30.3.7

REGULAR

NUMBER: 208.38

TITLE: AN ORDINANCE OF THE CITY OF MILPITAS AMENDING TITLE VIII, CHAPTER 2, SECTIONS 6.01 AND 7.05 OF THE MILPITAS MUNICIPAL CODE, RELATING TO SEWER SERVICE CHARGES AND SEWER CONNECTION FEES RESPECTIVELY

HISTORY: This ordinance was introduced at a meeting of the City Council of the City of Milpitas on May 6, 2003, by motion of Councilmember Polanski, and was adopted at a meeting of said Council on June 3, 2003, upon motion of Councilmember Gomez by the following vote:

AYES:	(4)	Mayor Esteves and Councilmembers Dixon, Gomez, and Polanski
NOES:	(0)	None
ABSENT:	(1)	Councilmember Livengood
ABSTAIN:	(0)	None

ATTEST:

Gail Blalock, City Clerk

APPROVED:

Jose S. Esteves, Mayor

APPROVED AS TO FORM:

Steven T. Mattas, City Attorney

ORDAINING CLAUSE:

THE CITY COUNCIL OF THE CITY OF MILPITAS DOES ORDAIN AS FOLLOWS:

Section 1. **Amendment to Section VIII-2-6.01.** SECTION VIII-2-6.01 OF THE MILPITAS MUNICIPAL CODE IS HEREBY AMENDED TO READ AS FOLLOWS:

VIII-2-6.01 Sewer Service Charges: The following amounts shall be assessed upon each premise maintaining a sewer connection with the City's sewage system.

1. RESIDENTIAL - Bimonthly for each dwelling unit

Category	FY 2003/04
Single Family Per Dwelling Unit	$46.10
Multi-Family Per Dwelling Unit	$33.82
Mobile Home Parks Per Dwelling Unit	$21.27

2. COMMERCIAL, INDUSTRIAL AND MISCELLANEOUS PREMISES

a) Flat Rate: For non-residential accounts, there shall be a flat rate assessed every billing cycle during which normal billing takes place, regardless of the amount of sewage discharged, in the amount of $7.78 per bimonthly period to defray billing and sewer system administration costs.

b) Quantity and Strength Charges: For each commercial, industrial, or miscellaneous premises, a charge for each one hundred cubic feet of water used per billing cycle shall be charged as follows:

Category	FY 2003/04
Motels, Hotels & Senior Citizen Housing Developments	$1.76
General office, banks, government offices general merchandise, retail, and shopping centers; building, hardware, and gardening material facilities; amusement centers, and theaters	$1.55
City of Milpitas	$1.54
Service stations, repair shops, and car washes	$1.75
Eating and drink establishments	$3.46
Personal services – laundry, barber/beauty shops, cleaners	$1.54
Jefferson Smurfit Corporation	$0.60
T. Marzetti Co.	$5.12
Prudential Overall Supply	$1.97
Xicor Inc.	$1.22
Loral-Fairchild-Lockheed	$1.21
US Filter	$1.62
Sipex Corporation	$1.24
Lucky Pure Water	$0.82
Calistoga Mountain Spring Water	$0.81
Milpitas Material	$0.01
Union Pacific Railroad	$3.39
Headway Technology Corporation	$1.58
Electrical and electronics design, fabrication, assembly and storage facilities	$1.54
Metal fabrication, machinery, and tool fabrication facilities	$2.26
Linear Technology Corporation	$1.45
Seagate Technology	$1.24
Schools, colleges and churches	$1.79
Convalescent hospitals, day care centers, and health service facilities	$1.70
Elmwood Rehabilitation center	$1.84

3. Purpose of Charge: The purpose of these charges is to defray the cost of operation and maintenance of the City's facilities, the cost of sewage treatment, and the debt service for the revenue bonds to finance the City's proportionate share of capital improvements at the San Jose/Santa Clara Water Pollution Control Plant.

4. Effective Date: The sewer service charges in Section 6.01 as established by Ordinance 208.38 shall become effective for utility bills issued on or after August 1, 2003, for meters read on or after July 22, 2003. All bills mailed thereafter shall be charged these charges.

Section 2. **Amendment to Section VIII-2.7.05.** Section VIII-2-7.05 OF THE MILPITAS MUNICIPAL CODE IS HEREBY AMENDED TO READ AS FOLLOWS:

VIII-2-7.05 Connection Fees for Connectors and Installers

Prior to connection to any sewer line of City or issuance of building permit (whichever occurs first), or prior to a change in use that results in an increased average daily waste water flow due to the change in use, connectors or developers shall pay to the City a fee for connection to the City's sewerage system as shown below:

A. $1,908 per single family dwelling unit.

B. $1,406 per dwelling unit at multi-family dwelling developments.

C. $8.52 per gallon per day of estimated average daily wastewater discharge for non-residential sites.

Notwithstanding the foregoing, connectors or developers with projects meeting the following criteria shall be subject to the provisions of this section in effect prior to the effective date of the amendments to this section enacted by Ordinance No. 208.38:

(a) Projects requiring discretionary planning approval with applications that are deemed complete prior to July 15, 2003; and

(b) Projects that do not require discretionary planning approval that receive building permits prior to July 15, 2003.

Section 3. **Validity of previous Code Sections.** If this entire Ordinance, or portions hereof, or its application is deemed invalid by a court of competent jurisdiction, any amendments made to the Milpitas Municipal Code by the Ordinance will be rendered void and cause the amended sections to remain in full force and effect for all purposes.

Section 4. **Effective Date; Publication.** Except as provided below, this Ordinance shall take effect 30 days following its passage, and prior to the expiration of 15 days from the passage thereof shall be published at least once in the Milpitas Post, a newspaper of general circulation, published and circulated in the City of Milpitas, County of Santa Clara, thenceforth and thereafter the same shall be in full force and effect. Notwithstanding the foregoing, section 2 of this Ordinance shall become effective July 15, 2003.

File 30.3 ~~21~~ 239 21

CERTIFICATION OF CITY CLERK

ORDINANCE NO. 239.2

I, Gail Blalock, City Clerk of the City of Milpitas, do hereby certify that the attached Ordinance is a true and correct copy of Ordinance No. 239.2 of the City of Milpitas, that said Ordinance was duly enacted and adopted by the City Council of the City of Milpitas at a meeting of said City Council held on the 19TH day of August, 2003, and that said Ordinance has been published and/or posted in the manner required by law.

WITNESS my hand and the Official Seal of the City of Milpitas, California, this 21ST day of August, 2003.

Gail Blalock
City Clerk

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REGULAR

NUMBER 239.2

TITLE: **AN ORDINANCE OF THE CITY OF MILPITAS AMENDING CHAPTER 16, TITLE XI, SECTION 15 OF THE MILPITAS MUNICIPAL CODE, RELATING TO STORM DRAIN CONNECTION FEE**

HISTORY: This Ordinance was introduced (first reading) by the City Council at its meeting of August 5, 2003, upon motion by Vice Mayor Dixon and was adopted (second reading) by the City Council at its meeting of August 19, 2003, upon motion by Councilmember Gomez. Said Ordinance was duly passed and ordered published in accordance with law by the following vote:

AYES:	(5)	Mayor Esteves and Councilmembers Dixon, Gomez, Livengood, and Polanski
NOES:	(0)	None
ABSENT:	(0)	None
ABSTAIN:	(0)	None

ATTEST:

Gail Blalock, City Clerk

APPROVED:

Jose S. Esteves, Mayor

APPROVED AS TO FORM:

Steven T. Mattas, City Attorney

ORDAINING CLAUSE:

THE CITY COUNCIL OF THE CITY OF MILPITAS DOES ORDAIN AS FOLLOWS:

Section 1. **Addition of Section XI-16-15.** Title XI, Chapter 16, Section 15 is hereby added to read as follows:

XI-16-15 Connection Fees

Prior to connection or discharge to any City storm drain facility (directly or indirectly), connectors shall pay City a fee for connection/discharge to the City's storm drain system as follows:

A. $1,100 per parcel for single family medium density with parcel size equal or smaller than 8,710 square feet (1/5 acre).

B. $1,916 per parcel for single family low density, with parcel size between 8,711 and 43,560 square feet (between 1/5 acre and 1 acre).

C. $3,594 per parcel for single family with parcel size between 43,561 and 174,240 square feet (between 1 acre and 4 acres).

D. $4,792 per parcel or single family with parcel size between 174,241 and 392,040 square feet (between 4 and 9 acres).

E. $6,469 per parcel for single family with parcel size greater than 392,040 square feet (9 acres).

F. $16,771 per acre for multi-family developments.

G. $21,562 per acre for all others (such as commercial, industrial, institutional, or mixed use sites).

H. $7,187 per acre for schools (with athletic fields), otherwise consider as institutional.

I. $4,792 per acre for parks

The purpose of the fee imposed by this section is to fund facilities (whether presently in existence or not) necessary to provide storm drain services, and revenues derived from the fee imposed by this section shall be used solely for that purpose.

Section 2. **Exemption for Certain Pending Projects.** Notwithstanding the foregoing, connectors with projects meeting the following criteria shall not be subject to the provisions of section 1 of this ordinance:

(a) Projects requiring discretionary planning approval with applications that are deemed complete prior to October 15, 2003; and

(b) Projects that do not require discretionary planning approval that receive building permits prior to October 15, 2003.

Section 3. **Effective Date; Publication.** Except as provided below, this Ordinance shall take effect 30 days following its passage, and prior to the expiration of 15 days from the passage thereof shall be published at least once in the Milpitas Post, a newspaper of general circulation, published and circulated in the City of Milpitas, County of Santa Clara, thenceforth and thereafter the same shall be in full force and effect. Notwithstanding the foregoing, section 1 of this Ordinance shall become effective October 15, 2003.

REGULAR

30.3.5

NUMBER: 120.41

TITLE: AN ORDINANCE OF THE CITY OF MILPITAS AMENDING SECTIONS 6.13, 6.14, 6.15, 6.16 AND 7.01, CHAPTER 1, TITLE VIII OF THE MILPITAS MUNICIPAL CODE, RELATING TO WATER SERVICE CHARGES AND CONNECTION FEES

HISTORY: This ordinance was introduced at a meeting of the City Council of the City of Milpitas on May 6, 2003, by motion of Councilmember Polanski, and was adopted at a meeting of said Council on June 3, 2003, upon motion of Councilmember Gomez by the following vote:

AYES:	(4)	Mayor Esteves and Councilmembers Dixon, Gomez, and Polanski
NOES:	(0)	None
ABSENT:	(1)	Councilmember Livengood
ABSTAIN:	(0)	None

ATTEST:

Gail Blalock, City Clerk

APPROVED:

Jose S. Esteves, Mayor

APPROVED AS TO FORM:

Steven T. Mattas, City Attorney

ORDAINING CLAUSE:

THE CITY COUNCIL OF THE CITY OF MILPITAS DOES ORDAIN AS FOLLOWS:

Section 1. **Amendment to Section VIII-1-6.13.** Title VIII, Chapter 1, Section 6.13 of the Milpitas Municipal Code is hereby amended to read as follows:

VIII-1-6.13 Quantity Charges:

The quantity charges per hundred cubic feet for metered water service shall be as follows:

Categories	Tiers	2003/2004 Rate
Residential customers (per dwelling unit)	1-20 hcf	$1.15
	21+ hcf	$2.42
Commercial, Industrial, & Institutional		$2.64
Recycled Industrial Process Use		$1.32
Recycled Sanitary Use (Inside Dual Plumbing)		$1.32
Potable Irrigation		$3.01
Recycled (Formerly Served by Wells)		$0.58
Recycled (Agricultural Service)		$0.22
For City Accounts (Recycled)		$0.55
Recycled (All other)		$2.41
Santa Clara County (Ed Levin Park)		$1.07
City of Milpitas accounts (potable)		$1.06

No adjustments shall be granted to any water account holder due to variation in the days of service for any bimonthly billing period. Acceptable days of service range from 50 to 69 days per bimonthly billing period.

Section 2. Amendment to Section VIII-1-6.14. Title VIII, Chapter 1, Section 6.14 of the Milpitas Municipal Code is hereby amended to read as follows:

VIII-1-6.14 Bimonthly Water Meter Charges:

Water Meter Charges:
The bimonthly charges for water meters shall be made on the basis of the size of the water meter (excluding Recycled Irrigation Formerly Served by Wells and Agricultural Service customers), and shall be as follows:

9/11

a) **For Residential Customers:**

Water Meter Size, inches	Charges, $
5/8	$14.60
3/4	$15.52
1	$22.05
1-1/2	$27.80
2	$36.28
3	$97.14
4	$123.09
6	$187.84
8	$246.11
10	$356.25

b) **For Non-Residential Customers (excluding Recycled Irrigation Formerly Served by Wells and Agricultural Service customers):**

Water Meter Size, inches	Charges, $
5/8	$15.41
3/4	$16.38
1	$23.31
1-1/2	$29.38
2	$38.31
3	$102.58
4	$129.96
6	$198.38
8	$259.92
10	$376.24

c) **For Recycled Irrigation Formerly Served by Wells and Agricultural Service Customers:**

$60.00 bimonthly

Section 3. Amendment to Section VIII-1-6.15. Title VIII, Chapter 1, Section 6.15 of the Milpitas Municipal Code is hereby amended to read as follows:

VIII-1-6.15 Fire Service Charges:

The bimonthly charges for fire services provided by detector check valves shall be made on the basis of the size of the detector check valve, and shall be as follows:

a) **For Residential Customers:**

Detector Check Valve Size, inches	Charges, $
2	$23.35
3	$35.07
4	$38.96
6	$50.68
8	$62.34
10	$74.04

b) For All Other Customers:

Detector Check Valve Size, inches	Charges, $
2	$24.69
3	$37.04
4	$41.15
6	$53.53
8	$65.83
10	$78.16

Section 4. Amendment to Section VIII-1.6.16. Title VIII, Chapter 1, Section 6.16 of the Milpitas Municipal Code is hereby amended to read as follows:

VIII-1-6.16 Effective Date of Water Rates:

The water quantity charges in Section 6.13, the water meter charges in Section 6.14, and the fire service charges in Section 6.15 as established by Ordinance No. 120.41 shall become effective for utility bills issued on or after August 1, 2003 for meters read on or after July 22, 2003. All bills mailed thereafter shall be based upon these charges.

Section 5. Amendment to Section VIII-1-7.01. Title VIII, Chapter 1, Section 7.01 of the Milpitas Municipal Code is hereby amended to read as follows:

VIII-1- 7.01 Connection Fees; Computation of Fees

Prior to connection to any water line of City, or issuance of building permit (whichever occurs first), or prior to a change in use that results in an increased average daily water use due to the change in use, connectors or developers shall pay to the City a fee for connection to the City's water system as shown below:

7.01-1.1 $1,910 per single family residence.

7.01-1.2 $1,164 per dwelling unit for multi-family developments.

7.01-1.3 $5.97 per gallon per day of estimated average daily water use for non-residential sites

Notwithstanding the foregoing, connectors or developers with projects meeting the following criteria shall be subject to the provisions of this section in effect prior to the effective date of the amendments to this section enacted by Ordinance No. 120.41:

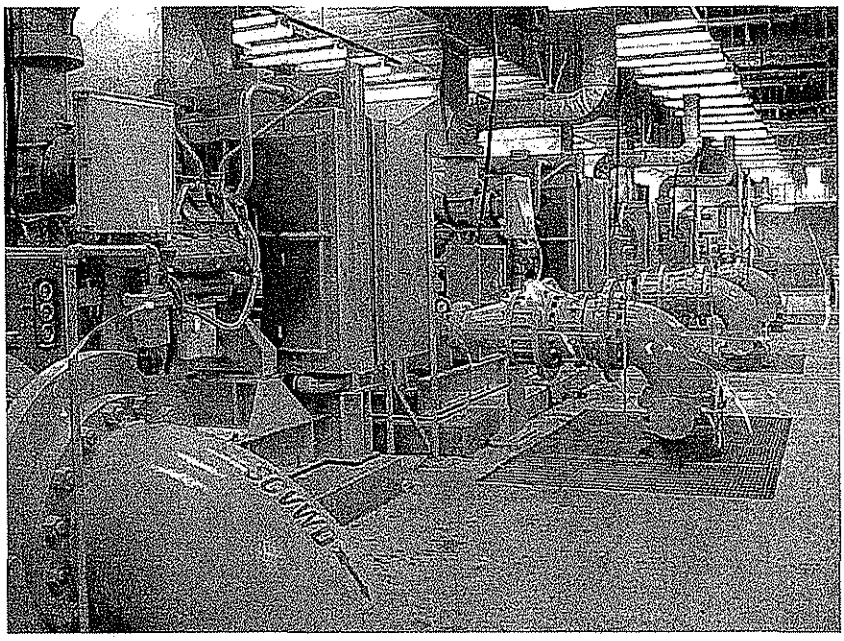
(a) Projects requiring discretionary planning approval with applications that are deemed complete prior to July 15, 2003; and

(b) Projects that do not require discretionary planning approval that receive building permits prior to July 15, 2003.

Section 6. Validity of previous Code Sections. If this entire Ordinance, or portions hereof, or its application is deemed invalid by a court of competent jurisdiction, any amendments made to the Milpitas Municipal Code by the Ordinance will be rendered void and cause the amended sections to remain in full force and effect for all purposes.

Section 7. Effective Date; Publication. Except as provided below, this Ordinance shall take effect 30 days following its passage, and prior to the expiration of 15 days from the passage thereof shall be published at least once in the Milpitas Post, a newspaper of general circulation, published and circulated in the City of Milpitas, County of Santa Clara, thenceforth and thereafter the same shall be in full force and effect. Notwithstanding the foregoing, section 5 of this Ordinance shall become effective July 15, 2003.

City of Milpitas



Financial Utility Master Plan

April 2003

BARTLE WELLS ASSOCIATES
INDEPENDENT PUBLIC FINANCE ADVISORS

BARTLE WELLS ASSOCIATES
INDEPENDENT PUBLIC FINANCE ADVISORS

1889 Alcatraz Avenue
Berkeley, CA 94703
510 653 3399 fax: 510 653 3769
www.bartlewells.com

April 23, 2003

City of Milpitas
455 East Calaveras Boulevard
Milpitas, CA 95035

Attn: Darryl Wong, Principal Civil Engineer

Re: Financial Utility Master Plan

Bartle Wells Associates is pleased to submit the attached Financial Utility Master Plan for the City's water, recycled water, wastewater, and storm drain utilities. Key elements of the financial master plan include developing long-range financing plans, utility rates, and connection fees to support the ongoing operating and capital requirements of the City's utilities.

The recommendations presented in this report were developed with a great deal of input from City staff and a Citizen Task Force representing residential, senior citizen, commercial/industrial, and institutional customers. Special thanks to all members of the City's project team including Darryl Wong, Marilyn Nickel, Aparna Chatterjee, Mike McNeely, Emma Karlen, Joanne Johnson, and other staff who contributed to the project.

We enjoyed working with the City on this assignment and remain available to provide assistance as needed in the future.

Very truly yours,

BARTLE WELLS ASSOCIATES

Douglas R. Dove, P.E., CIPFA
President

Alex T. Handlers, CIPFA
Senior Consultant

Sophia D. Skoda, P.E., CIPFA
Senior Consultant

MEMORANDUM

Engineering Division

To: Mike McNeely, City Engineer

From: Darryl Wong, Utility Engineer

Subject: Draft Utility Financial Master Plan

Date: April 8, 2003

Introduction. The City Council approved a consultant agreement on February 19, 2002 for the development of a comprehensive Utility Financial Master Plan (Master Plan) for the water, wastewater, and stormwater programs. This document provides background and selected highlights of the Master Plan effort. Further details on specific findings and recommendations may be found in the Executive Summary section of the Master Plan (copy attached as part of the Master Plan).

Background. The objective of the Master Plan effort is "to develop a comprehensive 20-year financial master plan and rate structure for water, wastewater, and stormwater utilities that will result in adequate resources for providing quality services while maintaining balanced utility budgets". In order to accomplish the objective, the following guiding principles were followed:

- Reflect costs of service
- Be fair and equitable to utility ratepayers
- Incorporate technically sound, reasonable, and defensible methodology
- Establish utility charges that will meet the City's revenue requirements
- Remain competitive with neighboring communities on rates

A Milpitas citizens' task force has convened monthly since July 2002 to assist in the plan development. The task force was requested to "provide perspective review towards developing and adopting a utility financing structure that will result in continued robust, high quality utility services while maintaining a balanced budget". The membership, comprised of representatives from each of the city rate categories, consisted of:

- Douglas Chun, Chair. Residential Representative, Water Quality Manager, Alameda County Water District.
- Keith Walker, Vice Chair. Institutional Representative, Facilities Manager, Milpitas Unified School District.

- John Hemstreet. Commercial/Industrial Representative, Assistant Plant Manager, T. Marzetti.
- Henry Ku. Senior Citizen Representative, Hydrologist, USGS, retired.

Members were briefed on water, sewer and storm drain systems to provide them with sufficient background to participate in the plan development. Information on the physical infrastructure systems, facility operations, wholesale suppliers, anticipated system demands, the city utility financial system, capital improvement program, and rate structure were presented and reviewed. Equity issues, rate development premises, funding needs, and cost comparisons to other municipalities were discussed. Staff received comments as the document was being developed, and has integrated the input into the document.

On February 10, 2003, the Utility Rate Subcommittee was briefed on the Master Plan. Background on the plan and findings was provided, and comments received to include into the document.

Affecting the cost of service are, among others, the following factors:

- **Facility replacement costs.** The City has a substantial investment in utilities. It is estimated that the total replacement value for the water system is $165 million, for the sewer system is $164 million, and the storm drain system is $240 million. As the city celebrates its 50th birthday, system components are reaching the end of their useful lives and replacements or retrofits are needed to maintain the system in proper operating condition. Current upgrades include retrofits to our hillside reservoir, and replacement of booster pumps.

- **Capital Improvement Program.** Capital improvement program is established to meet city service demands (as identified in the City Water and Sewer Master Plans), by regulatory/health and safety mandates, and by operational needs. About $20 million is needed for water and sewer capital improvements over the next ten years. Major projects include a new well to provide emergency drinking water supply, reservoir upgrades to accommodate a disinfectant change implemented San Francisco Public Utility Commission, seismic protection improvements, and sewer system capacity improvements.

- **Wholesale rate increases.** The San Francisco Public Utility Commission has estimated that wholesale rates will triple in ten years, the Santa Clara Valley Water District has estimated a doubling of rates in ten years. The Regional Water Pollution Control Plant has identified additional improvements and facilities needed to meet regulatory and other mandates of $121 million over the next five years, with additional improvements possible; the City share of these costs is about 7.5%.

- **Fund reserves.** Current water and wastewater fund reserves are below prudent levels needed to provide financial buffer for unanticipated operating or capital costs, cover periodic fluctuations in collections, and fund financial emergencies. Water and Wastewater expenses are exceeding revenues. For instance, even with the recommended rate increases, water balances will fall below $1 million in about two years, well below the prudent level of $4.0 million.

- **Storm Drain system.** The city does not have a dedicated storm drain revenue stream for maintaining the storm drain system. About $3 million per year is needed to operate and maintain, support flood plain management efforts, and to support new, more stringent State and Federal requirements for stormwater discharge.

Findings. The Master Plan provides a guideline for planned rate and fee adjustments to meet cost of service needs. The following are some of the key recommendations of the Master Plan.

1) **Maintain Prudent Fund Reserves** - The following minimum reserves are recommended:

   - Water Fund: 30% of annual O&M
   - Sewer Fund: 25% of annual O&M
   - Recycled Water Fund 25% of annual O&M

2) **Financing** - Pay-as-you-go financing is recommended to the extent possible and prudent. Projections indicate that the City should be able to fund capital improvements on cash basis using reserves, service charge revenues and connection fees recommended in the Master Plan.

3) **Infrastructure Fund** - The City has completed a separate evaluation of projects needed to replace facilities, which are reaching the end of their useful life. The majority of the pipelines have an estimated service life of about 35 to 100 years, depending on the material, and some of the lines will gradually need replacement in a few years. Replacement costs will begin to accelerate over the next decade. A designated infrastructure replacement fund is recommended.

4) **Connection Fees** - The City has not updated its water and sewer connection fees for at least 18 years and the fees are among the lowest in the region. Updates of these connection fees to recover costs of infrastructure needed to serve new development, and the implementation of a storm drain connection fee is recommended. The combined water, sewer and storm drain connection fees for new single family residents would be below the average for the region.

5) **Water and Wastewater Rates** - A planned approach for rate adjustments to adequately fund-long term wholesale, capital improvement, and infrastructure replacements was developed and reviewed in detail. Steady annual rate increases for the City costs (capital improvements, infrastructure replacement and fund balances) plus a wholesale cost pass-through is recommended. The result would be a typical single-family cost increase of a little over a dollar per month for water and for sewer, plus a pass through of wholesale costs.

6) **Storm Drain Rates** - A dedicated charge to recover costs for new storm drain system investments, replace facilities as they reach the end of useful life, and provide operation and maintenance funding is recommended. Development of a proposed service charge mechanism over the coming year is recommended.

The Master Plan provides the City with its first comprehensive guideline for financing wholesale cost increases, operation and maintenance needs, capital improvements, and infrastructure replacement while maintaining a prudent fund balance. The document represents a major effort to provide the City with a funding plan to maintain quality utility services on a long-term basis.

* * *

cc: Tom Wilson, City Manager
Blair King, Assistant City Manager
Emma Karlen, Finance Director
Utility Engineering: 40- 7096

CITY OF MILPITAS

FINANCIAL UTILITY MASTER PLAN

FINAL REPORT

April 2003

BARTLE WELLS ASSOCIATES
Independent Public Finance Advisors
1889 Alcatraz Avenue
Berkeley CA 94703
Tel. 510.653.3399
Fax 510.653.3769
www.BartleWells.com

PROJECT TEAM

City of Milpitas

Darryl Wong	Principal Civil Engineer
Marilyn Nickel	Associate Civil Engineer
Aparna Chatterjee	Assistant Civil Engineer
Mike McNeely	City Engineer
Emma Karlen	Director of Finance

Citizen Task Force

Douglas Chun	*Chair, Residential Representative* Water Quality Manager, Alameda County Water District
Keith Walker	*Vice Chair, Institutional Representative* Facilities Manager, Milpitas Unified School District
John Hemstreet	*Commercial/Industrial Representative* Assistant Plant Manager, T Marzetti
Henry Ku	*Senior Citizen Representative* Hydrologist, USGS, retired

Bartle Wells Associates

Douglas Dove	Principal
Alex Handlers	Senior Consultant
Sophia Skoda	Senior Consultant

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ABBREVIATIONS

AF	Acre-feet (1 AF = 43,560 cubic feet)
BAWUA	Bay Area Water Users Association
BOD	Biological Oxygen Demand
BWA	Bartle Wells Associates
CCI	Construction Cost Index
CIP	Capital improvement program
ENR	Engineering News-Record
GASB	Government Accounting Standards Board
gpd	Gallons per day
GO	General Obligation
hcf	Hundred cubic feet (1 hcf = 748 gallons)
I/I	Infiltration and inflow
mgd	Million gallons per day
NH3	Ammonia
NPDES	National Pollution Discharge Elimination System
O&M	Operating and maintenance
SCVURPPP	Santa Clara Valley Urban Runoff Pollution Prevention Program
SCVWD	Santa Clara Valley Water District
SFPUC	San Francisco Public Utilities Commission
SFR	Single family residence
SS	Suspended solids
SWRCB	State Water Resources Control Board
WPCP	San Jose/Santa Clara Water Pollution Control Plant

EXECUTIVE SUMMARY

ES EXECUTIVE SUMMARY

ES.1 Introduction

In February 2002, the City retained Bartle Wells Associates to develop a comprehensive Financial Utility Master Plan for the City's water, recycled water, wastewater, and storm drain utilities. Key elements of the master plan include developing long-range financing plans and utility rates to support the ongoing operating and capital requirements of the City's utilities. The recommendations were developed with substantial input from City staff, the City's engineering consultants, and a citizen task force representing residential, commercial/industrial, and institutional customers.

Study Objective – To develop a comprehensive 20-year financial master plan and rate structure for water, wastewater, and storm drain utilities that will result in adequate resources for providing quality services while maintaining balanced utility budgets.

ES.2 Financial Plan Guidelines

The report develops a number of general financial plan guidelines as summarized below.

ES.2.1 Rate Adjustments

Over the long-term, substantial utility rate increases are needed to meet the operating and capital requirements of the City's water and sewer enterprises. Rather than adopt large rate increases in the short-term, the City's objective is to steadily phase-in adjustments over the next 10 years – to the extent possible and financially prudent – in order to minimize the annual impact on customers. This report recommends that the City separate utility rate increases as follows:

- **Steady annual rate adjustments for City costs** - to recover costs that are under the City's control such as expenditures for utility operations and maintenance, capital projects, and infrastructure replacements.
- **Rate pass-through for external costs** - to recover utility costs that are out of the City's control including wholesale water purchases from the SFPUC and SCVWD and costs for the San Jose/Santa Clara Water Pollution Control Plant.

ES.2.2 Establish Minimum Fund Reserve Targets

Maintaining a prudent level of fund reserves is an important component of sustaining long-term financial health. Fund reserves provide a financial buffer for financing unanticipated operating or capital costs, covering periodic fluctuations in revenue collection, and dealing with financial emergencies. Adequate fund reserves can also be used to help stabilize future utility rate increases. The following minimum reserve targets are recommended:

- Water Fund 30% of annual O&M
- Sewer Fund 25% of annual O&M and treatment plant costs
- Recycled Water Fund 25% of annual O&M

ES.2.3 Capital Improvement Financing

The City has identified a number of capital improvements needed over the next 5 – 10 years and beyond, including high-priority City projects, engineering master plan projects, and a few additional projects identified in a recent seismic isolation study.

- **Water Fund CIP** – The Water Fund will need to finance about $9 million of capital improvements through 2011/12. Approximately $4.4 million of these projects are required over the next five years. Additional projects for growth will be directly funded with connection fees.
- **Sewer Fund CIP** – The Sewer Fund will need to finance about $13 million of capital improvements through 2011/12. Approximately $7.6 million of these projects are required over the next five years. Additional projects for growth will be directly funded with connection fees.
- **Storm Drain CIP** - $4.4 million of improvements are needed in the next five years.

Bartle Wells Associates recommends that the City use pay-as-you-go financing for capital projects to the extent possible and prudent. Financial projections indicate that the City should be able to fully fund its capital improvement program on a cash basis using reserves, service charge revenues, and connection fee revenues.

ES.2.4 Infrastructure Replacement Funding

A Utility Depreciation Study developed by Schaaf & Wheeler (June 2002) provides a sound basis for developing long-term financial plans for funding future infrastructure replacements. The study identifies all components of the City's utility systems and develops replacement schedules based on the useful life and cost of each component. The analysis develops the following replacement costs:

- **Water System** – $25.0 million of replacements projected over the next 20 years.
- **Sewer System** – $26.4 million of replacements projected over the next 20 years.

The financial plan developed in this report is based on meeting infrastructure replacement costs over the next 20 years with a pay-as-you-go approach. Most of these costs are funded over the last 10 years of the financial plan. Water and sewer cash flow projections indicate that neither utility will have adequate finances to set aside replacement funds for at least 5 to 7 years, until rates are phased in to sufficient levels. The long-term objective is to establish rates that enable steady annual transfers to the infrastructure funds to meet long-term replacement funding requirements. The City plans to verify actual replacement needs prior to conducting any replacements.

ES.2.5 Drought Contingency Planning

A drought can pose a tremendous financial burden on the City, both in terms of higher costs for wholesale water and reduced revenues due to lower water sales. The City has prudently adopted a plan for phasing in emergency measures as a drought develops. In order to maintain financial health after a drought has ended, the City should also phase out the emergency measures as water demand gradually returns to pre-drought levels.

ES.2.6 Public Education

To help build public acceptance for rate and fee increases, the City should clearly and concisely identify why future rate and fee adjustments are needed and proactively inform the public.

ES.2.7 Connection Fee Update

The City's water and sewer connection fees have not been updated in over 18 and 24 years respectively, and are among the lowest in the region. These fees should be updated to recover costs of utility infrastructure needed to serve new development. The City does not currently charge a storm drain connection fee and should establish one. Connection fees should be updated periodically.

ES.2.8 Annual Update of Financial Projections

The City should update financial projections annually to ensure that future rates reflect future revenue needs.

ES.3 Water Rate Recommendations

ES.3.1 Rate Adjustments

Long-range cash flow projections indicate the need for a series of rate adjustments beginning 2003/04. The increases will enable the water enterprise to fund its operating and capital programs while gradually building a prudent level of fund reserves. The following table shows projected rate adjustments assuming steady rate increases for City costs plus a variable wholesale rate pass-through.

Projected Water Rate Adjustments

Adjustment	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
City	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Wholesale	8.2%	6.9%	3.2%	1.7%	2.8%	8.5%	6.9%	4.6%	4.5%
Total	13.2%	11.9%	8.2%	6.7%	7.8%	13.5%	11.9%	9.6%	9.5%

ES.3.2 Reasons for Rate Adjustments

Rate increases are needed for a number of reasons including:

- Water rates have fallen behind the cost of providing service.
- Water fund reserves are currently below prudent levels and are dwindling. In recent years, the Water Fund had to borrow money to remain financially solvent.
- SFPUC wholesale water rates are projected to increase 41% over the next two years and to triple over the next 10 years, partially to fund major capital improvements to the Hetch-Hetchy regional water system.
- SCVWD wholesale water rates are projected to increase by about 18% over the next two years and about 80% over the next 10 years.

- The water fund is projected to pay for $9 million of priority capital improvement projects through 2011/12 including $4.4 million over the next five years.
- The Schaaf & Wheeler Utility Depreciation Study identified $25 million of infrastructure replacement needs over the next 20 years.
- Operating and maintenance costs are projected to increase gradually in future years. In particular, personnel costs – which include costs for utility personnel and City personnel providing services to the water utility – are projected to increase by almost 30% over the next four years, largely due to increased PERS requirements and contract salary schedules.

Chart A shows a 10-year projection of water expenses. The following table shows the major components of increases in annual costs over the next 10 years. The breakdown provides a good indication of the underlying factors driving the rate increases.

Components of Annual Cost Increases, 2002/03 – 2011/12

SFPUC Wholesale Water	50.2%
SCVWD Wholesale Water	13.0%
City O&M	21.7%
Capital Projects	1.6%
Infrastructure Replacement	13.6%
Total	100.0%

ES.3.3 Rate Impacts

Rate increases will be applied to the City's existing rate structure. No rate structure adjustments are recommended at this time. Chart B shows a 10-year projection of bi-monthly water bills for an average single family residence using 26 hcf of water. Chart C breaks down the bill between costs recovered for wholesale water purchases and revenues required for City needs. In future years, actual increases may vary based on customer class and use.

ES.3.4 Fund Balance Projections

Based on the cash flow projections, water fund reserves will continue to decrease through 2004/05 until rates are gradually increased to sufficient levels. The steady annual rate increases will enable the water fund to gradually build fund reserves to prudent minimum levels over the following years as shown on the following table and on Chart D.

Water Fund Balances (End-of-Year) & Minimum Reserve Targets ($ Millions)

	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Fund Balance	$1.4	$0.9	$0.5	$1.1	$2.4	$2.4	$2.7	$4.0	$6.3	$9.8
Minimum Target	$3.2	$3.5	$3.9	$4.1	$4.3	$4.5	$5.1	$5.6	$6.0	$6.5

ES.4 Recycled Water Recommendations

The City began providing recycled water services in October 1997 as part of the South Bay Water Recycling Program. The City keeps a separate accounting of recycled water revenues and expenses and has a goal of making the recycled water fund a self-supporting enterprise.

Recycled water rates are tied to potable water rates with recycled water quantity charges set at 80% of potable water charges for irrigation water, and at 50% of potable rates for most other uses. Recycled water rates should be adjusted by the same percentages as potable rates. Cash flow projections indicate that the recycled water fund should generate approximately $200,000 to $400,000 per year in net revenues. These revenues can be used to fund customer conversions to recycled water, unanticipated operating expenses, or capital projects.

ES.5 Sewer Rate Recommendations

ES.5.1 Rate Adjustments

Long-range cash flow projections indicate the need for a series of rate adjustments beginning 2003/04. The increases will enable the sewer enterprise to fund its operating and capital programs while gradually building back a prudent level of fund reserves. The following table shows projected rate adjustments assuming steady rate increases for City costs plus increases for treatment plant operating and capital costs, which are phased-in over the next six years.

Projected Sewer Rate Adjustments

Adjustment	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
City	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%
Treatment Plant	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	1.5%	1.5%	1.5%
Total	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%	7.0%	7.0%	7.0%

ES.5.2 Reasons for Rate Adjustments

Rate increases are needed for a number of reasons including:

- Sewer rates have fallen behind the costs of service and do not fund annual expenses.
- The sewer fund will be operating at a deficit over the next few years and is relying on a $5.2 million spend down of fund reserves – from the Treatment Plant Fund and Infrastructure Fund – over the next 4 years in order to make ends meet. Prudent use of these fund reserves will enable the City to phase in necessary rate increases over the next few years.
- Milpitas' share of treatment plant operating costs are budgeted at about $4.0 million in 2002/03. This represents an almost 30% increase over $3.1 million spent in 2001/02 and a 54% increase over $2.6 million spent in 2000/01.

- According to WPCP projections, the City's sewer fund will be billed about $900,000 per year on average over the next 5 years, substantially higher than the $400,000 budgeted in the current year.
- The sewer fund needs to fund $12.7 million of priority capital improvement projects through 2011/12, including $7.6 million over the next five years. This represents a substantial increase from CIP funding levels over the past five years, which have averaged about $500,000 annually.
- The Schaaf & Wheeler Utility Depreciation Study identified $26.4 million of infrastructure replacement needs over the next 20 years, most of which are funded in the last 10 years of the financial plan.

Chart E shows a 10-year projection of sewer expenses. The following table shows the major components of increases in annual costs over the next 10 years. The breakdown provides a good indication of the underlying factors driving the rate increases.

Components of Annual Cost Increases, 2002/03 – 2011/12

Treatment Plant O&M	26.1%
Treatment Plant Capital	11.6%
City O&M	21.9%
Capital Projects	12.4%
Infrastructure Replacement	28.0%
Total	100.0%

ES.5.3 Rate Impacts

Rate increases will be applied to the City's existing rate structure. No adjustments to the current rate structure are recommended at this time. Chart F shows a 10-year projection of bi-monthly sewer bills for single family and multi-family residences. Chart G breaks down the bill between costs recovered for treatment plant expenses and revenues required for City needs. Actual rate increases may vary based on customer class and use.

ES.5.4 Fund Balance Projections

Based on the cash flow projections, the steady annual rate increases will enable the sewer fund to gradually meet prudent minimum levels over the following years as shown on the following table and on Chart H. The sewer fund is relying on about $5 million in transfers from the treatment plant fund and the infrastructure replacement fund over the next four years in order to maintain reserves.

Sewer Fund Balances (End-of-Year) & Minimum Reserve Targets ($ Millions)

	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Fund Balance	$2.0	$1.9	$2.2	$2.2	$1.8	$2.2	$2.7	$2.9	$3.5	$4.7
Minimum Target	$1.9	$2.2	$2.0	$2.3	$2.5	$2.6	$2.6	$2.7	$2.8	$2.9

ES.6 Storm Drain Recommendations

Bartle Wells Associates recommends that the City, working with the City Attorney's office and the Council utility rate subcommittee, continue to explore a storm drain charge. This action could provide for needed storm drain and pumping costs, relieve general fund appropriations, and provide funding for costs of the newly mandated storm water quality program activities. In order to have a charge in place for FY 2004/05, the City would need approval on the fee structure and implementation procedures from the Council utility rate subcommittee by the fall of 2003. Bartle Wells also recommends that the City adopt a storm drain connection fee to recover costs of storm drain infrastructure needed to serve new development as soon as possible.

ES.7 Connection Fee Recommendations

Connection fees are one-time charges to new customers to recover the capital costs for infrastructure needed to serve growth. The City's water and sewer connection fees have not been updated in many years and are among the lowest in the region. The City does not charge a connection fee to recover costs for storm drain infrastructure. Current connection fees do not recover costs for facilities benefiting new development.

The City should adopt new water and sewer connection fees and establish a storm drain connection fee. The City's current treatment plant connection fee is adequate. The recommended fees recover costs for capital projects needed to serve new development as well as the costs of capacity in existing infrastructure that will benefit and serve growth. Without adequate connection fees, facilities needed to serve new development will be partially funded by current ratepayers. The following table compares current and recommended connection fees for a typical single family residence.

Utility Connection Fees for a Typical Single Family Residence (1/5 Acre)

	Current	Recommended
Water Connection Fee	$884	$1,910
Sewer Connection Fee	399	1,908
Treatment Plant Fee	880	880
Storm Drain Connection Fee	0	1,917
Total	2,163	6,615

ES.8 Regional Rate & Connection Fee Survey

ES.8.1 Regional Rates

Overall, the City's combined utility service rates are currently slightly below regional averages. For a typical single family residence, water rates are lower than average and sewer rates are higher than average. For a typical small commercial customer, water rates are higher than average and sewer rates are lower than average. Milpitas does not charge a storm drain service fee.

Chart I compares bi-monthly water, sewer, and storm drain service charges for an average single family residence using a moderate 25 hundred cubic feet (hcf) of water. One hcf equals about 748 gallons. The combined bi-monthly charges range from about $65 to $110. Milpitas' current charges total about $86, about $6 below the regional average of $92. The chart also shows the City's projected rates for 2003/04 for comparison only. Other regional agencies will also be adopting utility rate increases in 2003/04.

ES.8.2 Regional Connection Fees

The City's water and sewer connection fees are among the lowest of the regional agencies surveyed. Milpitas does not charge a storm drain connection fee.

Chart J compares combined water, sewer, and storm drain connection fees for a typical single family residence on a lot sized one-fifth of an acre, or about 8,700 square feet. The combined fees range from about $2,000 to about $12,000 and average approximately $7,900. Milpitas' current fees total about $2,046 and are less than half of the next lowest agency. The chart also shows the City's recommended connection fees which total $6,615. While substantially higher than the City's current connection fees, the recommended fees would remain among the lowest in the region.

