25,000				
Land Purchase					250,000
DEFERRED MAINTENANCE					
Aerators	2,000	2,060	2,122	2,185	2,251
Lift Stations	2,500	2,575	2,652	2,732	2,814
TOTAL	\$74,500	\$4,635	\$4,774	\$4,917	\$255,065
Ending Balance	\$83,853	\$164,118	\$278,927	\$397,180	\$268,981

Assumed Growth Rate =

3.00%

6/17/2004

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IV. PARK IMPROVEMENTS

Park Fees are collected from new residential development to pay for the acquisition and improvements to City Parks. Parks provide recreational amenities to the citizens of San Joaquin, and their development is necessary to provide a high quality of life.

A. Proposed Construction

State Grants have now accumulated over \$500,000 for park development. The City has prepared a master plan for the city-owned property northwest of Eight Street. The total cost to develop the entire site is \$2.7 million.

The city should obtain public input as to the facilities that should be constructed first. Some options are:

1. Softball Field
2. Soccer Field
3. Parking Facilities
4. Restrooms
5. Skate Park
6. BMX Track

Once the scope of the facilities are determined, construction plans can be completed.

B. Funding

A combination of City impact fees, state grants and community donations will be used to pay for the improvements. See Table 5

V. STREETS

A. Revenue

The reconstruction of the older streets in San Joaquin is one most visible needs of the City. A study was performed in 1997 which ranked the streets in need and estimated the cost to reconstruct the streets, curb, gutters, sidewalks and driveways. The present day cost is \$3.9 million. See Table 7.

The city should continue to seek funding sources for street reconstruction.

The city receives Federal Funding for major streets through Fresno COG in the RSTP and CMAQ programs. These funds must be matched with 11.5% city funding.

The Gas Tax, Local Transportation Funds (LTF) and Measure C funds are used for Public Works Department salaries and street maintenance. New development pays Major Street Fees to construct the center travel lanes of collector streets.

B. Proposed Construction

1. Colusa Avenue – Reconstruct Colusa Avenue from Manning Avenue to Cherry Lane.
2. Main Street – Overlay existing street from Manning Ave. to Nevada Ave.
3. CMAQ Sidewalk – Install sidewalks at various locations in the city.
4. Local Street Maintenance – Preventive maintenance by sealing pavements 10 years old which are in good condition.

C. Equipment

1. Street Sweeper – The city needs to replace the existing street sweeper. Used machines are available periodically which can last 6 to 8 years.

D. Downtown Enhancement

The historic downtown block of Main Street from Colorado Avenue to Nevada Avenue could be improved to provide a more pleasing atmosphere for customers and increase business activity.

Two options that could be explored are as follows:

1. Plaza – Eliminate traffic and create a pedestrian plaza. Provide parking in off-street lots. Improve landscaping, lighting and shade structures.

2. **Improve Streetscape – Maintain two-way traffic and provide landscape medians, corner islands, pedestrian crossings and lighting.**

Funding for the construction and maintenance could come from a downtown improvement district paid for by property owners and grants to encourage business activity.

TABLE 6

CITY OF SAN JOAQUIN

STREETS - FIVE YEAR CAPITAL IMPROVEMENT PLAN

	04/05	05/06	06/07	07/08	08/09
FUNDING					
Beginning Balance		\$160,150	\$160,884	\$69,881	\$80,028
Gas Tax	101,800				
Measure C	40,450				
LTF	117,600				
Major Street Fees	1,870				
Total	261,720				
Anticipated Revenue					
Gas Tax	68,000	70,040	72,141	74,305	76,535
LTF	52,800	54,384	56,016	57,696	59,427
Measure C(1)	45,300	46,659	48,059	49,501	50,986
Sub-total Revenue	166,100	171,083	176,215	181,502	186,947
Less P.W. Operations	(175,050)	(171,083)	(176,215)	(180,621)	(185,136)
Available for Construction	(8,950)	0	0	881	1,811
Maj. Street Fees	8,480	8,734	8,996	9,266	9,544
CDBG Funds(EDBG 762)	140,400				
RSTP Lifeline	154,400				
CMAQ Lifeline		58,600			
TOTAL	\$556,050	\$227,484	\$169,881	\$80,028	\$91,383
CONSTRUCTION					
Colusa Avenue(EDBG)	140,400				
Colusa Avenue(Local)	62,000				
Main Street	175,500				
CMAQ Sidewalks		66,600			
Local Maintenance			100,000		
Street Sweeper	18,000				
Sub-total	\$395,900	\$66,600	\$100,000	\$0	\$0

Ending Balance \$160,150 \$160,884 \$69,881 \$80,028 \$91,383

Assumed Growth Rate = 3.0 Percent

NOTES

1. CURRENT FUNDING LEVELS ARE ASSUMED TO REMAIN, BUT MAY EXPIRE IN FY 06/07.

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7/1/2004

TABLE 7

CITY OF SAN JOAQUIN

STREET RECONSTRUCTION COST

RANK	STREET	FROM	TO	2004 COST
1	NEVADA	5TH	9TH	\$321,210
2	NEVADA	9TH	12TH	280,158
3	EIGHTH	COLORADO	NEVADA	89,895
4	SEVENTH	COLORADO	NEVADA	120,979
5	SIXTH	COLORADO	CALIFORNIA	249,738
6	FIFTH	COLORADO	CALIFORNIA	86,441
7	NINTH	COLORADO	CALIFORNIA	259,160
8	MAIN	MANNING	COLORADO	254,897
9	ELEVENTH	COLORADO	CALIFORNIA	197,957
10	RAILROAD	PINE	9TH	226,106
11	RAILROAD	9TH	MANNING	269,045
12	IDAHO	PINE	9TH	153,898
13	IDAHO	9TH	MANNING	207,880
14	OREGON	PINE	MANNING	226,007
15	UTAH	PINE	MANNING	105,002
16	MAIN	COLORADO	CALIFORNIA	364,662
17	NINTH	PINE	COLORADO	381,228
18	COLORADO	5TH	MANNING	67,636

TOTAL STREETS = \$3,861,899

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7/2/2004

VII. STORM DRAINS

A. Existing Facilities

The city has 3 main storm drain outfalls:

1) California Avenue main and basin 2) Colorado Avenue main and lift station and 3) Manning Avenue main and lift station. The two lift stations pump into James Irrigation canals. New developments are required to install master plan facilities to serve their project. Developers who construct facilities in excess of their drainage fees are reimbursed from future fees collected.

B. Basin Acquisition

The city is purchasing a basin site on Colorado Avenue north of Fifth Street in connection with the Casa Mia development.

C. Funding

The city has no funding source other than impact fees for storm drains. Any street work in the historic part of town should include the storm drain facilities shown in Table 8.

TABLE 8

CITY OF SAN JOAQUIN

STORM DRAIN CONSTRUCTION COST

STREETS	2004 COSTS
MANNING & COLUSA AVENUE EXTENSION	\$156,402
ELEVENTH STREET EXTENSION	68,643
NEVADA STREET EXTENSION	168,420
RAILROAD STREET EXTENSION	207,851

TOTAL = \$601,316

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7/2/2004