CHART A

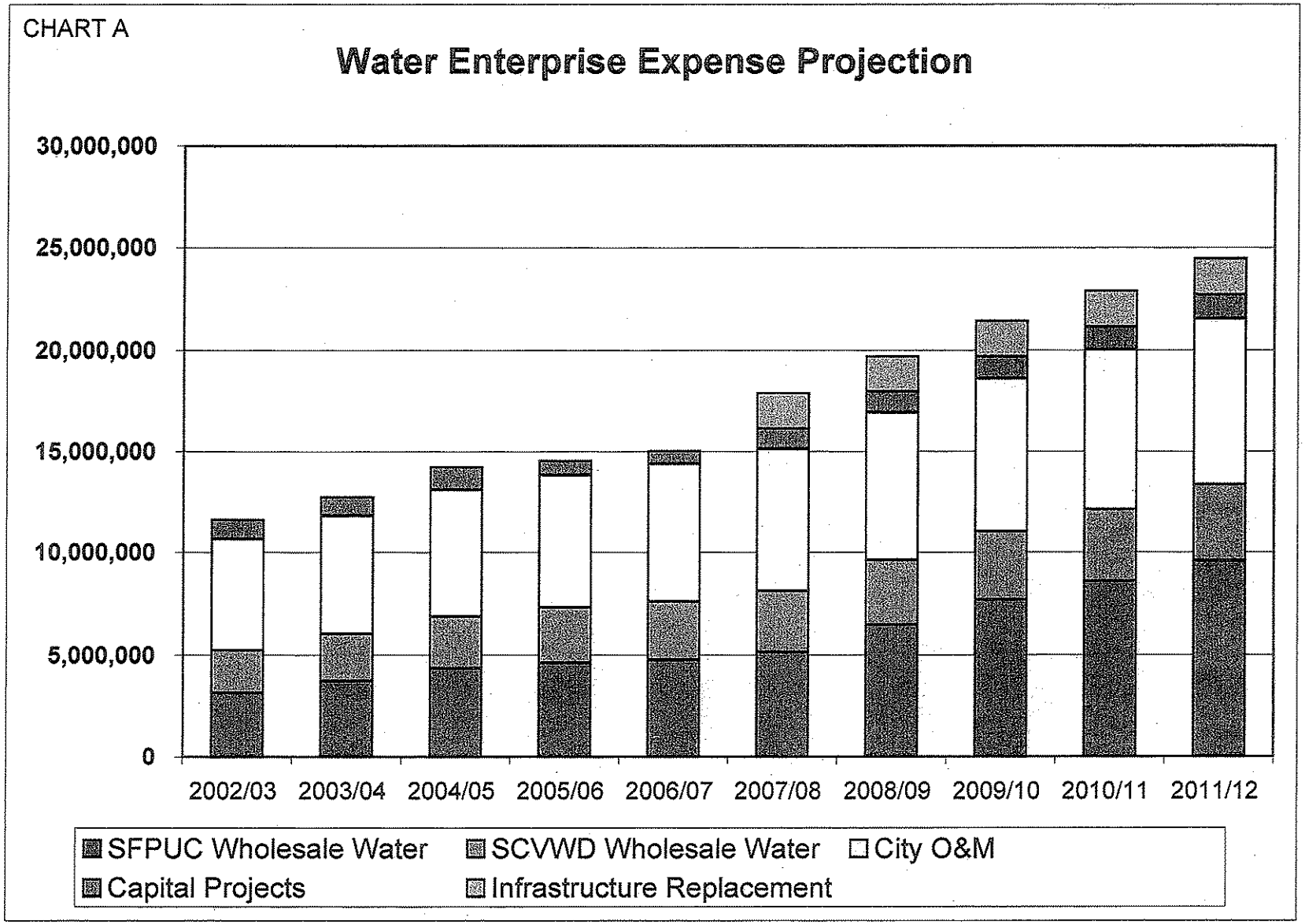

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CHART B

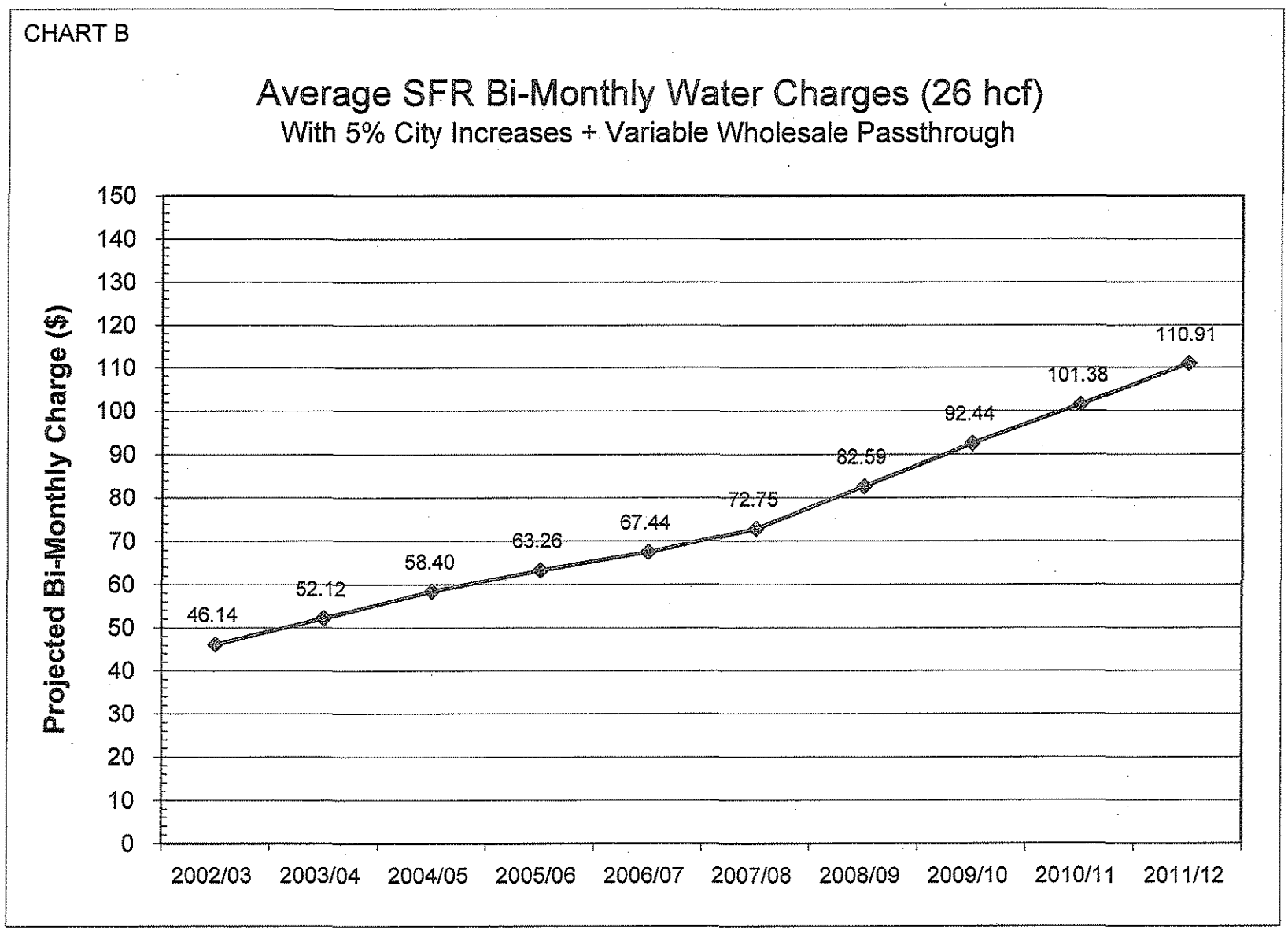

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CHART C

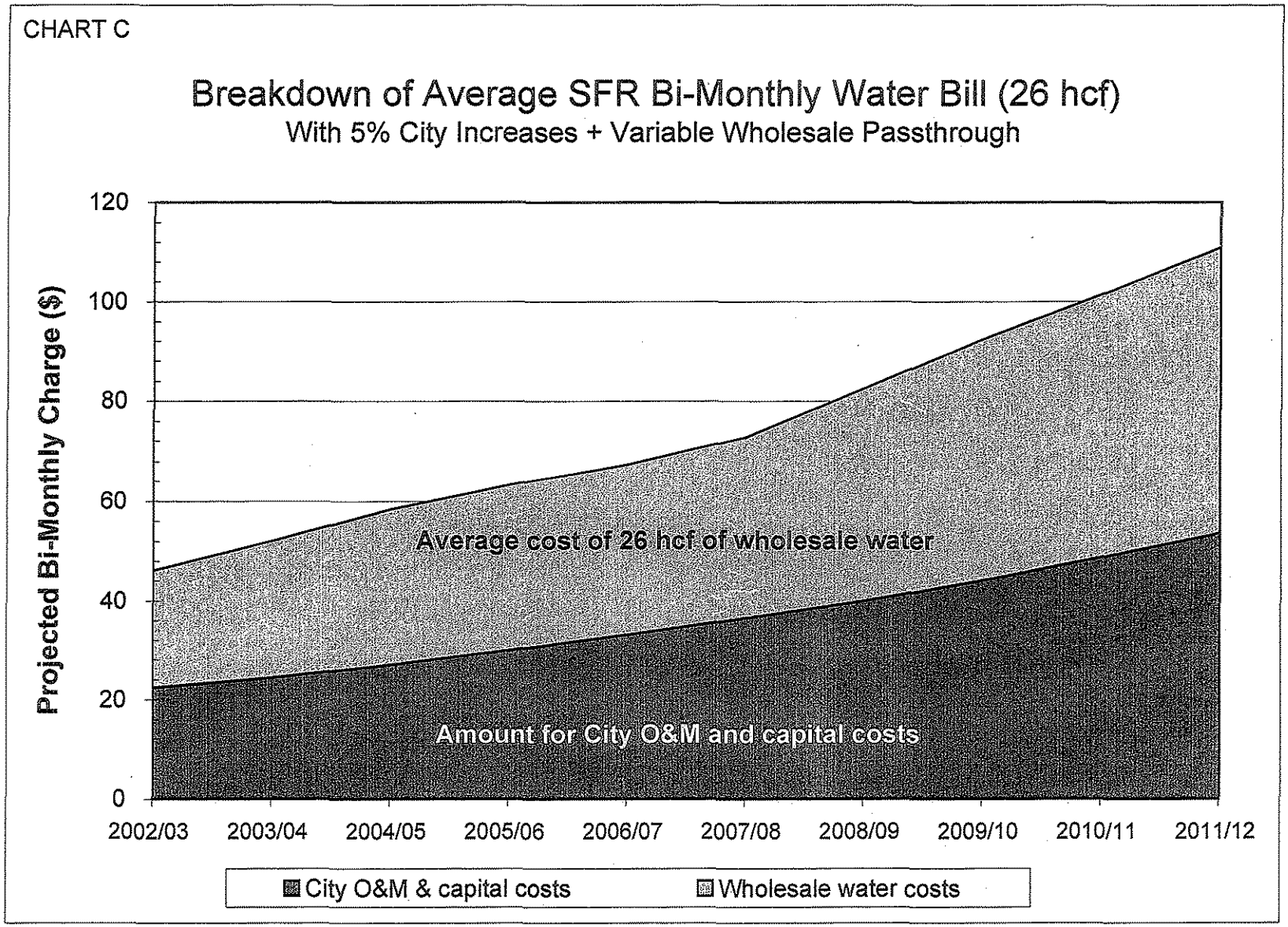

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CHART D

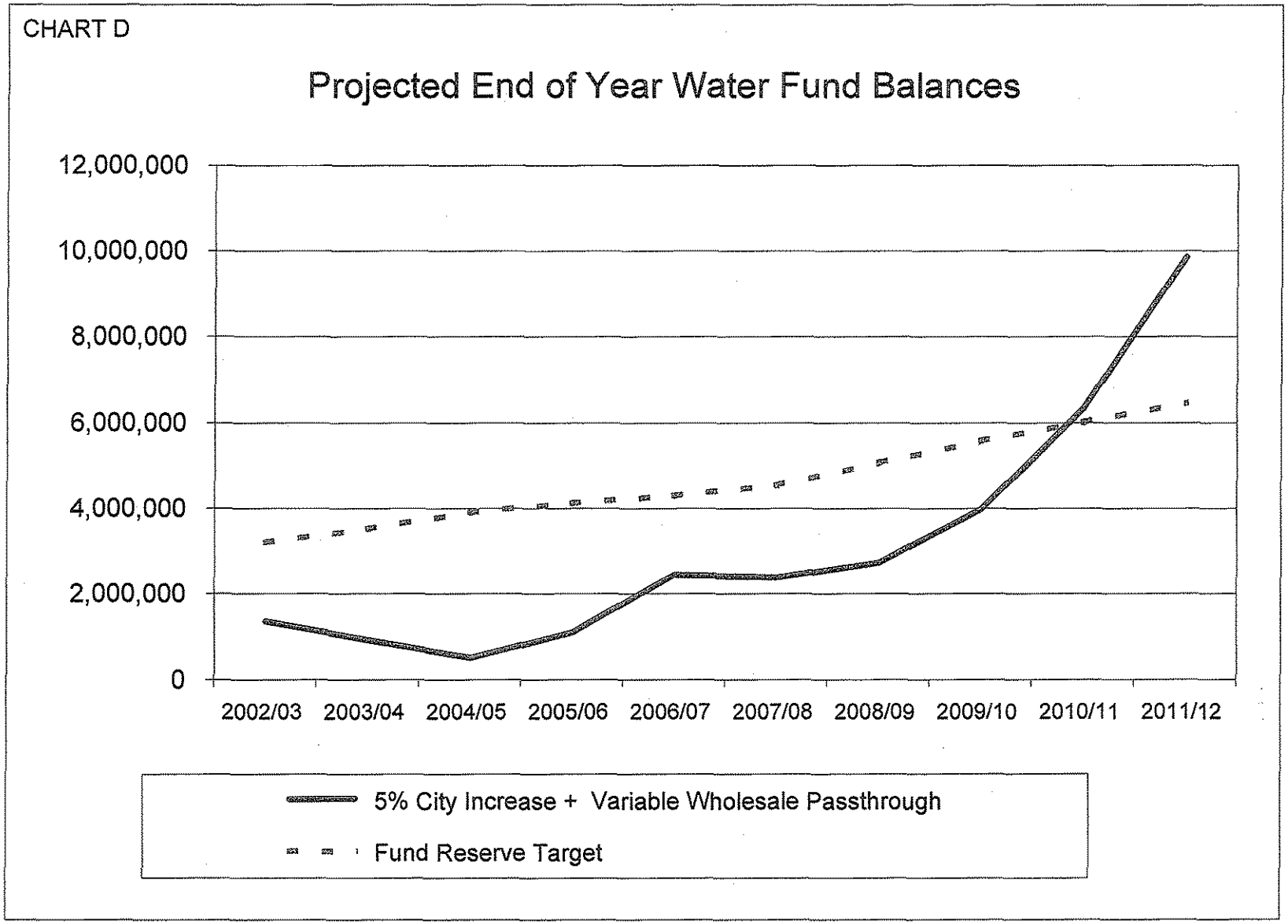

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CHART E

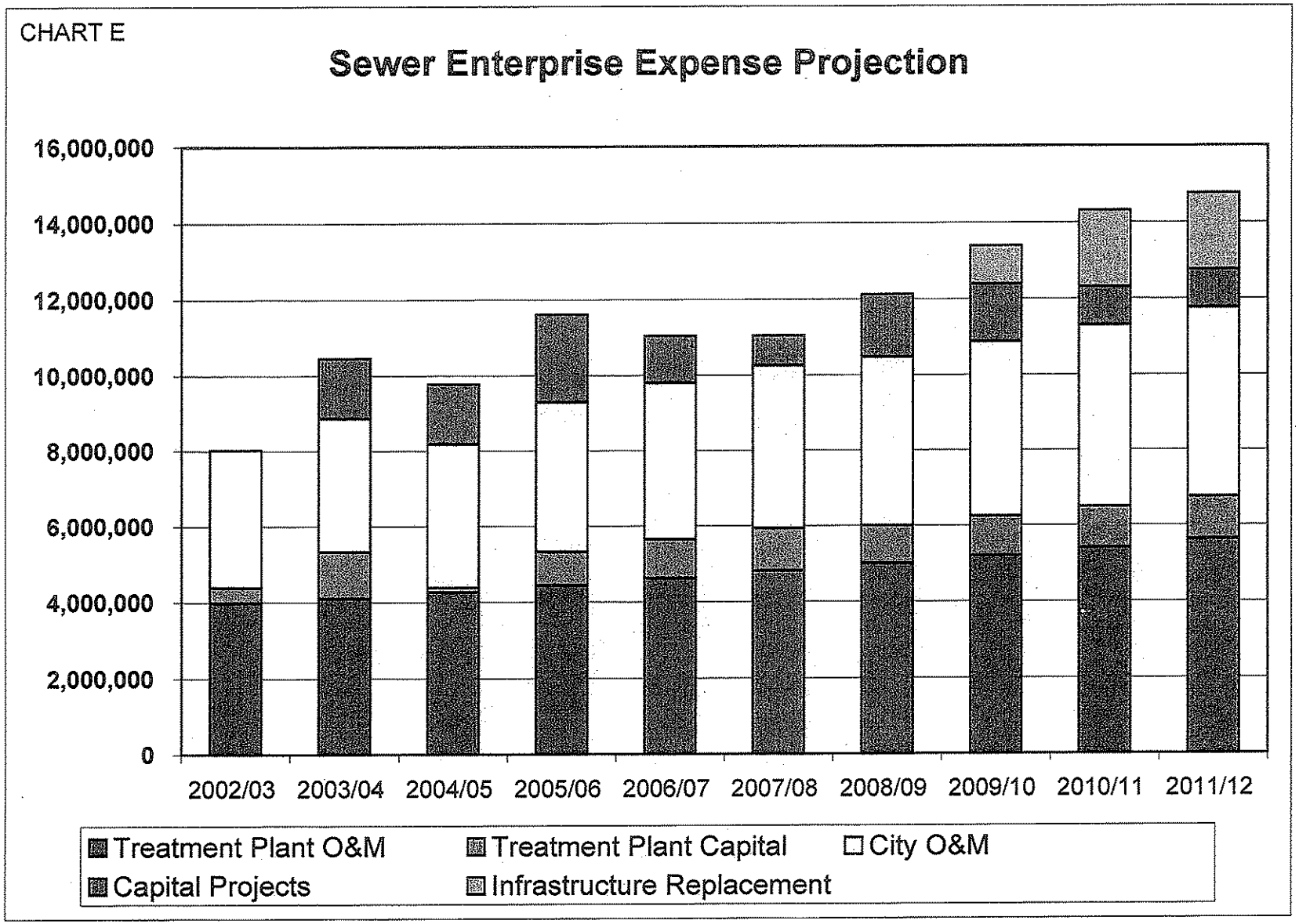

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CHART F

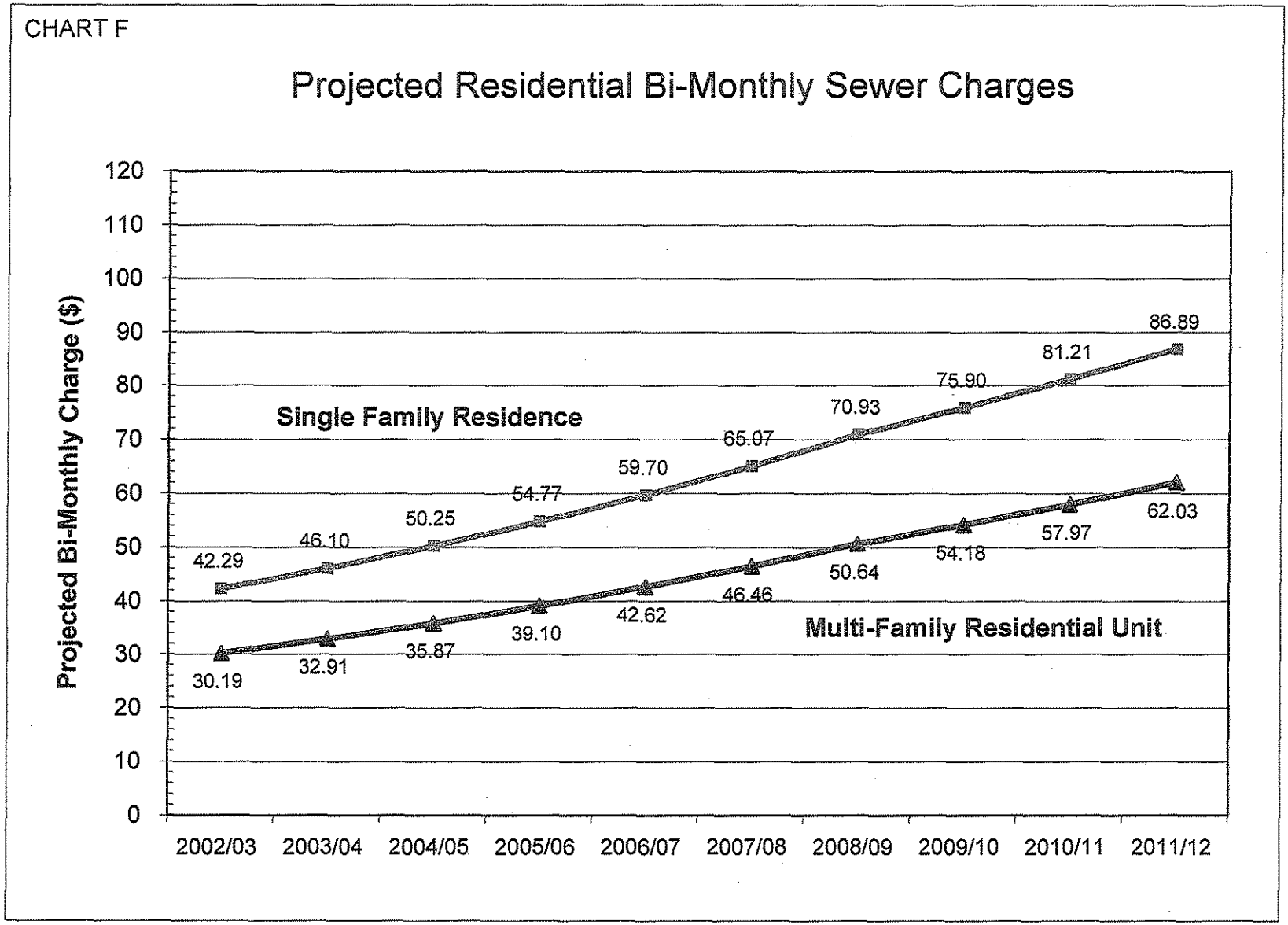

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CHART G

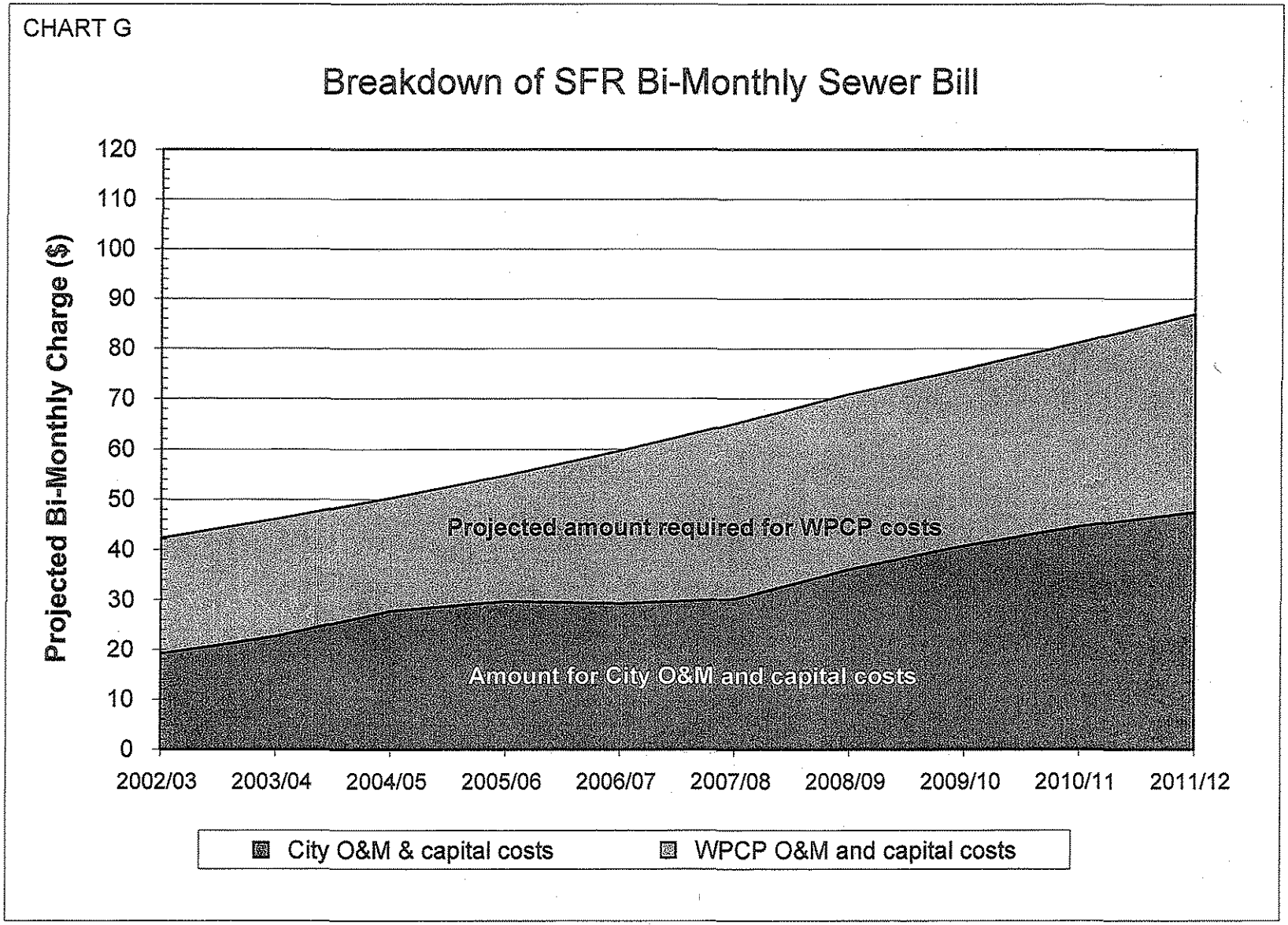

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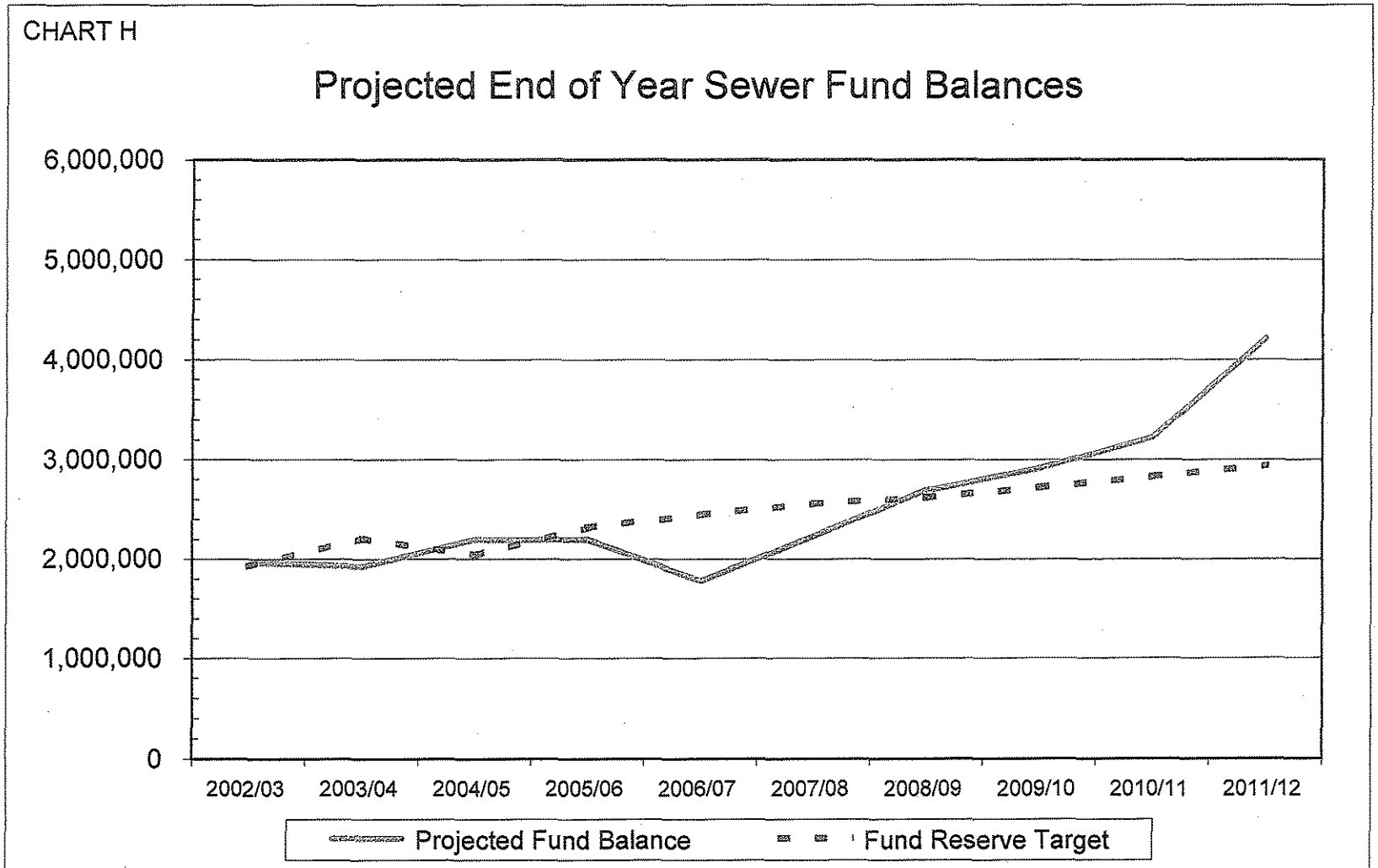
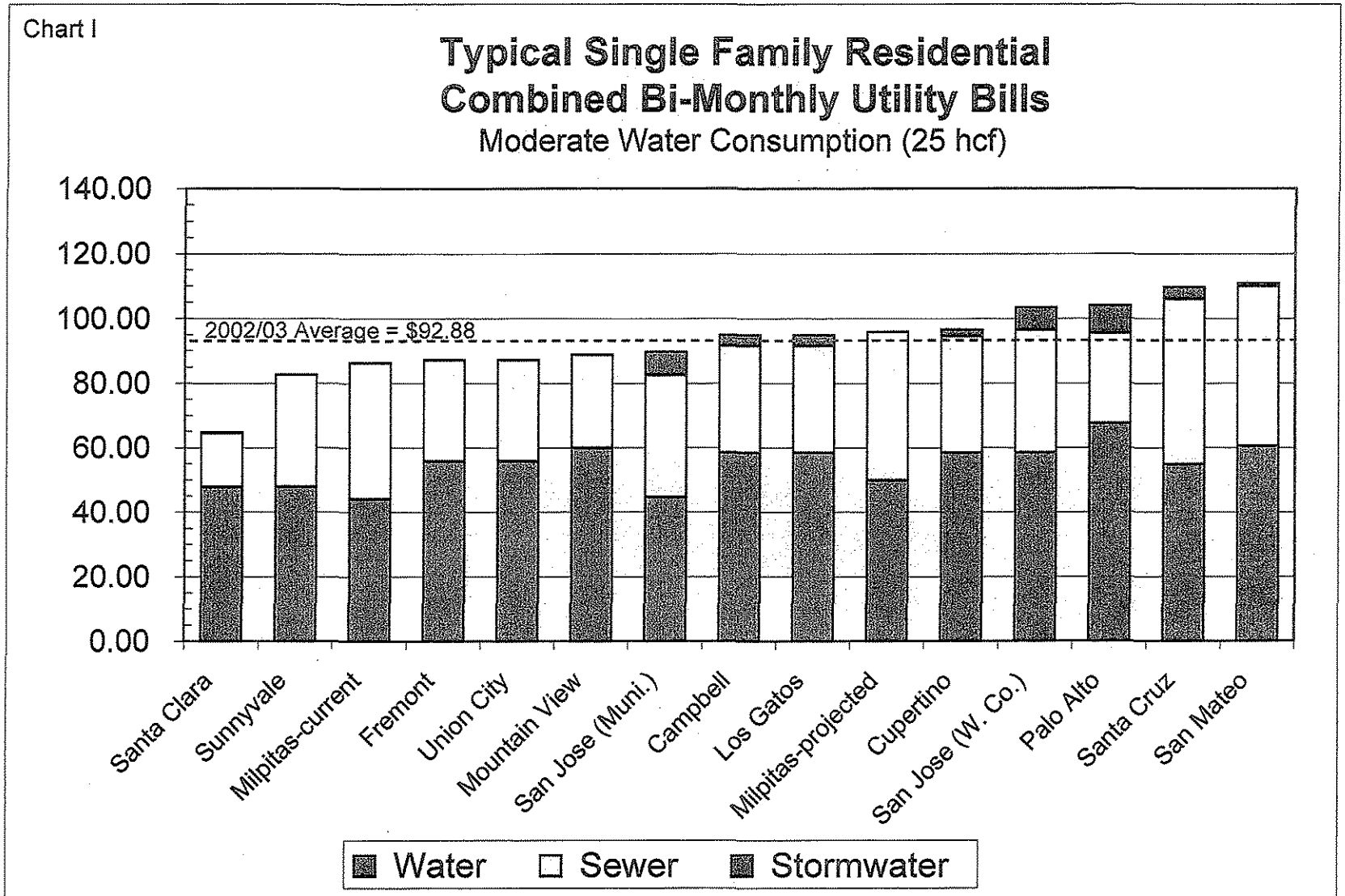
CHART H



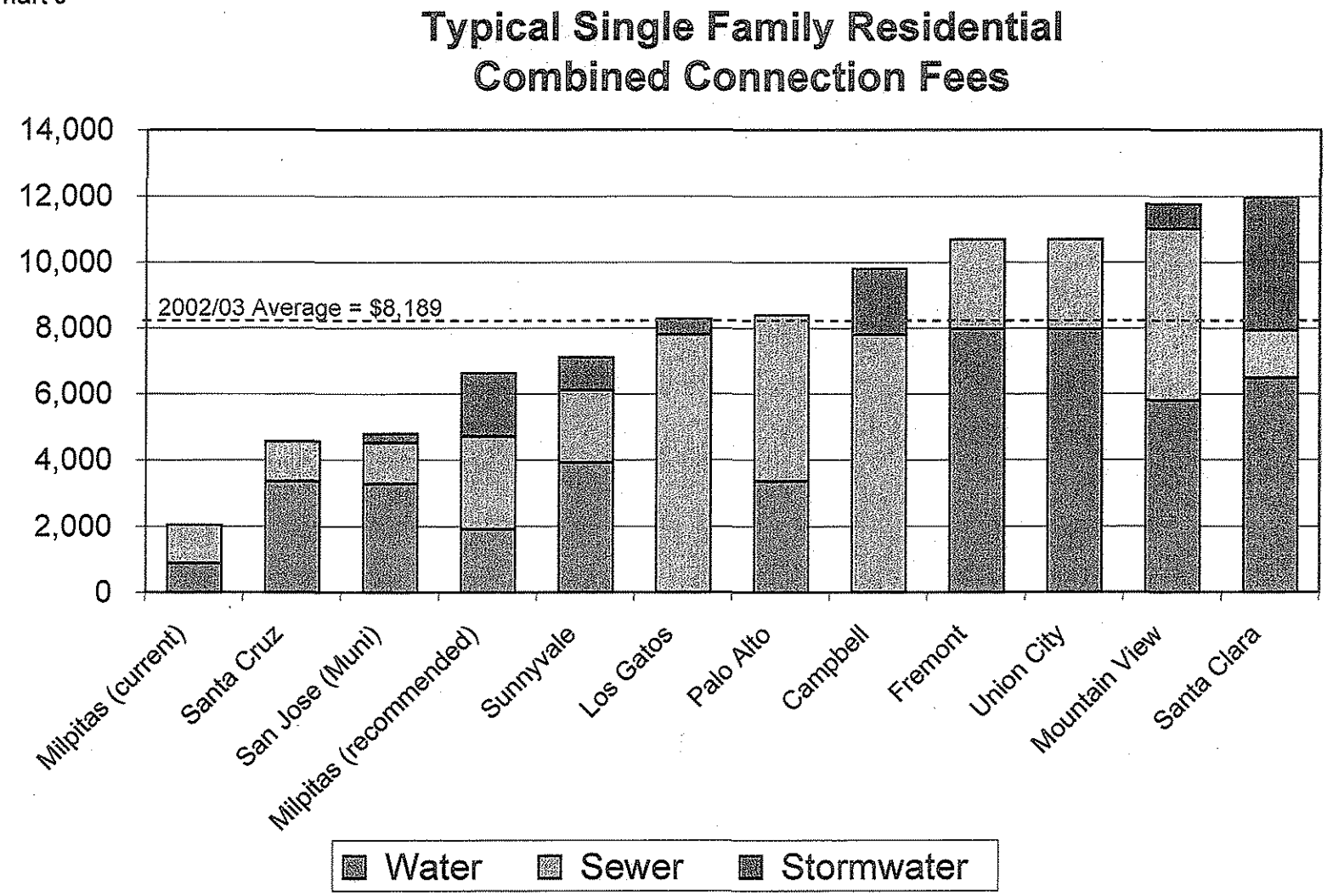
Assumes $5.2 million of projects are funded by the Treatment Plant Fund and Infrastructure Fund through 2004/05 in order to maintain adequate fund balances in the early years.

Chart I



Rates for 2002/03 shown; Milpitas projected rate for 2003/04 shown for comparison only.

Chart J



Includes connection fees for water system, sewer collection system, treatment plant, and storm drain system where applicable.

BACKGROUND AND OBJECTIVES

1 BACKGROUND AND OBJECTIVES

1.1 Introduction

The City of Milpitas provides water, wastewater, and storm drain services to residential, commercial, industrial, and institutional customers located within the City's boundaries. The City was incorporated as a general law city on January 26, 1954 and operates under a council/manager form of government. The City encompasses 13.6 square miles in Santa Clara County, near the southern end of the San Francisco Bay, and has a population of about 63,800.

In February 2002, the City retained Bartle Wells Associates to develop a comprehensive Financial Utility Master Plan for the City's water, recycled water, wastewater, and storm drain utilities. Key elements of the master plan include developing long-range financing plans and utility rates to support the ongoing operating and capital requirements of the City's utilities. The plan includes 20-year financial projections for each utility, but focuses recommendations on the first 10-year period.

The project was completed in two phases:

Phase 1 Evaluation of current utility customers, rates, and finances, and development of assumptions about future operating and capital funding requirements.

Phase 2 Development of long-term cash flow projections, long-range financing plans, minimum fund reserve targets, rate recommendations, and connection fees.

This report presents Bartle Wells Associates findings and recommendations. The recommendations were developed with substantial input from City staff, the City's engineering consultants, and a citizen task force representing residential, commercial/industrial, and institutional customers.

1.2 Objectives

Study Objective – To develop a comprehensive 20-year financial master plan and rate structure for water, wastewater, and storm drain utilities that will result in adequate resources for providing quality services while maintaining balanced utility budgets.

Financial Master Plans – The objective of the financial plans will be to provide long-term roadmaps for financing utility operating and capital programs while achieving prudent financial targets. The financial utility master plans will:

- Identify long-term operating and capital funding requirements, including adequate levels of replacement funding
- Evaluate the full range of financing alternatives available
- Establish prudent minimum fund reserve targets for each utility enterprise
- Develop long-range cash flow projections detailing annual revenues, expenditures, fund balances, and service charge revenue requirements

Utility Rate Studies – The objective of the utility rate studies will be to develop politically acceptable rates that meet annual utility revenue requirements and support the long-term financial health of the City's utilities. Guiding principals include:

- Reflect cost of service
- Be fair and equitable to utility ratepayers
- Incorporate technically sound, reasonable, and defensible methodology
- Evaluate rate structure alternatives and their impacts
- Recommend utility service charges that will meet the City's revenue requirements
- Phase in rate adjustments over time to minimize the annual impact on City ratepayers
- Develop new connection fees to recover an equitable share of capital costs from new development
- Remain competitive with neighboring communities

1.3 Background

Overall, the City's utilities are currently in fair financial health. However, current water and sewer utility rates are not recovering the costs of providing services. In addition, the City's utilities are facing substantial operating and capital cost increases in upcoming years. Together, the inadequacy of current rates plus the increasing financial requirements on the City's utilities will require rate increases in order to maintain the financial solvency of the water and sewer enterprises. Key financial challenges facing the City's water and sewer utilities include:

- Rates have fallen behind the costs of providing utility services.
- Current connection fees do not recover the cost of infrastructure needed to serve growth.
- Water fund balances are below minimum prudent levels and are projected to decrease over the next few years to minimal levels until rates are gradually raised to adequate levels.
- Sewer fund balances are currently at prudent levels. However, current rates and revenues are insufficient to meet the utility's annual revenue requirements. This will result in a decrease in fund reserves over the next few years until rates are gradually raised to adequate levels.
- The cost of wholesale water from the SFPUC is projected to increase by about 41% over the next two years and is projected to triple in the next 10 years. The cost of SCVWD wholesale water is projected to increase by approximately 18% over the next two years and by about 80% over the next 10 years.
- The regional wastewater treatment plant anticipates moderate operating cost increases and large capital cost increases in upcoming years.
- Engineering and infrastructure replacement studies have identified substantial capital improvement needs over the next 20 years.

1.4 Citizen Task Force

A citizen task force helped guide the recommendations of the Financial Utility Master Plan. The task force consisted of four members of the public representing residential, senior citizen, commercial/industrial, and institutional customers. The City held nine monthly meetings with the task force over the course of the project. The task force provided perspective review and input toward development of the final recommendations presented in this report.

FINANCIAL PLAN GUIDELINES

2 FINANCIAL PLAN GUIDELINES

2.1 Rate Adjustments

Over the long-term, substantial utility rate increases are needed to meet the operating and capital requirements of the City's water and sewer enterprises. Rather than adopt large rate increases in the short-term, the City's objective is to steadily phase-in adjustments over the next 10 years – to the extent possible and financially prudent – in order to minimize the annual impact on customers.

It is very important for the City to begin phasing in the necessary rate adjustments as soon as possible. Typically, agencies that postpone small rate adjustments are eventually forced to implement large rate increases. This approach is neither financially prudent nor popular with ratepayers.

The financing plans developed in this report break down the utility rate increases into two components:

1) Rate increases for City costs – These rate adjustments are sized to recover costs that are under the City's control such as expenditures for utility operations and maintenance, capital projects, and infrastructure replacements. The financing plan recommends adoption of steady annual rate increases for City costs. Small annual rate adjustments will help the City meet its long-term revenue requirements while minimizing the potential for large rate spikes.

2) Rate pass-through for external costs — These rate increases are needed to recover utility costs that are out of the City's control. For the water enterprise, these costs include wholesale water purchases from the SFPUC and SCVWD. For the sewer enterprise, these costs include the City's contractual share of annual operating and capital costs for the San Jose/Santa Clara Water Pollution Control Plant. These costs can be recovered via a direct annual rate pass-through, which can fluctuate from year to year. Alternatively, the City can try to stabilize this component of rate increases in future years.

Due to the unpredictability of these external cost increases and the utilities' current financial condition, the City should not attempt to begin stabilizing this component of the rate increases until sufficient fund reserves are achieved. To stabilize future rates, the City would initially need to adopt a rate increase that is higher than the pass-through alone in order to generate additional revenues and reserves that could be used to offset future rate increases.

2.2 Minimum Fund Reserve Targets

Maintaining a prudent level of fund reserves is an important component of sustaining long-term financial health. Fund reserves provide a financial buffer for financing unanticipated operating or capital costs, covering periodic fluctuations in revenue

collection, and dealing with financial emergencies. Adequate fund reserves provide financial flexibility for addressing funding needs and can be used to help stabilize future utility rate increases.

Bartle Wells Associates generally recommends that public agencies maintain at least 25% to 50% of annual operating expenses in fund reserves. The City's utilities can adopt minimum reserve targets at the lower end of this range based on the size of the City's utilities, the City's access to capital markets, and the long-term financial projections developed in this report. At the minimum level of 25%, the City would have about 90 days of operating expenses in emergency reserves.

Water Fund Reserve Target – A minimum reserve target equal to 30% of annual operating and maintenance expenditures is recommended. This reserve target serves the dual purposes of providing funds for emergency operations and for mitigating the financial impacts of a drought.

Recycled Water Fund Reserve Target – A minimum reserve target equal to 25% of annual operating and maintenance expenditures is recommended.

Sewer Fund Reserve Target – A minimum reserve target equal to 25% of annual operating and treatment plant expenditures is recommended. This includes 25% of City operating and maintenance costs plus 25% of annual operating and capital cost requirements of the San Jose/Santa Clara Water Pollution Control Plant. Unlike local capital improvement costs, the City's share of capital costs in the treatment plant cannot be postponed or eliminated based on short-term financial considerations.

No minimum reserve targets are recommended for the City's other utility funds such as capital improvement funds or infrastructure replacement funds. These funds are designated for specific purposes and will accrue and disperse funds over time based on capital improvement and infrastructure replacement needs. These funds should generally not be used to finance utility operations, but can provide a financial buffer for financial emergencies.

2.3 Capital Improvement Program (CIP)

Each year, the City develops a 5-year capital improvement program for each of its utility enterprises. The CIP identifies upcoming capital project needs and designates their funding sources. The CIPs include priority projects identified by the City, recent engineering master plan updates, and a recent seismic isolation study. Long-term CIP projections include a placeholder estimate undesignated future capital projects.

The City funds capital projects by transferring the total amount needed for each project to separate utility CIP funds in the year the project is budgeted. The CIP funds are then drawn down, often over a few years, as projects are designed and constructed.

The City's water, sewer, and storm drain capital improvement programs are attached in Appendix A.

Water CIP – Table 2-1 summarizes the Water Fund CIP expenditures. The City anticipates funding $4.4 million of improvements from the Water Fund over the next five years, and about $9.1 million through 2011/12. Additional projects for growth will be directly funded with connection fees.

Sewer CIP - Table 2-2 summarizes the Sewer Fund CIP projections. The City anticipates funding $7.6 million of capital improvements from the Sewer Fund over the next five years, and about $12.7 million through 2011/12. Additional projects for growth will be directly funded with connection fees.

Storm water CIP - Table 2-3 summarizes storm water CIP projections. The City anticipates funding about $4.4 million of capital improvements over the next five years. In addition, the storm water master plan identifies future capital improvement projects by priority. Priority 1 and 2 project costs have been incorporated into Table 2-3 for years 2007/08 through 2011/12.

2.3.1 Engineering Master Plans

The City water, sewer, and storm drain engineering master plans have all been recently updated. These plans evaluate the City's utility system infrastructure and develop capital improvement recommendations designed to meet current and future system deficiencies. High-priority projects identified in the master plans have been built into the City's capital improvement program.

The City's water and sewer engineering master plans were recently updated by Raines, Melton, and Carella, Inc. The Water Master Plan was completed December 2002 and the Sewer Master Plan was completed March 2003. The objectives of the water and sewer master plans include:

- Identify existing and future deficiencies within the water and sewer systems,
- Define capital improvement projects to mitigate the deficiencies identified,
- Develop a near-term capital improvement program, and
- Identify potential long-term capital projects.

The City's storm drain master plan was completed in July 2001 by Schaaf & Wheeler. The plan evaluates the ability of the City's storm drain facilities to meet a number of key performance criteria under various hydraulic scenarios. The storm drain master plan develops a prioritized capital improvement program and also identifies general maintenance and replacement schedules for major facilities.

2.3.2 Seismic Isolation Study

The City of Milpitas is located near several active earthquake faults. A major earthquake on one of these faults could severely limit the City's ability to provide crucial utility services to its customers.

A "Seismic Isolation Study", developed by David Evans and Associates, Inc. was submitted to the City in November 2001. The study assesses the potential impacts of seismic activity on the City's water utility infrastructure and recommends a number of capital improvements to mitigate major vulnerabilities. The City has included high priority projects in its capital improvement programs.

2.3.3 Undesignated Future Capital Projects

The financing plan includes placeholder estimates for future water and sewer capital projects outside the City's current 5-year CIP. Each year, the City can update the estimates as new information becomes available. The City has identified a number of specific areas that will likely result in future water and sewer capital expenditures, including:

Future Water Capital Improvements

1) Regulatory
   - Security/Vulnerability Upgrades (fencing, alarms)
2) Water Quality
   - Volatile organic control improvements at reservoirs, distribution system (piping reconfiguration, dead end elimination, new interconnecting lines)
   - Reservoir inlet pipe renovations to improve circulation
3) Cathodic Protection corrective programs
   - Potential additional steel line replacements (other than South Milpitas)
4) Master Plans
   - Water Master Plan (possible 2012 update, $300,000); potential new resulting projects
   - Financial Master Plan Update (possible 2012 update, $100,000)
5) Projects resulting from ongoing evaluations
   - Stormwater fee - information program
   - Additional seismic improvements - fault line crossing improvements
6) Water Supply
   - Additional backup water supply wells

Future Sewer Capital Improvements

1) Regulatory/mandated
   - Spill control upgrades (resulting from new "Capacity, Management Operation and Maintenance" evaluation requirement)

2) Water Pollution Control Plant discharge permit mandates
   - Cathodic protection
   - Potential pump station protection

3) Master Plans
   - Sewer Master Plan (possible 2012 update, $300,000) w/resulting projects
   - Financial Master Plan (possible 2012, $50,000)

4) Projects resulting from ongoing evaluations
   - Stormwater fee - information program cost

2.4 Capital Improvement Financing

Bartle Wells Associates recommends that the City use pay-as-you-go financing for capital projects to the extent possible and prudent. Based on the financial projections developed in this report, the City should be able to fully fund its capital improvement program on a cash basis using reserves, service charge revenues, and connection fee revenues.

The financing plan recommends that capital projects required for accommodating growth be funded with connection fees. This requires that the City's connection fees be updated to recover adequate costs from new development.

Debt is a useful tool for spreading out capital improvement costs over time, such as over the life of a project. However, debt is often a more expensive alternative than cash due to the costs of issuing debt and paying interest. Generally, debt should only be used in the following circumstances:

- If the City is unable to fund necessary capital improvements with cash;
- If the City has substantial capital improvement needs over a short term and wishes to spread financing costs over a longer time frame;
- To enable the City to maintain a prudent minimum level of fund reserves;
- If the City can earn higher rates of interest on its fund reserves than it would have to pay for new debt;
- To refinance outstanding debt for savings or to meet other financial objectives.

Capital Financing Alternatives – The following is a list of capital financing alternatives available to the City.

- Pay-as-you-go (cash funding)
- Interfund loans
- Revenue bonds
- General obligation bonds
- Certificates of Participation and installment purchase agreements

- Bank loans and private placement loans or leases
- Pooled financings, such as the California Statewide Communities Development Authority Water and Wastewater Revenue Bond Pool
- State Revolving Fund Loans issued by the State Water Resources Control Board
- California Infrastructure and Economic Development Bank subsidized loans
- State and federal grants, if available
- Assessment district or Mello-Roos bonds

2.5 Infrastructure Replacement Funding

A Utility Depreciation Study developed by Schaaf & Wheeler was submitted to the City in June 2002. The study develops an inventory of all components of the City's water and sewer systems, calculates replacement costs for each component, and develops a schedule of replacement needs based on the useful life of each component. The studies provide a sound basis for developing long-term financial plans for funding infrastructure replacements.

Milpitas should continue its practice of making infrastructure repairs and replacements as needed to keep the water and sewer systems in good operational condition. Utilities that fail to make prudent investments in infrastructure replacement – such as the SFPUC – are eventually faced with enormous liabilities.

Water System Replacement Costs - As shown on Table 2-4, the replacement costs for the City's water system infrastructure totals about $165 million in current (2002) dollars, assuming the City's asbestos cement pipelines can eventually be abandoned in place. Removal and disposal of these pipelines would cost an additional $80.6 million in current dollars if required. Table 2-5 projects the future cost of replacements by 5-year periods based on an assumed construction cost inflation rate of 4%. According to the table, about $25 million of replacements will be needed over the next 20 years.

Sewer System Replacement Costs - As shown on Table 2-6, the replacement costs for the City's sewer system infrastructure totals about $163.5 million in current (2002) dollars. Table 2-7 projects the future cost of replacements by 5-year periods based on an assumed construction cost inflation rate of 4%. According to the table, about $26.4 million of replacements will be needed over the next 20 years.

The financial plan developed in this report is based on meeting infrastructure replacement costs over the next 20 years. Most of these costs are funded over the last 10 years of the financial plan. These costs should be funded on a pay-as-you-go basis to the extent possible. The financial plans developed in this report indicate the City can likely fund all replacements over the next 20 years on a cash basis.

The City's utilities should set aside funds each year in a separate infrastructure fund to pay for the replacement of major facilities that reach the end of their useful lives. The sewer enterprise has already established such a fund. The water enterprise should establish a separate infrastructure fund when feasible. These funds will operate as separate sinking funds, they will accrue money each year via transfers from the water and sewer operating fund, earn interest on unspent reserves, and be used to fund infrastructure replacements.

Water and sewer enterprise cash flow projections indicate that neither utility will have adequate finances to set aside infrastructure replacement funds for at least another 5 to 7 years. The City's utilities can begin making annual transfers to the infrastructure fund as soon as rates are phased in to sufficient levels. The long-term objective is to establish rates that enable steady annual transfers to the infrastructure funds sufficient to meet long-term replacement funding requirements.

Facilities often have working lives that are longer or shorter than projected. To account for this, the City plans to verify actual replacement needs prior to conducting any replacements.

2.6 Drought Contingency Planning

A drought can pose a tremendous financial burden on the City. Droughts typically result in higher wholesale water costs coupled with reduced revenues due to lower water sales. Bartle Wells Associates evaluated a number of potential drought scenarios to determine their potential financial impacts. Our analysis indicated that a 20% drought, similar to the previous drought of the early 1990s, coupled with an achievable level of local conservation could result in a financial burden in the $5 to $10 million range.

During the drought of the early 1990s, the City implemented a number of emergency measures including water rationing and adoption of drought rate surcharges. When the drought ended, the City's rates were immediately reduced to pre-drought levels. However, water use did not immediately return to pre-drought levels due to the lingering effects of conservation practices implemented during the drought. This resulted in substantial water enterprise revenue shortfalls and operating deficits. Water fund reserves were completely spent down and eventually the water fund needed a bailout loan from the sewer fund to remain financially solvent. The water fund is still paying off the loan.

Droughts can take years to develop and are often preceded by numerous warnings. The City has already adopted a plan for dealing with a future drought as it develops. The plan includes implementation of emergency drought measures as specific drought trigger points are achieved.

After a drought has ended, the City should not immediately remove all drought emergency measures. Instead, the City should phase out the drought measures, including temporary rate surcharges, as water demand gradually returns to pre-drought levels. This will help the water enterprise maintain financial health in the years following a drought.

2.6.1 SFPUC & SCVWD Drought Measures

In the late 1990s, the City signed on to an "Interim Water Shortage Allocation Plan" with the Bay Area Water Users Association (BAWUA). The plan establishes a method for allocating water to the SFPUC's wholesale customers during periods of reduced supply, such as during droughts. Based on the allocation method, a 20% reduction in SFPUC water supply would currently result in approximately a 20% reduction in the City's supply assurance. Water used over this reduced drought allotment could be subject to extremely expensive drought rates.

During the last drought in the early 1990s, the SFPUC reduced supply assurances by about 20%. However, many agencies were not able to immediately reduce consumption and were faced with drought rates that were: 2 time the base rate for water use 10% higher than the reduced supply assurance, 8 times the base rate for water use 10% - 20%, and 10 times the base rate for water use in excess of 20% of the reduced supply assurance. The SFPUC may or may not implement a similar drought rate structure during the next drought. However, the prior drought rates provide a good indication of the level of financial burden the City may face in a future drought.

The SCVWD anticipates that its wholesale customers will also face supply reductions that correspond with the level of a future drought. For example, if SCVWD treated water supplies decrease by 20% due to drought, then the City may only be able to purchase 80% of its pre-drought supply. During a drought, the SCVWD will also likely impose rate penalties for water used in excess of the drought allowance.

2.7 Public Education

Public education can be an important tool in building acceptance for a rate increase. Customers are more inclined to support a rate adjustment – and less inclined to oppose it – when they understand the reasons why an increase is needed. To help build public acceptance for rate and fee increases, the City should clearly and concisely identify why future rate and fee adjustments are needed and proactively inform the public.

The City can provide information to utility customers via a wide range of methods including:

- Present information to the public at Council meetings and rate hearings.
- Hold rate workshops for the general public and/or for targeted customer groups.
- Build public input into the rate-setting process through use of a citizen advisory committee or task force.
- Prepare educational materials such as handouts and/or answers to typical questions for customers who request information.
- Send educational material to customers in utility bills or via separate mailings.
- Provide timely information to local media covering the issue, if applicable.
- Place articles or educational material in local print media, such as newspapers, business and community publications.

2.8 Connection Fee Update

The City's water and sewer connection fees have not been updated in many years and are among the lowest in the region. These fees should be updated to enable the City to recover costs of utility infrastructure needed to serve growth from new development. Adequate connection fees ensure that existing ratepayers will not have to subsidize the costs of facilities for future customers.

The City does not currently charge a storm drain connection fee. This report recommends adoption of new storm drain connection fee to recover costs for capacity in storm water facilities needed to handle runoff from new development.

Connection fees should be updated periodically.

2.9 Annual Update of Financial Projections

The City should update the financial projections annually to ensure that future rates accurately reflect future revenue needs. The long-term cash flow projections developed in this report are based on the best information currently available. However, the predictive power of these forecasts will decrease over time. The financial projections are useful for long-range planning, but should be updated regularly to ensure the appropriateness of future rate increases.

2.10 Potential Billing Modifications

Monthly Billing Cycle - Utility customers are currently billed on a bi-monthly basis. The City is considering moving to a monthly billing cycle. This would have no effect on the amount customers ultimately pay for utility services. However, it could affect customer perception by reducing the amount charged on each utility bill. Additionally, the City would receive revenues on a more-timely basis.

Monthly billing would not require monthly metering. The City could continue its practice of bi-monthly metering, but would need to develop a method for estimating utility service charges for months between meter readings. The bill following a meter reading would recover the difference between estimated and actual charges.

The main disadvantages are that monthly billing would double the City's current billing, postage, and bill processing expenses and would likely require additional staff time. The City estimates the direct costs of additional postage, bill production, and processing at roughly $65,000. The change of billing cycle does not need to correspond with a rate adjustment; the City can change its billing cycle at any time.

Separate Out City Charges from Wholesale Water and Treatment Plant Charges Utility bills currently break out costs by fixed and quantity charges according to the City's rate schedules. Another option is to show separate charges for City costs and wholesale water or treatment plant costs. This could help inform customers of how their money is spent. However, this could be technically difficult to implement and would require the City to eliminate the current billing breakdown.

2.11 General Financial & Rate Guidelines

Financial Guidelines

- Maintain adequate operating and capital reserves
- Establish reserve fund targets and adopt rates needed to gradually meet targets
- Evaluate financial impact of potential emergencies such as droughts and develop safeguards to mitigate financial impacts
- Expand current plans for reacting quickly to droughts
- Develop long-term financial utility master plan and update periodically
- Update financial/cash flow projections annually
- Set aside funds each year to offset future costs of infrastructure replacement
- Make repairs and replacements as necessary to keep system in good working condition
- Keep connection fees updated
- Use pay-as-you-go financing to the extent prudent and possible

Rate Guidelines

- Adjust rates frequently to avoid large, one-time increases
- If large rate increases are needed, phase-in increases to the extent possible to minimize annual impact on customers
- Clearly and concisely identify reasons for any rate adjustments to ratepayers
- Incorporate rate adjustments into annual budget process
- Document customer complaints to provide sound information for future decision making

Table 2-1
City of Milpitas - Financial Utility Master Plan
Water Fund CIP Summary

	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Water Fund CIP*									
Capital improvement projects	$917,000	$1,142,000	$711,000	$620,000	$36,000	$96,000	$142,000	$0	$65,000
Undesignated future capital projects	0	0	0	0	1,000,000	1,040,000	1,082,000	1,125,000	1,170,000
Total	917,000	1,142,000	711,000	620,000	1,036,000	1,136,000	1,224,000	1,125,000	1,235,000

* Does not include water projects funded by other City funds.
Source: City of Milpitas.

Table 2-2
City of Milpitas - Financial Utility Master Plan
Sewer Fund CIP Summary

	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Sewer Fund CIP*									
Capital improvement projects	$1,603,000	$1,595,000	$2,325,000	$1,254,000	$805,000	$1,645,000	$1,500,000	$775,000	$775,000
Undesignated future capital projects	0	0	0	0	0	0	0	225,000	225,000
Total	1,603,000	1,595,000	2,325,000	1,254,000	805,000	1,645,000	1,500,000	1,000,000	1,000,000

* Does not include sewer projects funded by other City funds.
Source: City of Milpitas.

Table 2-3
City of Milpitas - Financial Utility Master Plan
Storm Drain CIP Summary

	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Storm Drain CIP									
Capital improvement projects	$0	$686,816	$2,635,331	$1,076,270	$1,400,000	$1,500,000	$1,800,000	$2,000,000	$1,900,000
Undesignated future capital projects	0	0	0	0	0	0	0	0	0
Total	0	686,816	2,635,331	1,076,270	1,400,000	1,500,000	1,800,000	2,000,000	1,900,000

Source: City of Milpitas.

Table 2-4
City of Milpitas - Financial Utility Master Plan
Depreciation Study - Total Water System Replacement Costs

System Element	Replacement Cost ($ million)*
Pipeline replacement	$131.0
Valves and couplings	8.9
Asbestos-cement pipe disposal	80.6
Storage tanks	13.4
Pump stations	10.6
Wells	1.1
Total	245.6
Total without asbestos-cement pipe disposal	165.0

* Current cost based on March 2002 San Francisco ENR Construction Cost Index (7,684).
Source: Schaaf & Wheeler - Utility Depreciation Study; June 17, 2002.

Table 2-5
City of Milpitas - Financial Utility Master Plan
Projected Water System Replacement Costs by Period ($ Millions)

Years from 2002	Pipeline Replacements[1] (2002 $)	Other Replacements[2] (2002 $)	Total Costs (2002 $)	Total Costs[3] (Future $)
0 - 5	$0.9	$1.1	$2.0	$2.2
5 - 10	3.9	1.7	5.6	7.7
10 - 15	0.0		0.0	0.0
15 - 20	0.9	6.7	7.6	15.1
20 - 25	0.1		0.1	0.2
25 - 30	0.2		0.2	0.6
30 - 35	0.1	0.4	0.5	1.8
35 - 40	15.7		15.7	68.7
40 - 45	0.6	1.7	2.3	12.2
45 - 50	32.4		32.4	209.8
50 - 55	8.2	0.6	8.8	69.3
55 - 60	31.6		31.6	302.8
60 - 65	5.6		5.6	65.3
65 - 70	28.9		28.9	445.0
70 - 75	0.9		0.9	15.5
75 - 80	0.9		0.9	18.9
80 - 85	5.8		5.8	148.2
85 - 90	0.0		0.0	0.0
90 - 95	3.2	12.8	16.0	588.7
Total	139.9	25.0	164.9	1,972.0

1 Includes pipelines, valves, and couplings; does not include ACP disposal costs.
2 Includes storage tanks, booster pump stations, and wells.
3 Assumes an annual cost inflation rate of 4.0%.
Source: Schaaf & Wheeler - Utility Depreciation Study; June 17, 2002.

Table 2-6
City of Milpitas - Financial Utility Master Plan
Depreciation Study - Total Sewer System Replacement Costs

System Element	Replacement Cost ($ million)*
Pipeline replacement	$127.3
Manhole replacement	19.1
Lift stations	17.1
Total	163.5

* Current cost based on March 2002 San Francisco ENR Construction Cost Index (7,684).
Source: Schaaf & Wheeler - Utility Depreciation Study; June 17, 2002.

Table 2-7
City of Milpitas - Financial Utility Master Plan
Projected Sewer System Replacement Costs by Period ($ Millions)

Years from 2002	Pipeline Replacements[1] (2002 $)	Other Replacements[2] (2002 $)	Total Costs (2002 $)	Total Costs[3] (Future $)
0 - 5	$3.4		$3.4	$3.8
5 - 10	7.4		7.4	10.1
10 - 15	0.0	1.2	1.2	2.0
15 - 20	5.3		5.3	10.5
20 - 25	0.5	8.5	9.0	21.8
25 - 30	22.3		22.3	65.6
30 - 35	1.0		1.0	3.6
35 - 40	32.6		32.6	142.6
40 - 45	2.6		2.6	13.8
45 - 50	30.8		30.8	199.4
50 - 55	0.1	7.4	7.5	59.1
55 - 60	34.7		34.7	332.5
60 - 65	0.0		0.0	0.0
65 - 70	5.7		5.7	87.8
Total	146.4	17.1	163.5	952.6

1 Includes pipelines and manholes.
2 Includes sewer lift station elements.
3 Assumes an annual cost inflation rate of 4.0%.
Source: Schaaf & Wheeler - Utility Depreciation Study; June 17, 2002.

WATER ENTERPRISE

3 WATER ENTERPRISE

3.1 Water System, Customers, and Use

3.1.1 Overview

The water utility is a self-supporting enterprise; revenues derived from water rates and other sources, including reserves, must be sufficient to cover all operating and capital expenditures each year. The City's water enterprise serves about 15,100 customers who consume approximately 11 to 12 million gallons per day (mgd) of water on average. The City purchases its pre-treated, potable water supply from two wholesalers, the San Francisco Public Utilities Commission (SFPUC) and the Santa Clara Valley Water District (SCVWD). About 60% of the City's total water is purchased from the SFPUC and about 35% from the SCVWD.

The City also purchases limited amounts of recycled water from the San Jose/Santa Clara Water Pollution Control Plant via the South Bay Water Recycling Program (SBWRP) for non-potable uses such as landscape irrigation. Recycled water accounts for about 5% of the City's total water purchases. City policy requires new commercial and industrial customers located near existing recycled water mains to use recycled water for landscape irrigation. City policy also requires residential complexes to irrigate common landscape areas with recycled water when feasible.

3.1.2 Water System

The City operates and maintains a potable water system consisting of 198 miles of water mains (pipelines), 4 SFPUC turnouts (wholesale water supply connections), 1 SCVWD turnout, 5 water storage tanks, 5 pump stations, 13 pressure regulator valves, about 4,500 valves, about 1,660 fire hydrants, and 1 well, that is projected to have a 1.7 mgd capacity and can be used as a supplement source of supply. The City is currently constructing a second well that will have a projected capacity of 1.7 mgd.

The City's water storage tanks have a combined capacity of about 16.3 million gallons, equivalent to about 1-1/2 days of average daily demand. Unaccounted-for-water, the difference between the amount of water entering the system and the amount sold to end users, is estimated in 6% to 7% range. This is very low by industry standards, which are typically in the 10% to 15% range. Unaccounted-for-water is typically caused by system loss due to leakage, inaccurate meters, hydrant use, and unmetered fire flows.

Water is distributed to customers via 5 different pressure zones using pumps and pressure reducing valves. The zones correspond with various geographical areas and elevation levels.

Water supply from the SFPUC and SCVWD is distributed via two independent distribution systems and is not blended under normal operating conditions. However, the two systems can be interconnected in case of emergency. Residential areas of the City are primarily served by SFPUC water while the City's commercial and industrial areas are predominantly served by SCVWD water.

Recycled water is distributed via a separate system owned by the City of San Jose. The portion of the system serving Milpitas currently serves 126 recycled water customers. The South Bay Water Recycling Progam anticipates doubling the size of the recycled water distribution system in Milpitas. The City operates and maintains local sections of the regional recycled water distribution system as governed by contract with the City of San Jose.

3.1.3 Water Supply

Water supplies from the SFPUC and SCVWD are governed by contracts with each agency. The City currently has a supply assurance for a minimum annual delivery of 9.23 mgd of potable water from the SFPUC. This allocation could be reduced in drought years.

The SFPUC wholesale water contract provides for:

- Minimum Annual Supply Assurance 9.23 mgd
- Average Annual Usage 14.0 mgd
- Customer Max Day Usage 28.0 mgd
- Customer Peak Hour Usage 33.6 mgd

In 2001/02, the City purchased about 3.3 million hcf (6.8 mgd) of SFPUC water. This amount represents a slight decrease from the prior year.

The SCVWD contract provides for annual supply commitments that are based, in part, on the City's water demand projections. The City's water supply contract with SCVWD is adjusted every three years and allows for increases in water purchases to accommodate growth. The most recent contract schedule provides for an annual allotment of 4,950 acre-feet of treated water, about 4.4 mgd, in 2002/03.

The SCVWD wholesale water contract for 2002/03 provides for:

- Approved Annual Amount 4.42 mgd (4,950 acre-feet)
- Peak Day Delivery (180% of Approved) 7.96 mgd
- Peak 72 Hour Delivery (205% of Approved) 9.06 mgd

In 2001/02, the City purchased about 2.0 million hcf, equal to about 4 mgd, of SCVWD water. Based upon the most recent water demand projections submitted to SCVWD, the City anticipates increasing its supply allowance to up to 5,500 acre-feet by 2005/06.

Recycled water purchases from the SBWRP are governed by contract with the City of San Jose. In 2001/02, the City purchased about 322,000 hcf of treated recycled water from the San Jose/Santa Clara Water Pollution Control Plant, about 30% more than the previous year. Recycled water purchases are projected to about double over the next 10 years. Additional recycled water supply is readily available to meet future non-potable demand.

3.1.4 Customers

Table 3-1 shows a 3-year history of water customers by customer class. The City currently provides water service to about 15,060 customers. The City added a little under 400 accounts between 1999/00 and 2001/02. This equates to a 2.7% increase in the customer base over the past two years. A majority of these new accounts were condos/townhouses. Commercial customers accounted for the second largest increase.

As shown on Chart 3-A, the City's customer base is predominantly residential. Residential customers comprise about 90% of total customers with single family residences alone accounting for 12,108, or about 80%, of total accounts. Multi-family residential customers comprise 1,476, or about 10%, of total customers. Commercial, industrial, institutional, and governmental accounts comprise about 960, or approximately 6% of the City's customers. The remaining 513 customers are irrigation accounts which account for a little over 3% of the customer base.

3.1.5 Consumption

Table 3-2 shows a 3-year history of metered potable water consumption by customer class. Metered potable water use in 2001/02 decreased from the previous years to approximately 5 million hundred cubic feet (hcf), or about 10.3 million gallons per day (mgd). The main factors for the decrease include: 1) industrial consumption decreased by about 20% from 2000/01 to 2001/02, 2) multi-family account usage increased by about 42% 2000/01 and decreased by about 34% in 2001/02. Single family residential water use, which comprises about 37% of total water use, remained fairly constant over the 3-year period.

Table 3-3 calculates average bi-monthly consumption per customer class. Single family residential potable water use averaged about 26 hcf per bi-monthly billing period in each of the past three years.

3.1.6 Consumption & Charges by Customer Class

Table 3-4 compares the percentage of accounts, consumption, and charges by customer class for 2001/02. Residential customers, which comprise about 90% of the customer base, consumed about 48% of potable water and provided about 35% of service charge revenues. Commercial accounts, which comprise about 4% of customers, used about 11% of water and paid about 14% of service charges. Industrial customers comprise a little over 2% of customers yet consumed 20% of water and provided about 25% of service charge revenues. Irrigation accounts used about 16% of water and provided about 21% of revenues from rates.

Chart 3-B compares the percentage of water consumed and percentage of quantity charges by customer class. The differences between percentage consumed and quantity charges recovered is due to the difference in quantity charges between customer classes. This does not necessarily imply that the rates are inequitable.

3.1.7 Wholesale Water Purchases

Table 3-5 shows a history of the City's water purchases since 1975/76. Over the past 25 years, water purchases have increased by about 250%. Originally, the City purchased all of its water from the SFPUC. In 1993/94, the City began to use SCVWD as a second source of supply. For the past five years, recycled water from the San Jose/Santa Clara Water Pollution Control Plant has been acquired for non-potable uses.

In 2001/02, SFPUC water comprised approximately 60%, SCVWD water accounted for 35%, and recycled water constituted about 5% of the City's total water purchases. The amount of water purchased in 2001/02 decreased by almost 5% from the previous year. Chart 3-C shows historical purchases by source since 1975/76.

Table 3-6 shows the amount and cost of wholesale water purchased over the past four years. The table also calculates the average cost per hcf of wholesale water. Between 1998/99 and 2001/02, the average wholesale water rate increased by about $0.20 per hcf, from $0.69 to $0.89 per hcf. This represents a 30% increase in average wholesale water prices over four years.

Chart 3-D shows monthly wholesale water purchases over the past three years. Water purchases fluctuate seasonally in response to customer demand. Water demand is typically highest in the summer months, when customers use more water for landscaping and irrigation, and lowest in winter months, which generally receive higher levels of precipitation.

3.2 Water Utility Rates & Finances

3.2.1 Water Rates

Table 3-7 shows a schedule of 2002/03 water rates. Rates were last adjusted by a 7.5% across-the-board increase effective August 2, 2002 as a result of 2-year utility rate study conducted by City staff. The City's underlying rate structure has not been adjusted in many years; the City typically adopts across-the-board rate increases. All customers are metered. Customers pay a fixed bi-monthly meter charge based on meter size, plus a quantity charge based on metered water use.

The fixed meter charges enables the City to recover a portion of the fixed costs incurred by the water system, regardless of water use. Typically, a substantial percentage of operating costs, such as employee salaries, can be classified as fixed costs. Quantity charges recover the variable costs incurred by the water enterprise such as wholesale water purchases and electricity costs. Quantity charges frequently also recover some of the fixed costs that are indirectly related to water consumption.

The fixed meter charges range from $12.90 to $332.25 per bi-monthly billing. These charges are based on meter size to reflect the demand placed on the water system by each meter. Larger meters place comparatively more demand on the system and pay higher fixed charges. Fixed meter charges for non-residential customers are currently about 5% higher than for residential customers.

The City's water quantity charges vary based on customer class and range from $1.02 to $2.66 per hundred cubic feet (hcf) of water consumed in a bi-monthly billing period. One hcf of water equals about 748 gallons. In 2001/02, the average system-wide charge for potable water was $1.74 per hcf. Due to the different quantity rates, the average charge per unit of water varies by customer class with residential customer classes paying lower average rates per hcf of water than commercial and industrial customers.

Residential customers are billed according to a two-tier inclining rate structure while other customer classes pay a uniform rate for all water use. Residential consumption in the first and lowest of the two tiers is billed at a rate not lower than the average of the SFPUC and SCVWD wholesale water rates. In 2001/02, the average rate for all residential consumption was $1.27 per hcf. About 66% of residential consumption occurred in tier 1 with 34% of residential use in tier 2. This is consistent with consumption patterns in prior years.

Currently, the fixed meter charges generate about 15 percent, and the quantity charges generate about 85 percent of total revenues from water rates. In the future, the City should consider increasing the percentage of revenues recovered by the fixed meter charges to improve revenue stability, especially during droughts.

3.2.2 Water Enterprise Fund Reserves

The water enterprise maintains three separate funds. Each of these funds is treated as a separate accounting entity.

Water Fund – This is the main operating fund of the water enterprise. The fund is used to pay for all operating and maintenance costs including wholesale water purchases. The fund is also used to pay for ongoing capital projects as budgeted each year.

As of July 1, 2002, the water enterprise maintained an unreserved operating fund balance of about $1.7 million. This is low for agency of Milpitas' size and does not provide an adequate safeguard for dealing with financial emergencies. The fund balance is projected to continue to decrease over the next few years until rate adjustments are gradually phased in to adequate levels.

Water Capital Improvement Fund - As of June 30, 2002 the capital improvement fund had a balance of about $6.7 million. Each year, the City sets aside the full cost of capital improvements approved that year by transferring money to the CIP fund. These funds are fully committed to specific capital improvement projects that were budgeted in past years. The CIP fund typically carries a significant balance that is reserved for the remaining costs of projects approved in prior years but still under construction.
Water Line Extension Fund – As of June 30, 2002 this fund had a balance of about $600,000. The main source of revenue for this fund is water connection fees from new development. The fund is designated for capital improvement projects.

Water Infrastructure Fund – The water enterprise currently does not have a fund to account for infrastructure replacements. This fund should be established when feasible.

3.2.3 History of Revenues & Expenditures

Table 3-8 shows a 5-year history of revenue and expenditures. The City aims to roughly balance its budgets each year. Fund reserves generated in surplus years are typically used to make up any revenue shortfalls in deficit years.

3.3 Cash Flow and Rate Projections

3.3.1 Assumptions

Long-term cash flow projections were developed to evaluate the water enterprise's financial position over the next 20 years and determine annual revenue requirements and rate adjustments needed to fund operating and capital programs. The cash flow projections are based on a number of assumptions. For financial planning purposes, the assumptions are slightly conservative based on the best information currently available. Some of the basic assumptions include:

- **Growth:** Projected at 0% in 2003/04 and at 1% annually thereafter.
- **Rate adjustments:** Service charge revenue projections assume rate increases do not apply to the first 25% of annual revenues due to a 3-month lag from beginning of fiscal year until a rate increase impacts the revenue stream.
- **Wholesale water purchases:** Based on water use projections and future wholesale rate estimates provided by SFPUC and SCVWD.
- **Operating and maintenance expenses:** Personnel expenses increase at higher-than-typical rates to account for PERS retirement contribution increases over the next few years. Future personnel costs rise at the annual rate of 4%. Most other O&M expenses increase at the annual rate of 3%.
- **Capital project funding:** Cash flows provide for full funding of the City's CIP. The projections also include about $1.0 million per year as a reasonable placeholder for future CIP projects beginning 2007/08.
- **Infrastructure replacement funding:** The Schaaf & Wheeler depreciation study identifies $25 million of water system replacements over the next 20 years. The projections fully fund these costs over the 20-year period. However, because the City does not have sufficient funds to meet Schaaf & Wheeler's replacement estimates over the next five years, some of the costs have been postponed until the latter 15 years.

A more comprehensive list of assumptions is detailed on Table 3-9.

3.3.2 Projected Water Consumption & Wholesale Rates

The City purchases potable wholesale water from two sources: the San Francisco Public Utilities Commission (SFPUC) and the Santa Clara Valley Water District (SCVWD). In 2001/02, the City purchased a total of 5.3 million hcf of potable water. Of this total, about 3.3 million hcf, or 63% was purchased from SFPUC and about 2.0 million hcf, or 37% was purchased from SCVWD.

Table 3-10 projects potable water use and wholesale purchases over the next 20 years. The projections assume that the quantity of water purchased will increase by 1% per year beginning 2004/05 to account for the additional demands of growth. The projections also account for a decrease in potable water purchases due to some customers converting to recycled water predominantly for landscape irrigation. Total conversions over the next five years are estimated at about 160,000 hcf.

Wholesale rate projections are based on the latest projections provided by the SFPUC and SCVWD. Both agencies project substantial rate increases.

- SFPUC wholesale rates are projected to increase by over 40% in the next two years and to triple over the next 10 years.
- SCVWD wholesale rates are projected to rise by about 18% over the next two years and to increase about 80% over the next 10 years.

Chart 3-E shows wholesale water rate projections over the next 10 years.

3.3.3 Cash Flow Projections

Tables 3-11 – 3-13 show water enterprise cash flow projections under the two rate adjustment options outlined in the previous section. The water enterprise financial projections include cash flow projections for three funds as described below:

Table 3-11A - Water Fund cash flow projections with stable City rate increases plus variable future wholesale pass-throughs

Table 3-11B - Water Fund cash flow projections with stable City rate increases plus stable future wholesale pass-throughs

Table 3-12 - Water Infrastructure Fund cash flow projections

Table 3-13 - Water Line Extension Fund cash flow projections

Chart 3-F shows a 10-year projection of water fund expenditures by major cost categories.

3.3.4 Rate Adjustment Options

The projected water rate adjustments recommended in this report are comprised of two components: 1) a steady annual rate increase for City costs, and 2) a pass-through for wholesale rate increases. The wholesale pass-through may vary from year to year based on actual wholesale rate increases. The variable annual pass-through ensures that the City will recover sufficient revenues for annual wholesale rate increases, but could result in large fluctuations in rate increases from year to year. The financial projections shown and discussed in this report assume the City will adopt steady rate increases for City cost plus the variable wholesale rate pass-through.

Alternatively, the City can try to stabilize future wholesale rate adjustments based on SFPUC and SCVWD wholesale rate projections. This would require the adoption of rate

adjustments that are initially higher than actual wholesale increases, in order to build a financial buffer for stabilizing future rate increases. Based on the most recent wholesale rate projections, it appears that the City can begin stabilizing wholesale rates in 2005/06 at the earliest. Tables and charts showing financial projections with stabilized wholesale rate pass-throughs are also included with this report.

3.3.5 Rate Adjustments

The cash flow projections indicate the need for a series of rate adjustments beginning 2003/04. The increases will enable the water enterprise to fund its operating and capital programs while gradually building a prudent level of fund reserves. The following table shows projected rate adjustments assuming stable rate increases for City costs plus a variable wholesale rate pass-through.

Projected Water Rate Adjustments

Adjustment	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
City	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Wholesale	8.2%	6.9%	3.2%	1.7%	2.8%	8.5%	6.9%	4.6%	4.5%
Total	13.2%	11.9%	8.2%	6.7%	7.8%	13.5%	11.9%	9.6%	9.5%

Chart 3-G shows projected rate adjustments for City costs and for the wholesale rate pass-through each year.

3.3.6 Reasons for Rate Adjustments

Rate increases are needed for a number of reasons including:

- Water fund reserves are currently below prudent levels and are dwindling. In recent years, the Water Fund had to borrow money from the Sewer Fund to remain financially solvent.
- Water rates have fallen behind the cost of providing service.
- SFPUC wholesale water rates are projected to increase 41% over the next two years and to triple over the next 10 years, partially to fund major capital improvements to the Hetch-Hetchy regional water system. The City may have to fund the Hetch-Hetchy improvements by other methods, such as via annual debt service payments.
- SCVWD wholesale water rates are projected to increase by about 18% over the next two years and about 80% over the next 10 years.
- About $4.4 million of capital improvement projects are planned for the next 5 years, and a total of about $10.6 million are planned over the next 10 years. Projects specifically required for growth may be funded from the water line extension fund using connection fees.

- The Schaaf & Wheeler Utility Depreciation Study identified $25 million of infrastructure replacement needs over the next 20 years. The water enterprise does not currently have a funding mechanism for these costs. The financial projections assume the water enterprise will begin funding replacement projects on an ongoing basis beginning 2007/08.
- Operating and maintenance costs are projected to increase gradually in future years. In particular, personnel costs – which include costs for utility personnel and City personnel providing services to the water utility – are projected to increase by almost 30% over the next four years, largely due to increased PERS requirements and contract salary schedules.

Chart 3-H shows the major components of annual cost increases over the next 10 years, which are also summarized on the following table. For example, SFPUC wholesale water costs account for about 50% of the total increase in annual water expenses from 2002/03 through 2011/12. The breakdown provides a good indication of the underlying factors driving the rate increases.

Components of Annual Cost Increases, 2002/03 – 2011/12

SFPUC Wholesale Water	50.2%
SCVWD Wholesale Water	13.0%
City O&M	21.7%
Capital Projects	1.6%
Infrastructure Replacement	13.6%
Total	100.0%

3.3.7 Fund Balance Projections

Based on the cash flow projections, water fund reserves will continue to decrease through 2004/05 until rates are gradually increased to sufficient levels. The steady annual rate increases fshould enable the water fund to gradually build fund reserves to prudent minimum levels over the following years. The following table summarizes end-of-year fund balances and minimum fund reserve targets over the next 10 years. The table does not include water infrastructure or water line replacement fund reserves which are designated for other purposes. The table shows projections assuming a variable wholesale water rate pass-through.

Water Fund Balances (End-of-Year) & Minimum Reserve Targets ($ Millions)

	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Fund Balance	$1.4	$0.9	$0.5	$1.1	$2.4	$2.4	$2.7	$4.0	$6.3	$9.8
Minimum Target	$3.2	$3.5	$3.9	$4.1	$4.3	$4.5	$5.1	$5.6	$6.0	$6.5

This information is also presented graphically on Chart 3-I.

Although the Water Infrastructure Fund and Water Line Extension Fund may build up fund balances from time-to-time – as cash accrues for future projects – these funds are projected to be spent on projects needed over the 20-year planning horizon. These funds are designated for specific purposes and should not be used to fund operations, except in cases of financial emergency.

3.3.8 Water Rate Structure Adjustments

No adjustments are recommended to the City's current rate structure at this time. The City's current water rate structure is based on a history of Council policy decisions, has worked for many years, and has a long history of public acceptance. Additionally, most of the potential structural modifications would occur on top of the projected rate increases which could result in large rate impacts for many City customers.

During the rate evaluation process, the project team considered a number of potential water rate structure modifications. Based on evaluations of these structural modifications, including their impacts on ratepayers, none of the potential modifications were ultimately recommended. Rate structure adjustments create impacts that vary by customer or class, and are often not accepted by customers whose rates are most adversely affected by the adjustments. Some of the major rate structure modifications that were considered include the following:

- **Increase the percentage of revenues recovered from fixed meter charges** – Currently, about 15% of water service charge revenues are recovered via fixed meter charges, and about 85% of rate revenues are recovered from quantity charges based on water use. An increase in the percentage of revenues collected from fixed charges would improve revenue stability and reduce exposure to revenue loss due to conservation or drought. An increase in costs allocated to fixed charges would also result in a corresponding decrease in costs allocated to quantity charges. Hence, higher meter charges would be coupled with slightly lower quantity charges. From a ratepayer perspective, a disproportionate increase in the fixed meter charges would result in higher bills for customers using small amounts of water, and lower bills for customers consuming large amounts of water.
- **Align meter charges with meter capacity** – The City's water meter charges vary by meter size with larger meters paying larger fixed bi-monthly charges. The City's current meter ratios are acceptable, but are not aligned with meter capacity. For example, a customer with a 2-inch meter currently pays a bi-monthly meter charge that is 2.5 times the charge for a 5/8-inch meter, yet the capacity of a 2-inch meter is about 8 times that of a 5/8-inch meter. Aligning meter charges with meter capacity would result in substantially higher fixed charges for larger meters.
- **Reduce the amount of water in the first tier residential quantity charge** – The quantity charge for the first 20 hcf of bi-monthly residential consumption is set at about the average wholesale cost of water. This provides a large benefit not only to lifeline customers using minimal amounts of water, but also to customers using average amounts of water. Lifeline water use is generally estimated at about 4 - 5 hcf

per month, or 8 – 10 hcf bi-monthly. Decreasing the amount of water allowed at the lowest residential quantity rate would result in substantial increase in the average residential bill.

- **Establish a uniform block quantity charge for all water consumption** – Quantity charges currently vary by customer class. Residential customers currently purchase water according to a 2-tier inclining rate structure with rates that are lower than those of other customer classes. Charging a single rate for all water consumption would result in large rate increases for residential customers, especially those using low amounts of water, and rate decreases for other customers.

3.3.9 Rate Impacts

The recommended rate increases will be applied to the City's existing rate structure. This may result in rate impacts that vary based on customer class and consumption. Table 3-14A show projected rates for sample residential and commercial customers with a variable wholesale rate pass-through. Table 3-14B shows similar information with the stabilized future wholesale rate increases. The tables assume that the rate increases will by applied equally to all components of the water rate structure.

Chart 3-J shows a projection of bi-monthly service charges for an average single family residence using 26 hcf of water. Chart 3-K breaks down the bill between costs recovered for wholesale water purchases and costs recovered for City operating and capital costs. About 50% of each bill recovers costs for wholesale water purchases and about 50% is needed for City costs.

Tables 3-15A and B show projected bills for an average single family residence along with a breakdown of bi-monthly increases attributable to the to the City portion of the rate increase and to the wholesale rate pass-through. The City portion of the rate 2003/04 rate adjustment results in a bi-monthly increase of $2.27, or about $1.13 per month. The wholesale pass-through results in a bi-monthly increase of $3.71, or about $1.86 per month.

According to the City's current rate structure, the quantity charge for the first 20 hcf of bi-monthly residential consumption is set at about the average wholesale cost of water. Council policy requires the first-tier rate to be no less than the average cost of wholesale water. This benefits all residential customers, particularly those using low to moderate amounts of water. An average single family residence uses about 26 hcf of water bi-monthly and receives a large benefit from the low, first-tier quantity charge. Based on this rate structure, the first tier quantity charge may increase at a different rate than other components of the rate structure.

Table 3-1
City of Milpitas - Financial Utility Master Plan
Water Accounts

	Accounts		
	1999/00	2000/01	2001/02
Water Service Accounts			
Residential			
Single Family	12,055	12,096	12,108
Multi-Family			
Duplex Units	210	211	213
Condo/Townhouse Units	656	728	926
Multiple Family (3+ Units)	332	332	333
Mobile Home Parks	4	4	4
Subtotal Multi-Family	1,201	1,275	1,476
Subtotal Residential	13,256	13,371	13,583
Commercial Accounts	503	518	542
Industrial Accounts	345	348	346
Institutional/Governmental Accounts			
Institutional/Governmental/Schools	43	44	43
City of Milpitas Domestic Accounts	27	29	30
Santa Clara County/Ed Levin Park	1	1	1
Subtotal Institutional/Governmental	71	74	74
Subtotal Water Service Accounts	**14,174**	**14,311**	**14,546**
Irrigation Accounts			
City of Milpitas Irrigation Accounts	64	80	80
Non-Residential	333	344	344
Residential	88	88	88
Recycled Other	6	na	na
Subtotal Irrigation Accounts	**491**	**513**	**513**
Total	**14,666**	**14,824**	**15,058**

Source: City of Milpitas, Consumption Summaries for 1999/00, 2000/01, and 2001/02.

Table 3-2
City of Milpitas - Financial Utility Master Plan
Water Consumption

	Consumption (hcf)		
	1999/00	2000/01	2001/02
Water Service Accounts			
Residential			
Single Family	1,904,433	1,874,497	1,870,404
Multi-Family			
Duplex Units	36,503	35,299	33,709
Condo/Townhouse Units	49,508	54,129	63,377
Multiple Family (3+ Units)	456,218	649,190	433,246
Mobile Home Parks	32,737	33,873	22,666
Subtotal Multi-Family	574,966	772,491	552,998
Subtotal Residential	2,479,399	2,646,988	2,423,402
Commercial Accounts	533,973	581,262	560,516
Industrial Accounts	1,220,540	1,248,129	1,010,018
Institutional/Governmental Accounts			
Institutional/Governmental/Schools	197,910	297,651	187,230
Santa Clara County/ED Levin Park	6,446	9,670	7,988
City of Milpitas Domestic Accounts	31,827	20,059	24,343
Subtotal Institutional/Governmental	236,183	327,380	219,561
Subtotal Water Service Accounts	**4,470,095**	**4,803,759**	**4,213,497**
Irrigation Accounts			
City of Milpitas Irrigation Accounts	298,167	129,703	124,288
Non-Residential	548,585	496,425	525,519
Residential	143,785	131,611	153,213
Recycled Other	19,675	7,816	2,310
Subtotal Irrigation Accounts	**1,010,212**	**765,555**	**805,458**
Total	**5,480,307**	**5,569,314**	**5,018,827**

Source: City of Milpitas, Consumption Summaries for 1999/00, 2000/01, and 2001/02.

Table 3-3
City of Milpitas - Financial Utility Master Plan
Average Bi-Monthly Water Consumption

	Average Bi-Monthy Consumption		
	1999/00	2000/01	2001/02
Water Service Accounts			
Residential			
Single Family	26.3	25.8	25.7
Multi-Family			
Duplex Units	29.0	27.8	26.4
Condo/Townhouse Units	12.6	12.4	11.4
Multiple Family (3+ Units)	229.4	326.1	217.2
Per Multi-Family Unit (est.)	*22.9*	*32.6*	*21.7*
Mobile Home Parks	1,364.0	1,411.4	944.4
Per Mobile Home Unit (est.)	*9.6*	*9.9*	*6.6*
Subtotal Residential	31.2	33.0	29.7
Commercial Accounts	177.0	186.9	172.4
Industrial Accounts	589.9	597.5	486.3
Institutional/Governmental Accounts			
Institutional/Governmental/Schools	761.2	1,131.8	720.1
Santa Clara County/ED Levin Park	1,074.3	1,611.7	1,331.3
City of Milpitas Domestic Accounts	197.7	116.6	135.2
Subtotal Water Service Accounts	**52.6**	**55.9**	**48.3**
Irrigation Accounts			
City of Milpitas Irrigation Accounts	776.5	270.2	258.9
Non-Residential	274.4	240.3	254.4
Residential	271.8	248.6	289.4
Subtotal Irrigation Accounts	**342.7**	**249.0**	**261.9**
Total	**62.3**	**62.6**	**55.6**

Source: City of Milpitas, Consumption Summaries for 1999/00, 2000/01, and 2001/02.

Table 3-4
City of Milpitas - Financial Utility Master Plan
Water Account, Consumption, and Charge Summary for 2001/02

	Accounts	%	Consumption (hcf)	%	Quantity Charges	%
Water Service Accounts						
Residential						
Single Family	12,108	80.4%	1,870,404	37.3%	$2,442,585	28.0%
Multi-Family						
Duplex Units	213	1.4%	33,709	0.7%	38,460	0.4%
Condo/Townhouse Units	926	6.2%	63,377	1.3%	63,756	0.7%
Multiple Family (3+ Units)	333	2.2%	433,246	8.6%	503,606	5.8%
Mobile Home Parks	4	0.0%	22,666	0.5%	21,192	0.2%
Subtotal Multi-Family	1,476	9.8%	552,998	11.0%	627,014	7.2%
Subtotal Residential	13,583	90.2%	2,423,402	48.3%	3,069,599	35.1%
Commercial Accounts	542	3.6%	560,516	11.2%	1,208,217	13.8%
Industrial Accounts	346	2.3%	1,010,018	20.1%	2,209,798	25.3%
Institutional/Governmental Accounts						
Institutional/Governmental/Schools	43	0.3%	187,230	3.7%	405,933	4.6%
Santa Clara County/ED Levin Park	1	0.0%	7,988	0.2%	7,029	0.1%
City of Milpitas Domestic Accounts	29	0.2%	24,343	0.5%	25,348	0.3%
Subtotal Institutional/Governmental	73	0.5%	219,561	4.4%	438,310	5.0%
Subtotal Water Service Accounts	**14,545**	**96.6%**	**4,213,497**	**84.0%**	**6,925,924**	**79.3%**
Irrigation Accounts						
City of Milpitas Irrigation Accounts	76	0.5%	124,288	2.5%	137,529	1.6%
Non-Residential	342	2.3%	525,519	10.5%	1,290,312	14.8%
Residential	86	0.6%	153,213	3.1%	373,303	4.3%
Subtotal Irrigation Accounts	**506**	**3.3%**	**803,020**	**16.0%**	**1,808,037**	**20.6%**
Total	**15,051**	**100%**	**5,016,517**	**100%**	**8,733,961**	**100%**

Source: City of Milpitas, Consumption Summary 2001/02.

Table 3-5
City of Milpitas - Financial Utility Master Plan
Historical Wholesale Water Purchases (hcf)

Year	SFPUC	SCVWD	Recycled	Total	% Change
1975/76	2,470,484			2,470,484	
1976/77	2,073,457			2,073,457	-16.1%
1977/78	1,823,881			1,823,881	-12.0%
1978/79	2,417,843			2,417,843	32.6%
1979/80	2,469,338			2,469,338	2.1%
1980/81	2,696,421			2,696,421	9.2%
1981/82	2,804,937			2,804,937	4.0%
1982/83	3,036,261			3,036,261	8.2%
1983/84	3,508,013			3,508,013	15.5%
1984/85	3,867,094			3,867,094	10.2%
1985/86	4,140,503			4,140,503	7.1%
1986/87	4,370,146			4,370,146	5.5%
1987/88	4,317,178			4,317,178	-1.2%
1988/89	3,731,611			3,731,611	-13.6%
1989/90	4,065,458			4,065,458	8.9%
1990/91	3,806,701			3,806,701	-6.4%
1991/92	3,812,310			3,812,310	0.1%
1992/93	4,002,684			4,002,684	5.0%
1993/94	3,012,914	1,615,554		4,628,468	15.6%
1994/95	2,901,665	1,943,458		4,845,123	4.7%
1995/96	3,225,990	2,251,333		5,477,323	13.0%
1996/97	3,431,115	2,475,243		5,906,358	7.8%
1997/98	3,197,398	2,237,642	7,392	5,442,432	-7.9%
1998/99	3,361,509	2,053,680	137,056	5,552,245	2.0%
1999/00	3,504,335	2,112,638	214,771	5,831,744	5.0%
2000/01	3,444,542	2,209,381	247,713	5,901,636	1.2%
2001/02	3,335,244	1,965,782	321,677	5,622,703	-4.7%

Source: City of Milpitas.

Table 3-6
City of Milpitas - Financial Utility Master Plan
Historical Wholesale Water Costs

	1998/99	1999/00	2000/01	2001/02
SFPUC				
Amount (hcf)	3,361,509	3,504,335	3,444,542	3,335,244
Cost	$2,200,470	$3,037,979	$3,071,940	$3,036,522
Avg. cost ($/hcf)	$0.65	$0.87	$0.89	$0.91
SCVWD				
Amount (hcf)	2,053,680	2,112,638	2,209,381	1,965,782
Cost	$1,558,587	$1,722,126	$1,927,375	$1,850,244
Avg. cost ($/hcf)	$0.76	$0.82	$0.87	$0.94
Recycled				
Amount (hcf)	137,056	214,771	247,713	321,677
Cost	$48,632	$90,185	$96,465	$119,077
Avg. cost ($/hcf)	$0.35	$0.42	$0.39	$0.37
Total				
Amount (hcf)	5,552,245	5,831,744	5,901,636	5,622,703
Cost	$3,807,689	$4,850,290	$5,095,780	$5,005,843
Avg. cost ($/hcf)	$0.69	$0.83	$0.86	$0.89

Source: City of Milpitas.

Table 3-7
City of Milpitas - Financial Utility Master Plan
Water Rate Schedule 2002/03

BIMONTHLY WATER RATES

Meter Charges

Meter Size	Residential	Non-Residential
5/8"	$12.90	$13.60
3/4"	13.71	14.47
1"	19.48	20.59
1-1/2"	24.56	25.94
2"	32.05	33.83
3"	85.79	90.59
4"	108.71	114.78
6"	165.90	175.19
8"	217.37	229.53
10"	314.63	332.25

Quantity Charges (per hcf)

Residential		
1 - 20 hcf bimonthly	1.02	
21+ hcf bimonthly	2.14	
Commercial/Industrial/Institutional		2.33
Potable Irrigation		2.66
Santa Clara County (Ed Levin Park)		0.88
City of Milpitas accounts		0.97

Table 3-8
City of Milpitas - Financial Utility Master Plan
Water Enterprise Revenue & Expense History

	Actual 1997/98	Actual 1998/99	Actual 1999/00	Actual 2000/01	Estimated 2001/02
REVENUES					
Water service charges	8,286,242	7,872,665	9,091,372	9,859,529	10,300,000
Interest earnings	319,328	216,618	152,680	518,358	220,000
Transfer from recycled water	0	81,000	107,420	196,911	268,975
Other transfers in	323,492	261,495	48,470	0	0
Water service agreements	70,875	28,325	61,476	55,693	14,000
Other sales & revenues	12,760	9,223	69,828	4,000	0
Total revenues	9,012,697	8,469,326	9,531,246	10,634,491	10,802,975
EXPENSES					
Personnel services	956,542	1,135,790	1,085,975	1,221,260	1,296,347
Services & supplies	1,077,392	676,798	818,903	745,788	1,250,748
SFPUC wholesale water	2,537,827	2,213,722	3,037,979	3,071,940	3,400,000
SCVWD wholesale water	1,638,816	1,558,623	1,722,243	1,927,633	2,200,000
Capital outlay	88,803	54,724	73,420	74,628	100,300
Op. cost transfer to Gen Fund	2,239,814	2,270,932	2,308,488	2,505,933	2,752,399
Subtotal operating	8,539,194	7,910,589	9,047,008	9,547,182	10,999,794
Transfer to Water CIP Fund	0	920,000	0	570,000	223,600
Other transfers out	91,000	50,000	50,000	317,033	0
Debt service	0	0	0	0	0
Subtotal non-operating	91,000	970,000	50,000	887,033	223,600
Total expenses	8,630,194	8,880,589	9,097,008	10,434,215	11,223,394
Revenues less expenses	382,503	(411,263)	434,238	200,276	(420,419)

Source: City of Milpitas 2002/03 Budget & Financial Plan and Financial System Reports by Fund.

Table 3-9
City of Milpitas - Financial Utility Master Plan
Water Cash Flow Assumptions

WHOLESALE WATER PURCHASES

1 Growth in customer base and water usage estimated at 0% in 2003/04 and 1% annually thereafter
2 SFPUC wholesale water purchases estimated at 3.5 million hcf in 2003/04
3 SCVWD wholesale water purchases estimated at 2.2 million hcf in 2003/04
4 SCVWD wholesale purchases decrease by 2/3 of 90% of growth in recycled water use
5 SFPUC wholesale purchases decrease by 1/3 of 90% of growth in recycled water use
6 Wholesale water rates based on BAWUA (SFPUC) and SCWVD rate projections

REVENUES

1 Service charge revenues based on 2002/03 estimate of $10.7 million and increase due to a) growth and b) rate adjustments
2 Service charge revenues assume rate increases do not apply to the first 30% of annual revenues due to a three-month lag from beginning of fiscal year until a rate increase impacts revenues
3 Interest earnings projected at 3.5% of estimated average annual fund balance
4 Interest earnings from CIP Fund accrue to the water operating fund and are projected at $200,000 in 2003/04 and $100,000 thereafter (this assumes CIP fund maintains an average of about $2.8 million and earns 3.5% interest)
5 Transfers from the Recycled Water Fund linked to Recycled Water cash flow projection
6 Connection fee revenues accrue to the Water Line Extension Fund and are projected based on 125 new single family residential equivalent connections per year beginning 2004/05 and new recommended connection fees

EXPENSES

1 Expense projections based on 2002/03 budget and mid-year expense projection
2 Personnel services expenses and General Fund reimbursements escalate at the annual rate of 6.5% in 2003/04, 9% in 2004/05, 5% in 2005/06 and 2006/07, and 4% thereafter
3 Services & supplies increase at the annual rate of 3.0% and by projected net growth.
4 SFPUC and SCVWD wholesale water purchases based on wholesale rate projections and projected water consumption
5 Capital outlay costs escalate at the annual rate of 3.0%
6 Operating cost reimbursements to the General Fund are projected to increase at the annual rate of 6.5% in 2003/04, 9% in 2004/05, 5% in 2005/06 and 2006/07, and 4% thereafter.
7 CIP expenses based on City's most recent CIP projections; the projections include a reasonable placeholder for projects outside the City's current CIP
8 Loan repayment to Sewer Fund projected at $75,000 for 4 years beginning 2003/04
9 Set aside for Infrastructure Replacement Fund projected at $1.75 million annually beginning 2007/08; sufficient to fund Schaaf & Wheeler projected replacements over next 20 years
10 Schaaf & Wheeler Utility Depreciation Study replacements are funded from the Infrastructure Fund and are projected at $25.5 million over the next 20 years

Table 3-10
City of Milpitas - Financial Utility Master Plan
Wholesale Water Purchase Projections

	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
SFPUC Water Purchases									
Amount (hcf)	3,500,000	3,535,000	3,570,000	3,606,000	3,642,000	3,678,000	3,715,000	3,752,000	3,790,000
% increase	-	1%	1%	1%	1%	1%	1%	1%	1%
Less conversion to recycled	(11,250)	(12,450)	(13,650)	(15,300)	(750)	0	0	0	0
Total	3,488,750	3,522,550	3,556,350	3,590,700	3,641,250	3,678,000	3,715,000	3,752,000	3,790,000
Price ($/hcf)	$1.07	$1.24	$1.30	$1.33	$1.41	$1.76	$2.07	$2.29	$2.53
% increase	22%	16%	5%	2%	6%	25%	18%	11%	10%
Cost (rounded)	$3,733,000	$4,368,000	$4,623,000	$4,776,000	$5,134,000	$6,473,000	$7,690,000	$8,592,000	$9,589,000
SCVWD Water Purchases									
Amount (hcf)	2,200,000	2,199,000	2,196,000	2,190,000	2,181,000	2,201,000	2,223,000	2,245,000	2,267,000
% increase	-	1%	1%	1%	1%	1%	1%	1%	1%
Less conversion to recycled	(22,500)	(24,900)	(27,300)	(30,600)	(1,500)	0	0	0	0
Total	2,177,500	2,174,100	2,168,700	2,159,400	2,179,500	2,201,000	2,223,000	2,245,000	2,267,000
Price ($/AF)	$460	$495	$535	$560	$595	$625	$656	$689	$723
Price ($/hcf)	$1.06	$1.14	$1.23	$1.29	$1.37	$1.43	$1.51	$1.58	$1.66
% increase	10%	8%	8%	5%	6%	5%	5%	5%	5%
Cost (rounded)	$2,299,000	$2,499,000	$2,697,000	$2,815,000	$2,979,000	$3,157,000	$3,348,000	$3,550,000	$3,764,000
Total Wholesale Water Purchases									
Amount (hcf)	5,666,250	5,696,650	5,725,050	5,750,100	5,820,750	5,879,000	5,938,000	5,997,000	6,057,000
Net % increase	-	0.5%	0.5%	0.4%	1.2%	1.0%	1.0%	1.0%	1.0%
Total Cost	$6,032,000	$6,867,000	$7,320,000	$7,591,000	$8,113,000	$9,630,000	$11,038,000	$12,142,000	$13,353,000
% increase	-	14%	7%	4%	7%	19%	15%	10%	10%

Table 3-10 continued
City of Milpitas - Financial Utility Master Plan
Wholesale Water Purchase Projections

	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
SFPUC Water Purchases										
Amount (hcf)	3,828,000	3,866,000	3,905,000	3,944,000	3,983,000	4,023,000	4,063,000	4,104,000	4,145,000	4,186,000
% increase	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Less conversion to recycled	0	0	0	0	0	0	0	0	0	0
Total	3,828,000	3,866,000	3,905,000	3,944,000	3,983,000	4,023,000	4,063,000	4,104,000	4,145,000	4,186,000
Price ($/hcf)	$2.66	$2.79	$2.93	$3.08	$3.23	$3.39	$3.56	$3.74	$3.92	$4.12
% increase	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Cost (rounded)	$10,169,000	$10,784,000	$11,437,000	$12,129,000	$12,861,000	$13,640,000	$14,464,000	$15,341,000	$16,269,000	$17,251,000
SCVWD Water Purchases										
Amount (hcf)	2,290,000	2,313,000	2,336,000	2,359,000	2,383,000	2,407,000	2,431,000	2,455,000	2,480,000	2,505,000
% increase	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Less conversion to recycled	0	0	0	0	0	0	0	0	0	0
Total	2,290,000	2,313,000	2,336,000	2,359,000	2,383,000	2,407,000	2,431,000	2,455,000	2,480,000	2,505,000
Price ($/AF)	$759	$797	$837	$879	$923	$969	$1,018	$1,069	$1,122	$1,178
Price ($/hcf)	$1.74	$1.83	$1.92	$2.02	$2.12	$2.22	$2.34	$2.45	$2.58	$2.70
% increase	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Cost (rounded)	$3,992,000	$4,234,000	$4,490,000	$4,761,000	$5,050,000	$5,355,000	$5,679,000	$6,022,000	$6,388,000	$6,775,000
Total Wholesale Water Purchases										
Amount (hcf)	6,118,000	6,179,000	6,241,000	6,303,000	6,366,000	6,430,000	6,494,000	6,559,000	6,625,000	6,691,000
Net % increase	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Total Cost	$14,161,000	$15,018,000	$15,927,000	$16,890,000	$17,911,000	$18,995,000	$20,143,000	$21,363,000	$22,657,000	$24,026,000
% increase	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%

Table 3-11A
City of Milpitas - Financial Utility Master Plan
Water Enterprise Cash Flow Projection
With Variable Wholesale Rate Passthrough

	Estimated	Projected								
	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Beginning operating fund balance	$1,735,580	1,354,000	922,000	503,000	1,095,000	2,441,000	2,375,000	2,721,000	3,968,000	6,333,000
Projected growth		0.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Net growth (with recycled subst.)		0.0%	0.5%	0.5%	0.4%	1.2%	1.0%	1.0%	1.0%	1.0%
Rate adjustment - City costs		5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Rate adjustment - wholesale incs		8.2%	6.9%	3.2%	1.7%	2.8%	8.5%	6.9%	4.6%	4.5%
Total rate adjustment		**13.2%**	**11.9%**	**8.2%**	**6.7%**	**7.8%**	**13.5%**	**11.9%**	**9.6%**	**9.5%**
REVENUES										
Service charges	10,700,000	11,690,000	13,185,000	14,465,000	15,560,000	16,915,000	19,095,000	21,640,000	24,070,000	26,605,000
Interest earnings - Water Fund	-	40,000	25,000	28,000	62,000	84,000	89,000	117,000	180,000	283,000
Interest earnings - CIP Fund	241,000	200,000	150,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
Transfer from recycled water	300,000	369,000	450,000	535,000	638,000	698,000	761,000	829,000	904,000	985,000
Other revenues	4,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
Total revenues	11,245,000	12,304,000	13,815,000	15,133,000	16,365,000	17,802,000	20,050,000	22,691,000	25,259,000	27,978,000
EXPENSES										
Personnel services	1,381,301	1,471,000	1,603,000	1,683,000	1,767,000	1,838,000	1,912,000	1,988,000	2,068,000	2,151,000
Services & supplies	1,218,355	1,255,000	1,299,000	1,344,000	1,390,000	1,449,000	1,507,000	1,567,000	1,630,000	1,695,000
SFPUC wholesale water	3,150,000	3,733,000	4,368,000	4,623,000	4,776,000	5,134,000	6,473,000	7,690,000	8,592,000	9,589,000
SCVWD wholesale water	2,100,000	2,299,000	2,499,000	2,697,000	2,815,000	2,979,000	3,157,000	3,348,000	3,550,000	3,764,000
Capital outlay	100,475	103,000	106,000	109,000	112,000	115,000	118,000	122,000	126,000	130,000
Op. cost transfer to Gen Fund	2,706,720	2,883,000	3,142,000	3,299,000	3,464,000	3,603,000	3,747,000	3,897,000	4,053,000	4,215,000
Other	0	0	0	0	0	0	0	0	0	0
Subtotal operating	10,656,851	11,744,000	13,017,000	13,755,000	14,324,000	15,118,000	16,914,000	18,612,000	20,019,000	21,544,000
Transfer to CIP Fund	970,000	917,000	1,142,000	711,000	620,000	1,000,000	1,040,000	1,082,000	1,125,000	1,170,000
Loan repayment to Sewer Fund	0	75,000	75,000	75,000	75,000	0	0	0	0	0
Set aside for infrastructure repl	0	0	0	0	0	1,750,000	1,750,000	1,750,000	1,750,000	1,750,000
Subtotal non-operating	970,000	992,000	1,217,000	786,000	695,000	2,750,000	2,790,000	2,832,000	2,875,000	2,920,000
Total expenses	11,626,851	12,736,000	14,234,000	14,541,000	15,019,000	17,868,000	19,704,000	21,444,000	22,894,000	24,464,000
Revenues less expenses	(381,851)	(432,000)	(419,000)	592,000	1,346,000	(66,000)	346,000	1,247,000	2,365,000	3,514,000
Ending operating fund balance	1,353,729	922,000	503,000	1,095,000	2,441,000	2,375,000	2,721,000	3,968,000	6,333,000	9,847,000
Min fund rsrv target (30% O&M)	3,200,000	3,520,000	3,910,000	4,130,000	4,300,000	4,540,000	5,070,000	5,580,000	6,010,000	6,460,000

Table 3-11A continued
City of Milpitas - Financial Utility Master Plan
Water Enterprise Cash Flow Projection
With Variable Wholesale Rate Passthrough

		Projected								
	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
Beginning operating fund balance	9,847,000	12,896,000	15,630,000	17,995,000	19,930,000	21,373,000	22,248,000	22,477,000	21,979,000	20,656,000
Projected growth	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Net growth (with recycled subst.)	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Rate adjustment - City costs	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Rate adjustment - wholesale incs	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Total rate adjustment	**2.0%**	**2.0%**	**2.0%**	**2.0%**	**2.0%**	**2.0%**	**2.0%**	**2.0%**	**2.0%**	**2.0%**
REVENUES										
Service charges	27,970,000	28,810,000	29,675,000	30,565,000	31,485,000	32,430,000	33,400,000	34,405,000	35,435,000	36,500,000
Interest earnings - Water Fund	398,000	499,000	588,000	664,000	723,000	763,000	783,000	778,000	746,000	684,000
Interest earnings - CIP Fund	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
Transfer from recycled water	1,005,000	1,025,000	1,046,000	1,067,000	1,088,000	1,110,000	1,132,000	1,155,000	1,178,000	1,202,000
Other revenues	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
Total revenues	29,478,000	30,439,000	31,414,000	32,401,000	33,401,000	34,408,000	35,420,000	36,443,000	37,464,000	38,491,000
EXPENSES										
Personnel services	2,237,000	2,326,000	2,419,000	2,516,000	2,617,000	2,722,000	2,831,000	2,944,000	3,062,000	3,184,000
Services & supplies	1,763,000	1,834,000	1,907,000	1,983,000	2,062,000	2,144,000	2,230,000	2,319,000	2,412,000	2,508,000
SFPUC wholesale water	10,169,000	10,784,000	11,437,000	12,129,000	12,861,000	13,640,000	14,464,000	15,341,000	16,269,000	17,251,000
SCVWD wholesale water	3,992,000	4,234,000	4,490,000	4,761,000	5,050,000	5,355,000	5,679,000	6,022,000	6,388,000	6,775,000
Capital outlay	134,000	138,000	142,000	146,000	150,000	155,000	160,000	165,000	170,000	175,000
Op. cost transfer to Gen Fund	4,384,000	4,559,000	4,741,000	4,931,000	5,128,000	5,333,000	5,546,000	5,768,000	5,999,000	6,239,000
Other	0	0	0	0	0	0	0	0	0	0
Subtotal operating	22,679,000	23,875,000	25,136,000	26,466,000	27,868,000	29,349,000	30,910,000	32,559,000	34,300,000	36,132,000
Transfer to CIP Fund for capital	2,000,000	2,080,000	2,163,000	2,250,000	2,340,000	2,434,000	2,531,000	2,632,000	2,737,000	2,846,000
Loan repayment to Sewer Fund	0	0	0	0	0	0	0	0	0	0
Set aside for infrastructure repl	1,750,000	1,750,000	1,750,000	1,750,000	1,750,000	1,750,000	1,750,000	1,750,000	1,750,000	1,750,000
Subtotal non-operating	3,750,000	3,830,000	3,913,000	4,000,000	4,090,000	4,184,000	4,281,000	4,382,000	4,487,000	4,596,000
Total expenses	26,429,000	27,705,000	29,049,000	30,466,000	31,958,000	33,533,000	35,191,000	36,941,000	38,787,000	40,728,000
Revenues less expenses	3,049,000	2,734,000	2,365,000	1,935,000	1,443,000	875,000	229,000	(498,000)	(1,323,000)	(2,237,000)
Ending operating fund balance	12,896,000	15,630,000	17,995,000	19,930,000	21,373,000	22,248,000	22,477,000	21,979,000	20,656,000	18,419,000
Min fund rsrv target (30% O&M)	6,800,000	7,160,000	7,540,000	7,940,000	8,360,000	8,800,000	9,270,000	9,770,000	10,290,000	10,840,000

Table 3-11B
City of Milpitas - Financial Utility Master Plan
Water Enterprise Cash Flow Projection
With Stable Wholesale Rate Passthrough Beginning 2005/06

	Estimated	Projected								
	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Beginning operating fund balance	$1,735,580	1,354,000	922,000	503,000	1,176,000	2,886,000	3,472,000	4,061,000	4,933,000	6,600,000
Projected growth		0.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Net growth (with recycled subst.)		0.0%	0.5%	0.5%	0.4%	1.2%	1.0%	1.0%	1.0%	1.0%
Rate adjustment - City costs		5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Rate adjustment - wholesale incs		8.2%	6.9%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Total rate adjustment		**13.2%**	**11.9%**	**9.0%**	**9.0%**	**9.0%**	**9.0%**	**9.0%**	**9.0%**	**9.0%**
REVENUES										
Service charges	10,700,000	11,690,000	13,185,000	14,545,000	15,915,000	17,540,000	19,295,000	21,225,000	23,350,000	25,685,000
Interest earnings - Water Fund	-	40,000	25,000	29,000	71,000	111,000	132,000	157,000	202,000	276,000
Interest earnings - CIP Fund	241,000	200,000	150,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
Transfer from recycled water	300,000	369,000	450,000	535,000	638,000	698,000	761,000	829,000	904,000	985,000
Other revenues	4,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
Total revenues	11,245,000	12,304,000	13,815,000	15,214,000	16,729,000	18,454,000	20,293,000	22,316,000	24,561,000	27,051,000
EXPENSES										
Personnel services	1,381,301	1,471,000	1,603,000	1,683,000	1,767,000	1,838,000	1,912,000	1,988,000	2,068,000	2,151,000
Services & supplies	1,218,355	1,255,000	1,299,000	1,344,000	1,390,000	1,449,000	1,507,000	1,567,000	1,630,000	1,695,000
SFPUC wholesale water	3,150,000	3,733,000	4,368,000	4,623,000	4,776,000	5,134,000	6,473,000	7,690,000	8,592,000	9,589,000
SCVWD wholesale water	2,100,000	2,299,000	2,499,000	2,697,000	2,815,000	2,979,000	3,157,000	3,348,000	3,550,000	3,764,000
Capital outlay	100,475	103,000	106,000	109,000	112,000	115,000	118,000	122,000	126,000	130,000
Op. cost transfer to Gen Fund	2,706,720	2,883,000	3,142,000	3,299,000	3,464,000	3,603,000	3,747,000	3,897,000	4,053,000	4,215,000
Other	0	0	0	0	0	0	0	0	0	0
Subtotal operating	10,656,851	11,744,000	13,017,000	13,755,000	14,324,000	15,118,000	16,914,000	18,612,000	20,019,000	21,544,000
Transfer to CIP Fund for capital	970,000	917,000	1,142,000	711,000	620,000	1,000,000	1,040,000	1,082,000	1,125,000	1,170,000
Loan repayment to Sewer Fund	0	75,000	75,000	75,000	75,000	0	0	0	0	0
Set aside for infrastructure repl	0	0	0	0	0	1,750,000	1,750,000	1,750,000	1,750,000	1,750,000
Subtotal non-operating	970,000	992,000	1,217,000	786,000	695,000	2,750,000	2,790,000	2,832,000	2,875,000	2,920,000
Total expenses	11,626,851	12,736,000	14,234,000	14,541,000	15,019,000	17,868,000	19,704,000	21,444,000	22,894,000	24,464,000
Revenues less expenses	(381,851)	(432,000)	(419,000)	673,000	1,710,000	586,000	589,000	872,000	1,667,000	2,587,000
Ending operating fund balance	1,353,729	922,000	503,000	1,176,000	2,886,000	3,472,000	4,061,000	4,933,000	6,600,000	9,187,000
Min fund rsrv target (30% O&M)	3,200,000	3,520,000	3,910,000	4,130,000	4,300,000	4,540,000	5,070,000	5,580,000	6,010,000	6,460,000

Table 3-11B continued
City of Milpitas - Financial Utility Master Plan
Water Enterprise Cash Flow Projection
With Stable Wholesale Rate Passthrough Beginning 2005/06

	Projected									
	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
Beginning operating fund balance	9,187,000	11,190,000	12,810,000	13,991,000	14,663,000	14,763,000	14,212,000	12,933,000	10,833,000	7,815,000
Projected growth	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Net growth (with recycled subst.)	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Rate adjustment - City costs	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Rate adjustment - wholesale incs	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Total rate adjustment	**2.0%**	**2.0%**	**2.0%**	**2.0%**	**2.0%**	**2.0%**	**2.0%**	**2.0%**	**2.0%**	**2.0%**
REVENUES										
Service charges	26,965,000	27,775,000	28,610,000	29,465,000	30,350,000	31,260,000	32,200,000	33,165,000	34,160,000	35,185,000
Interest earnings - Water Fund	357,000	420,000	469,000	501,000	515,000	507,000	475,000	416,000	326,000	203,000
Interest earnings - CIP Fund	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
Transfer from recycled water	1,005,000	1,025,000	1,046,000	1,067,000	1,088,000	1,110,000	1,132,000	1,155,000	1,178,000	1,202,000
Other revenues	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
Total revenues	28,432,000	29,325,000	30,230,000	31,138,000	32,058,000	32,982,000	33,912,000	34,841,000	35,769,000	36,695,000
EXPENSES										
Personnel services	2,237,000	2,326,000	2,419,000	2,516,000	2,617,000	2,722,000	2,831,000	2,944,000	3,062,000	3,184,000
Services & supplies	1,763,000	1,834,000	1,907,000	1,983,000	2,062,000	2,144,000	2,230,000	2,319,000	2,412,000	2,508,000
SFPUC wholesale water	10,169,000	10,784,000	11,437,000	12,129,000	12,861,000	13,640,000	14,464,000	15,341,000	16,269,000	17,251,000
SCVWD wholesale water	3,992,000	4,234,000	4,490,000	4,761,000	5,050,000	5,355,000	5,679,000	6,022,000	6,388,000	6,775,000
Capital outlay	134,000	138,000	142,000	146,000	150,000	155,000	160,000	165,000	170,000	175,000
Op. cost transfer to Gen Fund	4,384,000	4,559,000	4,741,000	4,931,000	5,128,000	5,333,000	5,546,000	5,768,000	5,999,000	6,239,000
Other	0	0	0	0	0	0	0	0	0	0
Subtotal operating	22,679,000	23,875,000	25,136,000	26,466,000	27,868,000	29,349,000	30,910,000	32,559,000	34,300,000	36,132,000
Transfer to CIP Fund for capital	2,000,000	2,080,000	2,163,000	2,250,000	2,340,000	2,434,000	2,531,000	2,632,000	2,737,000	2,846,000
Loan repayment to Sewer Fund	0	0	0	0	0	0	0	0	0	0
Set aside for infrastructure repl	1,750,000	1,750,000	1,750,000	1,750,000	1,750,000	1,750,000	1,750,000	1,750,000	1,750,000	1,750,000
Subtotal non-operating	3,750,000	3,830,000	3,913,000	4,000,000	4,090,000	4,184,000	4,281,000	4,382,000	4,487,000	4,596,000
Total expenses	26,429,000	27,705,000	29,049,000	30,466,000	31,958,000	33,533,000	35,191,000	36,941,000	38,787,000	40,728,000
Revenues less expenses	2,003,000	1,620,000	1,181,000	672,000	100,000	(551,000)	(1,279,000)	(2,100,000)	(3,018,000)	(4,033,000)
Ending operating fund balance	11,190,000	12,810,000	13,991,000	14,663,000	14,763,000	14,212,000	12,933,000	10,833,000	7,815,000	3,782,000
Min fund rsrv target (30% O&M)	6,800,000	7,160,000	7,540,000	7,940,000	8,360,000	8,800,000	9,270,000	9,770,000	10,290,000	10,840,000

Table 3-12
City of Milpitas - Financial Utility Master Plan
Water Infrastructure Fund Cash Flow Projection

	Budget	Projected								
	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Beginning fund balance	0	0	0	0	0	0	150,000	305,000	466,000	632,000
REVENUES										
Interest earnings	0	0	0	0	0	0	5,000	11,000	16,000	22,000
Transfer from Operating Fund	0	0	0	0	0	1,750,000	1,750,000	1,750,000	1,750,000	1,750,000
Total revenues	0	0	0	0	0	1,750,000	1,755,000	1,761,000	1,766,000	1,772,000
EXPENSES										
Schaaf & Wheeler est. replacements	0	0	0	0	0	1,600,000	1,600,000	1,600,000	1,600,000	1,600,000
Revenues less expenses	0	0	0	0	0	150,000	155,000	161,000	166,000	172,000
Ending fund balance	0	0	0	0	0	150,000	305,000	466,000	632,000	804,000

Table 3-12 continued
City of Milpitas - Financial Utility Master Plan
Water Infrastructure Fund Cash Flow Projection

	Projected									
	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
Beginning fund balance	804,000	2,082,000	3,405,000	4,774,000	6,191,000	7,658,000	6,676,000	5,660,000	4,608,000	3,519,000
REVENUES										
Interest earnings	28,000	73,000	119,000	167,000	217,000	268,000	234,000	198,000	161,000	123,000
Transfer from Operating Fund	1,750,000	1,750,000	1,750,000	1,750,000	1,750,000	1,750,000	1,750,000	1,750,000	1,750,000	1,750,000
Total revenues	1,778,000	1,823,000	1,869,000	1,917,000	1,967,000	2,018,000	1,984,000	1,948,000	1,911,000	1,873,000
EXPENSES										
Schaaf & Wheeler est. replacements	500,000	500,000	500,000	500,000	500,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000
Revenues less expenses	1,278,000	1,323,000	1,369,000	1,417,000	1,467,000	(982,000)	(1,016,000)	(1,052,000)	(1,089,000)	(1,127,000)
Ending fund balance	2,082,000	3,405,000	4,774,000	6,191,000	7,658,000	6,676,000	5,660,000	4,608,000	3,519,000	2,392,000

Table 3-13
City of Milpitas - Financial Utility Master Plan
Water Line Extension Fund Fund Cash Flow Projection

	Budget	Projected							
	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Beginning fund balance	$632,000	425,000	440,000	544,000	627,000	888,000	1,158,000	1,438,000	1,727,000	2,026,000
New single family resid equivalents		0	125	125	125	125	125	125	125	125
Projected SFR connection fee		1,910	1,910	1,910	1,910	1,910	1,910	1,910	1,910	1,910
REVENUES										
Connection fees	2,000	0	239,000	239,000	239,000	239,000	239,000	239,000	239,000	239,000
Interest earnings	10,600	15,000	15,000	19,000	22,000	31,000	41,000	50,000	60,000	71,000
Other revenues/approp. transfers	470,000	0	0	0	0	0	0	0	0	0
Total revenues	482,600	15,000	254,000	258,000	261,000	270,000	280,000	289,000	299,000	310,000
EXPENSES										
Transfer to CIP Fund	690,000	0	150,000	175,000	0	0	0	0	0	0
Transfer to CIP for growth projects	0	0	0	0	0	0	0	0	0	0
Other expenses/transfers	0	0	0	0	0	0	0	0	0	0
Total expenses	690,000	0	150,000	175,000	0	0	0	0	0	0
Revenues less expenses	(207,400)	15,000	104,000	83,000	261,000	270,000	280,000	289,000	299,000	310,000
Ending fund balance	424,600	440,000	544,000	627,000	888,000	1,158,000	1,438,000	1,727,000	2,026,000	2,336,000

Table 3-13 continued
City of Milpitas - Financial Utility Master Plan
Water Line Extension Fund Fund Cash Flow Projection

					Projected					
	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
Beginning fund balance	2,336,000	2,657,000	2,989,000	3,333,000	3,689,000	4,057,000	4,438,000	4,832,000	5,240,000	5,662,000
New single family resid equivalents	125	125	125	125	125	125	125	125	125	125
Projected SFR connection fee	1,910	1,910	1,910	1,910	1,910	1,910	1,910	1,910	1,910	1,910
REVENUES										
Connection fees	239,000	239,000	239,000	239,000	239,000	239,000	239,000	239,000	239,000	239,000
Interest earnings	82,000	93,000	105,000	117,000	129,000	142,000	155,000	169,000	183,000	198,000
Other revenues/approp. transfers	0	0	0	0	0	0	0	0	0	0
Total revenues	321,000	332,000	344,000	356,000	368,000	381,000	394,000	408,000	422,000	437,000
EXPENSES										
Transfer to CIP Fund	0	0	0	0	0	0	0	0	0	0
Transfer to CIP for growth projects	0	0	0	0	0	0	383,000	3,664,000	0	0
Other expenses/transfers	0	0	0	0	0	0	0	0	0	0
Total expenses	0	0	0	0	0	0	383,000	3,664,000	0	0
Revenues less expenses	321,000	332,000	344,000	356,000	368,000	381,000	394,000	408,000	422,000	437,000
Ending fund balance	2,657,000	2,989,000	3,333,000	3,689,000	4,057,000	4,438,000	4,832,000	5,240,000	5,662,000	6,099,000

Table 3-14A
City of Milpitas - Financial Utility Master Plan
Residential Order-of-Magnitude Rate Projection
With Variable Wholesale Rate Passthrough

		2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Rate Adjustment*			13.2%	11.9%	8.2%	6.7%	7.8%	13.5%	11.9%	9.6%	9.5%
Customer Class	Bi-monthly Use (hcf)										
Residential (5/8" Meter)											
Low	15	$28.20	$31.85	$35.69	$38.68	$41.21	$44.48	$50.52	$56.57	$62.05	$67.89
Average	**26**	**46.14**	**52.12**	**58.40**	**63.26**	**67.44**	**72.75**	**82.59**	**92.44**	**101.38**	**110.91**
Med-High	40	76.10	86.00	96.34	104.28	111.26	119.93	136.07	152.22	166.90	182.59
High	60	118.90	134.40	150.54	162.88	173.86	187.33	212.47	237.62	260.50	284.99
Comm/Ind/Inst (1" Meter)											
Customer A	50	137.09	155.31	173.58	187.72	200.11	215.96	245.34	274.72	301.18	329.97
Customer B	100	253.59	287.31	321.08	347.22	370.11	399.46	453.84	508.22	557.18	610.47
Customer C	200	486.59	551.31	616.08	666.22	710.11	766.46	870.84	975.22	1,069.18	1,171.47

* Based on across-the-board rate increases; projected bi-monthly meter charge and quantity charges rounded to nearest $0.01. Actual rate adjustments may vary based on customer class and consumption.

Table 3-14A
City of Milpitas - Financial Utility Master Plan
Residential Rate Projection
With Variable Wholesale Rate Passthrough

		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
Total Rate Adjustment		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Customer Class	Bi-monthly Use (hcf)										
Residential (5/8" Meter)											
Low	15	$69.26	$70.64	$72.03	$73.44	$74.86	$76.29	$77.89	$79.50	$81.13	$82.77
Average	**26**	**113.13**	**115.36**	**117.66**	**119.98**	**122.31**	**124.65**	**127.27**	**129.90**	**132.55**	**135.21**
Med-High	40	186.21	189.84	193.68	197.54	201.41	205.29	209.59	213.90	218.23	222.57
High	60	290.61	296.24	302.28	308.34	314.41	320.49	327.19	333.90	340.63	347.37
Comm/Ind/Inst (1" Meter)											
Customer A	50	336.46	342.97	350.00	357.05	364.12	371.21	378.82	386.46	394.12	401.80
Customer B	100	622.46	634.47	647.50	660.55	673.62	686.71	700.82	714.96	729.12	743.30
Customer C	200	1,194.46	1,217.47	1,242.50	1,267.55	1,292.62	1,317.71	1,344.82	1,371.96	1,399.12	1,426.30

Table 3-14B
City of Milpitas - Financial Utility Master Plan
Residential Order-of-Magnitude Rate Projection
With Stable Wholesale Rate Passthrough Beginning 2005/06

		2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Rate Adjustment*			13.2%	11.9%	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%
Customer Class	Bi-monthly Use (hcf)										
Residential (5/8" Meter)											
Low	15	$28.20	$31.85	$35.69	$38.96	$42.51	$46.36	$50.51	$54.99	$59.95	$65.42
Average	**26**	**46.14**	**52.12**	**58.40**	**63.71**	**69.53**	**75.82**	**82.64**	**89.96**	**98.10**	**107.03**
Med-High	40	76.10	86.00	96.34	105.01	114.61	124.96	136.26	148.34	161.80	176.47
High	60	118.90	134.40	150.54	164.01	179.01	195.16	212.86	231.74	252.80	275.67
Comm/Ind/Inst (1" Meter)											
Customer A	50	137.09	155.31	173.58	189.43	206.49	225.28	245.32	267.63	291.74	318.18
Customer B	100	253.59	287.31	321.08	350.43	381.99	416.78	453.82	495.13	539.74	588.68
Customer C	200	486.59	551.31	616.08	672.43	732.99	799.78	870.82	950.13	1,035.74	1,129.68

* Based on across-the-board rate increases; projected bi-monthly meter charge and quantity charges rounded to nearest $0.01. Actual rate adjustments may vary based on customer class and consumption.

Table 3-14B continued
City of Milpitas - Financial Utility Master Plan
Residential Rate Projection
With Stable Wholesale Rate Passthrough

		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
Total Rate Adjustment		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Customer Class	Bi-monthly Use (hcf)										
Residential (5/8" Meter)											
Low	15	$66.77	$68.13	$69.50	$70.88	$72.28	$73.69	$75.11	$76.55	$78.15	$79.76
Average	**26**	**109.23**	**111.44**	**113.66**	**115.95**	**118.26**	**120.58**	**122.91**	**125.26**	**127.88**	**130.51**
Med-High	40	180.07	183.68	187.30	191.13	194.98	198.84	202.71	206.60	210.90	215.21
High	60	281.27	286.88	292.50	298.53	304.58	310.64	316.71	322.80	329.50	336.21
Comm/Ind/Inst (1" Meter)											
Customer A	50	324.63	331.10	337.59	344.10	351.13	358.18	365.25	372.35	379.97	387.61
Customer B	100	600.63	612.60	624.59	636.60	649.63	662.68	675.75	688.85	702.97	717.11
Customer C	200	1,152.63	1,175.60	1,198.59	1,221.60	1,246.63	1,271.68	1,296.75	1,321.85	1,348.97	1,376.11

Table 3-15A
City of Milpitas - Financial Utility Master Plan
Components of Average Single Family Residential Bill Increases
With Variable Wholesale Rate Passthrough

	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Rate Adjustment*										
City increase		5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Wholesale increase		8.2%	6.9%	3.2%	1.7%	2.8%	8.5%	6.9%	4.6%	4.5%
Total increase		13.2%	11.9%	8.2%	6.7%	7.8%	13.5%	11.9%	9.6%	9.5%

Customer Class	Bi-monthly Use (hcf)									
Residential (5/8" Meter)										
Average Bill	26	$46.14	$52.12	$58.40	$63.26	$67.44	$72.75	$82.59	$92.44	$101.38	$110.91
City increase (estimated)			2.27	2.64	2.96	3.12	3.40	3.64	4.14	4.66	5.02
Wholesale increase (estimated)			3.71	3.64	1.90	1.06	1.91	6.20	5.71	4.28	4.51
Total bi-monthly increase			5.98	6.28	4.86	4.18	5.31	9.84	9.85	8.94	9.53

* Based on across-the-board rate increases; projected bi-monthly meter charge and quantity charges rounded to nearest $0.01.
Actual rate adjustments may vary based on customer class and consumption.

Table 3-15B
City of Milpitas - Financial Utility Master Plan
Components of Average Single Family Residential Bill Increases
With Stable Wholesale Rate Passthrough Beginning 2005/06

	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Rate Adjustment*										
City increase		5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Wholesale increase		8.2%	6.9%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Total increase		13.2%	11.9%	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%

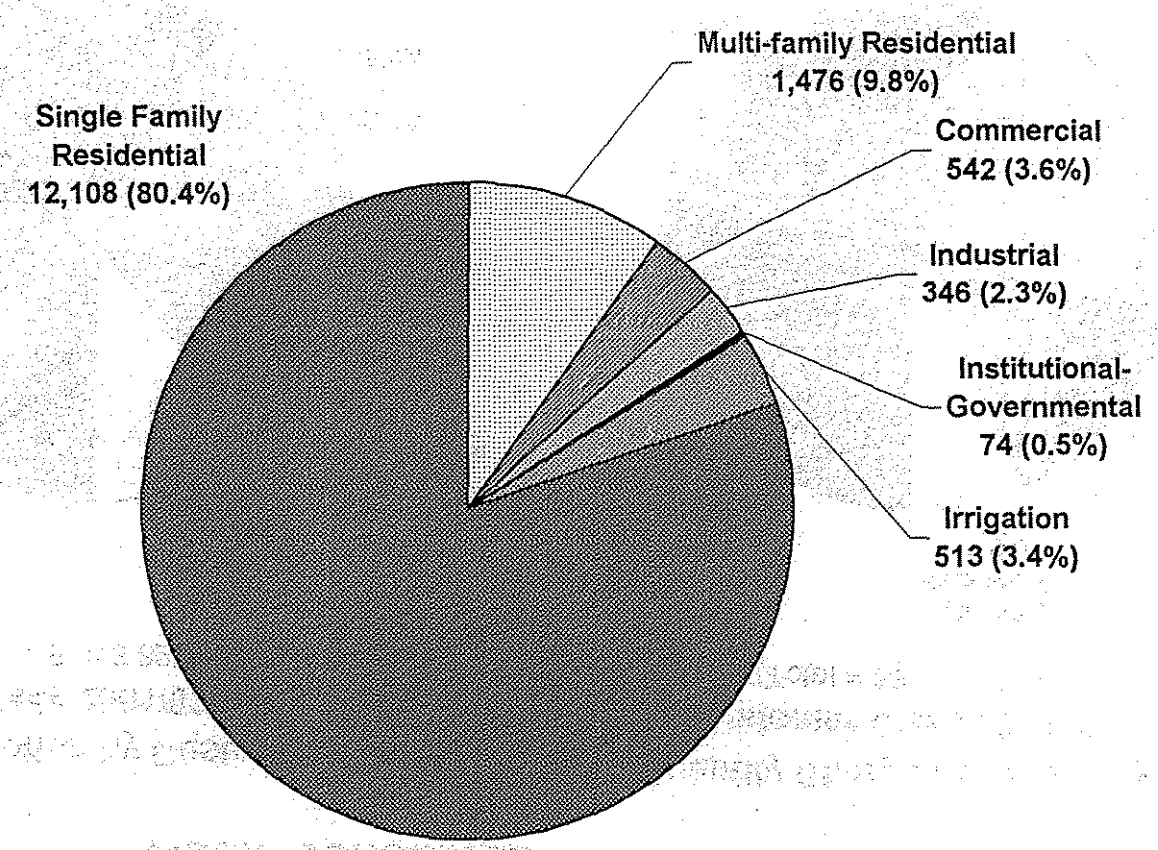
Customer Class	Bi-monthly Use (hcf)									
Residential (5/8" Meter)										
Average Bill	26	$46.14	$52.12	$58.40	$63.71	$69.53	$75.82	$82.64	$89.96	$98.10	$107.03
City increase (estimated)			2.27	2.64	2.95	3.23	3.49	3.79	4.07	4.52	4.96
Wholesale increase (estimated)			3.71	3.64	2.36	2.59	2.80	3.03	3.25	3.62	3.97
Total bi-monthly increase			5.98	6.28	5.31	5.82	6.29	6.82	7.32	8.14	8.93

* Based on across-the-board rate increases; projected bi-monthly meter charge and quantity charges rounded to nearest $0.01. Actual rate adjustments may vary based on customer class and consumption.

Chart 3-A

Water Accounts by Customer Class 2001/02

(Total Accounts = 15,058)



BARTLE WELLS ASSOCIATES

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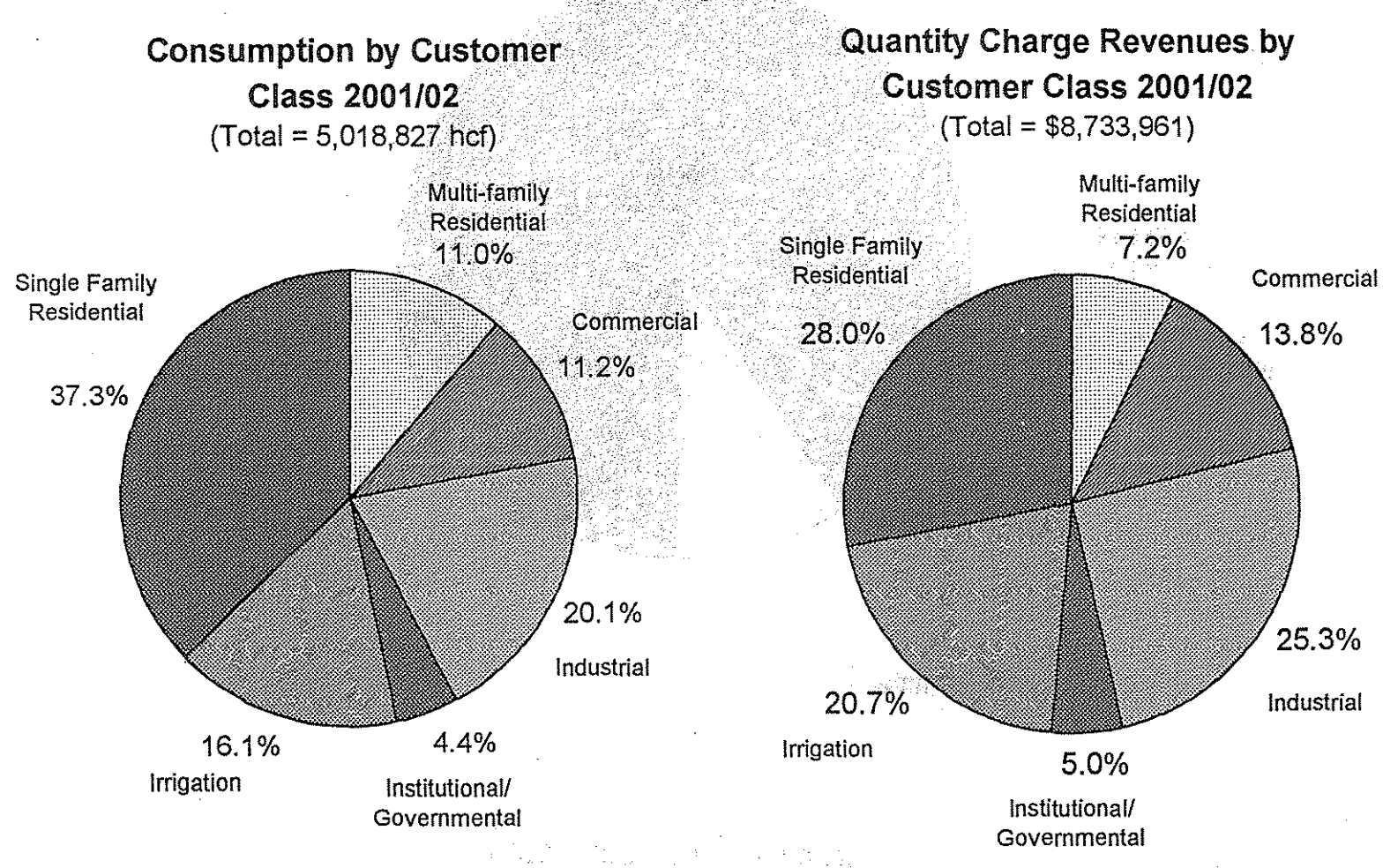
Chart 3-B

Water Consumption & Revenues



Potable water use and charges shown; does not include recycled water.

Chart 3-C

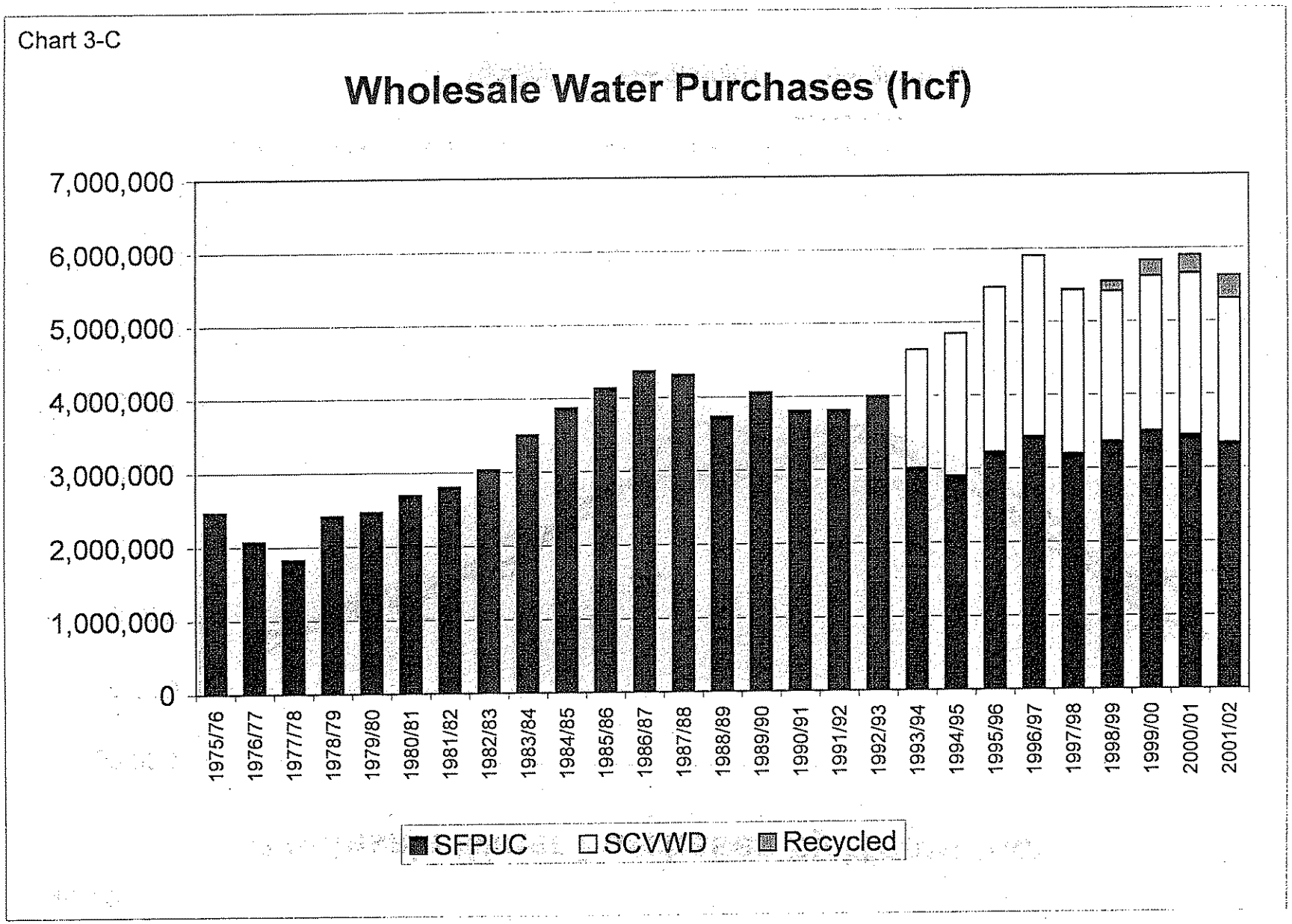


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Chart 3-D

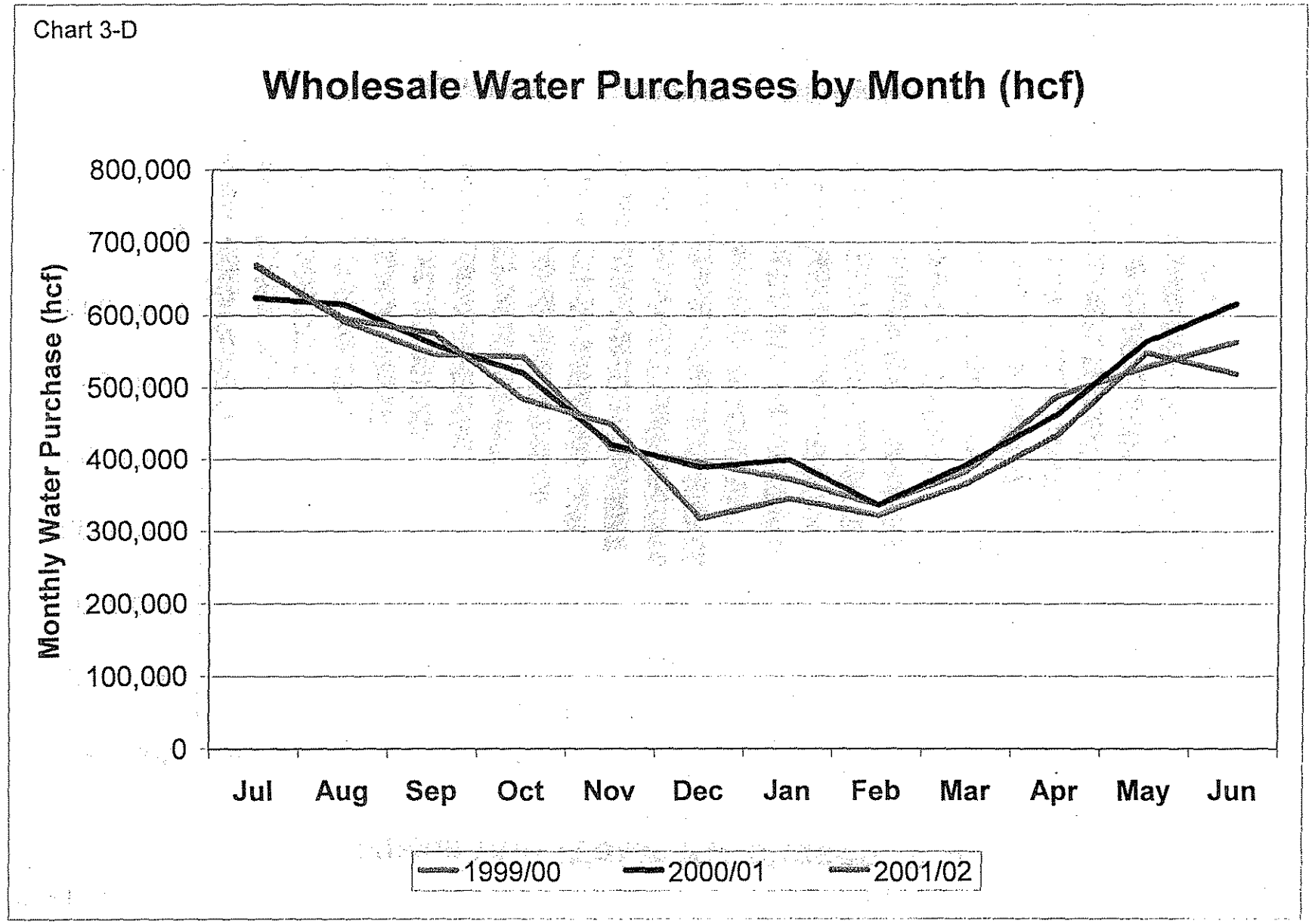

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Chart 3-E

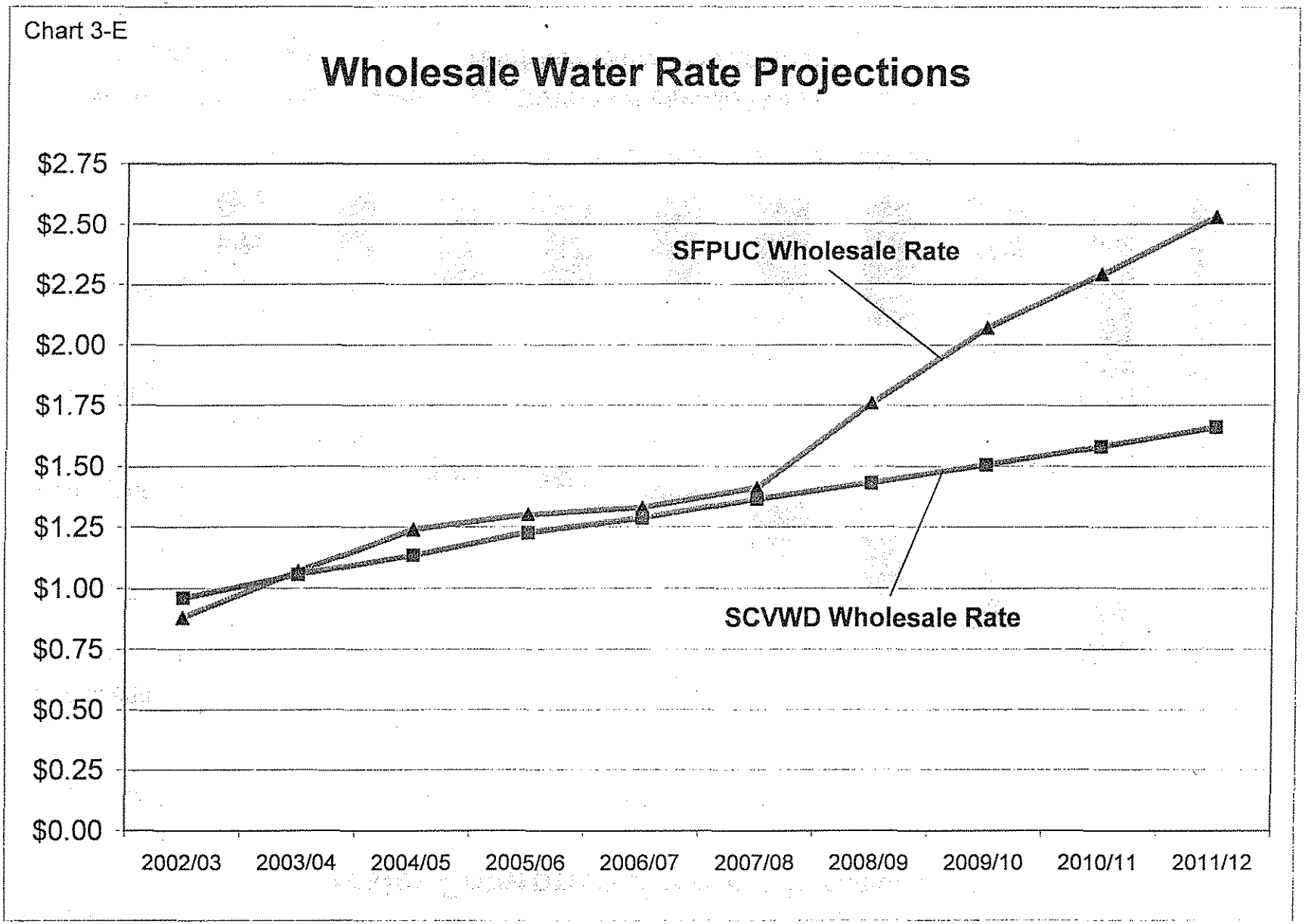

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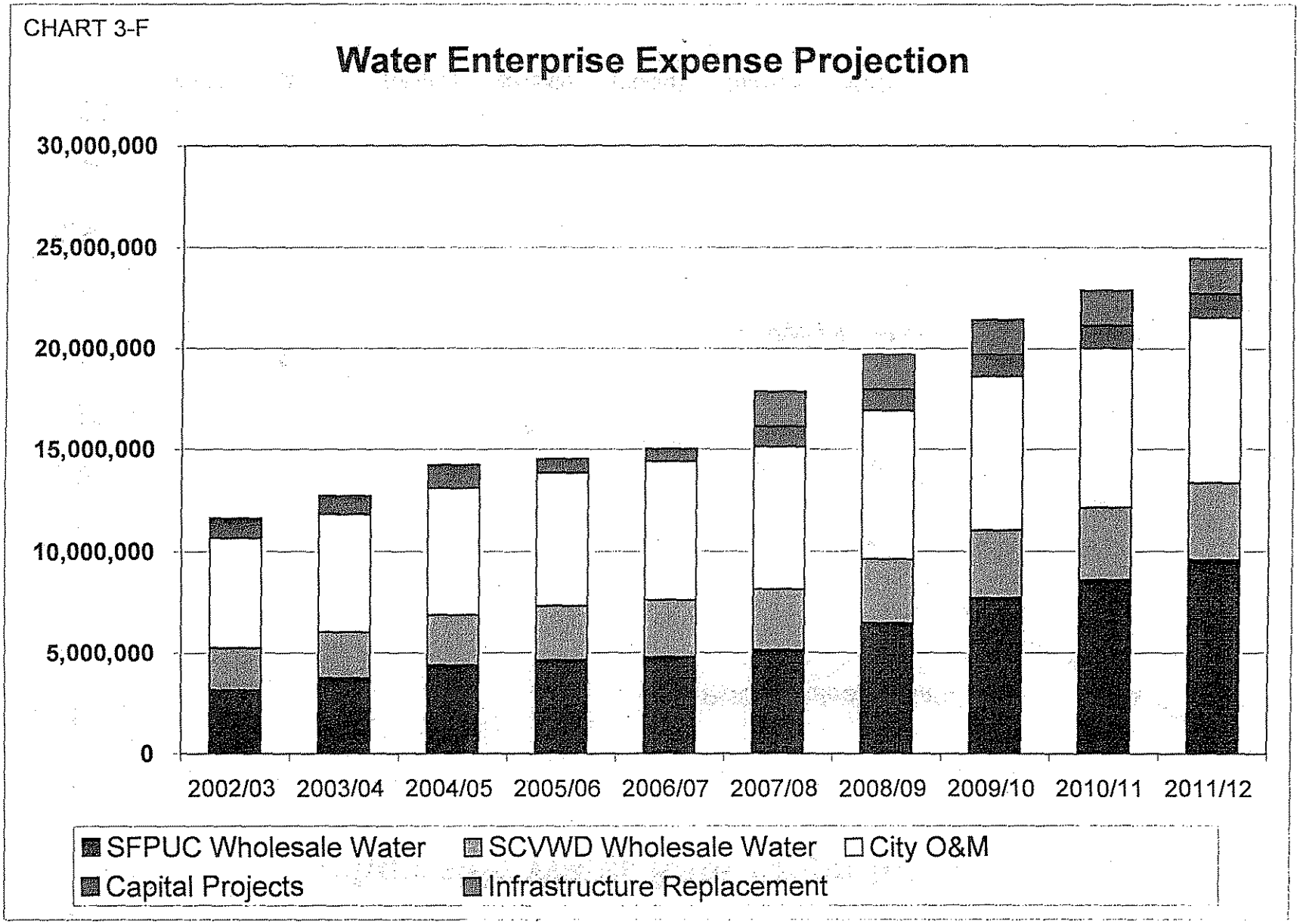
CHART 3-F



BARTLE WELLS ASSOCIATES
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CHART 3-G

Projected Annual Water Rate Increases

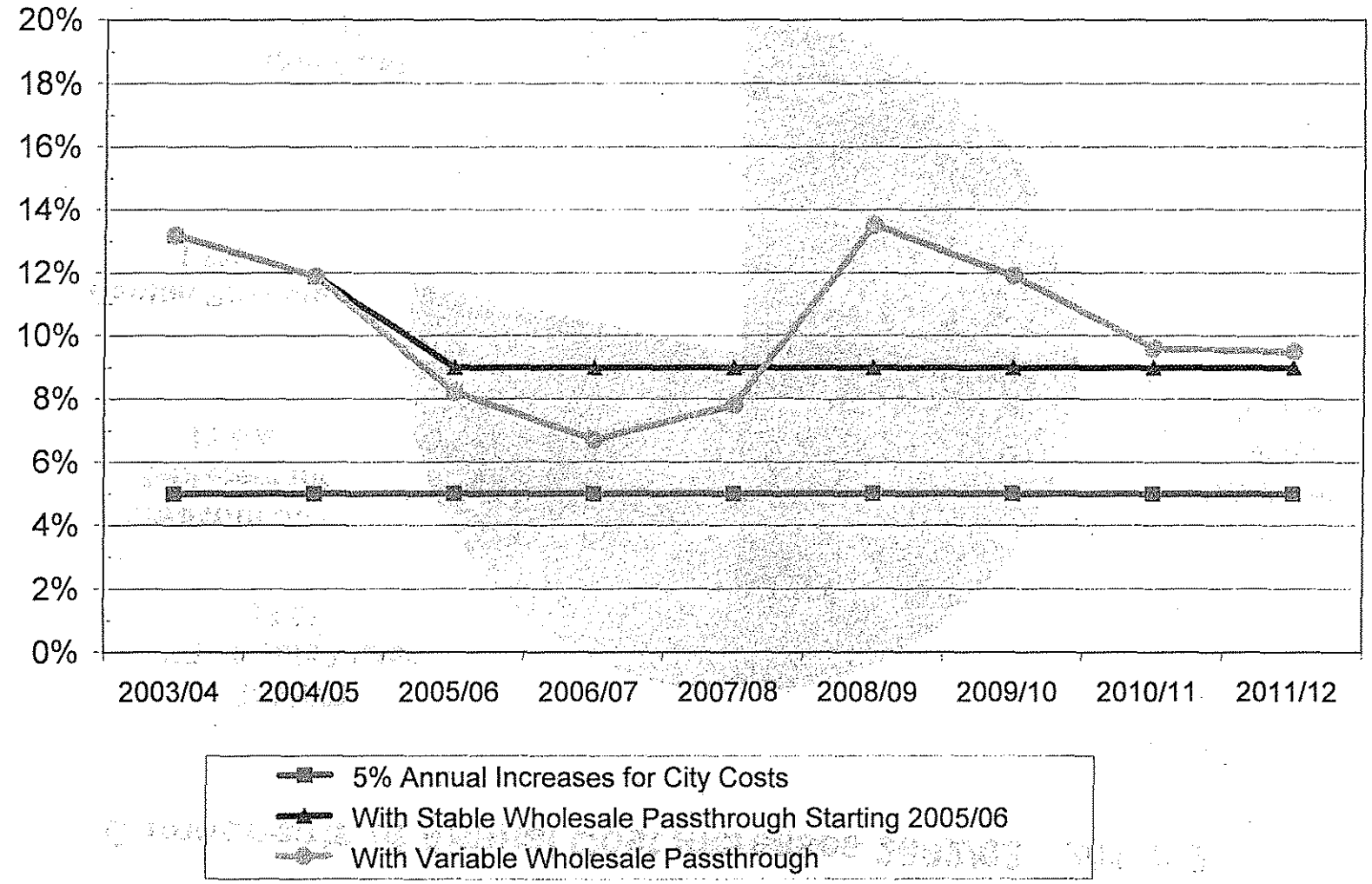

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CHART 3-H

Components of Annual Cost Increases 2002/03 - 2011/12

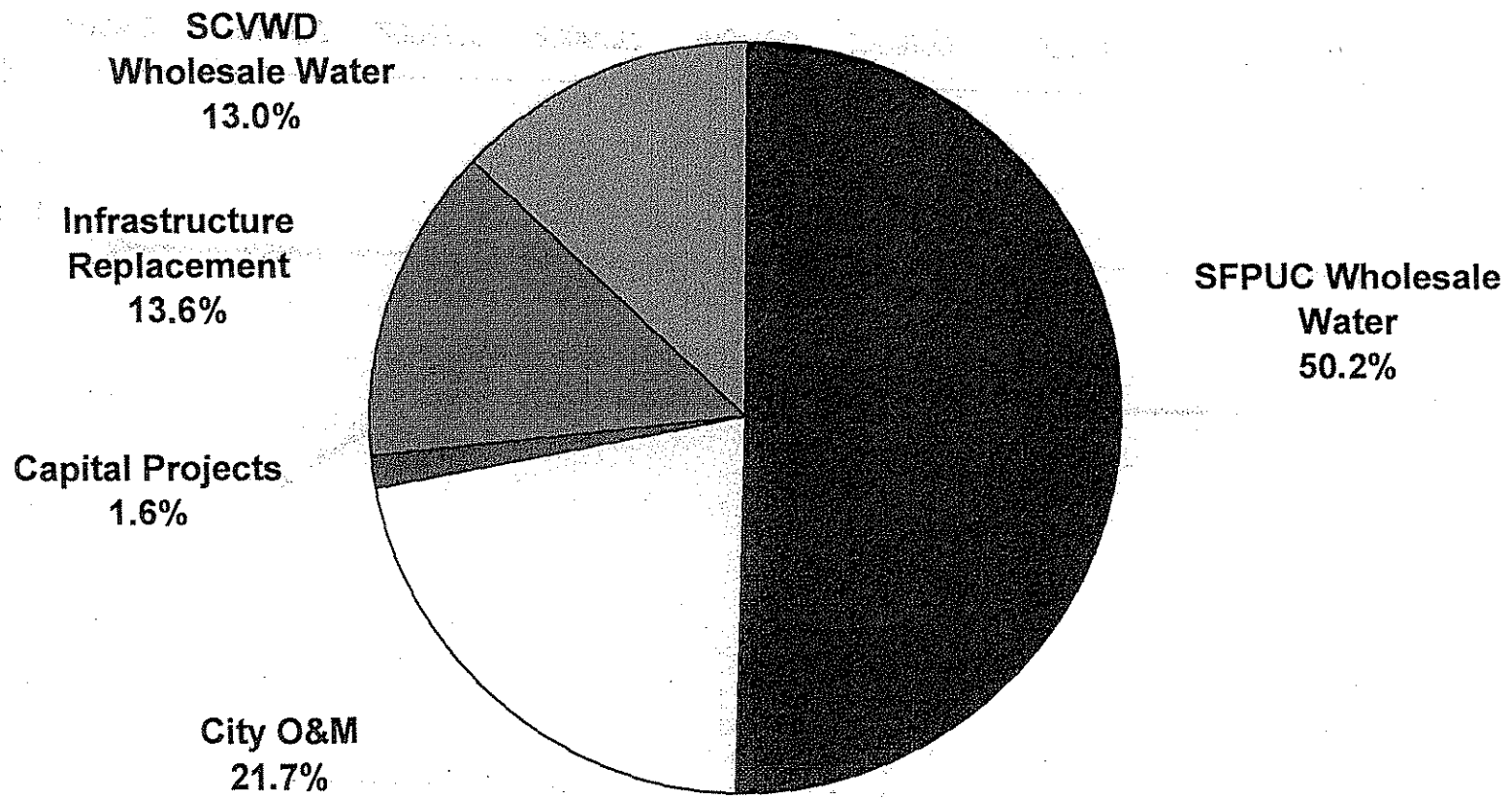

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CHART 3-I

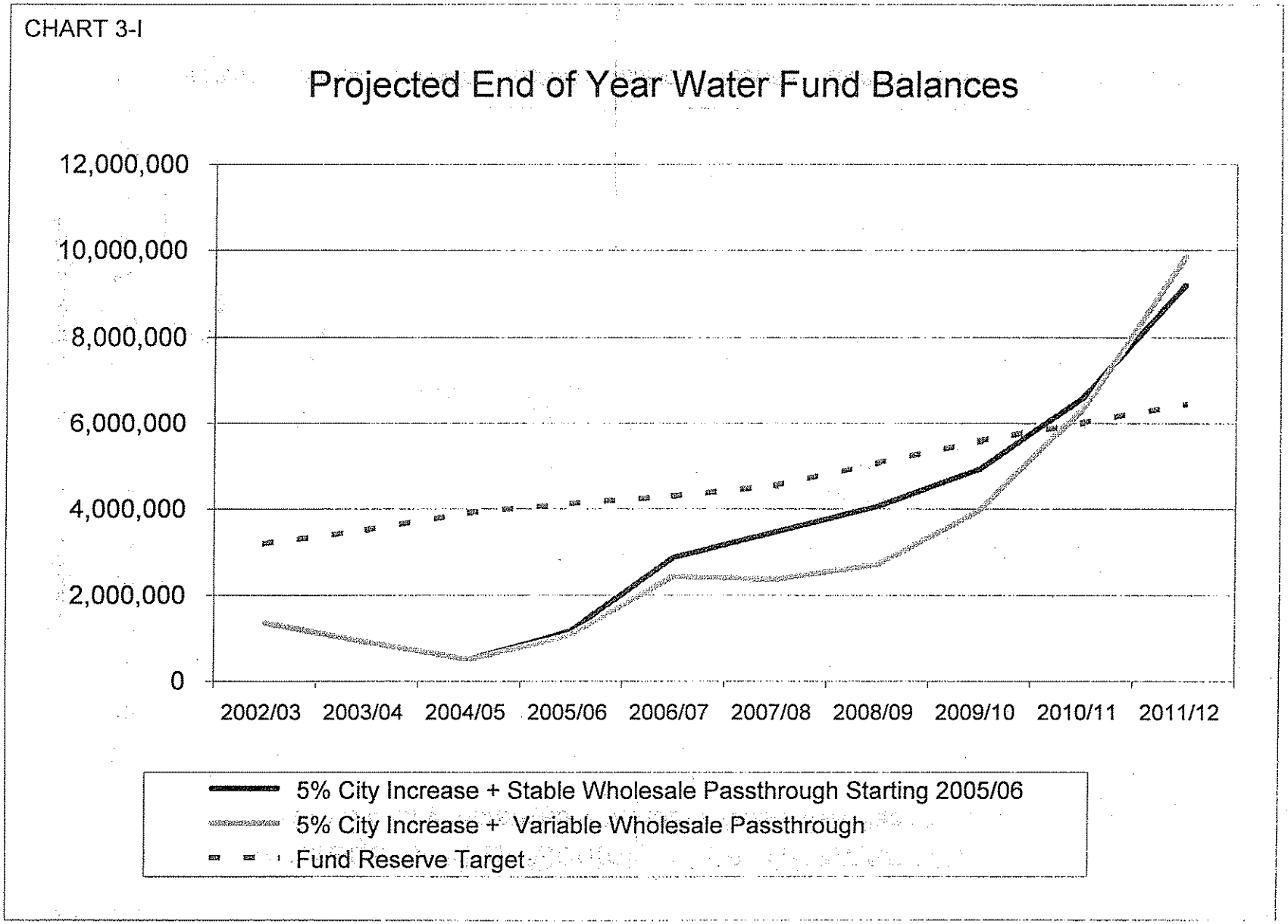

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CHART 3-J

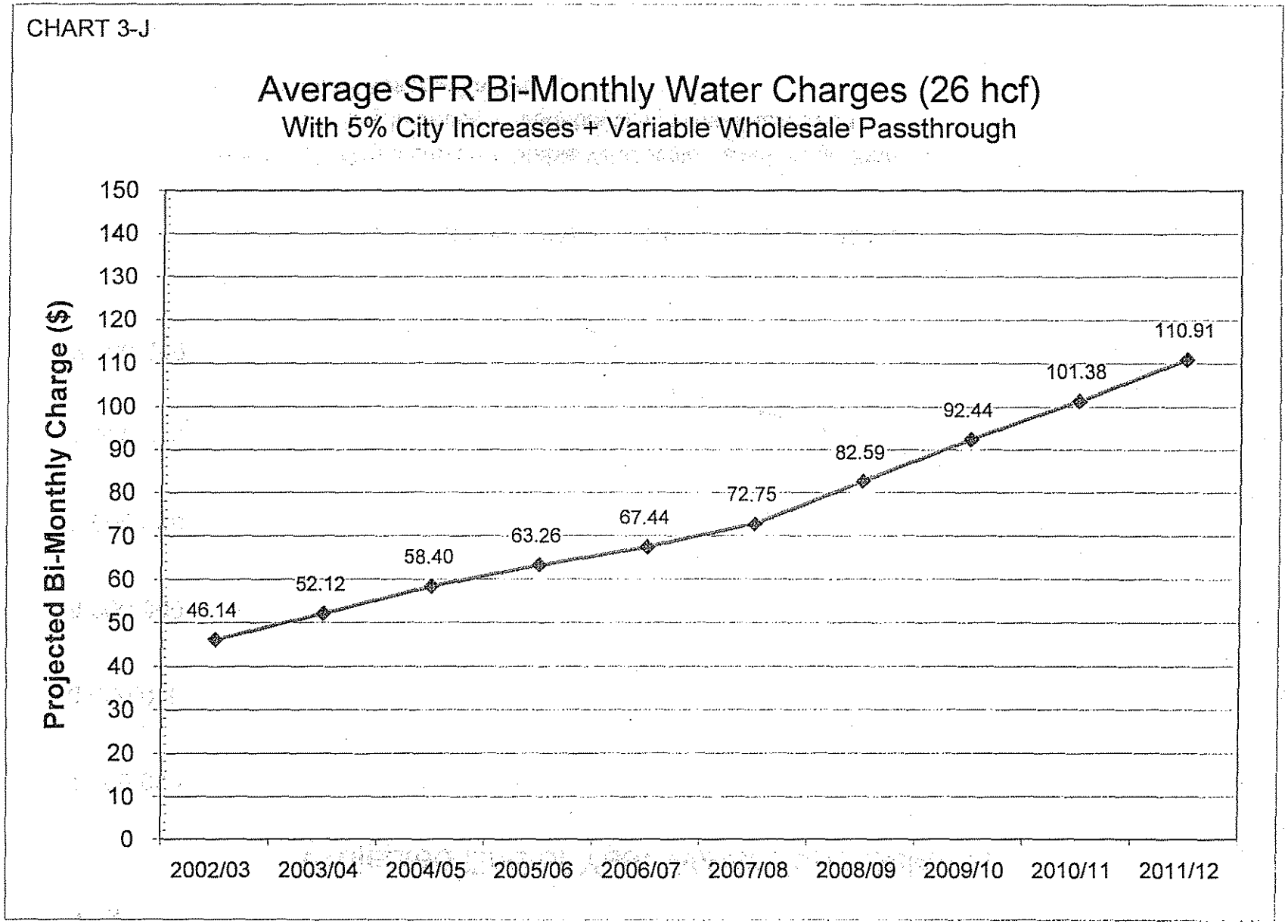

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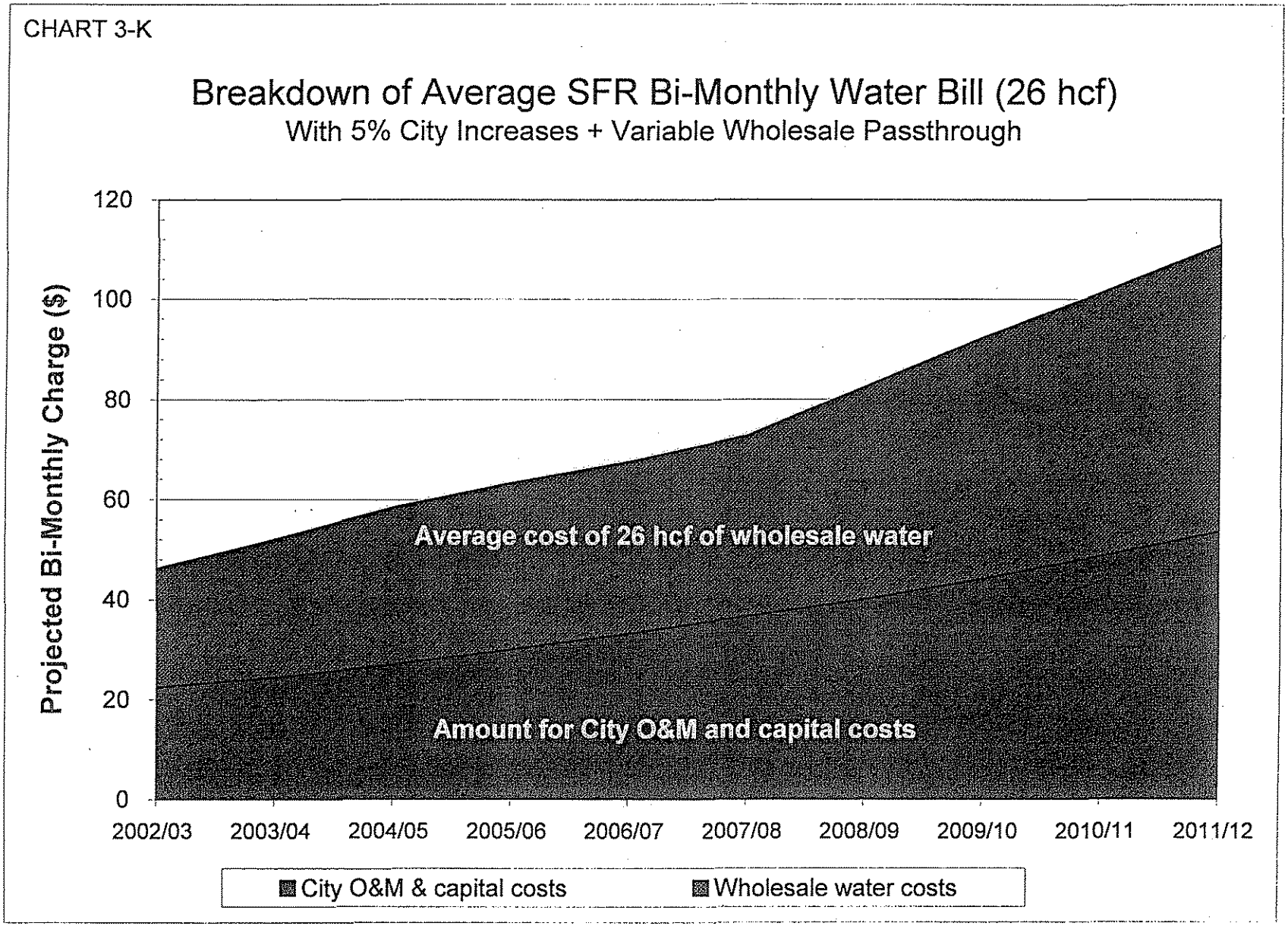
CHART 3-K



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RECYCLED WATER FUND

4 RECYCLED WATER FUND

4.1 Recycled Water System, Customers, and Finances

4.1.1 Recycled Water Fund

The City began providing recycled water services in October 1997 as part of the South Bay Water Recycling Program. The program was implemented to 1) reduce the amount of treated effluent discharged by San Jose/Santa Clara Water Pollution Control Plant into the South San Francisco Bay and 2) provide reliable, drought-proof non-potable water supplies to meet regional water needs.

The City keeps a separate accounting of recycled water revenues and expenses and has a goal of making the recycled water fund a self-supporting enterprise while maintaining balanced budgets and positive fund balances.

4.1.2 Recycled Water Customers

The City provides recycled water service to about 126 irrigation customers. Recycled water is used for landscape irrigation at commercial and industrial sites, and at selected residential complexes. An expansion to serve parks and schools is currently under construction. City policy requires new commercial and industrial customers located near existing recycled water mains to use recycled water for landscape irrigation.

4.1.3 Recycled Water Use

Table 4-1 shows a history of recycled water purchases by month for the past 4 years. Recycled water purchases from the SBWRP are governed by contract with the City of San Jose. Recycled water use has increased substantially over the past few years. In 2001/02, the City purchased about 322,000 hcf of recycled water, about 30% over the prior year. Because there are abundant excess supplies of recycled water available from the treatment plant, the City will face no constraints in meeting future non-potable needs.

4.1.4 Recycled Water Finances

As of June 30, 2002, the recycled water fund had an unreserved fund balance of about $614,000. Table 4-2 shows a five-year history of recycled water enterprise revenues and expenses. In 2001/02, recycled water sales are budgeted to account for $750,000, or 95% of all revenues. Wholesale purchases are budgeted at $150,000, about 25% of total expenses. Other operating costs total about $118,000, or 20% of total costs.

Lost Revenue Transfer – Each year, the recycled water fund reimburses the water fund for "lost revenues" resulting from estimated potable water purchases that were replaced by recycled water purchases when potable water customers were switched to recycled service. This transfer is budgeted at $300,000 in 2002/03, about half of total recycled water expenses.

Sewer Fund Loan Repayment - In 1999/00 the recycled water fund received a $90,000 loan from the sewer fund to make up for a negative fund balance. The loan is being repaid in three annual installments of $33,950 with final payment 2002/03.

SBWRP Reimbursement – A portion of recycled water operating expenses are funded via semi-annual transfers from the City of San Jose. Each year, the City submits an annual workplan to the City of San Jose/SBWRP. The workplan estimates recycled water operating and maintenance expenses for the upcoming year. San Jose pays for these expenses by transfering half of the projected expenses to the City in September and half in January. If actual expenses come in lower than projected, the City keeps the overpayment from San Jose and applies it to future year expenditures.

4.1.5 Recycled Water Rates

Table 4-3 shows recycled water rates for 2002/03. The recycled water rate structure is similar to the City's potable rate structure. Customers pay a fixed bi-monthly meter charge based on meter size, plus a quantity charge based on metered water use.

The fixed meter charge is equal to the meter charge for potable water customers. Agricultural accounts and customers formerly served by wells pay a flat bi-monthly meter charge of $60 regardless of meter size.

Recycled water quantity charges are set at 80% of potable water charges for irrigation water, and at 50% of potable rates for most other uses. Recycled agricultural service is billed at $0.08 per hcf. Recycled water rates are lower than potable rates for a number of reasons including: 1) wholesale recycled water rates are less than half wholesale potable rates, 2) recycled water infrastructure is owned and financed by the South Bay Water Recycling Project, 3) the City receives a reimbursement for some of its recycled water maintenance expenses, and 4) the City wishes to encourage recycled water use.

4.1.6 Wholesale Recycled Water Rates

Wholesale recycled water rates from the WPCP vary based on the end-users previous potable water source. The wholesale cost of recycled water to agricultural customers is $0.08 per hcf, and the rate for customers who previously used wells is $0.44 per hcf. The wholesale rates have remained constant since initiation of the recycled water program in 1997. However, the wholesale recycled rate is expected to increase to $0.55 per hcf in 2003/04. The City is billed quarterly for its recycled water purchases.

4.1.7 Recycled Water Capital Improvement Funding

The City anticipates that recycled water capital projects will be funded by the City of San Jose/SBWRP, which owns the recycled water distribution system. These costs are indirectly recovered via the City's sewer rates which are used to finance the City's share of SBWRP operating and capital costs.

4.2 Financial Projections

4.2.1 Assumptions

Long-term cash flow projections were developed to evaluate the recycled water enterprise's financial position over the next 20 years. The cash flow projections are based on a number of assumptions. For financial planning purposes, the assumptions are slightly conservative based on the best information currently available. Some of the basic assumptions include:

- **Growth:** Recycled water use is projected to increase at the annual rate of 10% for the next four years. No additional future growth is projected.
- **Recycled water rates:** The financial projections assume that recycled water rates will increase at the same rate as potable water rates.
- **South Bay Water Recycling Program (SBWRP) reimbursements:** The SBWRP is projected to reimburse the City for 90% of annual operating costs for personnel and services and supplies.
- **Lost revenue transfers to Water Fund:** The recycled water fund reimburses the water fund for potable water revenues lost due to customer conversions to recycled. These transfers were budgeted at $300,000 in 2002/03 and are projected to increase based on growth in recycled water use and increases in potable and recycled rates.
- **Transfers to the General Fund for operating costs:** The recycled water enterprise is budgeted to transfer about $11,000 to the General Fund for City operating expenses in 2002/03. These transfers are projected to increase to $50,000 in 2003/04.

A more comprehensive list of assumptions is listed on Table 4-4.

4.2.2 Projected Recycled Water Use & Cost

Table 4-5 shows recycled water use and wholesale cost projections. Recycled water usage is projected to increase at the annual rate of 10% for the next four years to a total of 555,000 hcf per year, in line with Urban Water Management Plan projections. The City estimates that 90% of this increase will be generated from current water customers converting from potable to recycled water use. No additional future growth in recycled water use is projected at this time.

Wholesale recycled water rates are expected to increase from $0.44 to $0.55 in 2003/04. This represents a 25% wholesale rate increase. Future wholesale recycled rates increases are tied to SCVWD wholesale untreated water rate projections through 2007/08 and then increase at the annual rate of 5% thereafter.

4.2.3 Cash Flow Projections

Table 4-6 shows recycled water cash flow projections. The projections assume that recycled water rates will increase at the same rate as potable water rates with a variable wholesale rate pass-through. The projections indicate that the recycled water fund should generate approximately $200,000 to $400,000 per year.

4.2.4 Rate Adjustments

Recycled water rates are tied to potable water rates. The fixed bi-monthly meter charges for recycled water customers are set at the same rates for potable customers. Recycled water quantity charges are set at 80% of potable water charges for irrigation water, and at 50% of potable rates for most other uses. To maintain the same relation between recycled and potable charges, recycled water rates should be adjusted by the same percentages as potable rates.

4.2.5 Fund Balance Projections

Based on the cash flow projections, recycled water reserves will increase by approximately $200,000 to $400,000 per year. This will result in a gradual buildup of fund reserves in future years. These reserves can be used to fund customer conversions to recycled water, unanticipated operating expenses, or capital projects.

Table 4-1
City of Milpitas - Financial Utility Master Plan
Historical Recycled Water Purchases by Month (hcf)

Month	1998/99	1999/00	2000/01	2001/02
Jul	14,378	46,736	40,464	66,061
Aug	10,088	10,277	17,643	12,369
Sep	41,295	49,263	53,087	92,850
Oct	1,549	9,413	12,549	13,574
Nov	32,461	35,435	38,364	54,042
Dec	1,860	2,830	6,621	2,985
Jan	10,482	15,052	20,276	18,299
Feb	752	2,938	4,950	1,621
Mar	3,900	6,605	15,020	10,425
Apr	683	4,885	2,551	7,073
May	12,562	21,886	26,976	30,450
Jun	7,046	9,451	9,212	11,928
Total	137,056	214,771	247,713	321,677
Increase		56.7%	15.3%	29.9%

Source: City of Milpitas.

Table 4-2
City of Milpitas - Financial Utility Master Plan
Recycled Water Revenue & Expense History

	Actual 1997/98	Actual 1998/99	Actual 1999/00	Actual 2000/01	Estimated 2001/02
REVENUES					
Recycled water service charges	3,623	200,837	338,937	441,524	660,000
Interest earnings	3,225	36	18,609	37,170	27,000
Water service agreements	1,529	393	10,670	6,000	0
Reimbursements	129,400	80,700	16,392	(14,427)	80,285
Total revenues	137,777	281,966	384,608	470,267	767,285
EXPENSES					
Personnel services	61,163	37,606	16,130	28,234	67,537
Services & supplies	3,944	27,866	8,186	5,596	18,058
Recycled water purchases	1,498	42,668	70,839	91,635	124,200
Capital outlay	24,987	0	24	0	10,000
Transfer to General Fund	0	13,952	9,183	9,470	9,826
Transfer to Water Fund	0	81,000	107,420	196,911	268,975
Transfer to Sewer Fund	0	0	0	33,950	33,950
Appn Transfer to Water M&O	0	0	48,470	0	0
Total expenses	91,592	203,092	260,252	365,796	532,546
Revenues less expenses	46,185	78,874	124,356	104,471	234,739

Source: City of Milpitas 2002/03 Budget & Financial Plan and Financial System Reports by Fund.

Table 4-3
City of Milpitas - Financial Utility Master Plan
Recycled Water Rates

	2002/03
Rate Adjustment	7.5%
Bimonthly Meter Charges	
Meter Size	
5/8"	$13.60
3/4"	14.47
1"	20.59
1-1/2"	25.94
2"	33.83
3"	90.59
4"	114.78
6"	175.19
8"	229.53
10"	332.25
Irrigation (Ag Svc & Formerly Served by Wells)	$60.00
Quantity Charges (per hcf)	
Recycled Industrial Process	$1.17
Recycled Sanitary Use Inside Dual Plumbing	1.17
Recycled (Formerly Served by Wells)	0.44
Recycled (Agricultural Service)	0.08
Recycled (All Other)	2.13
City of Milpitas - Recycled Accounts	0.42

Table 4-4
City of Milpitas - Financial Utility Master Plan
Recycled Water Revenue & Expense Assumptions

RECYCLED WATER PURCHASES

1 Growth in customer base and recycled water usage projected at 10% annually for the next 4 years, then at 0% thereafter
2 Wholesale recycled water rate projected at $0.39 per hcf in 2002/03 and $0.55 per hcf in 2003/04. Future rates increases are tied to SCVWD wholesale untreated water rate projections through 2007/08 and then increase at the annual rate of 5% thereafter.
3 Average charge per unit of recycled water estimated at $1.87 in 2002/03 and increases based on annual rate adjustments

REVENUES

1 Recycled water rate adjustments are tied to potable water rate adjustments.
2 Recycled service charge revenues assume an average charge of $1.87 per hcf in 2002/03 and increase due to a) increase in recycled water use, and b) increase in recycled water rates
3 Service charge revenues assume rate increases do not apply to first 30% of annual revenues due to a three-month lag from beginning of fiscal year until a rate increase impacts revenues
4 Interest earnings projected at 3.5% of average annual fund balance
5 Reimbursements from South Bay Water Recycling Program calculated at 90% of annual Personnel Services and Services & Supply expenses

EXPENSES

1 Expense projections based on 2002/03 budget
2 Personnel Services expenses increase at the annual rate of 6.5% in 2003/04, 9% in 2004/05, 5% in 2005/06 and 2006/07, and 4% thereafter
3 Services & supplies projected to escalate at the annual rate of 3.0%
4 Recycled water purchases based on Recycled Water Cost Projection table
5 Capital outlay projected to increase from $10,000 in 2002/03 by $5,000 per year through 2005/06 and escalate at the annual rate of 3% thereafter
6 Transfers to the General Fund are projected at $50,000 in 2003/04 and then increase at the same rate as Personnel Services expenses.
7 Transfers to Water Fund projected to increase based on growth and rate adjustments
8 The $33,950 transfer to Sewer Fund in 2002/03 represents the final loan payment

Table 4-5
City of Milpitas - Financial Utility Master Plan
Recycled Water Cost Projections

	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Recycled Water Purchases									
Amount purchased (hcf)	414,500	456,000	501,500	552,500	555,000	555,000	555,000	555,000	555,000
Annual increase (hcf)	37,500	41,500	45,500	51,000	2,500	0	0	0	0
Annual increase %	10%	10%	10%	10%	0%	0%	0%	0%	0%
Wholesale Costs									
Est. wholesale rate ($/hcf)	$0.55	$0.65	$0.68	$0.73	$0.76	$0.80	$0.84	$0.88	$0.92
Annual increase %	41%	19%	4%	8%	4%	5%	5%	5%	5%
Total cost (rounded)	$228,000	$296,000	$341,000	$403,000	$422,000	$444,000	$466,000	$488,000	$511,000

Table 4-5 continued
City of Milpitas - Financial Utility Master Plan
Recycled Water Cost Projections

	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
Recycled Water Purchases										
Amount purchased (hcf)	555,000	555,000	555,000	555,000	555,000	555,000	555,000	555,000	555,000	555,000
Annual increase (hcf)	0	0	0	0	0	0	0	0	0	0
Annual increase %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Wholesale Costs										
Est. wholesale rate ($/hcf)	$0.97	$1.02	$1.07	$1.12	$1.18	$1.24	$1.30	$1.37	$1.44	$1.51
Annual increase %	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Total cost (rounded)	$538,000	$566,000	$594,000	$622,000	$655,000	$688,000	$722,000	$760,000	$799,000	$838,000

Table 4-6
City of Milpitas - Financial Utility Master Plan
Recycled Water Cash Flow Projection
Linked to Variable Wholesale Water Rate Passthrough

	Estimated	Projected								
	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Beginning fund balance	$614,000	750,000	944,000	1,139,000	1,361,000	1,606,000	1,863,000	2,143,000	2,444,000	2,758,000
Projected growth		10%	10%	10%	10%	0%	0%	0%	0%	0%
Rate adjustment (linked to wtr rates)		13.2%	11.9%	8.2%	6.7%	7.8%	13.5%	11.9%	9.6%	9.5%
REVENUES										
Recycled water service charges	705,000	840,000	994,000	1,150,000	1,321,000	1,399,000	1,531,000	1,659,000	1,770,000	1,888,000
Interest earnings	18,917	26,000	33,000	40,000	48,000	56,000	65,000	75,000	86,000	97,000
Reimbursements from SBWRP	14,000	93,000	102,000	107,000	113,000	118,000	123,000	129,000	134,000	140,000
Other	0	0	0	0	0	0	0	0	0	0
Total	737,917	959,000	1,129,000	1,297,000	1,482,000	1,573,000	1,719,000	1,863,000	1,990,000	2,125,000
EXPENSES										
Personnel services	88,790	95,000	104,000	109,000	114,000	119,000	124,000	129,000	134,000	139,000
Services & supplies	7,280	8,000	9,000	10,000	11,000	12,000	13,000	14,000	15,000	16,000
Recycled water purchases	150,000	228,000	296,000	341,000	403,000	422,000	444,000	466,000	488,000	511,000
Capital outlay	10,000	15,000	20,000	25,000	26,000	27,000	28,000	29,000	30,000	31,000
Transfer to General Fund	11,433	50,000	55,000	58,000	61,000	63,000	66,000	69,000	72,000	75,000
Transfer to Water Fund	300,000	369,000	450,000	532,000	622,000	673,000	764,000	855,000	937,000	1,026,000
Transfer to Sewer Fund	33,950	0	0	0	0	0	0	0	0	0
Transfer to CIP	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0
Total expenses	601,453	765,000	934,000	1,075,000	1,237,000	1,316,000	1,439,000	1,562,000	1,676,000	1,798,000
Revenues less expenses	136,464	194,000	195,000	222,000	245,000	257,000	280,000	301,000	314,000	327,000
Ending fund balance	750,464	944,000	1,139,000	1,361,000	1,606,000	1,863,000	2,143,000	2,444,000	2,758,000	3,085,000
Min fund reserve target (25% O&M)	150,000	190,000	230,000	270,000	310,000	330,000	360,000	390,000	420,000	450,000

Table 4-6 continued
City of Milpitas - Financial Utility Master Plan
Recycled Water Cash Flow Projection
Linked to Variable Wholesale Water Rate Passthrough

	Projected									
	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
Beginning fund balance	3,085,000	3,396,000	3,691,000	3,969,000	4,231,000	4,470,000	4,683,000	4,870,000	5,025,000	5,147,000
Projected growth	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Rate adjustment (linked to wtr rates)	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
REVENUES										
Recycled water service charges	1,914,000	1,941,000	1,968,000	1,996,000	2,024,000	2,052,000	2,081,000	2,110,000	2,140,000	2,170,000
Interest earnings	108,000	119,000	129,000	139,000	148,000	156,000	164,000	170,000	176,000	180,000
Reimbursements from SBWRP	146,000	152,000	158,000	165,000	172,000	179,000	186,000	194,000	202,000	210,000
Other	0	0	0	0	0	0	0	0	0	0
Total	2,168,000	2,212,000	2,255,000	2,300,000	2,344,000	2,387,000	2,431,000	2,474,000	2,518,000	2,560,000
EXPENSES										
Personnel services	145,000	151,000	157,000	163,000	170,000	177,000	184,000	191,000	199,000	207,000
Services & supplies	17,000	18,000	19,000	20,000	21,000	22,000	23,000	24,000	25,000	26,000
Recycled water purchases	538,000	566,000	594,000	622,000	655,000	688,000	722,000	760,000	799,000	838,000
Capital outlay	32,000	33,000	34,000	35,000	36,000	37,000	38,000	39,000	40,000	41,000
Transfer to General Fund	78,000	81,000	84,000	87,000	90,000	94,000	98,000	102,000	106,000	110,000
Transfer to Water Fund	1,047,000	1,068,000	1,089,000	1,111,000	1,133,000	1,156,000	1,179,000	1,203,000	1,227,000	1,252,000
Transfer to Sewer Fund	0	0	0	0	0	0	0	0	0	0
Transfer to CIP	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0
Total expenses	1,857,000	1,917,000	1,977,000	2,038,000	2,105,000	2,174,000	2,244,000	2,319,000	2,396,000	2,474,000
Revenues less expenses	311,000	295,000	278,000	262,000	239,000	213,000	187,000	155,000	122,000	86,000
Ending fund balance	3,396,000	3,691,000	3,969,000	4,231,000	4,470,000	4,683,000	4,870,000	5,025,000	5,147,000	5,233,000
Min fund reserve target (25% O&M)	460,000	480,000	490,000	510,000	530,000	540,000	560,000	580,000	600,000	620,000

SEWER ENTERPRISE

5 SEWER ENTERPRISE

5.1 Sewer System, Customers, and Use

5.1.1 Overview

The sewer utility is a self-supporting enterprise; revenues derived from sewer rates and other sources, including reserves, must be sufficient to cover all operating and capital expenditures each year. The City's sewer enterprise serves about 14,250 accounts which discharge about 9.7 million gallons per day (mgd) of wastewater on average. The City operates a local wastewater collection system and sends all flows to the San Jose/Santa Clara Water Pollution Control Plant (WPCP) for treatment and disposal.

5.1.2 Wastewater Collection System

The City operates and maintains a wastewater collection system consisting of 167 miles of sewer mains (pipelines), 2 sewer pump stations, about 1,375 flushing inlets, and about 2,510 sewer manholes. Wastewater discharge is transported, mostly by gravity feed, to a pump station in the northwest area of the City where it then pumped to the regional treatment plant.

5.1.3 San Jose/Santa Clara Water Pollution Control Plant

The San Jose/Santa Clara Water Pollution Control Plant is a regional wastewater treatment plant serving 8 tributary sewage collection agencies, including municipalities and sanitary sewer districts. The treatment plant is jointly owned by the cities of San Jose and Santa Clara and is administered and operated by the City of San Jose's Environmental Services Department. The plant is one of the largest advanced wastewater treatment facilities in California and serves over 1,500,000 people in a 300 square mile service area located around the southern part of the San Francisco Bay. The WPCP has the capacity to treat 167 million gallons of wastewater per day to a tertiary level and can handle peak wet weather flows of up to 271 mgd.

Most of the treated effluent is discharged as fresh water into the South San Francisco Bay. This effluent has a lower salinity content than the brackish water of the South Bay and can adversely affect the ecological balance of the South Bay's fragile habitat and the survival of certain endangered species. Because of this ecological risk, the Regional Water Quality Control Board set a target limit on the amount of effluent that the WPCP can discharge into the Bay. That target limit is currently set at 120 mgd of average dry weather effluent. The average dry weather flow in 2000/01 was about 116 mgd.

The South Bay Water Recycling Project and the South Bay Action Plan were implemented in recent years to help the WPCP meet its effluent targets over the long-term. The SBWRP was established as a means of diverting effluent for non-potable uses such as landscaping, agricultural irrigation, and some industrial uses. About 10% of the treatment plant's effluent is currently recycled through the SBWRP. The City of Milpitas is the recipient of some of this recycled water.

The South Bay Action Plan includes a number of projects to help reduce WPCP effluent. The projects include: 1) expansion of the recycled water system, 2) industrial water recycling and reuse, 3) inflow/infiltration reduction, and 4) environmental enhancement pilot projects.

The WPCP's operating and capital budgets are developed by staff from San Jose's Environmental Services Department. The budgets are reviewed by a Treatment Plant Advisory Committee consisting of members of most of the tributary agencies prior to adoption.

5.1.4 Wastewater Treatment Capacity

The City has contractual rights for 12.5 mgd of average dry weather flow (ADWF) capacity in the regional treatment plant. This flow is generally defined as the average flow generated during the maximum 5-day period measured during dry weather (summer months) at the treatment plant. This 5-day period is known as "peak week." In 2001/02, the City discharged 8.9 mgd during peak week, well below the City's capacity limit.

The City anticipates that wastewater flows will increase over the next 20 years due to growth. Substantial growth is projected due to the Midtown Milpitas Specific Plan, which is projected to increase the City's population by 6,400 people over the next 20 years. Wastewater flow projections indicate that the City may need additional treatment capacity within the next 10 to 20 years due to growth. Even with slow growth, the City may exceed its 12.5 mgd capacity due to annual variation in sewer flows as shown on Chart 5-A.

The City will eventually need to obtain additional capacity in the regional treatment plant. The capacity can be obtained by a number of methods including:

- Purchase additional capacity in the treatment plant using cash or debt. Ideally, these costs can be funded by new development via connection fees.
- Purchase rights to use excess capacity held by other tributary agencies.
- Adopt mutual agreements with other tributary agencies use of excess capacity when needed
- Pursue other regional solutions

Industrial pretreatment is required for customers whose wastewater contains metals and other wastewater constituents at levels that exceed the treatment plant's capacity to remove those constituents from the wastewater stream.

5.1.5 Customers

Table 5-1 shows the number of sewer customers by class. In 2002, the City provided sewer service to about 14,240 accounts. Residential customers comprise 93% of total accounts with single family residences alone accounting for about 85% of all customers. All residential dwelling units, including multi-family and mobile home customers, are

billed a fixed amount per dwelling unit. Non-residential customers are billed based upon water meter readings. Chart 5-B shows a graphic breakdown of customers by class.

5.1.6 Wastewater Strength by Customer Class

Table 5-2 lists wastewater strength estimates for each of the City's customer classes. In order to meet legal permit requirements, the regional treatment plant must remove the three types of wastewater constituents shown – BOD, SS, and NH3 – from the discharge stream. The three strength measurements correspond with those used by the WPCP to allocate costs to the tributary agencies. The wastewater strength measures include:

BOD – Biological/Biochemical Oxygen Demand: This is a commonly used measure of the amount of organic oxygen-demanding material in a customer's wastewater effluent. The wastewater treatment process uses microorganisms to convert this organic matter to carbon dioxide and water.

SS – Suspended Solids: This is a measurement of the density of undissolved particles suspended in each customer's wastewater discharge. The treatment plant must remove these particles to meet its permit requirements.

NH3 – Ammonia: Ammonia must be removed from the effluent stream because it adversely affects water quality, including pH and nutrient balances. Ammonia also causes undesirable odors.

Wastewater strength estimates for each large industrial customer are based on actual sampling data. The City's BOD, SS, and NH3 strength estimates for residential, commercial, and institutional customers are based on standards established by the State Water Resources Control Board. All of the tributary agencies to the regional treatment plant use the same wastewater strength estimates for residential and commercial customers. This enables the WPCP to allocate costs equitably among the tributary agencies.

5.1.7 Sewer Flow

Chart 5-C shows a history of metered wastewater discharges to the WPCP since 1975/76. Although wastewater flow remains fairly stable throughout the year, there is typically a slight increase in flows sent to the treatment plant during wet weather months due to infiltration and inflow.

5.2 Sewer Rates and Finances

5.2.1 Sewer Rates

Table 5-3 shows the current sewer rate schedule. Rates have not increased since 1999/00 and have fallen behind the cost of service. Sewer rates vary by customer class based on wastewater strength estimates for each class. The City's rate structure conforms with

State Water Resources Control Board revenue program guidelines which require each customer or class to pay sewer rates in proportion to the cost of service received. An adjustment to the sewer loadings of one customer class typically affects the rates for all classes as costs are reallocated.

Rates were most recently adjusted in 2002/03 in accordance with the SWRCB revenue program guidelines. The rates were set such that after the 2002/03 cost allocation, residential rates remained unchanged. This resulted in a slight rate decrease for most commercial and industrial customers.

Milpitas re-allocates costs to its customers each year based on estimated wastewater flows and strengths. According to the SWRCB, costs must be reallocated not less than every two years, but Milpitas re-allocates costs on an annual basis in line with the annual allocations of the San Jose/Santa Clara Water Pollution Control Plant.

Residential customers pay flat bi-monthly charges for wastewater service. The City has 3 residential customer classes. Single family residences pay a bi-monthly rate of $42.29. Sewer rates for multi-family dwelling units and mobile homes are $30.19 and $18.69 respectively. Residential rates have not been adjusted over the past two years.

Non-residential customers pay a fixed bi-monthly charge of $7.14 plus a quantity charge based on metered water use. The quantity charges vary by customer class. The City has 6 commercial rate classes, 3 institutional classes, and 17 industrial customers. Customers with higher strength wastewater, such as restaurants, pay higher rates to account for the increased costs of treating their sewer discharge. Residential, commercial, and institutional rates are based on sewage strength estimates for each class. Large industrial customers pay individual rates based on each customer's estimated discharge strength according to annual sampling data.

5.2.2 Sewer Enterprise Fund Reserves

The sewer enterprise maintains four separate funds. Each of these funds is treated as a separate accounting entity.

Sewer Fund – This is the main operating fund of the sewer enterprise. The fund is used to pay for all operating and maintenance costs for wastewater collection and treatment. The fund is also used to pay for ongoing capital and replacement projects as budgeted each year.

As of July 1, 2002, the sewer enterprise maintained an unreserved operating fund balance of about $2.3 million. The balance on July 1, 2003 is projected to decrease to about $1.97 million, roughly equal to the minimum fund reserve target recommended in this report. With the rate recommendations developed in this report, the fund balance is projected to further decrease through July 1, 2004 to about $1.7 million, before rate adjustments are gradually phased in to adequate levels.

Sewer CIP Fund - As of June 30, 2002 the capital improvement fund had a balance of about $5.6 million. Each year, the City sets aside the full cost of capital improvements approved that year by transferring money to the CIP fund. These funds are fully committed to specific capital improvement projects that were budgeted in past years. The CIP fund typically carries a significant balance that is reserved for the remaining costs of projects approved in prior years but still under construction.

Treatment Plant Construction Fund – As of June 30, 2002 the treatment plant construction fund had a balance of about $4.8 million. These fund reserves are designated for capital improvement projects. The treatment plant construction fund is generally used to fund capital improvements at the regional treatment plant or within the City's collection system. The main source of revenues for this fund is treatment plant connection fees and sewer connection fees collected from new development. According to the financial projections, this fund will be used to finance about $3.2 million of projects over the next three years. This fund may also be used to finance the acquisition of additional capacity in the wastewater treatment plant.

Sewer Infrastructure Fund – The sewer infrastructure fund was established in 2000/01 to build reserves to offset the future costs of facilities reaching the end of their useful lives. Fund balances totaled about $5.2 million on July 1, 2002. According to the financial plan, the infrastructure fund will finance $1.0 million of capital projects in each of the next three years in order to keep the sewer fund from falling far below minimum prudent reserve levels. The main source of revenue for this fund is transfers from the sewer fund. As noted earlier, the sewer fund will not be able to make any transfers to this fund until 2007/08, when rates have been phased in to adequate levels.

5.2.3 History of Revenues & Expenditures

Table 5-4 shows a 5-year history of revenue and expenditures. The City aims to roughly balance its budgets each year. Fund reserves generated in surplus years are typically used to make up any revenue shortfalls in deficit years.

5.2.4 Treatment Plant Operating Costs

Each year the WPCP develops an operating budget for the upcoming year. Annual WPCP operating costs are allocated to each of the tributary agencies according to a revenue program that accounts for the estimated wastewater flow and strength from each agency. Operating costs are not dependent upon the amount of each agency's contractual capacity rights.

Table 5-5 shows the treatment plants 2002/03 operating budget and allocations to the tributary agencies. The budget estimates that the City will owe $3.98 million for its 6.358% share of total treatment costs.

Together, WPCP operating and capital costs account for roughly half of the City's annual sewer budget. The City is contractually responsible for paying its assigned share of treatment plant costs.

5.2.5 Treatment Plant Capital Costs

Table 5-6 shows 5-year projections of Milpitas' share of anticipated WPCP capital costs and funding requirements as of February 2003. Each year the WPCP develops a 5-year projection of anticipated capital improvement costs. The majority of WPCP capital costs are allocated to each of WPCP's tributaries based on each agency's share of capacity rights in the treatment plant, regardless of actual discharge. Milpitas currently has rights to about 7.5% of WPCP capacity.

5.3 Financial & Rate Projections

5.3.1 Assumptions

Long-term cash flow projections were developed to evaluate the sewer enterprise's financial position over the next 20 years and determine annual revenue requirements and rate adjustments needed fund operating and capital programs. The cash flow projections are based on a number of assumptions. For financial planning purposes, the assumptions are slightly conservative based on the best information currently available. Some of the basic assumptions include:

- **Growth:** Projected at 0% in 2003/04 and at 1% annually thereafter.
- **Rate adjustments:** Service charge revenue projections assume rate increases do not apply to the first 25% of annual revenues due to a 3-month lag from beginning of fiscal year until a rate increase impacts the revenue stream.
- **Operating and maintenance expenses:** Personnel expenses increase at higher-than-typical rates to account for PERS retirement contribution increases over the next few years. Future personnel costs rise at the annual rate of 4%. Most other O&M expenses increase at the annual rate of 3%.
- **Treatment plant operating costs:** Operating expense projections are based on the 2002/03 treatment plant operating charge of about $4.0 million, which includes about $100,000 of replacement costs. The treatment plant operating cost budget is typically conservative; actual costs are often lower than budgeted. The financial projections are based on the conservative budget data. Future treatment plant operating costs increase at about 4% per year based on a) cost inflation estimated at 3% per year, and b) growth estimated at 1% per year beginning 2004/05.
- **Treatment plant capital costs:** The San Jose/Santa Clara Water Pollution Control Plant develops a 5-year capital improvement program each year. According to the projections, treatment plant capital costs will average about $900,000 annually over the next 5 years. Cash flow projections include about $1.0 million per year escalating by 3% annually as a placeholder for future treatment plant capital costs beginning 2008/09.
- **Capital project funding:** Cash flows provide for full funding of the City's 5-year CIP and projects identified in the Sewer Master Plan. The projections also include

about $1.0 million per year as a placeholder for future CIP funding beginning 2007/08.

- **Infrastructure replacement funding:** The Schaaf & Wheeler depreciation study identifies $26.4 million of sewer system replacements over the next 20 years. The projections assume no funding for replacements over the next 5 years, but fully fund the $26.4 million of project over a 20-year period.

A more comprehensive list of assumptions is detailed on Table 5-7.

5.3.2 Cash Flow Projections

Table 5-8 shows anticipated sewer fund cash flows for the next 20 years. The projections indicate that the sewer fund will operate at a large deficit over the next few years without substantial contributions from the Treatment Plant Fund and the Infrastructure Fund.

The projections assume that the City will use the Treatment Plant Fund to pay for treatment plant capital costs over the next three years. The projections also include annual transfers of $1.0 million from the Infrastructure Fund for the next three years to help offset higher-than-typical capital project costs. Without these transfers, the sewer fund will need large rate increases to fund its annual revenue requirements over the next few years. The transfers will enable the City to prudently use its reserves in order to facilitate a gradual increase in sewer rates.

The projections also include direct transfers from the Treatment Plant Fund to the Sewer CIP Fund to finance capital projects designated for growth.

Table 5-9 shows cash flow projections for the Treatment Plant Construction Fund.

Table 5-10 shows Sewer Infrastructure Fund cash flow projections.

Chart 5-D shows a 10-year projection of sewer fund expenditures by major expense category.

5.3.3 Rate Adjustments

The cash flow projections indicate the need for a series of rate adjustments beginning 2003/04. The increases will enable the sewer enterprise to fund its operating and capital programs while gradually building a prudent level of fund reserves. The following table shows projected rate adjustments assuming stable rate increases for City costs plus a pass-through for treatment plant costs. The pass-through for treatment plant costs is phased in over the next six years because rates have fallen behind and are not currently recovering adequate revenues for treatment plant costs. Beginning 2009/10, the pass-through for treatment plant costs is projected at 1.5% annually.

Projected Sewer Rate Adjustments

Adjustment	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
City	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%
Treatment Plant	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	1.5%	1.5%	1.5%
Total	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%	7.0%	7.0%	7.0%

Chart 5-E shows projected rate adjustments for City costs and for the treatment plant pass-through over the next 10 years.

5.3.4 Reasons for Rate Adjustments

Rate increases are needed for a number of reasons, including:

- Sewer rates have fallen behind the costs of service and do not fund annual expenses.
- The sewer fund will be operating at a deficit and is relying on a $5.2 million spend down of fund reserves – from the Treatment Plant Fund and Infrastructure Fund – over the next 4 years in order to make ends meet. Prudent use of these fund reserves will enable the City to phase in necessary rate increases over the next few years.
- Treatment plant operating costs are budgeted at about $4.0 million in 2002/03. This represents an almost 30% increase over $3.1 million spent in 2001/02 and a 54% increase over $2.6 million spent in 2000/01.
- Treatment plant capital costs are necessary to improve operations and meet regulatory requirements. According to WPCP February 2003 projections, the City's sewer fund will be billed about $900,000 per year on average over the next 5 years, substantially higher than the $400,000 budgeted in the current year.
- The sewer fund's share of capital improvements – necessary to maintain capacity in the City's wastewater collection system – is projected to average about $1.5 million annually over the next 5 years. This represents a substantial increase from CIP funding levels over the past 5 years, which have averaged about $500,000 annually.
- The Schaaf & Wheeler Utility Depreciation Study has identified $26.4 million in infrastructure replacement needs over the next 20 years. Historically, the sewer enterprise has transferred some money to the infrastructure fund. However, the transfers will need to increase substantially to meet identified expenses. The projections indicate that the sewer fund cannot afford to begin transferring money to the infrastructure fund until 2009/10.
- Operating and maintenance costs are projected to increase gradually in future years. In particular, personnel costs – which include costs for utility personnel and City personnel providing services to the water utility – are projected to increase by almost 30% over the next four years, largely due to increased PERS requirements and contract salary increases.

Chart 5-F shows the major components of annual cost increases over the next 10 years, which are also summarized on the following table. The breakdown provides a good indication of the underlying factors driving the rate increases.

Components of Annual Cost Increases, 2002/03 – 2011/12

Treatment Plant O&M	26.1%
Treatment Plant Capital	11.6%
City O&M	21.9%
Capital Projects	12.4%
Infrastructure Replacement	28.0%
Total	100.0%

5.3.5 Fund Balance Projections

Based on the cash flow projections, sewer operating fund reserves will decrease over the next two years until rates are gradually increased to sufficient levels. The ongoing rate increases should enable the sewer fund to gradually build fund reserves back to prudent minimum levels over the following years. The following table summarizes end-of-year fund balances and minimum fund reserve targets over the next 10 years. The table does not include reserves in the Sewer Infrastructure Fund or Treatment Plant Construction Fund; these reserves which are designated for other purposes.

Sewer Fund Balances (End-of-Year) & Minimum Reserve Targets ($ Millions)

	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Fund Balance	$2.0	$1.9	$2.2	$2.2	$1.8	$2.2	$2.7	$2.9	$3.5	$4.7
Minimum Target	$1.9	$2.2	$2.0	$2.3	$2.5	$2.6	$2.6	$2.7	$2.8	$2.9

This information is also presented graphically on Chart 5-G.

The Sewer Infrastructure Fund and Treatment Plant Construction Fund may build up fund balances from time-to-time. However, these funds are designated for specific capital projects needed over the 20-year planning horizon and should not be used to fund operations, except in cases of financial emergency.

5.3.6 Sewer Rate Structure Adjustments

No adjustments are recommended to the City's current rate structure at this time. The City's current sewer rate structure is based on a history of Council policy decisions, has worked for many years, and has a long history of public acceptance. Additionally, most of the potential structural modifications would occur on top of the projected rate increases which could result in large rate impacts for many City customers.

During the rate evaluation process, the project team considered a number of potential sewer rate structure modifications. Based on evaluations of these structural modifications, including their impacts on ratepayers, none of the potential modifications were ultimately recommended. Rate structure adjustments create impacts that vary by customer or class. Some of the rate structure modifications that were considered include the following:

- **Simplify commercial customer classifications** – The City currently classifies commercial customers according to six classifications based on specific types of businesses. Another approach is to establish general sewer rate categories for commercial customers. For example, the City could adopt four general rate classes including low, standard, med-high, and high strength customer classes. This would require reclassification of current customers.

- **Add a new commercial customer classification for mixed use customers** – The City does not have a rate for medium-high strength or mixed use dischargers, such as a commercial complex with one restaurant and 10 retail outlets. Under the current rate structure, all wastewater flows from the complex are billed at the high-strength rate for restaurants. Adding a new commercial classification could help allocate costs a little more equitably. If the City opts to pursue this option in the future, clear criteria will need to be established for when the new rate class applies.

- **Revise residential wastewater strength estimates** – The City's current residential strength estimates are set to correspond with those used by the WPCP to allocate costs to the tributary agencies. These strength estimates are at the top of the range of SWRCB standard user strength classifications. Using lower residential strength estimates to allocate costs would result in lower residential rates and higher non-residential rates.

- **Re-allocate infiltration and inflow costs** – Milpitas estimates I/I expenses at 5% of total sewer system expenses and allocates these costs equally to all customers, regardless of size or flow. I/I costs account for a greater portion of small customers' bills than large customers' bills. SWRCB guidelines also allow the City to recover I/I based on wastewater flow. The City can also allocate no costs to I/I and indirectly recover any I/I costs based on allocation of other costs.

- **Increase fixed portion of service charge for non-residential customers** - Commercial and industrial customers currently pay a flat bi-monthly sewer rate of $7.14 plus a quantity charge based on metered water use. An increase in the percentage of revenues collected from fixed charges would improve revenue stability and reduce exposure to revenue loss due to conservation or drought. An increase in costs allocated to fixed charges would also result in a corresponding decrease in costs allocated to quantity charges. Hence, higher meter charges would be coupled with slightly lower quantity charges. From a ratepayer perspective, a disproportionate increase in the fixed meter charges would result in higher bills for commercial customers using small amounts of water, and lower bills for customers consuming large amounts of water.

5.3.7 Sewer Rate Impacts

Table 5-11 shows order-of-magnitude projections of bi-monthly sewer bills for sample residential and commercial customers. The table provides a good indication of the rate impacts of the recommendations developed in this report. The projections assume across-the-board rate increases. Actual rates for each customer class will likely vary a little from the projections. This is because sewer rates will be adjusted each year to account for both a) rate increases, and b) new cost allocations to each customer class based on wastewater flow and strength.

Chart 5-H shows a projection of single family and multi-family residential bi-monthly bills. Chart 5-I breaks down projected single family residential sewer bills between costs recovered for treatment plant expenses and costs recovered for City operating and capital expenses.

Tables 5-12 shows projected bills for an average single family residence along with a breakdown of bi-monthly increases attributable to the to the City portion of the rate increase and to the wholesale rate pass-through. The City portion of the rate 2003/04 rate adjustment results in a bi-monthly increase of $2.33, or about $1.16 per month. The pass-through for WPCP costs results in a bi-monthly increase of $1.48, or about $0.79 per month.

Table 5-1
City of Milpitas - Financial Utility Master Plan
Sewer Accounts (2002)

	Accounts	Dwelling Units
RESIDENTIAL		
Single Family	12,098	12,098
Multiple Family	1,179	4,253
Mobile Home	4	570
Subtotal - Residential Accounts	13,281	16,921
NON-RESIDENTIAL		
Commercial		
Hotels, motels, senior housing	24	
General offices, retail, shopping	386	
City of Milpitas accounts	32	
Service stations, repair shops, car washes	34	
Eating and drinking establishments	154	
Personal services (laundry, barber/beauty shops, cleaner	29	
Subtotal - Commercial Accounts	659	
Industrial		
Jefferson Smurfit Corporation	1	
T. Marzetti Co.	2	
Prudential Overall Supply	2	
Xicor Inc.	1	
Loral-Fairchild	4	
US Filter	2	
Sipex Corporation	3	
Lucky Pure Water	1	
Calistoga Mountain Spring Water	1	
Milpitas Material	1	
Union Pacific Railroad	1	
Headway Tech.	2	
Electrical/Electronics	173	
Machinery Manufacture	22	
Linear Technology	5	
Seagate Technology	5	
Read-Rite	3	
Subtotal - Industrial Accounts	229	
Institutional		
Schools/colleges	53	
Convalescent homes/day care	16	
Elmwood Rehabilitation	3	
Subtotal - Industrial Accounts	72	
Total	14,241	

Table 5-2
City of Milpitas - Financial Utility Master Plan
Wastewater Strength Loadings by Customer Class

	BOD (mg/l)	SS (mg/l)	NH3 (mg/l)
RESIDENTIAL			
Single Family	250	250	35
Multiple Family	250	250	35
Mobile Home	250	250	35
NON-RESIDENTIAL			
Commercial			
Hotels, motels, senior housing	310	121	7
General offices, retail, shopping	130	80	11
City of Milpitas accounts	130	80	11
Service stations, repair shops, car washes	180	280	0
Eating and drinking establishments	1,250	560	10
Personal services (laundry, barber/beauty shops, cleaners)	150	110	5
Industrial			
Jefferson Smurfit Corporation	857.14	99.67	1.51
T. Marzetti Co.	1,173.33	284.08	0.66
Prudential Overall Supply	543.75	86.50	2.60
Xicor Inc.	22.50	5.13	2.14
Loral-Fairchild	8.86	2.29	3.36
US Filter	7.38	15.38	0.46
Sipex Corporation	18.83	54.83	6.77
Lucky Pure Water	130.00	80.00	11.00
Calistoga Mountain Spring Water	57.25	179.67	0.14
Milpitas Material	130.00	80.00	11.00
Union Pacific Railroad	442.86	383.14	3.61
Headway Tech.	270.00	4.33	1.70
Electrical/Electronics	30.00	15.00	30.00
Machinery Manufacture	290.00	550.00	0.00
Linear Technology	25.38	17.57	16.44
Seagate Technology	22.50	25.00	2.08
Read-Rite	88.33	0.33	0.00
Institutional			
Schools/colleges	130.00	100.00	30.00
Convalescent homes/day care	230.00	85.00	15.00
Elmwood Rehabilitation	220.00	146.17	21.13

Table 5-3
City of Milpitas - Financial Utility Master Plan
Sewer Rate Schedule

	2002/03
RESIDENTIAL	
Flat Bimonthly Charge	
Single Family	$42.29
Multiple Family	30.19
Mobile Home	18.69
NON-RESIDENTIAL	
Flat Bimonthly Charge	7.14
Quantity Charge per hcf of metered water use	
Commercial	
Hotels, motels, senior housing	1.35
General offices, retail, shopping	1.21
City of Milpitas accounts	1.15
Service stations, repair shops, car washes	1.38
Eating and drinking establishments	3.37
Personal services (laundry, barber/beauty shops, cl	1.11
Industrial	
Jefferson Smurfit Corporation	0.53
T. Marzetti Co.	2.46
Prudential Overall Supply	1.69
Xicor Inc.	0.72
Loral-Fairchild	0.70
US Filter	0.76
Sipex Corporation	0.85
Lucky Pure Water	0.54
Calistoga Mountain Spring Water	0.60
Milpitas Material	0.01
Union Pacific Railroad	2.26
Headway Tech.	1.14
Electrical/Electronics	1.19
Machinery Manufacture	2.13
Linear Technology	0.92
Seagate Technology	0.82
Read-Rite	0.76
Institutional	
Schools/colleges	1.58
Convalescent homes/day care	1.30
Elmwood Rehabilitation	1.42

Table 5-4
City of Milpitas - Financial Utility Master Plan
Sewer Enterprise Revenue & Expense History

	Actual 1997/98	Actual 1998/99	Actual 1999/00	Actual 2000/01	Actual 2001/02
REVENUES					
Sewer service charges	6,610,583	6,795,163	7,069,988	7,133,968	6,750,000
Property taxes	600,930	643,998	701,270	744,085	753,900
Interest earnings	831,538	596,978	686,189	1,387,541	877,000
Other transfers in	321,723	9,154	4,905	350,983	33,950
Other revenues	171,521	20,512	137,993	16,976	12,321
Total revenues	8,536,295	8,065,805	8,600,345	9,633,553	8,427,171
EXPENSES					
Personnel services	769,043	640,585	679,162	671,557	770,145
Services & supplies	683,664	372,506	412,487	412,630	2,134,798
Treatment plant, O&M	3,093,527	2,932,928	2,503,491	2,555,914	3,081,208
Treatment plant, capital	1,049,424	330,977	295,050	0	0
Capital outlay	1,608	36	22,763	2,148	200
Operating transfer to Gen Fund	1,381,339	1,336,095	1,432,795	1,570,397	1,766,620
Subtotal operating	6,978,605	5,613,127	5,345,748	5,212,646	7,752,971
Transfer to Sewer CIP Fund	0	1,815,000	0	453,500	0
Appn transfer to Sewer M&O	0	0	0	1,096,287	0
Other transfers out	221,000	1,388,755	50,000	1,331,048	550,000
Debt service (contractual obligation)	99,903	625,451	631,192	589,490	651,705
Subtotal non-operating	320,903	3,829,206	681,192	3,470,325	1,201,705
Total expenses	7,299,508	9,442,333	6,026,940	8,682,971	8,954,676
Total revenues less expenses	1,236,787	(1,376,528)	2,573,405	950,582	(527,505)

Sources: City of Milpitas.

Table 5-5
City of Milpitas - Financial Utility Master Plan
Treatment Plant Operating Cost Allocation - 2002/03 Budget[1]

Agency	2001/02 Estimated Total Effluent Treated (MGD)	Percent of Total Sewage Treated[2]	2002/03 Proposed Budget[3]
City of San Jose	25,120	63.1	$42,087,744
City Santa Clara	6,700	14.2	8,909,965
Subtotal	31,820	77.3	50,997,709
West Valley Sanitation District	3,829	9.7	6,054,167
Cupertino Sanitation District	1,883	4.7	2,961,012
City of Milpitas	***2,752***	***6.4***	***3,981,834***
Sanitation Districts # 2 - 3	556	1.5	911,851
Burbank Sanitation District	121	0.3	194,770
Sunol Sanitation District	59	0.1	90,809
Subtotal	9,200	22.6	14,194,443
Total	41,020	100.0	65,192,152

1 Source: San Jose/Santa Clara Water Pollution Control Plant 2002/03 Proposed O&M Budget.
2 Based on each agencies' percentage of total flow, BOD, SS, and NH3.
3 Includes $1.7 million in contingency funds.

Table 5-6
City of Milpitas - Financial Utility Master Plan
Milpitas' Share of Treatment Plant Capital Improvement Program

	2003/04	2004/05	2005/06	2006/07	2007/08	5-Year Total
Beginning Milpitas WPCP Capital Reserves	$1,342,482	$7,004,034	$1,614,026	$21,038	$37,531	
Project Funding Sources						
Milpitas' Cash Contribution	*1,215,818*	*101,559*	*874,817*	*1,019,639*	*1,128,902*	*4,340,735*
Other Revenue Sources	940,938	251,926	88,888	41,010	41,568	1,364,330
Bond Proceeds	5,556,800	0	0	0	0	5,556,800
Total	7,713,556	353,485	963,705	1,060,649	1,170,470	11,261,865
Milpitas Share of Project Costs						
Water Pollution Control Plant	459,463	4,878,206	1,961,430	479,093	376,956	8,155,148
South Bay Action Plan	721,105	329,340	29,117	29,117	29,117	1,137,796
South Bay Water Recycling Program	17,590	0	0	0	0	17,590
Equipment Replacement	414,860	96,960	127,160	96,960	96,960	832,900
New Debt Service	438,987	438,987	438,987	438,987	438,987	2,194,935
Total	2,052,004	5,743,493	2,556,693	1,044,156	942,020	12,338,369
Ending Milpitas WPCP Capital Reserves	7,004,034	1,614,026	21,038	37,531	265,981	

Source: San Jose/Santa Clara Water Pollution Control Plant (Totals may not add due to rounding).

Table 5-7
City of Milpitas - Financial Utility Master Plan
Sewer Cash Flow Assumptions

GROWTH PROJECTIONS

1 Growth in customer base and wastewater flow estimated at 0% in 2003/04 and at 1% annually thereafter
2 Growth projections affect a) customer base and service charge revenues, and b) treatment plant operating expenses

REVENUES

1 Service charge revenues based on 2002/03 estimate of $6.7 million and increase due to a) growth and b) rate adjustments.
2 Service charge revenues assume rate increases do not apply to the first 25% of annual revenues due to a three-month lag from beginning of fiscal year until a rate increase impacts revenues
3 Property tax revenues escalate at the annual rate of 2%
4 Interest earnings from operating fund projected at 3.5% of beginning fund balance
5 Interest earnings from CIP Fund projected at $100,000 per year
6 Other revenues projected at $10,000 per year plus $75,000 annually for the next four years for repayment of a loan made to the water fund
7 Contributions from the Treatment Plant Construction Fund are projected at about $2.8 million over the next three years corresponding with projected treatment plant capital cost requirements. Future contributions are sized to correspond with projected expenses for additional treatment capacity, which will be funded via treatment plant connection fees.
8 Contributions from the Infrastructure Fund to the Sewer Fund to help fund capital projects are projected at $1.0 million annually for three years, 2003/04 through 2005/06.
9 Treatment Plant Fee revenues accrue to the Treatment Plant Construction Fund and are projected at $110,000 per year based on 125 new single family residential equivalents at the current fee
10 Connection Fee revenues accrue to the Treatment Plant Construction Fund and are projected at $219,000 per year based on 125 new single family residential equivalents at the new recommended fee

EXPENSES

1 Expense projections based on 2002/03 budget and mid-year expense projection
2 Personnel services expenses and General Fund reimbursements escalate at the annual rate of 6.5% in 2003/04, 9% in 2004/05, 5% in 2005/06 and 2006/07, and 4% thereafter
3 Services & supplies include non-departmental costs other than treatment plant expenses and increase at the annual rate of 3.0%
4 Capital outlay expenditures projected at $10,000 through 2006/07 plus $5,000 for each subsequent 5-year period
5 Treatment plant O&M costs increase due to a) cost inflation estimated at 3.0% per year, and b) growth
6 Treatment plant capital costs based on SJ/SC WPCP 5-Year CIP Projection through 2007/08 and are projected at $1.0 million per year escalating by 4% annually thereafter
7 CIP expenses based on City's CIP projections; future CIP costs projected at $1.0 million per year escalating by 4% annually beginning 2010/11
8 Projected costs for additional treatment capacity to be funded by connection fees via transfers from the Treatment Plant Fund
9 Final debt service payment due from Sewer Fund is made in 2002/03
10 Set aside for the Infrastructure Replacement Fund is projected at $1.0 million in 2009/10 and $2.0 million thereafter; sufficient to fund Schaaf & Wheeler projected replacements over the next 20 years
11 Schaaf & Wheeler Utility Depreciation Study replacements are funded from the Infrastructure Fund and are projected at $26.4 million over the next 20 years

Table 5-8
City of Milpitas - Financial Utility Master Plan
Sewer Operating Fund Cash Flow Projection

	Estimated	Projected								
	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Beginning fund balance	$2,300,000	1,967,000	1,925,000	2,190,000	2,197,000	1,778,000	2,229,000	2,697,000	2,911,000	3,451,000
Projected growth		0%	1%	1%	1%	1%	1%	1%	1%	1%
Rate adjustment - City costs		5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%
Rate adjustment - WPCP costs		3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	1.5%	1.5%	1.5%
Total		9.0%	9.0%	9.0%	9.0%	9.0%	9.0%	7.0%	7.0%	7.0%
REVENUES										
Sewer service charges	6,700,000	7,150,000	7,865,000	8,655,000	9,520,000	10,470,000	11,520,000	12,495,000	13,495,000	14,575,000
Property taxes & related revs	792,000	800,000	816,000	832,000	849,000	866,000	883,000	901,000	919,000	937,000
Interest earnings Operating Fund	200,000	69,000	67,000	77,000	77,000	62,000	78,000	94,000	102,000	121,000
Interest earnings CIP Fund	-	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
Other revenues	0	85,000	85,000	85,000	85,000	10,000	10,000	10,000	10,000	10,000
Subtotal revenues	7,692,000	8,204,000	8,933,000	9,749,000	10,631,000	11,508,000	12,591,000	13,600,000	14,626,000	15,743,000
Trtmnt Plant Const Fund contribution	0	1,216,000	102,000	875,000	0	0	82,000	86,000	89,000	93,000
Infrastructure Fund contribution	0	1,000,000	1,000,000	1,000,000	0	0	0	0	0	0
Subtotal contributions	0	2,216,000	1,102,000	1,875,000	0	0	82,000	86,000	89,000	93,000
Total revenues	7,692,000	10,420,000	10,035,000	11,624,000	10,631,000	11,508,000	12,673,000	13,686,000	14,715,000	15,836,000
EXPENSES										
Personnel services	819,173	872,000	950,000	998,000	1,048,000	1,090,000	1,134,000	1,179,000	1,226,000	1,275,000
Services & supplies	822,865	848,000	873,000	899,000	926,000	954,000	983,000	1,012,000	1,042,000	1,073,000
Operating transfer to Gen Fund	1,698,677	1,809,000	1,972,000	2,071,000	2,175,000	2,262,000	2,352,000	2,446,000	2,544,000	2,646,000
Capital outlay	475	10,000	10,000	10,000	10,000	15,000	15,000	15,000	15,000	15,000
Treatment plant O&M	3,984,300	4,104,000	4,268,000	4,439,000	4,617,000	4,802,000	4,994,000	5,194,000	5,402,000	5,618,000
Treatment plant capital	400,848	1,216,000	102,000	875,000	1,020,000	1,129,000	1,000,000	1,040,000	1,082,000	1,125,000
Other	0	0	0	0	0	0	0	0	0	0
Subtotal operating	7,726,338	8,859,000	8,175,000	9,292,000	9,796,000	10,252,000	10,478,000	10,886,000	11,311,000	11,752,000
Transfer to Sewer CIP Fund	0	1,603,000	1,595,000	2,325,000	1,254,000	805,000	1,645,000	1,500,000	775,000	775,000
Additional treatment capacity	0	0	0	0	0	0	82,000	86,000	89,000	93,000
Debt service	298,880	0	0	0	0	0	0	0	0	0
Transfer to Infrastructure Fund	0	0	0	0	0	0	0	1,000,000	2,000,000	2,000,000
Subtotal non-operating	298,880	1,603,000	1,595,000	2,325,000	1,254,000	805,000	1,727,000	2,586,000	2,864,000	2,868,000
Total expenses	8,025,218	10,462,000	9,770,000	11,617,000	11,050,000	11,057,000	12,205,000	13,472,000	14,175,000	14,620,000
Revenues less expenses	(333,218)	(42,000)	265,000	7,000	(419,000)	451,000	468,000	214,000	540,000	1,216,000
Ending fund balance	1,966,782	1,925,000	2,190,000	2,197,000	1,778,000	2,229,000	2,697,000	2,911,000	3,451,000	4,667,000
Min fund reserve target (25% O&M)	1,930,000	2,210,000	2,040,000	2,320,000	2,450,000	2,560,000	2,620,000	2,720,000	2,830,000	2,940,000

Table 5-8 continued
City of Milpitas - Financial Utility Master Plan
Sewer Operating Fund Cash Flow Projection

	Projected									
	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
Beginning fund balance	4,667,000	6,004,000	7,273,000	8,468,000	9,574,000	10,572,000	11,447,000	15,882,000	12,892,000	13,301,000
Projected growth	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Rate adjustment - City costs	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Rate adjustment - WPCP costs	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Total	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
REVENUES										
Sewer service charges	15,130,000	15,505,000	15,895,000	16,295,000	16,700,000	17,120,000	17,545,000	17,985,000	18,435,000	18,895,000
Property taxes & related revs	956,000	975,000	995,000	1,015,000	1,035,000	1,056,000	1,077,000	1,099,000	1,121,000	1,143,000
Interest earnings Operating Fund	163,000	210,000	255,000	296,000	335,000	370,000	401,000	556,000	451,000	466,000
Interest earnings CIP Fund	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
Other revenues	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Subtotal revenues	16,359,000	16,800,000	17,255,000	17,716,000	18,180,000	18,656,000	19,133,000	19,750,000	20,117,000	20,614,000
Trtmnt Plant Const Fund contribution	96,000	254,000	264,000	275,000	286,000	297,000	7,400,000	0	0	0
Infrastructure Fund contribution	0	0	0	0	0	0	0	0	0	0
Subtotal contributions	96,000	254,000	264,000	275,000	286,000	297,000	7,400,000	0	0	0
Total revenues	16,455,000	17,054,000	17,519,000	17,991,000	18,466,000	18,953,000	26,533,000	19,750,000	20,117,000	20,614,000
EXPENSES										
Personnel services	1,326,000	1,379,000	1,434,000	1,491,000	1,551,000	1,613,000	1,678,000	1,745,000	1,815,000	1,888,000
Services & supplies	1,105,000	1,138,000	1,172,000	1,207,000	1,243,000	1,280,000	1,318,000	1,358,000	1,399,000	1,441,000
Operating transfer to Gen Fund	2,752,000	2,862,000	2,976,000	3,095,000	3,219,000	3,348,000	3,482,000	3,621,000	3,766,000	3,917,000
Capital outlay	20,000	20,000	20,000	20,000	20,000	25,000	25,000	25,000	25,000	25,000
Treatment plant O&M	5,843,000	6,077,000	6,320,000	6,573,000	6,836,000	7,109,000	7,393,000	7,689,000	7,997,000	8,317,000
Treatment plant capital	1,170,000	1,217,000	1,266,000	1,317,000	1,370,000	1,425,000	1,482,000	1,541,000	1,603,000	1,667,000
Other	0	0	0	0	0	0	0	0	0	0
Subtotal operating	12,216,000	12,693,000	13,188,000	13,703,000	14,239,000	14,800,000	15,378,000	15,979,000	16,605,000	17,255,000
Transfer to Sewer CIP Fund	806,000	838,000	872,000	907,000	943,000	981,000	1,020,000	1,061,000	1,103,000	1,147,000
Additional treatment capacity	96,000	254,000	264,000	275,000	286,000	297,000	3,700,000	3,700,000	0	0
Debt service	0	0	0	0	0	0	0	0	0	0
Transfer to Infrastructure Fund	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000
Subtotal non-operating	2,902,000	3,092,000	3,136,000	3,182,000	3,229,000	3,278,000	6,720,000	6,761,000	3,103,000	3,147,000
Total expenses	15,118,000	15,785,000	16,324,000	16,885,000	17,468,000	18,078,000	22,098,000	22,740,000	19,708,000	20,402,000
Revenues less expenses	1,337,000	1,269,000	1,195,000	1,106,000	998,000	875,000	4,435,000	(2,990,000)	409,000	212,000
Ending fund balance	6,004,000	7,273,000	8,468,000	9,574,000	10,572,000	11,447,000	15,882,000	12,892,000	13,301,000	13,513,000
Min fund reserve target (25% O&M)	3,050,000	3,170,000	3,300,000	3,430,000	3,560,000	3,700,000	3,840,000	3,990,000	4,150,000	4,310,000

Table 5-9
City of Milpitas - Financial Utility Master Plan
Treatment Plant Construction Fund Cash Flow Projection

	Estimated	Projected								
	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Beginning fund balance	$4,800,000	$4,956,000	$3,763,000	$3,819,000	$2,799,000	$3,076,000	$3,513,000	$3,527,000	$3,537,000	$3,545,000
New single family resid equivalents		0	125	125	125	125	125	125	125	125
Projected SFR treatment plant fee		880	880	880	880	880	880	880	880	880
Projected SFR connection fee		1,750	1,750	1,750	1,750	1,750	1,750	1,750	1,750	1,750
REVENUES										
Treatment plant connection fees	60,000	0	110,000	110,000	110,000	110,000	110,000	110,000	110,000	110,000
Connection fees	2,000	0	219,000	219,000	219,000	219,000	219,000	219,000	219,000	219,000
Interest earnings	94,000	173,000	132,000	134,000	98,000	108,000	123,000	123,000	124,000	124,000
Total revenues	156,000	173,000	461,000	463,000	427,000	437,000	452,000	452,000	453,000	453,000
EXPENSES										
Transfer for WPCP capital projects	0	1,216,000	102,000	875,000	0	0	0	0	0	0
Transfer to CIP for growth projects	0	0	153,000	458,000	0	0	356,000	356,000	356,000	310,000
Transfer for add'l treatment capacity	0	0	0	0	0	0	82,000	86,000	89,000	93,000
Transfer to sewer CIP	0	150,000	150,000	150,000	150,000	0	0	0	0	0
Total expenses	0	1,366,000	405,000	1,483,000	150,000	0	438,000	442,000	445,000	403,000
Revenues less expenses	156,000	(1,193,000)	56,000	(1,020,000)	277,000	437,000	14,000	10,000	8,000	50,000
Ending fund balance	4,956,000	3,763,000	3,819,000	2,799,000	3,076,000	3,513,000	3,527,000	3,537,000	3,545,000	3,595,000

Table 5-9 continued
City of Milpitas - Financial Utility Master Plan
Treatment Plant Construction Fund Cash Flow Projection

	Projected									
	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
Beginning fund balance	$3,595,000	$3,954,000	$4,167,000	$4,378,000	$4,585,000	$4,788,000	$4,988,000	$1,792,000	($1,516,000)	($1,187,000)
New single family resid equivalents	125	125	125	125	125	125	125	125	125	125
Projected SFR treatment plant fee	880	880	880	880	880	880	880	880	880	880
Projected SFR connection fee	1,750	1,750	1,750	1,750	1,750	1,750	1,750	1,750	1,750	1,750
REVENUES										
Treatment plant connection fees	110,000	110,000	110,000	110,000	110,000	110,000	110,000	110,000	110,000	110,000
Connection fees	219,000	219,000	219,000	219,000	219,000	219,000	219,000	219,000	219,000	219,000
Interest earnings	126,000	138,000	146,000	153,000	160,000	168,000	175,000	63,000	0	0
Total revenues	455,000	467,000	475,000	482,000	489,000	497,000	504,000	392,000	329,000	329,000
EXPENSES										
Transfer for WPCP capital projects	0	0	0	0	0	0	0	0	0	0
Transfer for growth-related projects	0	0	0	0	0	0	0	0	0	0
Transfer for add'l treatment capacity	96,000	254,000	264,000	275,000	286,000	297,000	3,700,000	3,700,000	0	0
Transfer to sewer CIP	0	0	0	0	0	0	0	0	0	0
Total expenses	96,000	254,000	264,000	275,000	286,000	297,000	3,700,000	3,700,000	0	0
Revenues less expenses	359,000	213,000	211,000	207,000	203,000	200,000	(3,196,000)	(3,308,000)	329,000	329,000
Ending fund balance	3,954,000	4,167,000	4,378,000	4,585,000	4,788,000	4,988,000	1,792,000	(1,516,000)	(1,187,000)	(858,000)

Table 5-10
City of Milpitas - Financial Utility Master Plan
Sewer Infrastructure Fund Cash Flow Projection

	Estimated	Projected								
	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Beginning fund balance	5,200,000	5,382,000	4,570,000	3,730,000	2,861,000	2,961,000	1,565,000	120,000	124,000	378,000
REVENUES										
Interest earnings	182,000	188,000	160,000	131,000	100,000	104,000	55,000	4,000	4,000	13,000
Transfer from Operating Fund	0	0	0	0	0	0	0	1,500,000	1,750,000	1,750,000
Total revenues	182,000	188,000	160,000	131,000	100,000	104,000	55,000	1,504,000	1,754,000	1,763,000
EXPENSES										
Replacement projects	0	0	0	0	0	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000
Transfer to Sewer Fund	0	1,000,000	1,000,000	1,000,000	0	0	0	0	0	0
Total expenses	0	1,000,000	1,000,000	1,000,000	0	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000
Revenues less expenses	182,000	(812,000)	(840,000)	(869,000)	100,000	(1,396,000)	(1,445,000)	4,000	254,000	263,000
Ending fund balance	5,382,000	4,570,000	3,730,000	2,861,000	2,961,000	1,565,000	120,000	124,000	378,000	641,000

Table 5-10 continued
City of Milpitas - Financial Utility Master Plan
Sewer Infrastructure Fund Cash Flow Projection

	Projected									
	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
Beginning fund balance	641,000	1,163,000	1,704,000	2,264,000	2,843,000	3,443,000	3,364,000	3,282,000	3,197,000	3,109,000
REVENUES										
Interest earnings	22,000	41,000	60,000	79,000	100,000	121,000	118,000	115,000	112,000	109,000
Transfer from Operating Fund	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000
Total revenues	2,022,000	2,041,000	2,060,000	2,079,000	2,100,000	2,121,000	2,118,000	2,115,000	2,112,000	2,109,000
EXPENSES										
Replacement projects	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	2,200,000	2,200,000	2,200,000	2,200,000	2,200,000
Transfer to Operating Fund for repls	0	0	0	0	0	0	0	0	0	0
Total expenses	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	2,200,000	2,200,000	2,200,000	2,200,000	2,200,000
Revenues less expenses	522,000	541,000	560,000	579,000	600,000	(79,000)	(82,000)	(85,000)	(88,000)	(91,000)
Ending fund balance	1,163,000	1,704,000	2,264,000	2,843,000	3,443,000	3,364,000	3,282,000	3,197,000	3,109,000	3,018,000

Table 5-11
City of Milpitas - Financial Utility Master Plan
Sewer Order-of-Magnitude Rate Projection

		Current	Projected							
		2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Rate Adjustment*			9.0%	9.0%	9.0%	9.0%	9.0%	9.0%	7.0%	7.0%	7.0%
Residential (Flat Bi-Monthly Charge)											
Single Family		$42.29	$46.10	$50.25	$54.77	$59.70	$65.07	$70.93	$75.90	$81.21	$86.89
Multiple Family		30.19	32.91	35.87	39.10	42.62	46.46	50.64	54.18	57.97	62.03
Mobile Home		18.69	20.37	22.20	24.20	26.38	28.75	31.34	33.53	35.88	38.39
Commercial (Volume Based Charge)											
General office/retail	Water Use (hcf)										
Customer A	50	67.64	73.78	80.48	87.74	95.57	103.98	113.47	121.31	129.71	138.67
Customer B	100	128.14	139.78	152.48	166.24	181.07	196.98	214.97	229.81	245.71	262.67
Customer C	200	249.14	271.78	296.48	323.24	352.07	382.98	417.97	446.81	477.71	510.67

* Assumes across-the-board rate increases; actual rates may vary based on wastewater discharge strength and flow.

Table 5-11 continued
City of Milpitas - Financial Utility Master Plan
Sewer Order-of-Magnitude Rate Projection

		Projected									
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
Rate Adjustment*		1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Residential (Flat Bi-Monthly Charge)											
Single Family		$88.19	$89.51	$90.85	$92.21	$93.59	$94.99	$96.41	$97.86	$99.33	$100.82
Multiple Family		62.96	63.90	64.86	65.83	66.82	67.82	68.84	69.87	70.92	71.98
Mobile Home		38.97	39.55	40.14	40.74	41.35	41.97	42.60	43.24	43.89	44.55
Commercial (Volume Based Charge)											
General office/retail	Water Use (hcf)										
Customer A	50	140.89	143.11	145.34	147.57	149.80	152.04	154.28	156.52	158.77	161.02
Customer B	100	266.89	271.11	275.34	279.57	283.80	288.04	292.28	296.52	300.77	305.02
Customer C	200	518.89	527.11	535.34	543.57	551.80	560.04	568.28	576.52	584.77	593.02

* Assumes across-the-board rate increases; actual rates may vary based on wastewater discharge strength and flow.

Table 5-12
City of Milpitas - Financial Utility Master Plan
Components of Average Single Family Residential Sewer Bill Increases

	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Rate Adjustment*										
City increase		5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%
WPCP increase		3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	1.5%	1.5%	1.5%
Total increase		9.0%	9.0%	9.0%	9.0%	9.0%	9.0%	7.0%	7.0%	7.0%
Customer Class										
Single Family Residence										
Average Bill	$42.29	$46.10	$50.25	$54.77	$59.70	$65.07	$70.93	$75.90	$81.21	$86.89
City increase (estimated)		2.33	2.54	2.76	3.01	3.28	3.58	3.91	4.17	4.46
WPCP increase (estimated)		1.48	1.61	1.76	1.92	2.09	2.28	1.07	1.14	1.22
Total bi-monthly increase		3.81	4.15	4.52	4.93	5.37	5.86	4.97	5.31	5.68

* Based on across-the-board rate increases for all customer classes.
Actual rate adjustments may vary based on customer class, wastewater flow and strength.

Chart 5-A

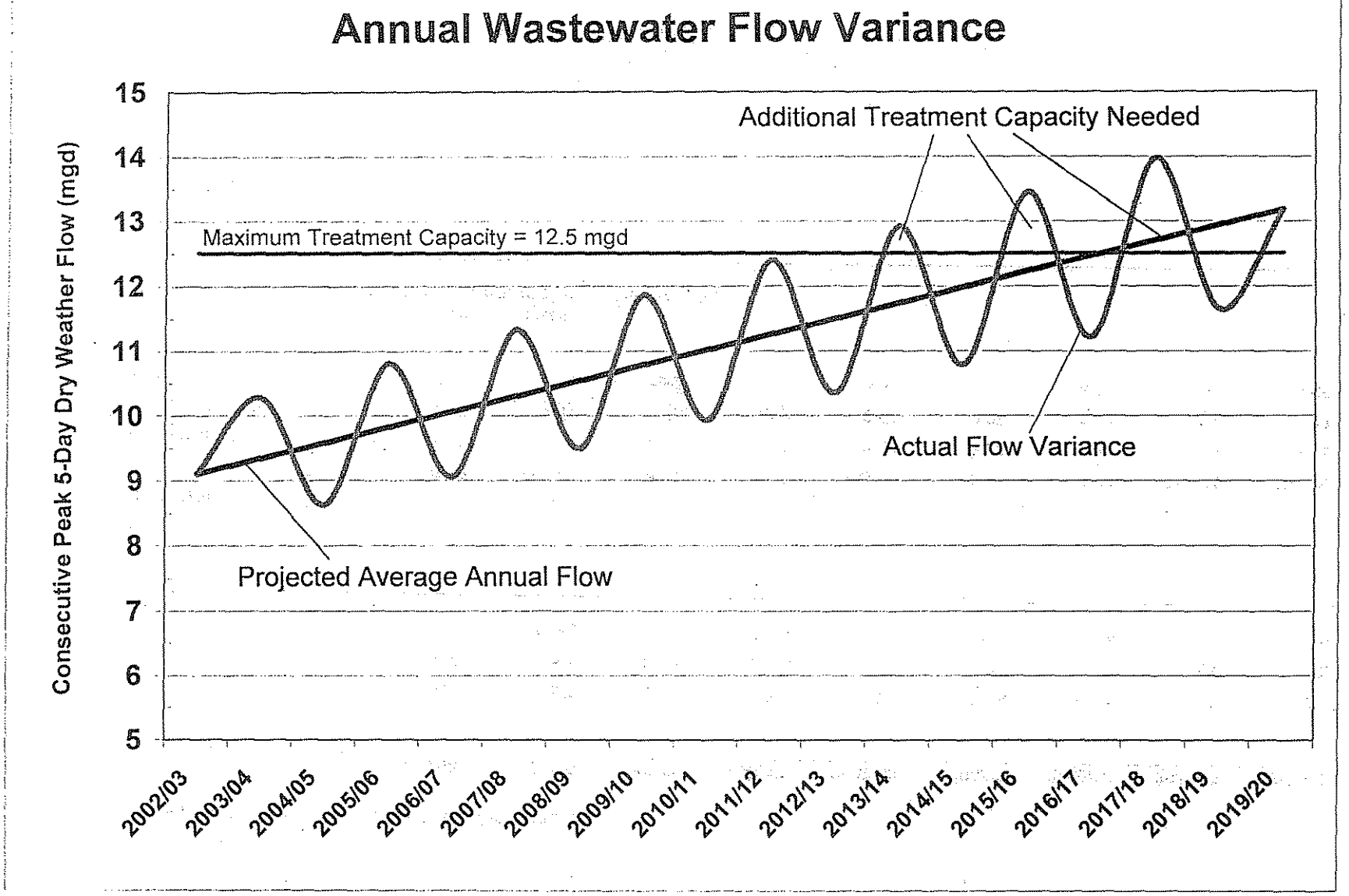

Annual Wastewater Flow Variance
Consecutive Peak 5-Day Dry Weather Flow (mgd)
15
14
13
12
11
10
9
8
7
6
5
Additional Treatment Capacity Needed
Maximum Treatment Capacity = 12.5 mgd
Actual Flow Variance
Projected Average Annual Flow
2002/03
2003/04
2004/05
2005/06
2006/07
2007/08
2008/09
2009/10
2010/11
2011/12
2012/13
2013/14
2014/15
2015/16
2016/17
2017/18
2018/19
2019/20

Chart 5-B

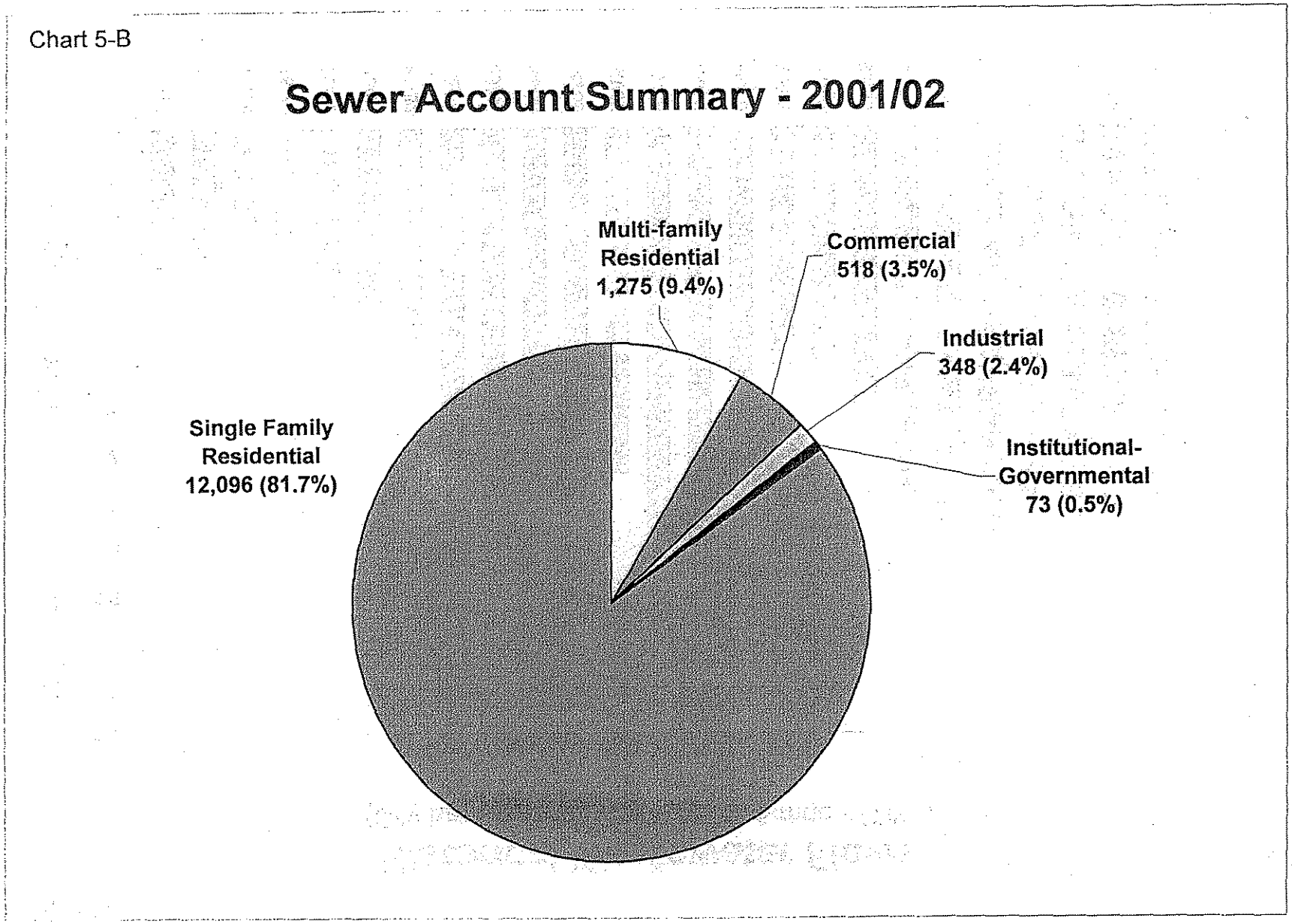
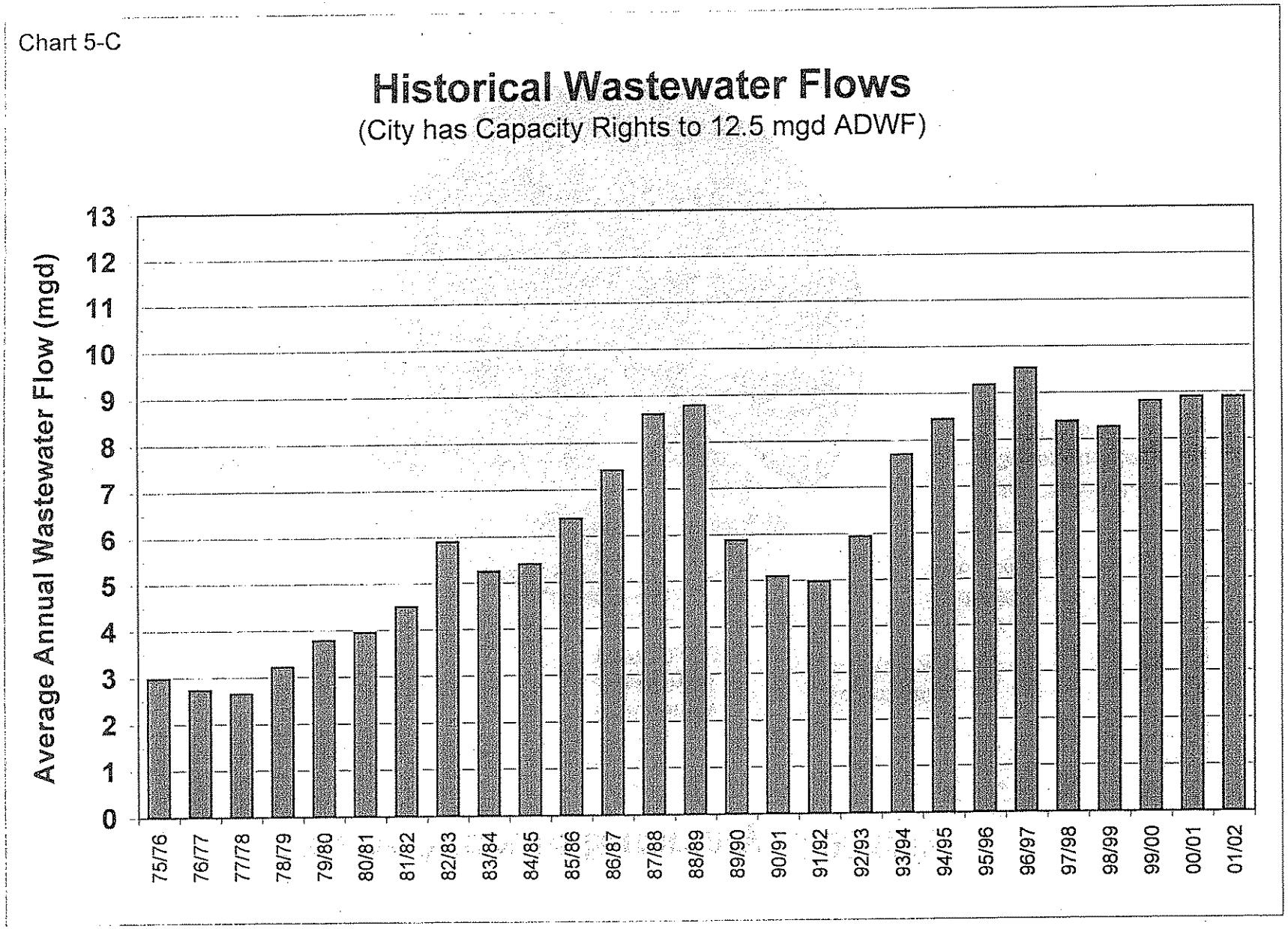
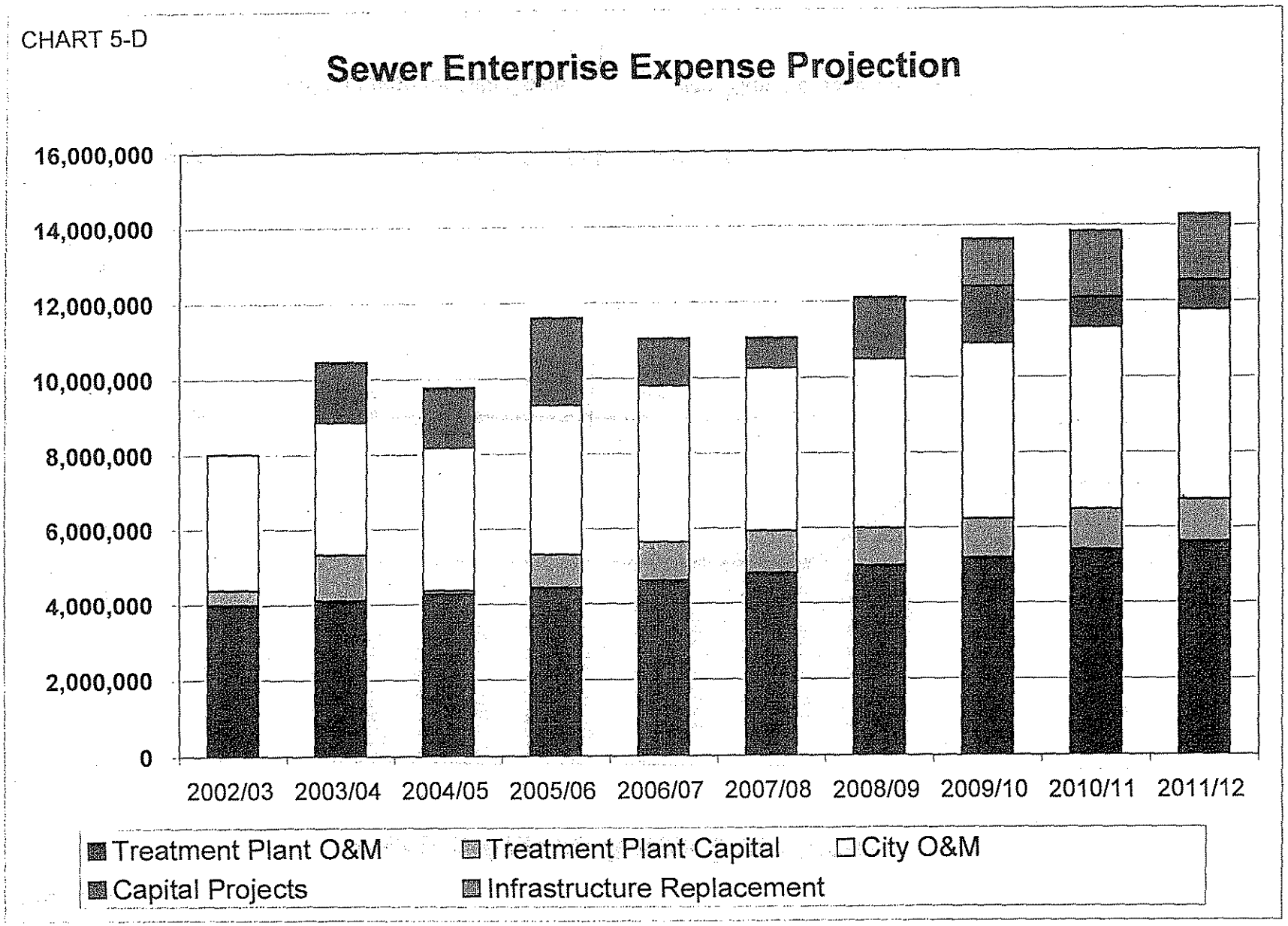

Sewer Account Summary - 2001/02
Multi-family Residential 1,275 (9.4%)
Commercial 518 (3.5%)
Industrial 348 (2.4%)
Institutional-Governmental 73 (0.5%)
Single Family Residential 12,096 (81.7%)

Chart 5-C



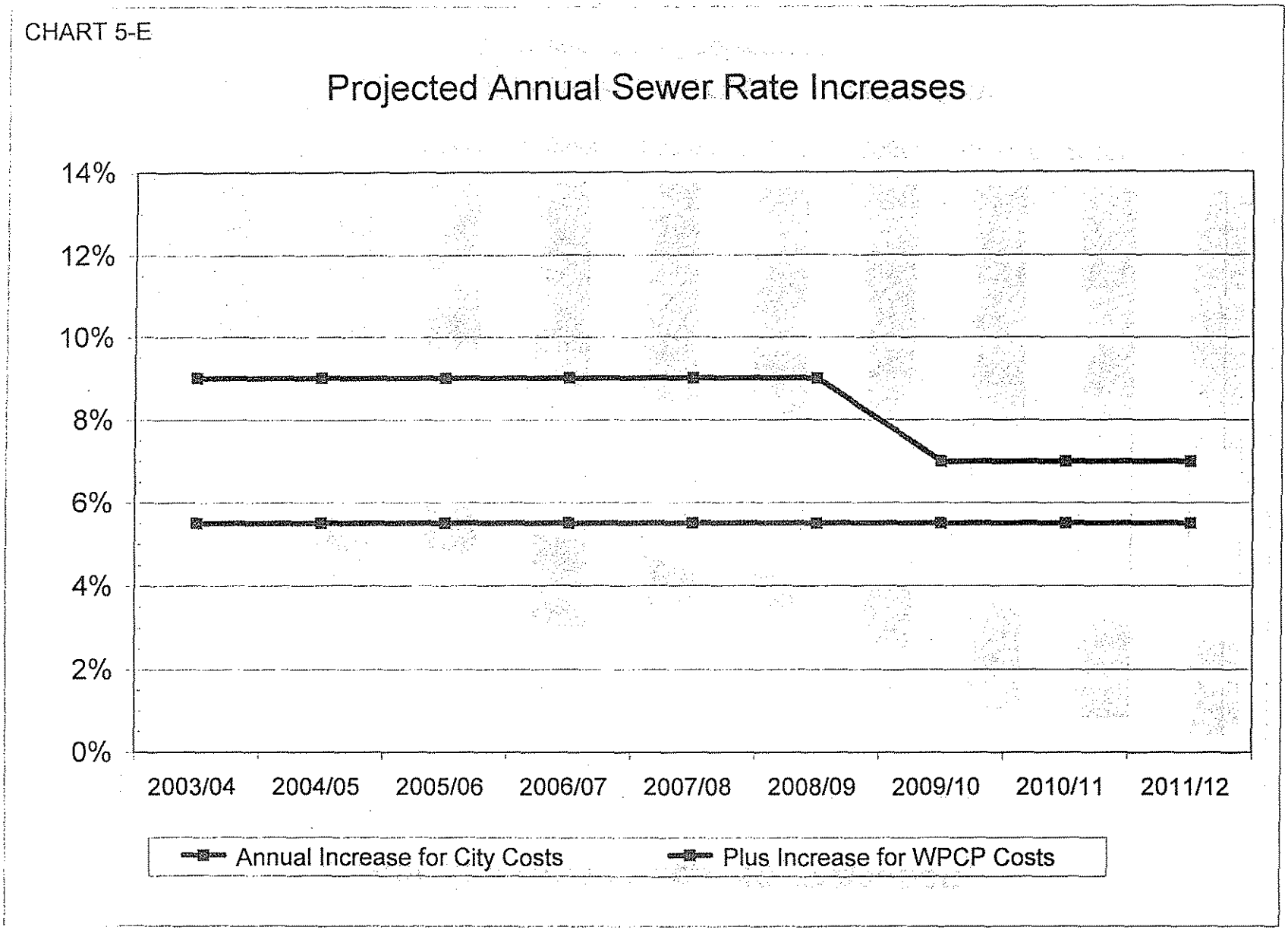
BARTLE WELLS ASSOCIATES
F:\Jobs\Milpitas-314C\Milpitas Phase 2 Tables N\Hist Swr Flows,3/18/2003

CHART 5-D



BARTLE WELLS ASSOCIATES
F:\Jobs\Milpitas-314C\Milpitas Phase 2 Tables N\S Cost Chart,3/18/2003

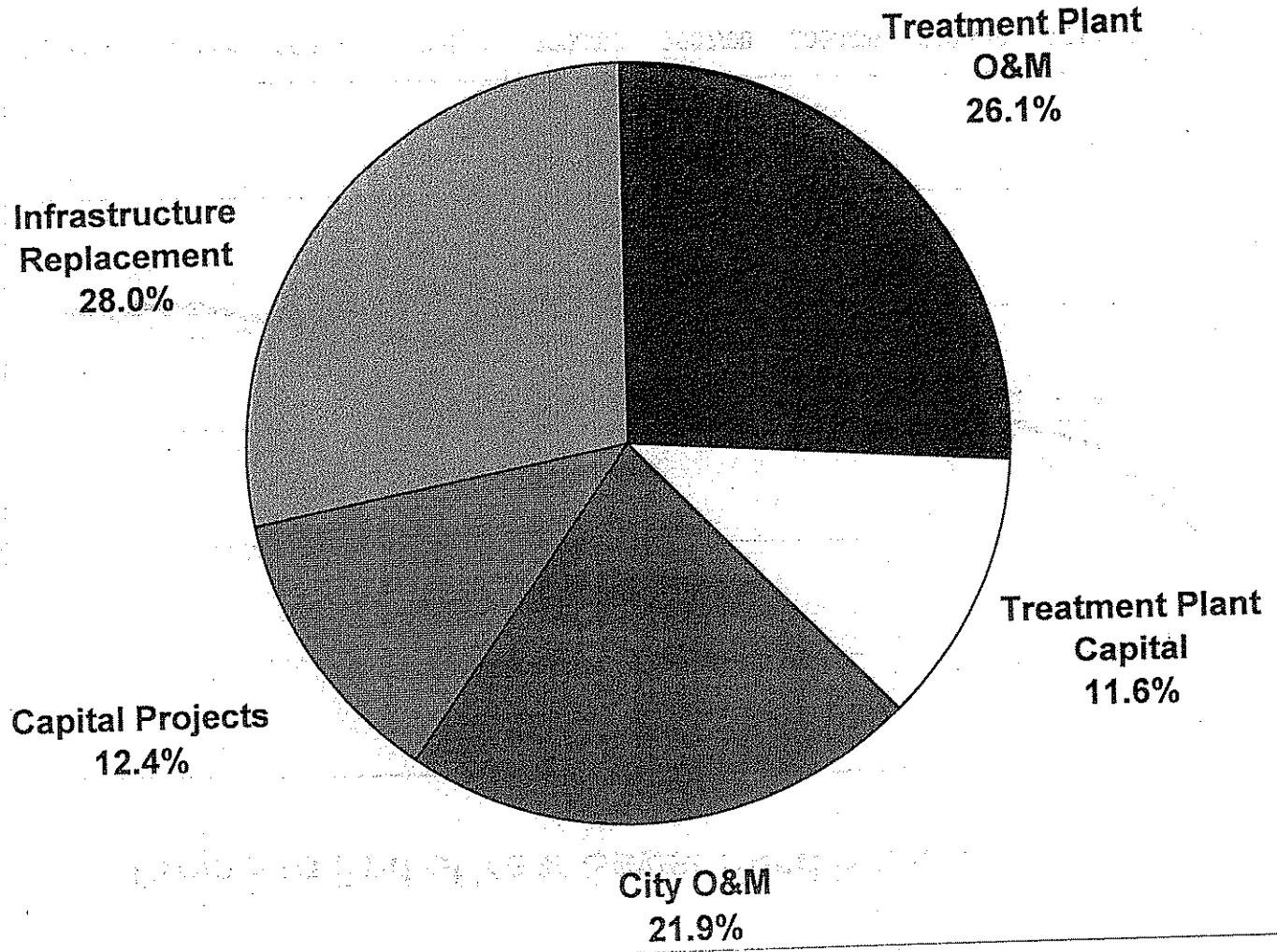
CHART 5-E



BARTLE WELLS ASSOCIATES
F:\Jobs\Milpitas-314C\Milpitas Phase 1 & 2 Tables N CHARTS\S Rate Incs,3/18/2003

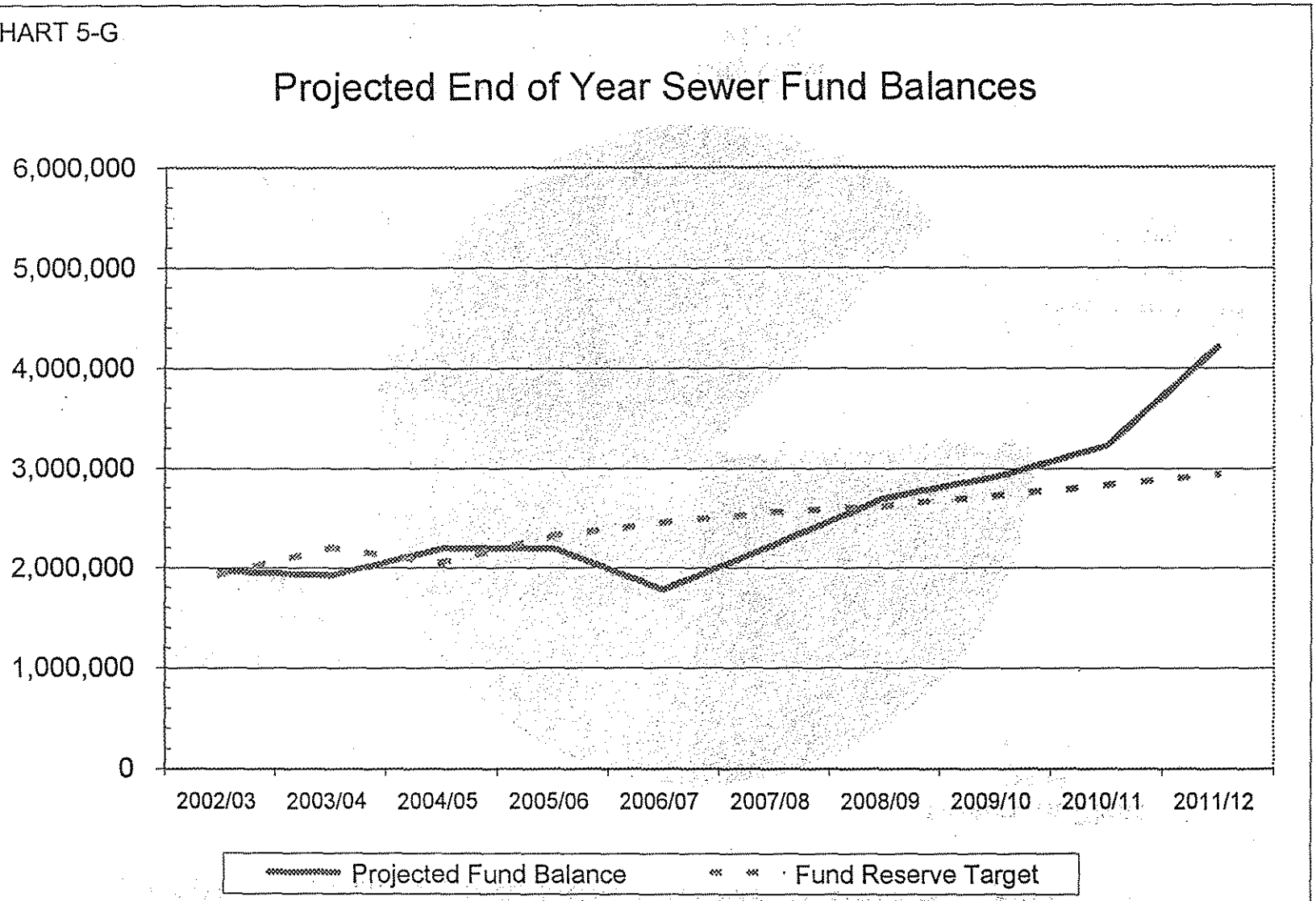
CHART 5-F

Components of Annual Cost Increases 2002/03 - 2011/12



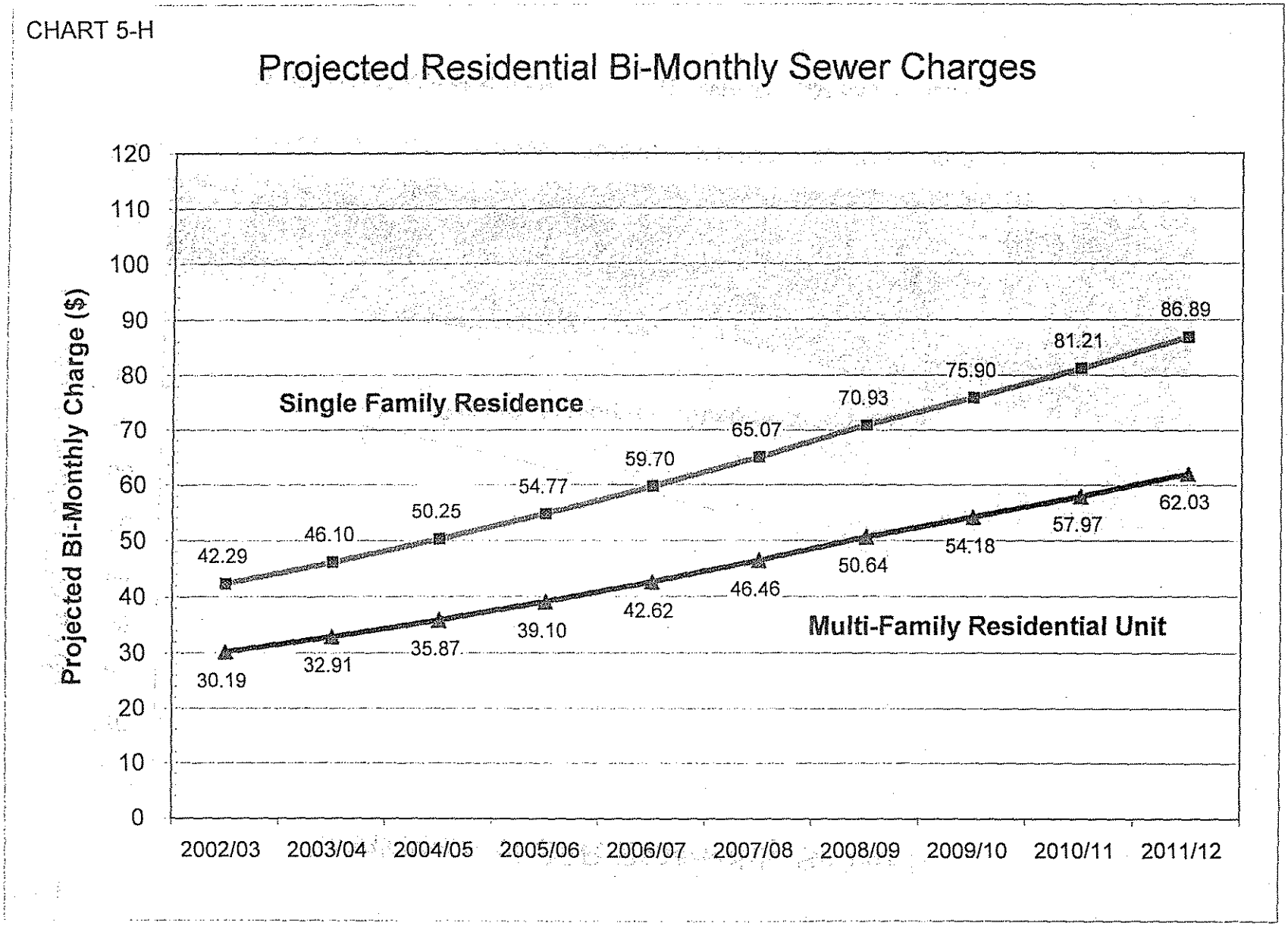
BARTLE WELLS ASSOCIATES
F:\Jobs\Milpitas-314C\Milpitas Phase 2 Tables N\S Cost % Incs Chart,3/18/2003

CHART 5-G



Assumes $5.2 million of projects are funded by the Treatment Plant Fund and Infrastructure Fund through 2004/05 in order to maintain adequate fund balances in the early years.

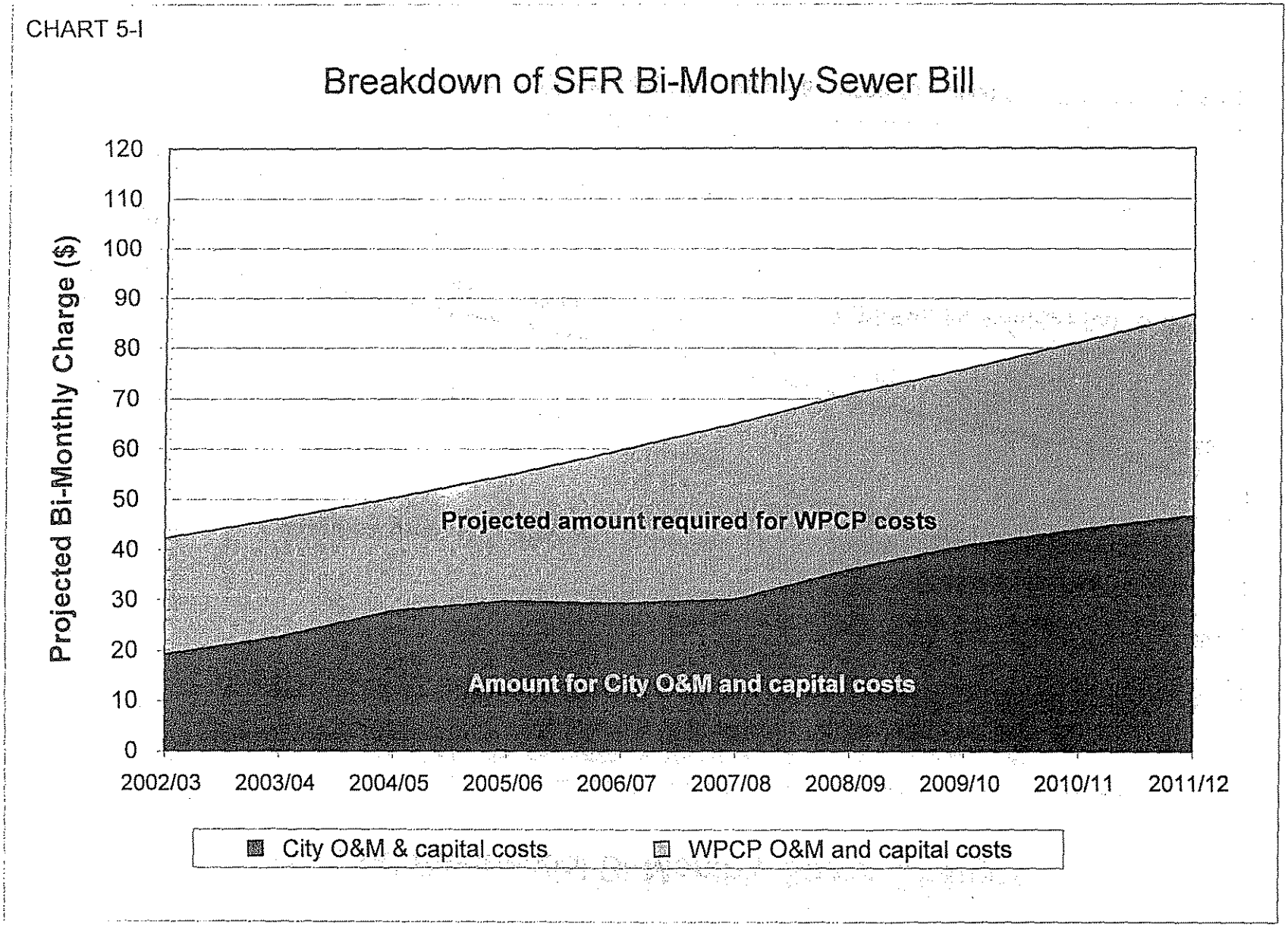
CHART 5-H



BARTLE WELLS ASSOCIATES

F:\Jobs\Milpitas-314C\Milpitas Phase 1 & 2 Tables N CHARTS\S Rate Proj,3/18/2003

CHART 5-I


Breakdown of SFR Bi-Monthly Sewer Bill
Projected Bi-Monthly Charge ($)
120
110
100
90
80
70
60
50
40
30
20
10
0
2002/03
2003/04
2004/05
2005/06
2006/07
2007/08
2008/09
2009/10
2010/11
2011/12
Projected amount required for WPCP costs
Amount for City O&M and capital costs
City O&M & capital costs
WPCP O&M and capital costs

STORM DRAIN FINANCING

6 STORM DRAIN FINANCING

The City of Milpitas owns and maintains a network of conduits, lagoons, and pump stations, which drain storm water to local creeks and the bay. The City's storm drain or storm water activities consist of:

- System operations including repair, replacement and O&M.
- Pollution prevention for street discharge, corporation yards, and parks as well as industrial facilities and new development.
- Administration in the form of management of an urban runoff program including contributions to the regional National Pollution Discharge Elimination System (NPDES) permit, and flood control planning.
- Administration in the form of Flood Plain Management and identification of storm drain network deficiencies.

The City funds these costs primarily with general fund monies.

From an asset standpoint, at the beginning of FY 2002/03, the City had 98 miles of storm lines, 4.5 miles of drainage channel, 3,493 catch basins, 1,898 storm man holes, and 13 storm pump stations. As no separate enterprise exists at this time, City storm assets are currently accounted for with the City's other general fund assets.

6.1 National Pollution Discharge Elimination System Permit

Milpitas is a member of the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP). This program is a multi-jurisdictional cooperative effort among the County, the Santa Clara Valley Water District, and thirteen north county cities, all working to improve the water quality of south San Francisco Bay and the streams of Santa Clara County, by reducing non-point source pollution in storm water runoff and other surface flows. SCVURPPP was established in response to two water quality regulations affecting the San Francisco Bay: the federal Clean Water Act, and the San Francisco Bay Basin Water Quality Control Plan. The SCVURPPP has been issued a region-wide National Pollution Discharge Elimination System Permit (NPDES) by the Regional Water Quality Control Board for discharges from the jurisdiction's stormwater systems to the waters of the United States.

Santa Clara Valley Water District and the City of San Jose together pay close to 60% of the SCVURPPP program costs, which are estimated to be around $3.2 million in the coming year. Other SCVURPPP members are allocated costs based on population. Milpitas' share is estimated at close to 3% of total costs. SCVURPPP was reissued its third NPDES permit on February 21, 2001. Program costs have increased and the permit's "C-3 Provisions", which were issued in October 2001, have been revised to include far-reaching requirements for controlling pollutants from both new and redevelopment activities.

6.2 Capital Improvement Program

Schaff & Wheeler competed a storm drain master plan for the City which establishes a prioritized capital improvement program in July of 2001. The capital plan establishes four priority levels as defined below:

- Priority 1 – Protects life and/or property that would be in imminent danger during a ten-year (or less) magnitude event or where very severe damage could occur during a more extreme event.
- Priority 2 – Protects property from 100 year flooding.
- Priority 3 – Improvements remedy residual flooding that does not pose a risk to life or property – 10 year frequency event.
- Priority 4 – Improvements remedy residual flooding that does not pose a risk to life or property – 100 year frequency event.

The suggested CIP spending by priority is as follows:

- Priority 1 projects $5.1 million (nearly one half for pump station improvements),
- Priority 2 projects $9.4 million,
- Priority 3 projects $6.7 million, and
- Priority 4 projects $2.6 million

The storm drain CIP priority projects total $23.8 million. The master plan suggests an annual capital investment rate of $4 million including near and long-term equipment replacements.

6.3 Projected Budget

The City's Schaff & Wheeler master plan suggests an annual O&M budget of $1 million. An annual budget of around $2 million a year for capital expenditures would allow the City to fund all priority capital needs in less than 15 years. Using these estimates, the City's storm drain operating and capital budget, including the City's NPDES commitment, would total about $3 million annually.

6.4 History of Storm Facilities Funding

Historically storm and sanitary sewer facilities were combined both physically and operationally. In many large and older cities, they are still combined. These combined systems were usually funded from property tax revenues. In the more recent past, with the passage of the federal Clean Water Act, separate sanitary sewer enterprises were organized by cities to obtain state and federal grants under the Clean Water Act. The Clean Water Act grant program was intended for wastewater treatment, and service

charges were required to qualify for grants. A public enterprise is essentially a self-supporting service. Thus, following the adoption of the Clean Water Act, sewer and storm drain systems were generally separated and subject to separate funding sources.

California's Proposition 13 in 1978 effectively eliminated property taxes as a revenue source for city sanitary sewer services. Property tax revenues were limited and many cities eliminated property-tax support for services that had an alternative revenue source, such as sewer rates for sewer service. However, storm sewer operations generally continued to be supported by general fund revenues. A minority of cities however did create separate storm sewer enterprises funded by user charges. Because of the rapidly increasing costs of complying with NPDES permits, many jurisdictions have recently explored the concept of creating a stormwater enterprise to shift the costs of the program out of the general fund.

6.5 Storm Drain Funding Options

The sections below describe options for storm capital and operations and maintenance funding. Following the discussions is a matrix which summarizes the options, whether they can be: used to fund capital, used to fund operations and maintenance, and weather they require a voter approval.

Flood Control Assessment Districts
Benefit assessment districts and assessment districts can be used to fund storm water improvements and operation and maintenance of those improvements. Under Proposition 218, assessments can only be levied for special benefit, which must be demonstrated in an engineer's report. In addition, Proposition 218 imposes additional procedural requirements on the levying of assessments. For instance, an assessment can only be adopted or increased if a majority of those returning ballots, weighted based on the amount of assessments that would be paid, approve the assessment. Assessment bonds for capital costs would be sold based on the revenues from an assessment.

Because of the difficulty of separating general benefit from special benefit (general enhancement of property value does not constitute special benefit under Proposition 218 assessments are not in common use as a new funding source. This may be a good solution for funding storm drain improvements local to an easily defined area. However, it may be difficult to get an assessment approved by the property owners. Additionally, adding such districts to the City might increase the administrative burden to City staff.

Storm Water Enterprise Fee or Special Tax
Proposition 218, which was enacted by California's electorate in 1996, contains both procedural and substantive provisions that apply to "property related fees." The procedural provisions require a majority protest proceeding after notice and hearing. The notice must contain the amount of the fee that the City proposes to be imposed on each parcel. If 50% or more of the proposed fee payers protest before the hearing, the fee may not be imposed. If the fee survives the majority protest proceeding, it must meet the second procedural requirement, voter approval. This requires a favorable vote of either

50% of property owners or two-thirds vote of the electorate. (Property-related fees for sewer, water, and refuse collection services are exempt from the voter approval requirement.)

It is unclear whether Proposition 218 would apply to a properly crafted stormwater enterprise fee. The California Supreme Court determined that only fees imposed directly on property or on property owners as property owners are subject to Proposition 218. (See *Apartment Assoc. of Los Angeles County, Inc. v. City of Los Angeles* (2001) 24 Cal.4th 830.) Since a stormwater enterprise fee is based on each user's contribution of stormwater to the stormdrain system in excess of property in its natural state, it would seem that such fees are not imposed on property owners as property owners and therefore are not "property-related fees." However, in *Howard Jarvis Taxpayers Association v. City of Salinas* (2002) 98 Cal.App.4th 1351, a court of appeals determined that Salinas's stormdrain user fee was subject to Proposition 218, because in the court's view the fee was based on the physical characteristics of property and therefore was a property-related fee. Many local-government attorneys argue that *Salinas* is inconsistent with the Supreme Court's decision in *Apartment Association* and believe that a properly crafted stormwater enterprise fee may be imposed without complying with Proposition 218.

Given the significant uncertainty regarding the applicability of Proposition 218, the City might choose either to comply with Proposition 218's property related fees provisions or not, based on the advice of legal counsel. As noted above, if the City decided to enact a fee only after complying with Proposition 218, it would require satisfying two significant hurdles: first, a majority protest hearing (if 50% of the property owners protest the fee cannot be enacted); and, second, voter approval (either a majority of property owners or two-thirds of the electorate).

Sales Tax

Funding via a sales tax similar to Napa County's Measure "A" passed in 1998 is another voted option. Napa County passed a one-half of one percent transactions and use tax titled the "Flood Protection Sales Tax." The County established a Flood Protection and Watershed Improvement Expenditure Plan describing the projects authorized to be funded with the proceeds of the Flood Protection Sales Tax. Authorization of a sales tax surcharge requires a two-thirds voter approval. A quarter cent (one quarter of 1 percent) sales tax could yield the City about $3.35 million per year assuming Milpitas' total sales of about $1.3 billion annually. This type of a tax would require co-operation with other cities and the county as the entire county would have to approve the vote. This type of a tax would require co-operation with other cities and the county as the entire county would have to approve the vote.

General Obligation (GO) Bond

A 20 or 30 year GO bond could be voted to pay for some or all of the capital improvements recommended in the Storm Drain Master Plan. This would require a 2/3 vote of the public. A $25 million, 30 year term, GO bond voted over Milpitas' assessed valuation of about $7.9 billion would yield a necessary tax rate of 8/10 of 1 cent per $100 of a property's assessed valuation. For a $400,000 home, this would equate to an

increase in property taxes of about $33/year. A GO bond could only be used to fund capital costs, but not operating costs. The term of bonds cannot be longer than the lives of the projects they are financing.

Mello-Roos Community Facilities District
The Mello-Roos Community Facilities Act of 1982 provides for the financing of a broad range of public facilities and certain specific services. The Mello-Roos Act provides for voter approval of a special tax and issuance of bonds secured by that tax. The measure to authorize a special tax and/or bonds must be approved by a two-thirds vote of the qualified (which meets requirements of Prop 218) electors in the community facilities district (CFD). Qualified electors are registered voters or, if there are fewer than 12 registered voters in the CFD, landowners based on one vote per acre. Most Mello-Roos districts are created for developers to fund improvements to serve a specific development. This is a plausible option for City wide capital and operations and maintenance costs so long as it could receive a two-thirds vote.

Levy of a Storm Water Connection/Impact Fee on New Development
This allows the City to recover the portion of the proposed CIP allocable to new development. The fee could also be designed recover the capital portion of Milpitas' NPDES "C-3 Provision" requirements. This would not allow the City to recover capital costs allocable to existing residents or for future on-going maintenance costs associated with new development. However, it may be possible for the City to require new development to agree to waive restrictions on the imposition of fees or assessments to fund operations and maintenance of stormwater facilities.

Formation of a Storm Water Utility Enterprise
This would essentially create a storm water enterprise and impose a storm water utility fee without complying with requirements of Prop. 218. This would allow the City Council to simply impose the fee as it imposes ordinary sewer and water service charges. As noted in the discussion above, it is unclear whether Proposition 218 applies to properly crafted storm water fees.

Creation of a Storm Water Funding Charge which Builds in Beneficiaries
This option would be a voted charge or assessment (see options discussed above) which creates consensus for a positive vote by building a block of beneficiaries over whom costs can be levied and or support can be gained including: environmental concerns, habitat restoration, recreation facilities, streets, and bike paths. This effort would require a complex, coordinated effort to build consensus between different advocacy groups on the elements of such a plan. This is not so much a solution in itself but rather an option for helping to implement the three voted options discussed above.

Continued Use of General Fund Monies
This is essentially the status quo as the general fund currently provides funding for many storm water activities. This is a drain on the general fund and a growing one as NPDES costs increase and as the large capital needs of the City's storm system come into focus.

A summary of the funding alternatives discussed is shown below.

Summary of Storm Drain Financing Alternatives

Financing Method	Allowable Uses		Approval requirements
	O&M	Capital	
Assessment district	yes	yes	Fifty percent approval
Enterprise service fees	yes	yes	Fifty percent property owner approval
Special tax	yes	yes	Two-thirds voter approval
Countywide sales tax	yes	yes	Two-thirds county voter approval
General obligation bonds	no	yes	Two-thirds voter approval
Mello-Roos Community Facilities District	yes	yes	Two-thirds voter approval
Connection/impact fee	no	yes	Council vote
Storm water utility enterprise	yes	yes	Council vote
General Fund support	yes	yes	Council vote

6.6 Form for a Storm Drain Charge

The following is a brief outline of one approach by which storm drain costs could be recovered via a voted or non-voted charge. The first step splits storm drain program costs into flow and quality related costs. The second step defines a method by which to recover the costs.

Cost Category:	Flow Related Costs	Quality Costs
Cost Recovery Method:	[Lot Size] x [Runoff Coefficient]	[Quality Coefficient]

Flow related costs would include capital improvements which are sized by volume of flow. For ease of billing, residential runoff could be split into two or three categories by size rather than billing each responsible residence or "parcel" individually. No significant in-equity would be introduced by billing using three classes of residential size properties rather than billing each properties individual size. Runoff coefficients would be assigned on the basis of land use as land use types and runoff quantities are strongly correlated. An equivalent residential runoff unit (ERRU) would be defined and used to calculate the charge.

Quality related costs including NPDES, street sweeping and other related costs could be recovered via a quality coefficient assigned by land use code. An equivalent residential quality unit (ERQU) would be defined. The relative quality of runoff from various non-

residential properties would be defined as some multiple of that of an equivalent residential quality unit. Lead, copper, and other runoff pollutant information from the Bay Area Association of Storm Management Agencies and other Santa Clara valley monitoring reports could be used to define the quality coefficient. Quality costs are considered independent of lot size and or flow and are assumed to be most closely related to the land use of the lot. This recognizes that in most communities quality costs include items like site inspections whose costs are more related to the frequency with which a certain land category must be inspected because of the types of pollutants present (as measured by the Quality coefficient) rather than the size of the parcel. If the City found that it's quality costs were more tied to volume of flow, this portion of the charge could be changed to include a quantity component.

A sample charge of less than $50/household per year could be defined as follows:

$$\frac{(\$15/\text{ERRU}) \times (\text{Runoff Coefficient}) \times (\text{Area of lot})}{0.125 \text{ acres (one flow ERRU)}} + \frac{\$35/\text{ERRU} \times (\text{Quality Coefficient})}{0.25 \text{ acres (one ERQU)}}$$

As the sample form for the charge is based on usage, the City should bill the individual using or benefiting from the storm drain services provided by the City on their behalf. In the case of multi-tenant commercial users, as with water or sewer charges, the property manager or other individual receiving the storm drain bill could re-allocate the bill to tenants per their lease agreements.

6.7 Conclusions

Four viable storm drain funding options emerge from the discussion above. Any voted option would require substantial lead time in order to mount a successful public education campaign in order to secure support.

- Adopt a voter-approved storm drain charge in any of the forms discussed above.
- Establish a separate storm drain enterprise supported by a non-voted storm drain service charge structured to be exempt from Prop. 218.
- Adopt a storm drain connection/impact fee for new development.
- General fund support for stormwater services

6.8 Recommendations

6.8.1 Storm Drain Service Charge

Bartle Wells Associates recommends that the City continue to explore either a voted or non-voted storm drain charge. This would avoid the necessity of general fund support to the stormdrain system. The steps required to adopt such a fee are:

1) Work with the City Attorney's office and utility billing department to create a defensible charge structure which can be integrated into the City's billing system with minimal difficulty,
2) Work with the City Attorney's office to create a document summarizing the final form and calculation of the charge,
3) Receive approval from the City's utility rate subcommittee to present the charge to the full City Council,
4) Follow City procedures for charge adoption, including making available the charge study and conducting a public hearing,
5) If implementing a voted charge, conduct an election.
6) If implementing a non-voted charge, have City Council vote on charge adoption.

6.8.2 Storm Drain Connection Fee

Bartle Wells Associates recommends that the City adopt a storm drain connection/impact fee as soon as possible. The steps required to adopt such a fee include:

1) Set a timeline and guidelines for fee implementation,
2) Receive approval from the City's utility rate subcommittee to present the fee to the full City Council,
3) Follow City procedures for fee adoption including making available the fee study and conducting a public hearing
4) Have City Council vote on fee adoption.

CONNECTION FEES

7 CONNECTION FEES

7.1 Purpose

Connection fees are one-time charges to new customers to recover the capital costs for infrastructure needed to serve growth. These fees go by a variety of names including capacity fees, hook-up fees, facility charges, and connection charges. These charges do not include fees for the direct costs of installing service connections.

The City's utilities currently charge the following connection fees:

- **Water Connection Fee** – for capacity in the City's water system
- **Sewer Connection Fee** – for capacity in the City's wastewater collection system
- **Treatment Plant Fee** – for wastewater treatment capacity in the San Jose/Santa Clara Water Pollution Control Plant

The City does not charge a connection fee to recover costs for storm drain infrastructure.

Connection fees should recover costs for future projects that must be constructed to serve new development, as well as the costs of capacity in existing infrastructure that will benefit and serve new customers. Connection fees are also appropriate for the incremental capacity needed when redevelopment projects or current customers require additional capacity in excess of existing capacity rights.

7.2 Government Code

California Government Code Section 66013 governs water and sewer connection fees. The code states that connection fees must be reasonable and non-arbitrary, and based on facility capital costs, user loads, and system capacity. The fees cannot exceed the estimated reasonable cost of providing the service for which they are imposed unless approved by a two-thirds vote of the electorate. A variety of methods may be used to determine an appropriate connection fee.

Section 66013 of the Government Code also specifies a number of provisions for the deposit, investment, accounting, and expenditure of connection fees. The City should review its policies and practices to ensure compliance with the legal requirements of the code.

7.3 Water Connection Fees

7.3.1 Current Water Connection Fees

Table 7-1 shows current water connection fees. The fees were adopted by ordinance on September 18, 1984 and have not been updated in over 18 years. Current fees are based

on lot size and front footage of existing water mains. They do not recover costs in proportion to the capacity in infrastructure needed to serve new development. For example, a single family residence and a restaurant on similar lots would be charged the same connection fee, even if the restaurant uses 20 times as much water and requires 20 times as much capacity in water system infrastructure.

The current connection fee for a typical single family residence on a 1/5-acre square lot equals about $884. This is very low by regional and statewide standards. A regional survey of connection fees is shown later in this report.

7.3.2 New Water Connection Fee Calculation

Bartle Wells Associates recommends that the City update its connection fees to ensure it is recovering adequate costs for infrastructure needed to serve new development. Table 7-2 calculates a new water connection fee based on a standard buy-in methodology. The fee is calculated by dividing the value of existing infrastructure, plus additional capital project costs anticipated over the next ten years, by average day system capacity.

As shown on theTable 7-2, the total buy-in value is estimated at approximately $179 million and includes the following:

- The current value of existing infrastructure, estimated at about $166 million based on detailed information provided by Schaaf & Wheeler included in Appendix B. Current system value equals the replacement cost for each component of the water system less depreciation based on the age and useful life of each component.
- About $13 million in capital projects anticipated over the next 10 years

The connection fee is calculated by dividing the buy-in value of $179 million by the average daily capacity of the water system, estimated at 30 mgd. This results in a new connection fee of $5.97 per gpd. The actual connection fee charged to a new customer can be calculated by multiplying this unit cost by the customer's projected water use.

Bartle Wells Associates recommends that the City establish minimum flat fees for single family residential, multi-family residential, and small commercial development based on typical consumption.

7.3.3 Recommended Water Connection Fees

Table 7-3 compares current and recommended water connection fees for a number of sample residential and non-residential customers. The table calculates new connection fees for single family residences at $1,910 and for multi-family residential units at $1,164.

The recommended fees are higher than the City's current fees, especially for customers using large amounts of water and requiring large amounts of capacity in the water system. As noted, this is because current fees do not recover adequate revenues for infrastructure capacity required by new development. The City currently recovers less than $100 in connection fees per typical new multi-family dwelling unit.

7.4 Sewer Connection Fees

7.4.1 Current Sewer Connection Fees & Treatment Plant Fees

New sewer customers pay a connection fee for capacity in the City's sewer collection system plus a treatment plant fee for capacity in the regional wastewater treatment plant. Table 7-4 shows current sewer connection fees and treatment plant fees. These fees have not been updated in many years.

Current connection fees are based on lot size and front footage to existing sewer mains. The acreage portion of the fee and a maximum front footage fee per residential lot were adopted on October 12, 1978. The front footage portion of the fee was adopted on October 30, 1967. The current fees do not recover costs in proportion to the capacity in infrastructure needed to serve growth. The current connection fee for a typical single family residence on a 1/5-acre square lot equals about $399. This is very low by regional and statewide standards. A regional survey of connection fees is shown later in this report.

The City's current treatment plant fees were adopted in the early 1980s. New residential customers are charged flat fees based on customer class. The treatment plant fee for a single family residence is $880 and the fee for a multi-family dwelling unit is $690. Treatment plant fees for non-residential customers are calculated based on each customer's projected wastewater flow and strength.

7.4.2 New Sewer Connection Fee Calculation

Bartle Wells Associates recommends that the City update its connection fees to ensure it is recovering adequate costs for infrastructure needed to serve new development. Table 7-5 calculates a new sewer connection fee based on a standard buy-in methodology. The fee is calculated by dividing the value of existing infrastructure, plus additional capital project costs anticipated over the next ten years, by system capacity.

As shown on the table, the total buy-in value is estimated at approximately $106 million and includes the following:

- The current value of existing infrastructure, estimated at about $94 million based on detailed information provided by Schaaf & Wheeler included in Appendix B. Current system value equals the replacement cost for each component of the water system less depreciation based on the age and useful life of each component.
- About $12.7 million in capital projects anticipated over the next 10 years

The connection fee is calculated by dividing the buy-in value of $106 million by the capacity of the sewer system, estimated at 12.5 mgd based on the City's capacity in the wastewater treatment plant. This results in a new connection fee of $8.52 per gpd. The actual connection fee charged to a new customer can be calculated by multiplying this unit cost by the customer's projected sewer flow.

Bartle Wells Associates recommends that the City establish standard fixed connection fees for single family residences, multi-family dwelling units, and mobile home units. The City should also establish a minimum flat fee for small commercial development.

7.4.3 Recommended Sewer Connection Fees

Table 7-6 compares current and recommended sewer connection fees for a number of sample residential and non-residential customers. The table calculates new connection fees for single family residences at $1,908 and for multi-family residential units at $1,406.

The recommended fees are higher than the City's current fees, especially for customers discharging large amounts of flow and requiring substantial capacity in the sewer collection system. As noted, this is because current fees do not recover adequate revenues for infrastructure capacity required by new development. The City currently recovers less than $100 in connection fees per typical new multi-family dwelling unit.

7.4.4 Sewer Treatment Plant Fee Recommendation

No adjustments to the City's treatment plant fees are recommended at this time. The City's current treatment plant fees adequately recover costs for treatment capacity in the regional treatment plant.

The City currently has enough treatment plant capacity to meet its projected needs for a number of years. However, the City may eventually need to acquire additional treatment capacity. Treatment plant fees should be reviewed periodically to ensure that future fees are sufficient to recover costs for the acquisition of additional treatment capacity.

7.4.5 Combined Sewer Connection Fees

The combined connection fee and treatment plant fee for a typical single family residence would increase from about $1,162 to $2,788 with the recommended fees. The combined fees for a multi-family dwelling unit in a high-density residential development would increase from approximately $715 to $2,096. Again, this is due to the inadequately low current connection fees for multi-family developments.

7.5 Storm Drain Connection Fees

The City has made substantial investments in storm drain facilities and anticipates the need for a number of additional projects to meet the new NPDES stormwater requirements. However, the City does not charge a connection fee to recover costs for storm drain infrastructure. Bartle Wells Recommends that the City adopt a storm drain connection fee as soon as feasible.

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7.5.1 New Storm Drain Connection Fee Calculation

Tables 7-7 through 7-10 develop a new storm drain connection fee based on a standard buy-in methodology. The fee is calculated by dividing the value of existing infrastructure, plus additional anticipated capital project and equipment costs, by total potential citywide impervious surface area.

Table 7-7 lists current storm drain facilities and current replacement costs by component. Total system replacement costs are estimated at about $91 million.

Table 7-8 summarizes the cost of storm drain capacity improvements including City-identified improvements and projects recommended in the City's Storm Drain Master Plan dated July 2001, developed by Schaaf & Wheeler. The recommended capacity improvements also include near-term equipment needs. The total cost of these improvements is estimated at $25 million.

Table 7-9 calculates total potential citywide stormwater runoff acreage based on the number of acres of land that may eventually be developed under various land use categories. The total represents the potential amount of impervious surface area in the City at buildout. The table estimates total potential runoff acreage at 4,863 acres, or about 56% of total city area.

Table 7-10 calculates a new storm drain connection fee. The connection fee is calculated by dividing the buy-in value of $116 million by total potential citywide runoff acreage. This results in a new storm drain connection fee of $23,880 per acre of impervious surface, or about $55 per 100 square feet. The actual connection fee charged to a new customer can be calculated by multiplying the unit cost by the customer's actual or estimated impervious surface area.

Bartle Wells Associates recommends that the City establish minimum flat fees for single family residential, multi-family residential, and small commercial development based on typical flow and strength.

7.5.2 Sample Storm Drain Connection Fees

Table 7-11 shows examples of storm drain connection fees for various types of new development. The table calculates a single family residential fee of $1,060 for a 5,000 square foot lot and a fee of about $1,847 for a 1/5-acre lot. Fees for other customers vary based on estimated amount of impervious surface area for each type of development.

Table 7-1
City of Milpitas - Financial Utility Master Plan
Current Water Connection Fee

Water Connection Fee*
Sum of the following:

A $700 per acre of lot ($350 maximum per lot, $700 minimum per residential subdivision)

B $8 per front foot of existing water main within or adjacent to the site ($1,680 maximum per dwelling unit). Frontage foot for corner lots shall be the larger of the longest frontage.

C Hillside charges when a supplemental water facilities improvement benefit district exists. Each district so established provides for a dwelling unit fee.

* Adopted September 18, 1984.

Table 7-2
City of Milpitas - Financial Utility Master Plan
Water Connection Fee Calculation

BUY-IN VALUE	
Estimated infrastructure value	
Water pipe components[1]	$144,115,000
Water tanks[1]	12,545,000
Water pump stations[1]	6,022,000
Water wells[2]	3,500,000
Subtotal	166,182,000
Capital improvement projects 2002/03 - 2011/12	$12,966,000
Total system value + planned capital projects	$179,148,000
CAPACITY	
Water system average day capacity (mgd)[3]	30
CONNECTION FEE PER UNIT	
Cost per average daily consumption (mgd)	$5,971,600
Cost per average daily consumption (gpd)	5.97

1 Based on depreciated Schaaf & Wheeler component cost estimates.
2 Based on estimated cost of Curtis well at $2.5 million and Pinewood well at $1 million.
3 Engineering estimate.

Table 7-3
City of Milpitas - Financial Utility Master Plan
Water Connection Fees for Sample Customers

	Customer Profile				Connection Fee Comparison	
	Lot Size[1]	Dwelling Units	Front Footage[2]	Est. Use[3] (avg gpd)	**Current**	**Recommended**
Fee description					Fee per acre plus fee per front foot	Fee based on capacity & flow
RESIDENTIAL						
Single family	5,000 ft^2	1	71	320	$648	$1,910
Single family	1/5 acre	1	93	320	$884	$1,910
Multi-family development	20,000 ft^2	10	141	1,950	$1,449	$11,642
Estimated fee per unit					145	1,164
Multi-family development (high-density)	1 acre	50	209	9,750	2,372	58,208
Estimated fee per unit					47	1,164
NON-RESIDENTIAL						
Small commercial customer	5,000 ft^2	n/a	71	320	$648	1,910
Industrial customer	3 acres	n/a	361	15,000	4,988	89,550
Warehouse	3 acres	n/a	361	1,000	4,988	5,970
Small shopping center	1 acre	n/a	209	5,000	2,372	29,850

1 Assumes lot is perfectly square.
2 Assumes water main fronts one side of lot.
3 Residential use based on average flows: single family/duplex unit = 320 gpd; condo/townhouse = 195 gpd.

Table 7-4
City of Milpitas - Financial Utility Master Plan
Current Sewer Connection Fee & Treatment Plant Fee

Sewer Connection Fee[1,2,3]
Sum of the following:

A $600 per acre of lot ($200 maximum per lot, $600 minimum per residential subdivision)

B $3 per front foot of existing sewer within or adjacent to the site ($300 maximum per residential lot). Front footage for corner lots shall be the larger of 1) the longest frontage dimension, or 2) the summation of all frontages less 100'.

Treatment Plant Fee
Based on wastewater flow and strength.

Residential (per dwelling unit)	
Single family or duplex	$880
Multiple family	690
Mobile home park	440
Commercial/Industrial/Institutional[4]	
Consecutive peak 5-day dry weather discharge < 5,000 gpd	
High strength industrial/commercial ($/hcf/day) *Restaurants, eating and drinking establishments, retail food stores*	$4,200
Low strength industrial/commercial ($/hcf/day) *All others*	$2,600
Consecutive peak 5-day dry weather discharge ≥ 5,000 gpd	
Fees per unit during consecutive peak 5-day dry weather discharge	
Flow (per each million gallons or fraction thereof)	$2,293,957
BOD (per each 1,000 lbs or fraction thereof)	245,251
SS (per each 1,000 lbs or fraction thereof)	134,098
NH3 (per each 1,000 lbs or fraction thereof)	1,263,254

1 Front footage fee adopted September 30, 1967.
2 Sewer acreage connection fee adopted September 12, 1978.
3 Maximum front footage fee per residential lot adopted September 12, 1978.
4 Peak 5-day discharge shall be established by the City Engineer.

Table 7-5
City of Milpitas - Financial Utility Master Plan
Sewer Connection Fee Calculation

BUY-IN VALUE	
Estimated infrastructure value	
Sewer pipe components[1]	$84,790,000
Sewer pump stations[2]	9,003,000
Subtotal	93,793,000
Capital improvement projects 2002/03 - 2011/12	12,700,000
Total system value + planned capital projects	$106,493,000
CAPACITY	
Sewer system/treatment capacity (mgd)[3]	12.5
CONNECTION FEE PER UNIT	
Cost per mgd	$8,519,440
Cost per gpd	8.52

1 Based on depreciated value of Schaaf & Wheeler pipeline cost estimates.
2 Based on Schaaf & Wheeler pump station cost estimates; assumes 50% depreciation.
3 City's treatment capacity in the San Jose/Santa Clara Water Pollution Control Plant.

Table 7-6
City of Milpitas - Financial Utility Master Plan
Comparison of Sewer Connection Fees for Sample Customers

	Customer Profile				Connection Fee Comparison	
	Lot Size[1]	Dwelling Units	Front Footage[2]	Est. Flow[3] (gpd)	**Current**	**Recommended**
Fee description					Fee per acre plus fee per front foot	Fee based on capacity & flow
RESIDENTIAL						
Single family	5,000 ft^2	1	71	224	$282	$1,908
Single family	1/5 acre	1	93	224	$399	$1,908
Multi-family development	20,000 ft^2	10	141	1,650	$698	$14,058
Estimated fee per unit					70	1,406
Multi-family development (high-density)	1 acre	50	209	8,250	$1,227	$70,290
Estimated fee per unit					25	1,406
NON-RESIDENTIAL						
Small commercial customer	5,000 ft^2	n/a	71	224	$282	$1,908
Industrial customer	3 acres	n/a	361	15,000	2,883	$127,800
Warehouse	3 acres	n/a	361	1,000	2,883	$8,520
Small shopping center	1 acre	n/a	209	5,000	1,227	$42,600

1 Assumes lot is perfectly square.
2 Assumes sewer main fronts one side of lot.
3 Residential flows based on City of Milpitas projected flows: single family = 224 gpd; multi-family unit = 165 gpd.

Table 7-7
City of Milpitas - Financial Utility Master Plan
Storm Drain Facilities and Replacement Value

Year	Original Installation Cost	Total Replacement Costs (2002 Dollars)	Depreciated Value (2002 Dolars)
Pre 80/81	$51,165,786	$208,575,982	$69,525,327.20
80/81	982,926	2,032,070	459,156
81/82	1,785,146	3,690,553	2,214,332
82/83	441,682	804,251	498,636
83/84	304,651	456,530	292,179
84/85	2,371,564	3,610,027	1,968,698
85/86	712,782	1,082,336	630,668
86/87	1,353,937	1,886,691	442,788
87/88	1,558,375	2,086,742	1,502,454
88/89	481,501	644,517	476,942
89/90	201,293	260,445	197,938
90/91	1,163,394	1,474,687	863,953
91/92	676,176	834,355	667,484
92/93	975,176	1,189,449	822,175
93/94	951,176	1,123,480	822,459
94/95	458,307	539,155	463,673
95/96	1,453,172	1,703,817	1,499,359
96/97	490,666	575,110	517,599
97/98	1,046,078	1,192,917	1,097,484
98/99	96,894	108,647	102,128
99/00	4,222,143	4,753,937	4,302,655
00/01	118,810	122,446	119,997
01/02	1,669,785	1,669,785	1,669,785
Subtotal	74,681,420	240,417,931	91,157,871

1 Cost, useful life and age of storm system inventory installed in FY 80/81 and later are based upon values provided in the FY 02 GASB 34 Engineering Infrastructure Report.

2 Original installation costs of Storm Systems installed prior to FY 80/81 are calculated based upon values provided in the utility system inventory maintained by Land Development less value of storm system infrastructure provided in the 01/02 GASB 34 Engineering Infrastructure report. Storm systems installed prior to FY 80/81 are assumed to have an average age of 30 years and an average useful life of 45 years.

3 Total replacement costs are escalated using the Engineering News-Record San Francisco Construction Cost Index.

Table 7-8
City of Milpitas - Financial Utility Master Plan
Storm Drain Infrastructure Capacity Improvements

	Estimated Cost
Capital Improvements (1)	$18,000,000
Near-Term Equipment (1)	2,000,000
City Identified CIP	4,913,000
Total Cost	24,913,000

1 Schaaf & Wheeler Storm Drain Master Plan, July 2001.

Table 7-9
City of Milpitas - Financial Utility Master Plan
Land Use and Runoff Potential

Land Use Category	Acreage (1)	Runoff Factor (2)	Runoff Acreage
Single Family Residential	4,200	0.4	1,680
Multi-family Residential	570	0.7	399
Commercial/Industrial	3,040	0.9	2,736
Agricultural	240	0.2	48
Open Space	610	0.0	0
Total	8,660	n/a	4,863

1 Provided by the City of Milpitas
2 Schaaf & Wheeler Storm Drain Master Plan, July 2001.

Table 7-10
City of Milpitas - Financial Utility Master Plan
Storm Drain Connection Fee Calculation

Value of Existing Facilties	$91,157,871
Value of Master Plan Improvements (1)	24,913,000
Total	116,070,871
Total Runoff Acres	4,860
Connection Fee per Runoff Acre	$23,880
Connection Fee per 100 Square Feet of Runoff Surface	$55

1 Includes capital improvement projects and near-term equipment requirements.

Table 7-11
City of Milpitas - Financial Utility Master Plan
Storm Drain Connection Fees for Sample Customers

	Lot Size (sq. feet)	Dwelling Units	Runoff Factor	Impervious Surface (sq. feet)	Storm Drain Connection Fee
RESIDENTIAL					
Single family residence	5,000	1	0.4	2,000	$1,100
Single family residence (1/5 acre)	8,712	1	0.4	3,485	$1,917
Multi-family development	20,000	10	0.7	14,000	$7,700
Estimated fee per unit					$770
Multi-family development (high-density)	43,560	50	0.7	30,492	$16,771
Estimated fee per unit					$335
NON-RESIDENTIAL					
Small commercial customer	5,000	n/a	0.9	4,500	$2,475
Industrial customer (3 acres)	130,680	n/a	0.9	117,612	$64,687
Small shopping center (1 acre)	43,560	n/a	0.9	39,204	$21,562

SURVEY OF REGIONAL RATES & CONNECTION FEES

8 SURVEY OF REGIONAL RATES & CONNECTION FEES

The rate survey information presented in this section presents comparative information on regional water, sewer, and stormwater rates and connection fees. Each of the agencies surveyed operates under a unique set of conditions and has different utility infrastructure, operational constraints, levels of service provision, customer base, water usage profiles, financial conditions, and policy objectives. As such, the surveys should be used for informational purposes only.

Utility charges are typically collected via monthly or bi-monthly billings. However, some agencies collect all or a portion of wastewater and/or stormwater charges on the property tax rolls. The rate survey shows all rates on a bi-monthly basis.

Many of the agencies surveyed have connection fees that can vary based on a wide range of factors including: estimated utility use, meter size, lot size, front footage, size of water or sewer main fronting property, and location. The connection fees shown in this survey are based on agency estimates for typical customers in each class.

8.1 Water Rate Survey

Table 8-1 summarizes the results of a survey of single family residential water rates from 14 regional agencies. All of the agencies surveyed had rates that included a fixed bi-monthly service charge and quantity charges for metered water use. The fixed component ranged from $5.86 to $18.00 bi-monthly. Milpitas fixed charge of $12.90 is very close to the average of $12.68. The quantity rate structures vary with some agencies charging uniform rates for all residential water use and others charging tiered rates with anywhere from 2 to 4 rate tiers.

Because each agency has a different rate structure, Table 8-1 compares bi-monthly bills for customers using low (15 hcf), moderate (25 hcf), and high (50 hcf) amounts of water. Charts 8-A – 8-C compare bi-monthly rates for the three consumption levels.

Milpitas' current residential water rates are low by regional standards for all three consumption levels. The City had the second lowest charge for customers using a low 15 hcf, the lowest charge for residential customers using a moderate 25 hcf, and the fourth lowest rates for customers using 50 hcf in a bi-monthly billing period.

The charts also show Milpitas projected bills for 2003/04 for informational purposes only. This is not a fair comparison with other agencies' 2002/03 rates. Other regional agencies will also be adopting rate increases for 2003/04.

Table 8-2 shows information on regional commercial water rates and compares bi-monthly bills for a hypothetical small commercial customer with a 5/8" or 3/4" meter using 20 hcf of water. The estimated bills range from $22.45 to $60.20. Milpitas' had the highest water bill for the sample customer.

8.2 Sewer Rate Survey

Table 8-3 and Chart 8-D compare regional single family residential sewer rates. All but one of the agencies charges flat rates for residential wastewater service. The City of San Mateo's rates are based on average winter water use during the winter months (November – March). Bi-monthly equivalent charges ranged from $16.70 to $51.20. Milpitas currently has the third highest sewer rate of agencies surveyed with a bi-monthly charge of $42.29, about 21% higher than the survey average of $34.90.

Table 8-4 summarizes information on regional commercial wastewater rates. Commercial sewer rates typically vary by customer class based on the estimated wastewater strength of each type of business. Industrial sewer rates are usually based on estimates of each individual customer's sewage strength, as determined by actual sampling data.

Table 8-4 also compares bi-monthly bills for a hypothetical small commercial customer using 20 hcf of water. The estimated bills range from $29.60 to $68.80. Milpitas' charge of $31.34 is among the lowest of the cities surveyed.

8.3 Storm Drain Rate Survey

Table 8-5 summarizes the results of a single family residential stormwater rate survey. The bi-monthly rate in the cities surveyed ranges from $0.32 to $8.50 per residence. Of the SCURPPP members surveyed, only Milpitas, Mountain View, and Sunnyvale do not currently have a storm charge in place. As also shown in the table, only San Jose and San Mateo County have increased their charges since 2001/02.

All respondents who had not raised their charge stated that they had not done so because of concerns about Prop. 218 and the Salinas decision. San Jose believes itself to be exempt from Prop. 218 as a storm sewer service provider. San Mateo County does not believe its fee to be property-related. Palo Alto believes its fee is subject to both the notification and voting procedures of Prop 218 and held a vote to increase its fee in 2000. The vote failed.

Many agencies do not have a separate stormwater service charge. These agencies typically fund their storm drain operations from either the general fund, other utility enterprises, or a combination of both. For example, the City of Sunnyvale has historically treated its storm drain services as part of its wastewater enterprise and has funded storm drain operations using sewer rates.

8.4 Combined Utility Rates

Table 8-6 compares combined bi-monthly water, sewer, and stormwater rates for a typical single family residence. The combined utility charges range from $64.77 to $110.87 with an average rate of $92.88 and a median rate of $92.21. Milpitas has the third lowest combined charge of $86.29, about 7% below the survey average. The survey results are also presented on Chart 8-E.

With the rate recommendations, Milpitas combined bi-monthly bill for water and sewer services would rise from $86.29 to $96.33 for a typical single family residence. This represents an increase of about $5 per month. Again, much of this increase is needed to recover costs that are out of the City's control including wholesale water costs and operating/capital costs of the regional wastewater treatment plant.

Chart 8-F shows combined water and sewer charges for a hypothetical small commercial customer using 20 hcf of water in a bi-monthly period. Milpitas current combined charges are slightly below average.

8.5 Water Connection Fee Survey

Table 8-7 shows a survey of regional water connection fees. Milpitas' current fee for a typical single family residence is about $884. This is lowest of public water agencies surveyed. Residents of Campbell and Los Gatos are served by the San Jose Water Company, a private company that cannot charge connection fees; single family residences are charged a meter installation fee of about $3,300. The recommended single family residential connection fee of $1,910 will remain the lowest of the other regional public agencies shown.

The table also calculates connection fees for a hypothetical high-density multi-family development and a small commercial customer. The City's current water connection fees for these customers are also the lowest of the public agencies surveyed.

8.6 Sewer Connection Fee Survey

Table 8-8 shows a survey of regional sewer connection fees, which include fees for wastewater collection and treatment. Milpitas' current fees for a typical single family residence total about $1,162. This is among the lowest of the agencies surveyed and is far below the $3,732 average of the other agencies' fees. The recommended single family residential connection fee of $2,788 will remain lower than the current regional average.

The table also calculates connection fees for a high-density multi-family development and a small commercial customer. The City's current sewer connection fees for these customers are also among the lowest of the agencies surveyed.

8.7 Storm Drain Connection Fee Survey

Table 8-9 shows results from a survey of regional storm water connection fees. The table also shows examples of the City's new fee recommendations. A number of the agencies, including Milpitas, do not currently charge storm drain connection fees. Of those agencies with storm drain connection charges, the fees range from $270 to about $4,000 per single family residence.

Table 8-9 also calculates connection fees for a sample high-density multi-family development and a small commercial customer. The recommended fee for a multi-family development would be the highest of the agencies surveyed.

8.8 Combined Connection Fees

Chart 8-G compares single family residential water, sewer, and storm drain connection fees for 12 regional agencies. The fees assume a typical single family residence is located on lot one-fifth of an acre, or about 8,700 square feet, in area. The combined fees range from about $2,000 to almost $12,000. Milpitas' current combined connection fees of $2,046 are the lowest of the agencies surveyed – less than half of the next lowest agency – and are substantially below the regional average of about $8,200. The chart also includes Milpitas' recommended utility connection fees which total about $6,600 and would remain low by regional standards.

Table 8-1
City of Milpitas - Financial Utility Master Plan
Single Family Residential Water Rate Survey - 2002/03

City	Billing Cycle	Fixed Charge (Bi-monthly)	Quantity Rate Structure	Quantity Charge per hcf	Total Bi-monthly Bill					
					Low 15 hcf	Rank	Moderate 25 hcf	Rank	High 50 hcf	Rank
Campbell	Monthly	$17.74	uniform	1.63	$42.19	10	$58.49	8	$99.24	5
Cupertino	Monthly	17.74	uniform	1.63	42.19	10	58.49	8	99.24	5
Fremont	Bi-monthly	8.90	uniform	1.88	37.03	6	55.78	6	102.65	9
Los Gatos	Monthly	17.74	uniform	1.63	42.19	10	58.49	8	99.24	5
Milpitas	Bi-monthly	12.90	2 tiers	1.02 - 2.14	28.20	2	44.00	1	97.50	4
Mountain View	Monthly	7.40	4 tiers	1.09 - 4.46	37.55	8	59.95	12	171.45	14
Palo Alto	Monthly	10.00	2 tiers	1.91 - 2.45	42.97	14	67.47	14	128.72	13
San Jose (Muni.)	Bi-monthly	11.70	4 tiers	1.22 - 1.84	30.22	3	44.62	2	86.62	3
San Jose (W. Co.)	Monthly	17.74	uniform	1.63	42.19	10	58.49	8	99.24	5
San Mateo	Monthly	12.56	uniform	1.92	41.36	9	60.56	13	108.56	11
Santa Clara	Monthly	10.40	uniform	1.49	32.81	4	47.75	3	85.10	2
Santa Cruz	Bi-monthly	18.00	3 tiers	0.76 - 3.31	$36.75	5	$54.85	5	$115.10	12
Sunnyvale	Bi-monthly	5.86	4 tiers	0.84 - 1.78	24.52	1	47.86	4	81.43	1
Union City	Bi-monthly	8.90	uniform	1.88	37.03	6	55.78	6	102.65	9
Average		12.68			36.94		55.18		105.48	
Median		12.13			37.29		57.13		99.24	
Minimum		5.86			24.52		44.00		81.43	
Maximum		18.00			42.97		67.47		171.45	

Rates apply to each agency's smallest base meter size, which is typically a 5/8" or 5/8" x 3/4" meter.

Table 8-2
City of Milpitas - Financial Utility Master Plan
Regional Commercial Water Rates

Agency	Billing	Flat Charge	Consumption Charge	Bi-Monthly Service Charge (20 hcf)
Santa Clara	Monthly	Charge based on meter size Ranges from $5.20 (5/8" meter) - $399.40 (14" meter)	$0.60 per hcf	$22.45
Sunnyvale	Bi - Monthly	Charge based on meter size Ranges from $5.85 (5/8" meter) - $29.26 (2" meter)	7-tiered rate structure Ranges from $0.83 - $1.92 per hcf	24.52
San Jose (Muni)	Bi - Monthly	Charge based on meter size Ranges from $11.70 (5/8" meter) - $550.00 (10" meter)	Tiered depending on zones Ranges from $1.44 - $1.67 per hcf	40.50
Los Gatos (SJWC)	Bi - Monthly	Charge based on meter size Ranges from $8.87 (5/8" meter) - $790.00 (10" meter)	$1.63 per hcf	41.47
Campbell (SJWC)	Bi - Monthly	Charge based on meter size Ranges from $8.87 (5/8" meter) - $790.00 (10" meter)	$1.63 per hcf	41.47
Fremont (ACWD)	Bi - Monthly	Charge based on meter size Ranges from $8.90 (5/8" meter) - $1,144.00 (14" meter)	$1.63 per hcf	41.50
Union City (ACWD)	Bi - Monthly	Charge based on meter size Ranges from $8.90 (5/8" meter) - $1,144.00 (14" meter)	$1.63 per hcf	41.50
Mountain View*	Monthly	Charge based on meter size & backflow e.g. 3/4" charge is $3.70 w/o backflow, $14.40 w/ backflow	$2.33 per hcf Ranges from $1.09 - $2.24	49.52
San Mateo	Monthly	Charge based on meter size Ranges from $6.28 (5/8" meter) - $149.14 (10" meter)	$1.92 per hcf	50.96
Santa Cruz	Bi - Monthly	Charge based on meter size Ranges from $18.00 (5/8" meter) - $4,140.00 (14" meter)	$1.81 per hcf	54.20
Palo Alto	Bi - Monthly	Charge based on meter size Ranges from $5.00 (5/8" meter) - $100.00 (10" meter)	$2.55 per hcf	56.00
Milpitas	Bi - Monthly	Charge based on meter size Ranges from $13.60 (5/8" meter) - $332.25 (10" meter)	$2.33 per hcf	60.20

* Average of 3/4" meter charge with and without backflow prevention shown.

Table 8-3
City of Milpitas
Single Family Residential Sewer Rate Survey - 2002/03

City	Billing Cycle	Rate Structure	Fixed Charge (Bi-monthly)	Quantity Charge per hcf	Bi-monthly Bill	Rank
Campbell*	Annual	flat rate	$33.00	-	$33.00	6
Cupertino*	Annual	flat rate	36.00	-	36.00	9
Fremont	Annual	flat rate	31.33	-	31.33	4
Los Gatos*	Annual	flat rate	33.00	-	33.00	6
Milpitas*	Bi-monthly	flat rate	42.29	-	42.29	11
Mountain View	Monthly	flat rate	28.80	-	28.80	3
Palo Alto	Monthly	flat rate	28.00	-	28.00	2
San Jose*	Annual	flat rate	37.92		37.92	10
San Mateo**	Annual	quantity rate	-	2.74	49.32	12
Santa Clara*	Monthly	flat rate	16.70	-	16.70	1
Santa Cruz	Bi-monthly	flat rate	51.20	-	51.20	13
Sunnyvale	Bi-monthly	flat rate	34.84	-	34.84	8
Union City	Annual	flat rate	31.33	-	31.33	4
Average					34.90	
Median					33.00	
Minimum					16.70	
Maximum					51.20	

* Tributary agency to San Jose / Santa Clara Water Pollution Control Plant.
** Charge based on avgerage winter water use (Nov - March), bi-monthly bill assumes 18 hcf of discharge.

Table 8-4
City of Milpitas - Financial Utility Master Plan
Regional Commercial Sewer Rates

Agency	Billing	Flat Charge (Bi-Monthly Equivalent)	Consumption Charge	Bi-Monthly Service Charge (20 hcf)
Campbell (WVSD)	Annual	None	Based on water use Comm. ranges from $1.48 - $3.26 Industrial ranges from $1.33 - $5.05	$29.60
Los Gatos (WVSD)	Annual	None	Based on water use Comm. ranges from $1.48 - $3.26 Industrial ranges from $1.33 - $5.05	29.60
Milpitas	Bi - Monthly	$7.14	Varies by type of business Ranges from $1.11 - $3.37 (restaurants) per hcf	31.34
San Jose	Annual	None	Based on customer class and strength and previous year's winter water usage Ranges from $1.72 - $3.07 per hcf	34.40
Santa Clara	Monthly	$18.56	Varies by type of business Ranges from $0.97 - $2.29 per hcf Sewage volume is taken as % of water use	37.96
San Mateo	Annual	None	Based on customer class and strength and previous year's winter water usage Ranges from $2.74 - $6.14 (restaurants) per hcf	54.80
Mountain View	Bi - Monthly	$14.68	Varies by type of business Ranges from $2.10 - $2.58 (restaurants) per hcf	56.68
Fremont (Union SD)	Annual	$27.67	Based either on loading averages (Volume, SS, COD) or on parcel strength ($1.81 - $3.86 per 1,000 gallons)	60.58
Union City (Union SD)	Annual	$27.67	Based either on loading averages (Volume, SS, COD) or on parcel strength ($1.81 - $3.86 per 1,000 gallons) Restaurant rate = $4.72 per 1,000 gallons	60.58
Santa Cruz	Monthly	Based on discharge strength (4 classes) Ranges from $29.00 - $60.80	Based on discharge strength (4 comm. classes) Ranges from $1.80 - $4.24	65.00
Palo Alto	Bi - Monthly	$14.00	Varies by type of business Ranges from $2.74 - $5.15 (restaurants) per hcf	68.80

Table 8-5
City of Milpitas
Single Family Residential Stormwater Rate Survey

City	SCVURPPP Member	2001/02 Bi-Monthly Equiv Rate	2002/03 Bi-Monthly Equiv Rate
Fremont		0.00	$0.00
Union City		0.00	0.00
Milpitas	x	0.00	0.00
Mountain View	x	0.00	0.00
Sunnyvale	x	0.00	0.00
Santa Clara	x	0.32	0.32
San Mateo		0.57	0.99
Cupertino	x	2.00	2.00
Los Gatos	x	3.38	3.38
Campbell	x	3.38	3.38
Santa Cruz*		$3.54	3.54
San Jose	x	6.74	7.00
Palo Alto	x	8.50	8.50

* Residents pay an additional flood zone charge of $14.56 bi-monthly.

Table 8-6
City of Milpitas
Single Family Residential Combined Bi-Monthly Rate Survey - 2002/03

City	Water	Sewer	Stormwater	Total	Rank
Santa Clara	$47.75	$16.70	$0.32	$64.77	1
Sunnyvale	47.86	34.84	0.00	82.70	2
Milpitas	44.00	42.29	0.00	86.29	3
Fremont	55.78	31.33	0.00	87.11	4
Union City	55.78	31.33	0.00	87.11	4
Mountain View	59.95	28.80	0.00	88.75	6
San Jose (Muni.)	44.62	37.92	7.00	89.54	7
Campbell	58.49	33.00	3.38	94.87	8
Los Gatos	58.49	33.00	3.38	94.87	8
Cupertino	58.49	36.00	2.00	96.49	10
San Jose (W. Co.)	58.49	36.00	2.00	96.49	10
Palo Alto	67.47	28.00	8.50	103.97	12
Santa Cruz	54.85	51.20	3.54	109.59	13
San Mateo	60.56	49.32	0.99	110.87	14
Average	55.18	34.98	2.22	92.39	
Median	57.13	33.92	1.49	92.21	
Minimum	44.00	16.70	0.00	64.77	
Maximum	67.47	51.20	8.50	110.87	

Notes: Water bill based on 25 hcf bi-monthly consumption.
Sewer bill based on fixed charge or 18 hcf bi-monthly discharge.

Table 8-7
City of Milpitas - Financial Utility Master Plan
Water Connection Fee Survey

	Single Family Residence	Multi-Family High-Density Development	Small Commercial Customer
Customer Profile			
Lot Size	1/5 acre	1 acre	5,000 ft^2
Dwelling Units	1	50	n/a
Front Footage	93	209	71
Average Usage (gpd)	320	9,750	320
Meter Size	3/4"	4"	3/4"
Water Connection Fees[1]			
Milpitas (current)[2]	$884	$1,812	$708
Milpitas (recommended)	1,910	58,208	1,910
San Jose (Muni)	3,286	10,000 [4]	3,286
Palo Alto	3,353	6,050	3,353
Santa Cruz	3,356	167,800	3,356
Sunnyvale	3,919	22,047	3,083
Mountain View	5,800	13,000	4,400
Fremont (ACWD)[2]	7,978	200,559	6,967
Union City (ACWD)[2]	7,978	200,559	6,967
Santa Clara[2]	11,353	32,254	11,353
Average of other public agencies	5,878	81,534	5,346
Campbell (SJWC)[3]	0	0	0
Los Gatos (SJWC)[3]	0	0	0
Average of all cities	4,355	59,462	3,952

1 For a typical customer in each classification.
2 Includes estimated front footage charges.
3 San Jose Water Company is a private water company and cannot charge connection fees; Single family residences are charged a meter installation fee of $3,286.
4 Estimated.

Table 8-8
City of Milpitas - Financial Utility Master Plan
Sewer Connection Fee Survey

	Single Family Residence	Multi-Family High-Density Development	Small Commercial Customer
Customer Profile			
Lot Size	1/5 acre	1 acre	5,000 ft^2
Dwelling Units	1	50	n/a
Building Square Footage			2,000
Front Footage	93	209	71
Sewer Flow	224	8,250	224 - 244
Sewer Connection Fees[1,2]			
Milpitas (current)	$1,162	$35,727	$1,060
Milpitas (recommended)	2,788	104,790	2,687
Mountain View	5,200	11,800	5,200
San Jose (Muni)	1,227	32,233	1,178
Santa Clara	1,442	39,350	4,509
Sunnyvale	2,187	67,550	2,187
Palo Alto[3]	5,046	10,092	5,046
Fremont (Union SD)	2,710	135,500	2,560
Union City (Union SD)	2,710	135,500	2,560
Campbell (WVSD)	7,800	28,000	7,400
Los Gatos (WVSD)	7,800	28,000	7,400
Santa Cruz	1,200	45,000	1,200
Average of other agencies	3,732	53,303	3,924

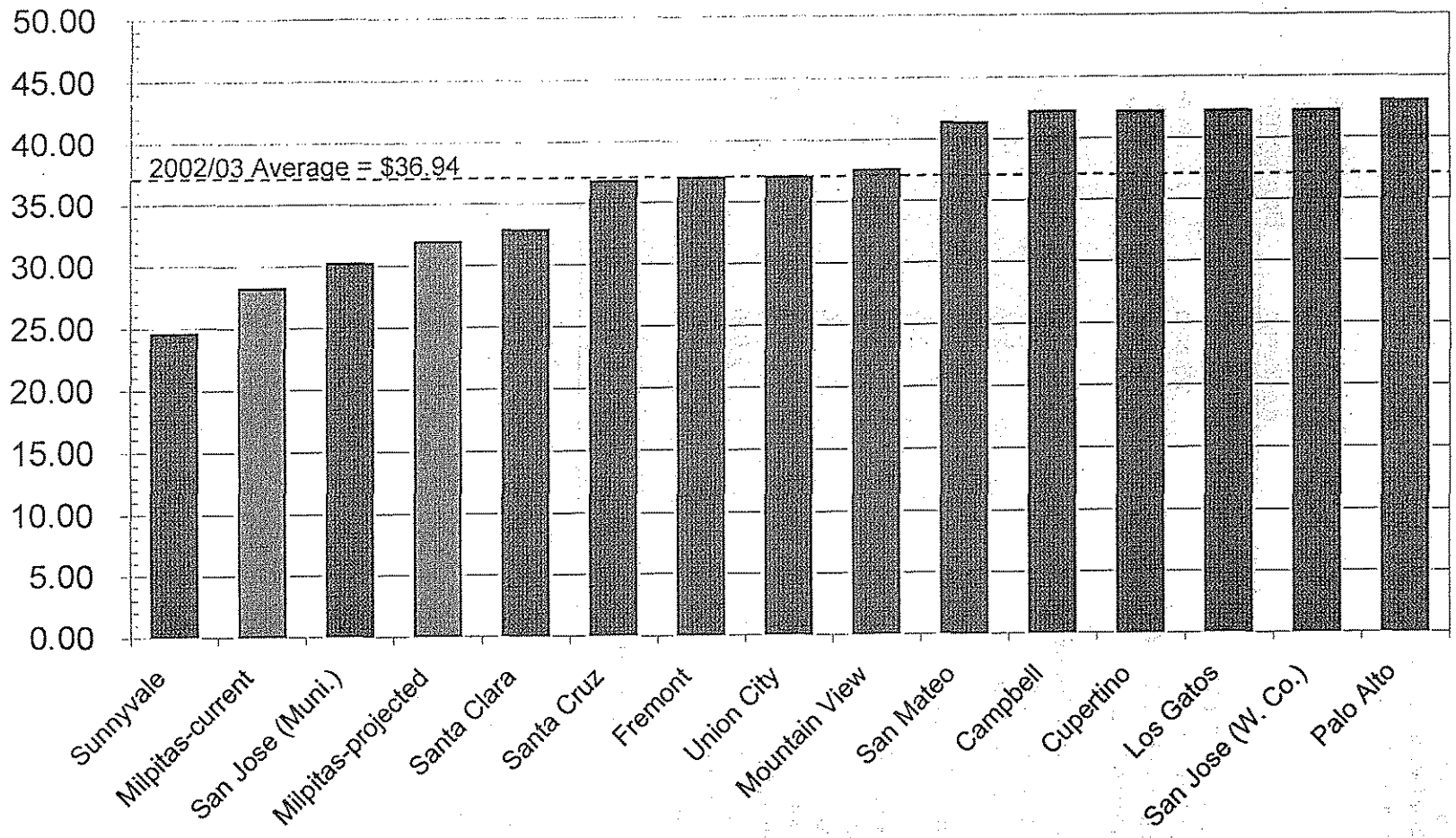
1 For a typical customer in each classification.
2 Includes connection fees for wastewater collection and treatment where applicable.
3 Fee is for sewer lateral; there is no fee for sewer trunk line or treatment plant capacity.

Table 8-9
City of Milpitas - Financial Utility Master Plan
Storm Drain Connection Fee Survey

	Single Family Residence	Multi-Family High-Density Development	Small Commercial Customer
Customer Profile			
Lot Size	1/5 acre	1 acre	5,000 ft^2
Impervious Surface Area (est. ft^2)	2,000	30,492	4,500
Dwelling Units	1	50	na
Storm Drain Connection Fee			
Milpitas (current)	$0	$0	$0
Milpitas (proposed)	1,917	16,771	2,475
Mountain View	758	3,790	435
San Jose	270	1,815	405
Santa Clara	4,039	4,039	4,039
Sunnyvale	1,003	4,853	1,003
Palo Alto	0	0	0
Fremont	0	0	0
Union City	0	0	0
Campbell	2,000	2,250	287
Los Gatos	480	3,000	344
Santa Cruz	0	0	0
Average of other cities	855	1,975	651

Chart 8-A

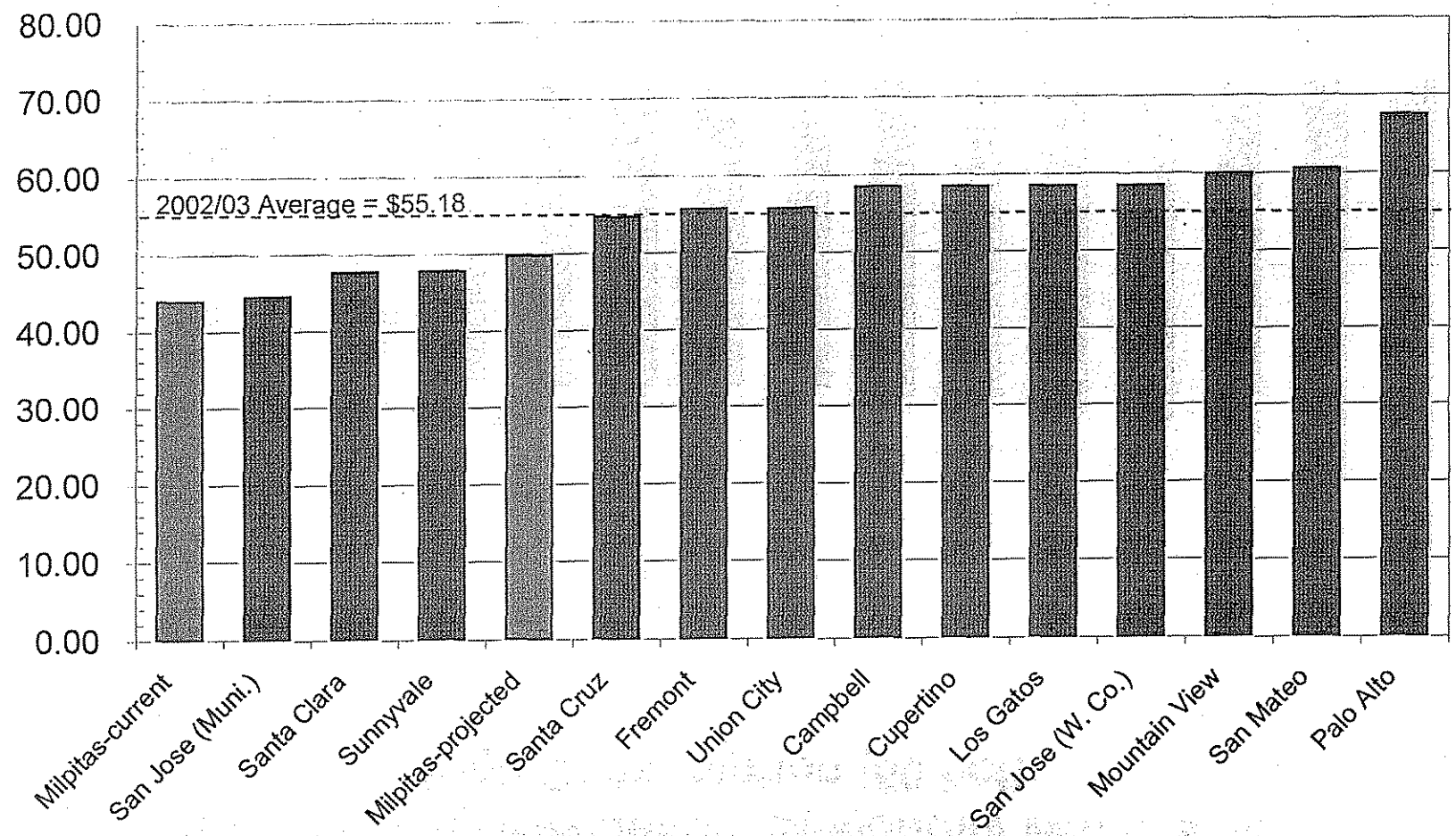
Single Family Residential Bi-Monthly Water Bills
Low Consumption (15 hcf)



Rates for 2002/03 shown; Milpitas projected rate for 2003/04 shown for comparison only.

Chart 8-B

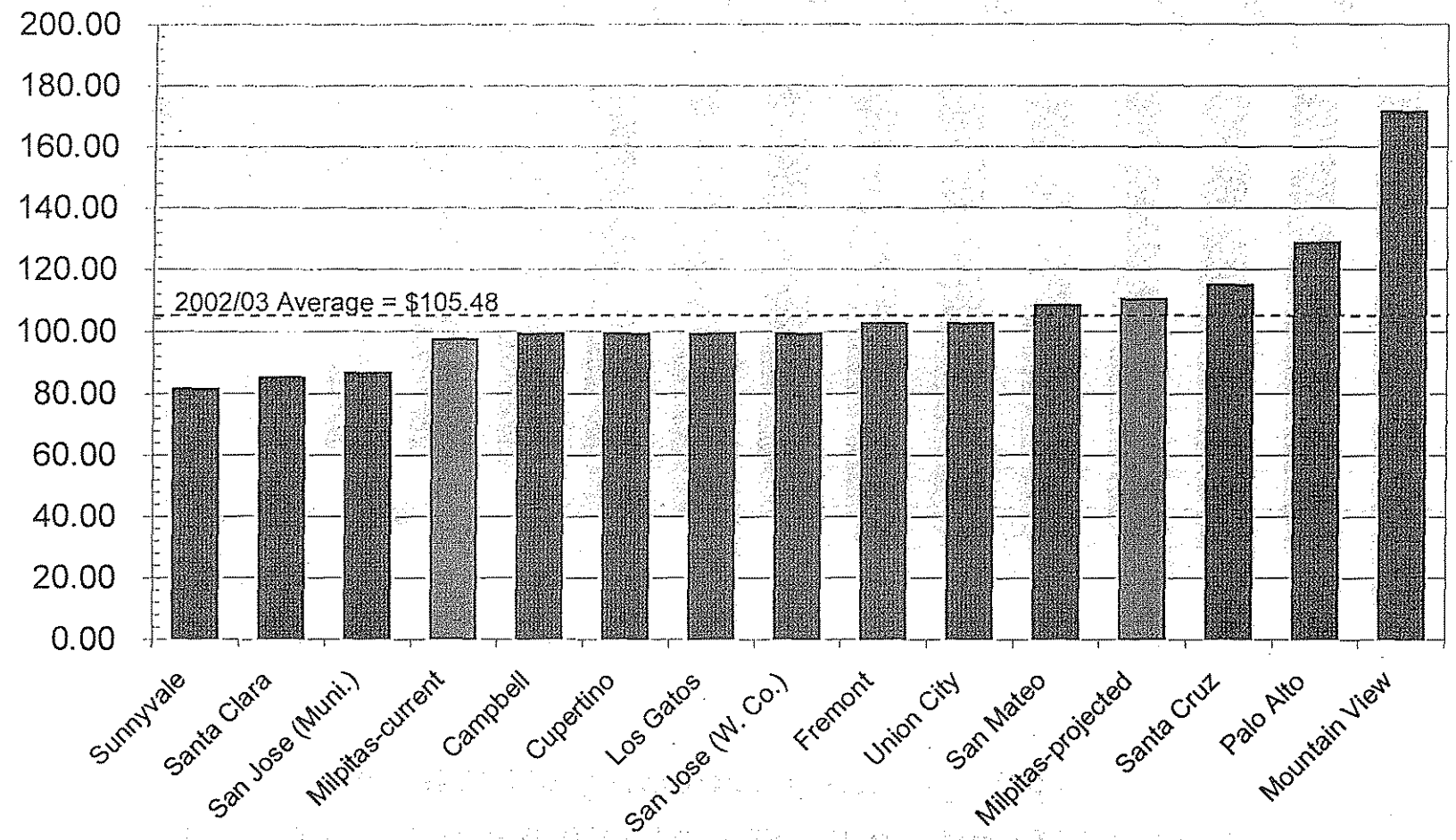
Single Family Residential Bi-Monthly Water Bills
Moderate Consumption (25 hcf)



Rates for 2002/03 shown; Milpitas projected rate for 2003/04 shown for comparison only.

Chart 8-C

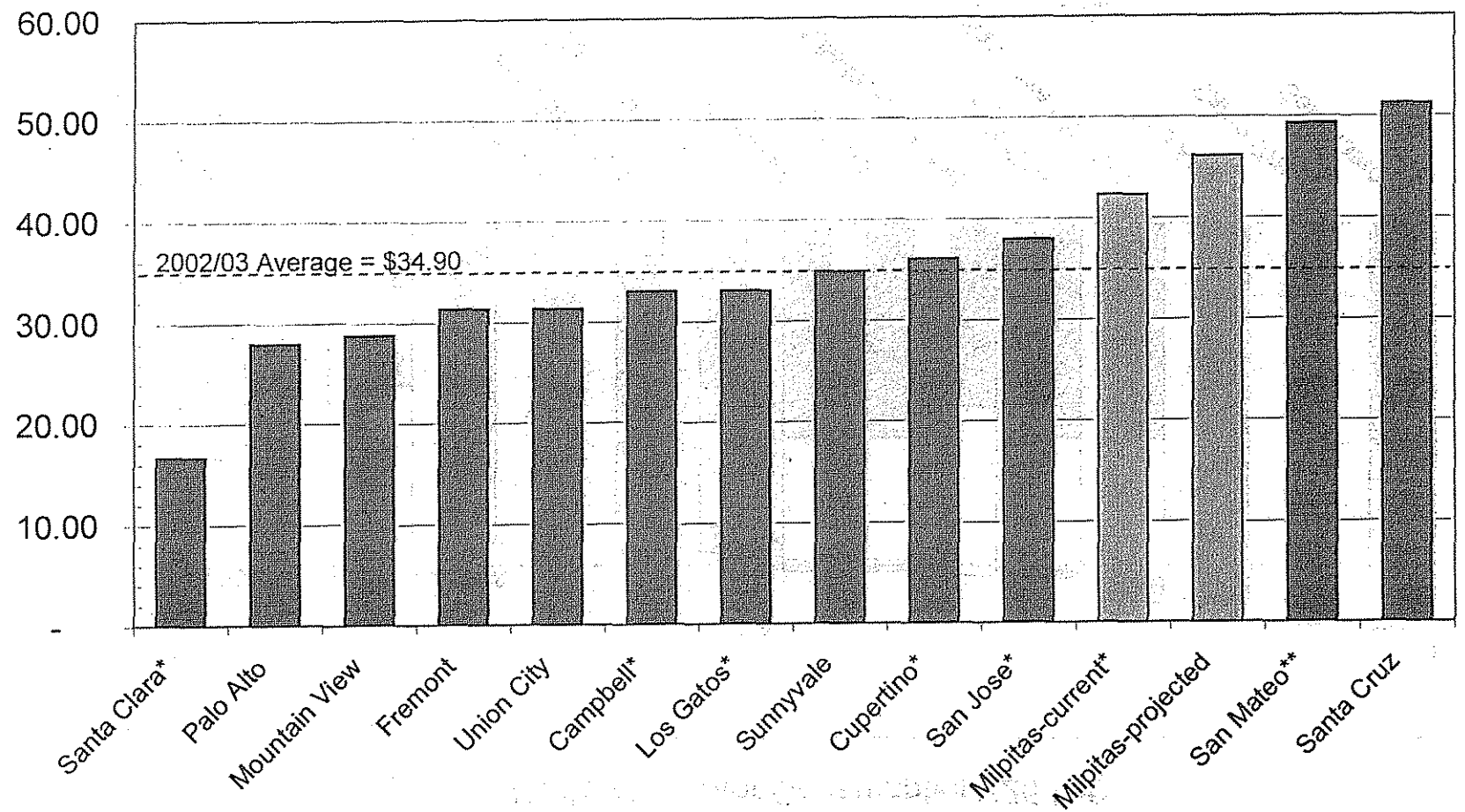
Single Family Residential Bi-Monthly Water Bills
High Consumption (50 hcf)



Rates for 2002/03 shown; Milpitas projected rate for 2003/04 shown for comparison only.

Chart 8-D

Single Family Residential Bi-Monthly Sewer Bills



* Tributary agency to San Jose/Santa Clara Water Pollution Control Plant.

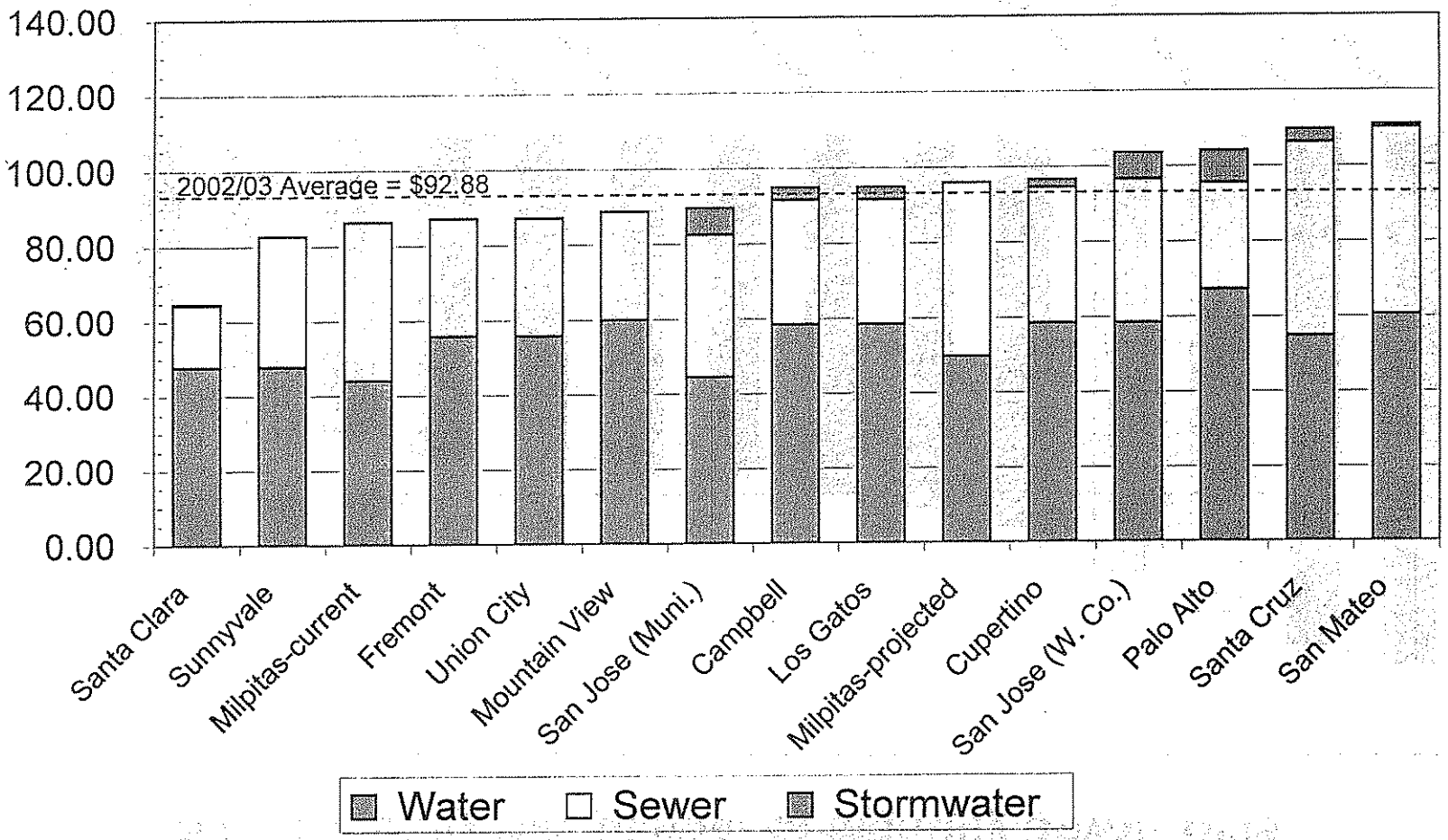
** Based on 18 hcf bi-monthly wastewater discharge.

Rates for 2002/03 shown; Milpitas projected rate for 2003/04 shown for comparison only.

Chart 8-E

Typical Single Family Residential Combined Bi-Monthly Utility Bills

Moderate Water Consumption (25 hcf)

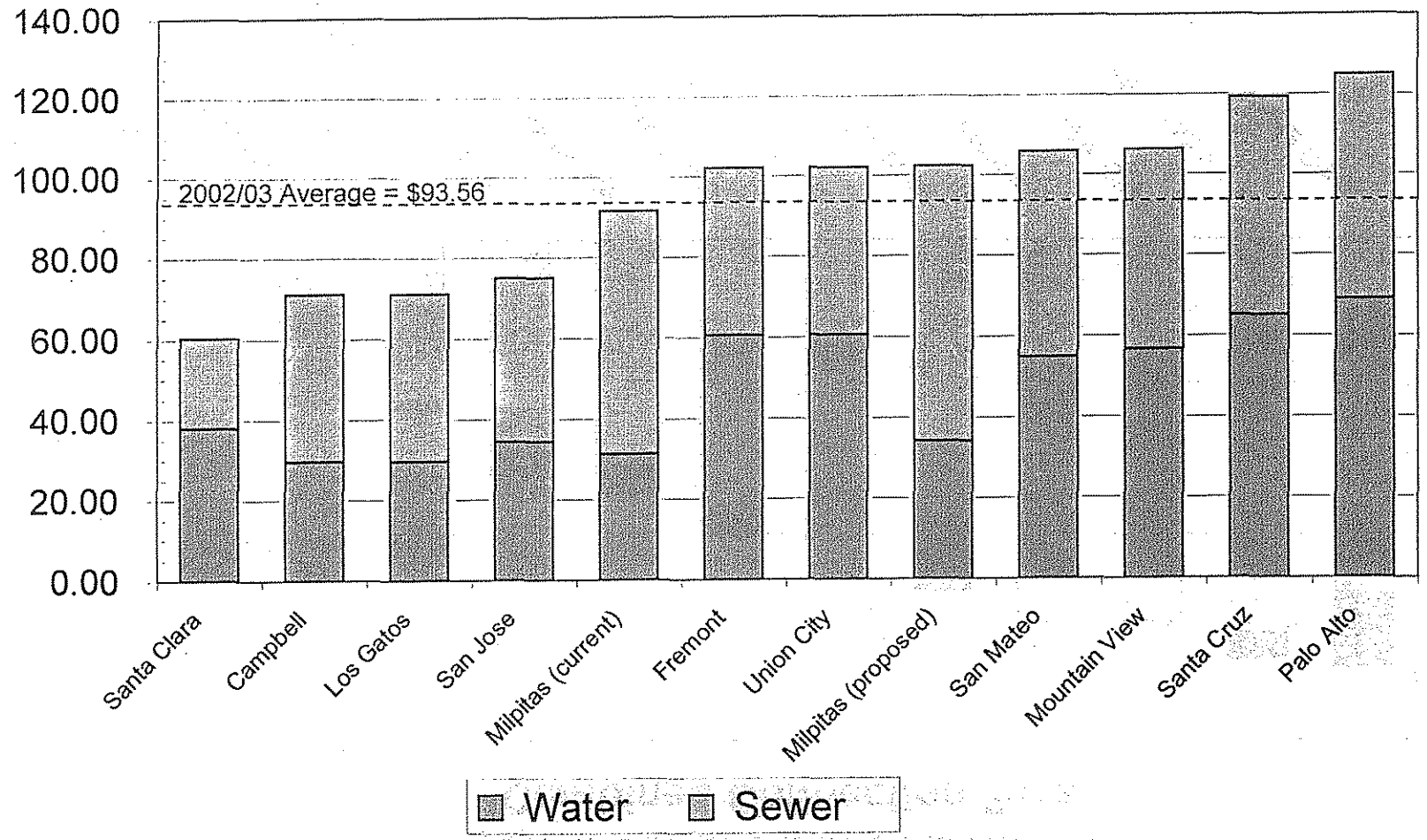


Rates for 2002/03 shown; Milpitas projected rate for 2003/04 shown for comparison only.

Chart 8-F

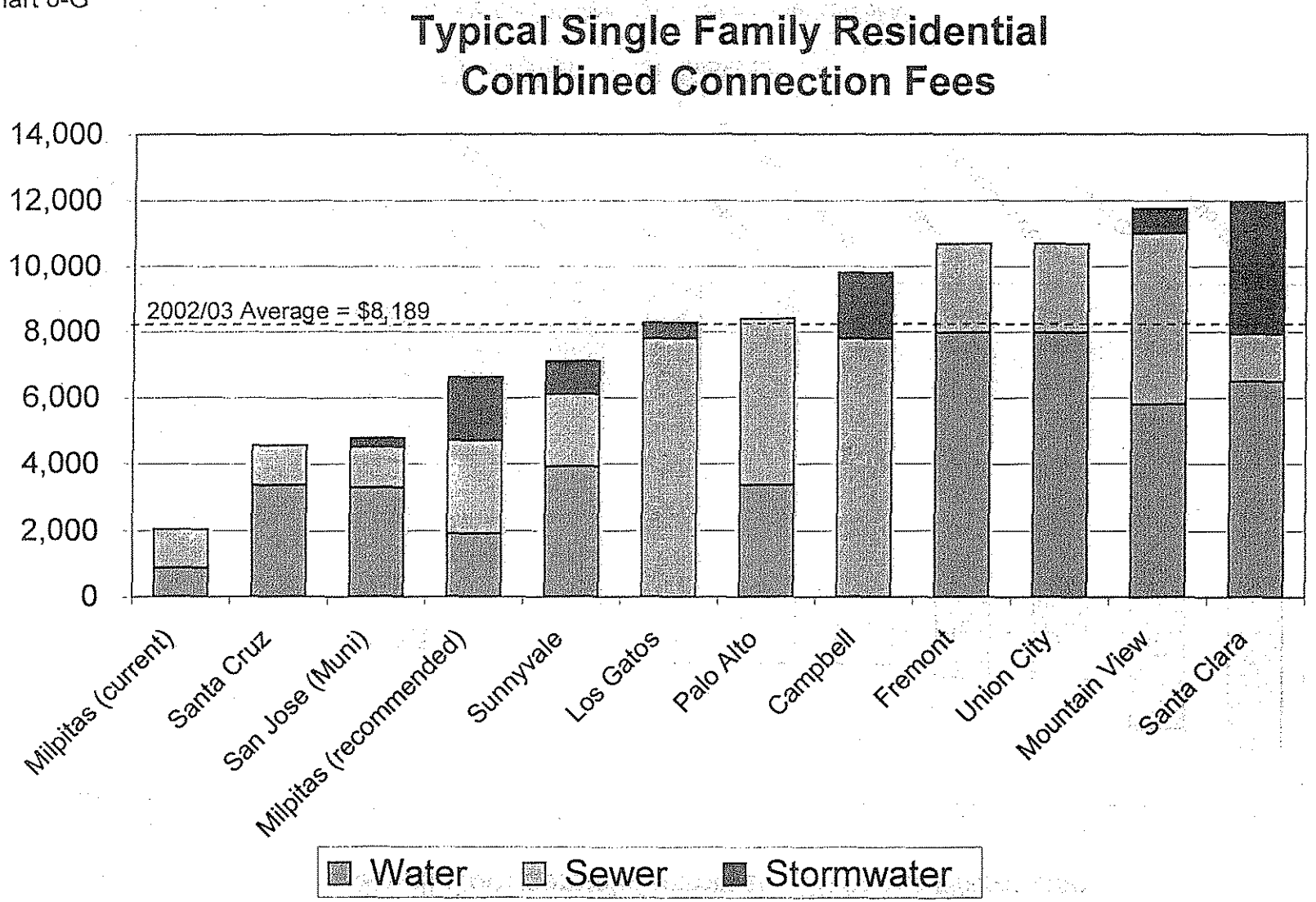
Commercial Bi-Monthly Water & Sewer Bills

Small Commercial Customer - 20 hcf of Water Use



Rates for 2002/03 shown; Milpitas projected rate for 2003/04 shown for comparison only.

Chart 8-G



Includes connection fees for water system, sewer collection system, treatment plant, and storm drain system where applicable.

APPENDICES

APPENDIX A

City of Milpitas - Water Capital Improvement Plan

City of Milpitas - Sewer Capital Improvement Plan

City of Milpitas - Storm Drain Capital Improvement Plan

Table 1

City of Milpitas Proposed Water System Capital Improvement Program

Improvement Projects funded by Water Fund (Rates)

	PROJECT NUMBER	IMPROVEMENT PROJECTS		2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/2020	2020/2021	2021/2022
1	7090	Cathodic Protection		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2	7058	Utility System Monitoring & Control		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
3	7066	Miscellaneous Minor Water Project		$0	$32,446	$33,746	$35,096	$36,500	$37,960	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
4	7078	Pressure Reducing Valve Replacement		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
5	7076	Well Upgrade Program (Phase 1 & 2)		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
6	7083	Hillside Water System Improvements	1,120,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7	7084	Los Coches Water Valve Replacement		$0	$0	$0	$0	$0	$0	$0		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
8	7085	Tularcitos Tank Landscape Renovation		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
9	7089	Water System Air Relief Valve		$182,000	$0	$393,702	$143,308	$0	$119,715	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
10	7088	Sunnyhills and Seismic Evaluation		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
11	7091	City Reservoir Evaluation/Study		$250,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
12	7093	Ayer Reservoir & Pump Station		$0	$0	$0	$0	$815,157	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
13	7094	Gibraltar Reservoir & Pump Station		$0	$0	$0	$0	$0	$948,989	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
14	7098	Financial Utility Rate Master Plan		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
15		Water System Seismic Improvements		$50,000	$0	$312,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
16		Brian Cl/Santos		$0	$0	$0	$0	$0	$41,123	$42,788	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
17		Carlo/Railroad		$0	$0	$0	$409,450	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
18		Pinewood Well Cooling & Connection													$0	$0	$0	$0	$80,000	$0	$0	$0
19		Tularcitos Overflow Improvements		$0	$0	$0	$0	$0	$0	$100,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
20		18" S Milpitas Steel Line Replacement		$260,000	$1,081,600	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
21		Sample Stations		$26,000	$27,040	$28,122	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
22		Sunnyhills Turnout		$0	$0	$0	$0	$0	$17,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
23		Sunnyhills area PRV		$0	$0	$0	$0	$0	$0	$0	$0	$65,472	$204,274	$0	$0	$0	$0	$0	$0	$0	$0	$0
24		Water System Security		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
25		Ayer Reservoir Seismic Improvements		$50,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
26		Pipe-Structure Interface Improvement		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$135,071	$210,710	$219,139	$0
27		Zone 3 Fault Crossing Improvements		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$160,094	$561,894	$0	$0
28		Country Club Pump Station Landscape Improvements		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$38,019	$112,378	$0	$0
29		Gibraltar Pump Station Seismic Improvements		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$99,431	$185,425	$0	$0
30		Gibraltar Reservoir Bypass		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$18,009	$56,189	$0	$0
31		Infrastructure replacement study		$0	$0	$0	$40,945	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0		$0	$0
32		Los Coches Valves		$33,514																		
33		undesignated future cip		$0	$0	$0	$0	$0	$0	$850,000	$1,124,664	$1,169,659	$1,795,726	$2,000,000	$2,163,200	$2,249,728	$2,339,717	$1,924,881	$1,494,049	$2,412,725	$2,737,138	$2,846,624
34		SUBTOTAL OF IMPROVEMENTS	$1,120,000	$851,514	$1,141,088	$787,676	$628,799	$851,657	$1,165,787	$1,092,788	$1,124,664	$1,235,331	$2,000,000	$2,080,000	$2,163,200	$2,249,728	$2,339,717	$2,433,306	$2,630,838	$2,631,864	$2,737,138	$2,846,624
35		proposed funding from rates	970,000	$917,000	$1,142,000	$711,000	$620,000	$1,000,000	$1,040,000	$1,082,000	$1,125,000	$1,170,000	$2,000,000	$2,080,000	$2,163,000	$2,250,000	$2,340,000	$2,434,000	$2,531,000	$2,632,000	$2,737,000	$2,846,000
37		cumulative CIP improvement cost with undesignated (exclude growth)	1,120,000	$1,971,514	$3,112,602	$3,900,172	$4,528,971	$5,380,628	$6,546,415	$7,639,183	$8,734,047	$9,969,378	$11,969,378	$14,049,378	$16,212,578	$18,462,306	$20,802,023	$23,235,329	$25,765,967	$28,397,830	$31,134,969	$33,981,592
							"Year 5"					"Year 10"					"Year 15"				"Year 20"	
39		Cumulative cost impr plus growth	$1,120,000	$1,971,514	$3,112,602	$3,900,172	$4,528,971	$5,380,628	$6,546,415	$7,639,183	$9,734,047	$9,969,378	$11,969,378	$14,049,378	$16,212,578	$18,462,306	$20,802,023	$23,235,329	$26,148,967	$32,444,830	$35,181,969	$38,028,592

Table 2

City of Milpitas Proposed Water System Capital Improvement Program

Growth Projects funded by Connection Fees

	PROJECT NUMBER	"GROWTH" PROJECTS	2002/2003	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/2020	2020/2021	2021/2022
1		SCVWD Zone Storage Tank proposed in 15/16	$ -	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,664,000	$0	$0
2		Gibraltar Pipeline Improvements proposed in 20/21	$ -	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$383,000	$0	$0	$0
3		SUBTOTAL OF GROWTH PROJECTS	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$383,000	$3,664,000	$0	$0
4		ANTICIPATED CONNECTION FEE FUNDING	0	$0	$239,000	$239,000	$239,000	$239,000	$239,000	$239,000	$239,000	$239,000	$239,000	$239,000	$239,000	$239,000	$239,000	$239,000	$239,000	$239,000	$239,000	$239,000
5		cumulative CIP growth cost (excluding Improvement)	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$383,000	$4,047,000	$4,047,000	$4,047,000
							"Year 5"					"Year 10"					"Year 15"					"Year 20"

Table 3

City of Milpitas Sewer System Capital Improvement Program

Improvement Projects funded by Sewer Fund (Rates)

	PROJECT NUMBER	IMPROVEMENT PROJECTS	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
1	6057	Miscellaneous Minor Sewer Projects	-	-	32,448	33,746	35,096	36,500	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	6073	Sewer Deficiency & Structural Correction	-	45,000	30,000	25,000	877,394	608,326	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	6079	Main SPS Site Improvements	-	416,000	461,312	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	6084	Marylinn Overflow	-	-	-	-	-	250,000	181,912	-	-	-	-	-	-	-	-	-	-	-	-	-
5	6088	Utility Depreciation Study	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6		Sunnyhills Channel	-	-	-	470,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7		Venus Pump Station	-	52,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8		wet weather monitoring	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9		Milpitas/Washington	-	-	-	-	81,890	85,166	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10		Milpitas/Dixon	-	-	-	11,136	41,062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11		Calaveras Blvd at I-680	-	-	-	-	-	-	12,653	-	-	-	-	-	-	-	-	-	-	-	-	-
12		Calaveras at Camegie	-	-	-	-	-	-	-	-	-	-	-	608,084	-	-	-	-	-	-	-	-
13		Escuela At Angus	-	-	-	-	-	-	-	-	-	-	1,015,818	352,150	-	-	-	-	-	-	-	-
14		Montague /Gladding	-	-	-	-	-	-	75,919	76,855	-	-	-	-	-	-	-	-	-	-	-	-
15		Milpitas/Calaveras	-	-	-	-	-	-	-	-	369,514	384,294	-	-	-	-	-	-	-	-	-	-
16		Abbott/Calaveras	-	-	-	-	-	-	360,616	375,041	-	-	-	-	-	-	-	-	-	-	-	-
17		Wastewater Seismic Evaluation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26,135	62,820	65,333	67,946
18	6080	SBWR Phase 2 Improvements	-						700,000	600,000												
19		Infrastructure replacement study	-	-			40,945															
20		undesignated projects	-			400,000			280,000	400,000	400,000	400,000	-	-	600,000	900,000	900,000	1,000,000	1,000,000	1,000,000	1,100,000	1,100,000
21		Subtotal Improvement CIPs recommended	-	513,000	543,760	939,882	1,076,387	979,992	1,531,100	1,453,996	769,514	784,294	1,015,818	960,234	600,000	900,000	900,000	1,000,000	1,026,135	1,062,820	1,165,333	1,167,946
22		avail funding from rates	-	603,000	595,000	1,325,000	1,254,000	805,000	1,645,000	1,500,000	775,000	775,000	806,000	838,000	872,000	907,000	943,000	981,000	1,020,000	1,061,000	$1,103,000	$1,147,000
24		cumulative costs improvement cips with undesignated	-	513,000	1,056,760	1,996,642	3,073,029	4,053,021	5,584,121	7,038,117	7,807,631	8,591,925	9,607,743	10,567,977	11,267,977	12,267,977	13,167,977	14,167,977	15,168,112	16,230,931	17,416,264	18,584,210
							"Year 5"					"Year 10"					"Year 15"					"Year 20"
25		Cumulative cost all projects	-	513,000	1,214,944	2,646,360	3,724,747	4,704,739	6,498,147	8,225,683	9,676,083	11,168,960	12,280,777	13,495,012	14,559,012	15,734,012	16,920,012	18,217,012	22,937,146	28,401,210	29,568,543	30,734,489

Table 4

City of Milpitas Sewer System Capital Improvement Projects

Growth Projects funded by Connection and/or Treatment Plant Fees

	PROJECT NUMBER	"GROWTH" PROJECTS	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
1	6078	San Jose Parallel Forcemain	0	0	0	0	0	0	0	0	0	0	0						0	0		
2	6080	South Bay Water Recycling, Phase II	0	0	0	0	0	0	0	0	0	0	0						0	0		
3	6082	Recycled In Kind Services	0	0	0	0	0	0	0	0	0	0	0						0	0		
4	6092	Overflow Sewer near Hillview/Los Coches	0	0	0	0	0	0	0	0	0	0	0						0	0		
5	6093	South Bay Water Recycle Projects	0	0	0	0	0	0	0	0	0	0	0						0	0		
6		Main /Great Mall	0	0	158,184	493,534	0	0	0	0	0	0	0						0	0		
7		Curtis Flow diversion	0	0	0	0	0		186,308	187,520	0	0	0						0	0		
8		Great Mall between Montague and Main	0	0	0	0	0		0	0	591,906	615,582	0						0	0		
9		Montague/Capitol	0	0	0	0	0		0	0	0	0	0						0	701,244		
10		Lease/Purchase Plant Capacity	0	0	0	0	0	0	82,000	86,000	89,000	93,000	96,000	254,000	264,000	275,000	286,000	297,000	3,700,000	3,700,000		
11		Subtotal New Growth CIP recommended	0	0	158,184	493,534	0	0	282,308	273,520	680,906	708,582	96,000	254,000	264,000	275,000	286,000	297,000	3,700,000	4,401,244	0	0
12		Anticipated connection fee revenue	2,000	0	219,000	219,000	219,000	219,000	219,000	219,000	219,000	219,000	219,000	219,000	219,000	219,000	219,000	219,000	219,000	219,000	$219,000	$219,000
13		Anticipated treatment Plant Fee Revenue	60,000	0	110,000	110,000	110,000	110,000	110,000	110,000	110,000	110,000	110,000	110,000	110,000	110,000	110,000	110,000	110,000	110,000	110,000	110,000
14		Interest Income on TPF Fund	94,000	173,000	132,000	134,000	98,000	108,000	123,000	123,000	124,000	124,000	126,000	138,000	148,000	153,000	160,000	168,000	175,000	83,000	0	0
15		less other planned expenses	0	525,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16		cumulative new growth project costs	0	0	158,184	651,718	651,718	651,718	934,026	1,187,546	1,868,452	2,577,035	2,673,035	2,927,035	3,191,035	3,466,035	3,752,035	4,049,035	7,749,035	12,150,279	12,150,279	12,150,279
							"Year 5"					"Year 10"					"Year 15"					"Year 20"

Table 5

City of Milpitas Storm System Capital Improvement Program

Needs Funding Source

	PROJECT NUMBER	PROJECT NAME		2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
1	3371	Misc Minor Storm Drain Projects		$10,000	$0	$21,632	$22,497	$23,397	$24,333	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0		
2	3392	Jurgen Pump Station Improvements	Priority 1		$0	$0	$112,466	$1,052,873	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0		
3	3396	Manor Pump Station Improvements	Priority 1	$425,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0		
4	8118	Storm Drain System SCADA			$0	$0	$424,974	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0		
5	8138	Berryessa Pump Station Improvments			$0	$304,200	$949,164	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0		
6	8140	Oakcreek Pump Station Engine Replacement			$0	$380,984	$1,126,270	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0		
7		Vista Way	Priority 1						$209,930		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0		
8		Wrigley Way	Priority 1						$71,200														
9		Vista Way	Priority 1						$111,650														
10		Watson Court	Priority 1						$53,400														
11		South Park Victoria	Priority 1							$204,160													
12		Jacklin Road	Priority 1						$117,600														
13		Traughber	Priority 1						$826,380														
14		Park Hill	Priority 1							$90,925													
15		Prada	Priority 1							$113,680													
16		Montague	Priority 1							$49,560													
17		Abbott	Priority 1							$182,660													
18		Coyote	Priority 1								$296,670												
19		Spence Creek Pump Station	Priority 1							$400,000													
20		UPRR	Priority 1								$250,000												
21		Sycamore	Priority 1							$498,320													
22		Dempsey	Priority 2								$282,240												
23		South Park Victoria	Priority 2								$48,280												
24		Sequoia	Priority 2								$497,700												
25		Wrigley Way	Priority 2								$267,820												
26		Fox Hollow	Priority 2									$83,720											
27		Printy	Priority 2								$101,850												
28		Quail	Priority 2									$79,750											
29		Calle Oreinte	Priority 2									$411,600											
30		Temple	Priority 2									$44,500											
31		Quinco	Priority 2									$250,000											
								"Year 5"					"Year 10"					"Year 15"					

APPENDIX B

Schaaf & Wheeler Water System Pipe Components, Estimated Replacement Costs, and estimated current depreciated value

Schaaf & Wheeler Water Tanks and estimated current depreciated value

Schaaf & Wheeler Water Booster Pump Stations and estimated current depreciated value

Schaaf & Wheeler Sewer System Pipe Components, Estimated Replacement Costs, and estimated current depreciated value

Schaaf & Wheeler Sewer Lift Stations and estimated current depreciated value

Schaaf & Wheeler Worksheet B - Water System Pipe Components and Estimated Replacement Costs

Enter Current SFENR Date (mm/yyyy):	02/2003
Enter Current SFENR Construction Cost Index	7821

Enter Current Year: 2003

Enter Coupling Unit Cost: $1,674

A	B	C	D	E	F	G	H	I	J	K	L	M	N=M-(Year-L)	O	P=(G+H)*O	Q	R	S	T=R*E	U=P+Q+S+T	
W-Plat #	Section #	Street	Pipe Diameter (Inches)	Pipe Length (FT)	Pipe Material	B	G	FH	BO	ARV A&V	Year Pipe Installed	Pipe Life Expectancy (yr)	Pipe Life Left (yr)	Valve Unit Cost ($) (see Worksheet D)	Valve Cost ($)	Coupling Cost ($)	Pipe Repl. Cost ($/LF) (see Worksheet C)	ACWP & ACP Disposal ($/LF) (see Worksheet E)	Total Pipe Replacement Cost ($)	Total Cost Current SFENR ($)	Estimated Value Feb 2003 ($) SFENR=7821
												SFENR Construction Cost Index:		7410	7410	7410	7684	7684	7684	7821	
3	6	California Cir	12	630	ACWP	0	2	1	0	0	1985	85	67	$2,155	$4,310	$3,148	$166	$67,659	$88,125	$166,427	$131,184
3	6	Dixon Landing Rd	12	260	ACWP	0	0	0	0	0	1985	85	67	$2,155	$0	$3,148	$166	$33,191	$43,231	$81,105	$63,929
4	3	California Cir	12	260	ACWP	0	2	0	0	0	1985	85	67	$2,155	$4,310	$3,148	$166	$33,191	$43,231	$85,653	$67,515
5	6	off McCarthy Blvd	4	225	WS	0	0	0	0	0	1995	35	27	$1,365	$0	$3,148	$120	$0	$27,075	$30,879	$23,821
6	3	off McCarthy Blvd	4	190	WS	0	0	0	0	0	1995	35	27	$1,365	$0	$3,148	$120	$0	$22,863	$26,592	$20,514
6	2,3,5	McCarthy Blvd	3	2,200	PVC	0	0	0	0	0	1995	70	62	$1,311	$0	$3,148	$114	$0	$251,608	$259,407	$229,760
7	6	McCarthy Blvd	14	800	DIP	6	0	5	2	0	1995	100	92	$3,142	$18,854	$3,148	$178	$0	$142,007	$167,755	$154,335
7	6	Ranch Rd	16	530	DIP	3	0	2	0	0	1995	100	92	$5,035	$15,105	$3,148	$190	$0	$100,960	$122,021	$112,260
7	2,3,6	McCarthy Blvd	3	1,650	PVC	0	0	0	0	0	1995	70	62	$1,311	$0	$3,148	$114	$0	$188,706	$195,386	$173,056
8	6	off Ranch Dr	14	530	DIP	1	0	0	0	0	1995	100	92	$3,142	$3,142	$3,148	$178	$0	$94,079	$102,392	$94,201
8	6	Ranch Dr	16	1,180	PVC	5	0	5	1	0	1995	70	62	$5,035	$25,175	$3,148	$190	$0	$224,780	$258,672	$229,109
8	2,3,5	McCarthy Blvd	14	2,170	DIP	12	0	11	0	0	1995	100	92	$3,142	$37,709	$3,148	$178	$0	$385,193	$435,167	$400,354
8	5,6	Ranch Dr	14	350	PVC	1	0	1	0	0	1995	70	62	$3,142	$3,142	$3,148	$178	$0	$62,128	$69,872	$61,887
9	3	Cypress Dr	14	1,050	DIP	3	0	0	0	1	1995	100	92	$3,142	$9,427	$3,148	$178	$0	$186,384	$202,972	$186,734
9	6	Bellew Dr	14	680	ACP	4	0	3	0	0	1995	85	77	$3,142	$12,570	$3,148	$178	$93,196	$120,706	$234,296	$212,245
9	2,3,6	McCarthy Blvd	12	2,130	PVC	0	4	2	0	1	1995	70	62	$2,155	$8,620	$3,148	$166	$0	$354,164	$372,885	$330,270
9	3,6	Cypress Dr	12	590	ACP	0	2	2	0	1	1995	85	77	$2,155	$4,310	$3,148	$166	$75,318	$98,102	$184,377	$167,024
9	5,6	Bellew Dr	12	1,130	ACP	0	6	5	1	2	1995	85	77	$2,155	$12,930	$3,148	$166	$144,254	$187,890	$355,022	$321,608
10	1	off Murphy Ranch Rd	4	725	PVC	0	4	0	0	0	1995	70	62	$1,365	$5,460	$3,148	$120	$0	$87,241	$97,878	$86,692
10	6	Alder Dr	12	390	ACWP	0	1	1	0	0	1985	85	67	$2,155	$2,155	$3,148	$166	$49,787	$64,847	$122,270	$96,378
10	1,2	Bellew Dr	12	650	ACP	0	2	3	0	0	1995	85	77	$2,155	$4,310	$3,148	$166	$82,978	$108,078	$202,327	$183,284
10	1,2,5	Murphy Ranch Rd	12	2,240	ACP	0	9	7	1	1	1985	85	67	$2,155	$19,395	$3,148	$166	$285,954	$372,454	$693,915	$546,968
10	2,3,5	Sumac Dr	12	1,460	ACWP	0	3	5	0	1	1985	85	67	$2,155	$6,465	$3,148	$166	$186,381	$242,760	$446,922	$352,280
10	3,6	McCarthy Blvd	12	2,070	ACP	0	9	7	0	3	1985	85	67	$2,155	$19,395	$3,148	$166	$264,252	$344,188	$643,058	$506,881
11	3	Murphy Ranch Rd	12	525	ACWP	0	2	2	0	0	1985	85	67	$2,155	$4,310	$3,148	$166	$67,021	$87,294	$164,931	$130,006
11	3	Tasman Dr	12	510	DIP	0	2	0	0	2	1985	100	82	$2,155	$4,310	$3,148	$166	$0	$84,800	$94,180	$77,228
11	6	Tasman Dr	12	480	ACP	0	1	1	0	0	1985	85	67	$2,155	$2,155	$3,148	$166	$61,276	$79,812	$149,195	$117,600
11	3,6	McCarthy Blvd	12	2,020	ACWP	0	10	6	0	0	1985	85	67	$2,155	$21,550	$3,148	$166	$257,870	$335,874	$630,374	$496,883
12	3	McCarthy Blvd	12	670	ACWP	0	3	3	0	0	1985	85	67	$2,155	$6,465	$3,148	$166	$85,531	$111,404	$210,584	$165,990
12	3	off McCarthy Blvd	8	440	ACWP	0	1	0	0	0	1985	85	67	$1,625	$1,625	$3,148	$139	$48,634	$61,100	$116,724	$92,006
12	3	Sycamore	12	80	ACWP	0	0	1	0	1	1985	85	67	$2,155	$0	$3,148	$166	$10,213	$13,302	$27,255	$21,484
12	3,6	off McCarthy Blvd	8	760	ACWP	0	2	1	0	0	1985	85	67	$1,625	$3,250	$3,148	$139	$84,005	$105,536	$199,666	$157,384
13	3	Arizona Ave	6	155	ACWP	0	1	1	0	0	1975	85	57	$1,430	$1,430	$3,148	$129	$16,213	$19,927	$41,614	$27,906
13	3	Arizona Ave	8	220	ACWP	0	1	0	0	0	1955	85	37	$1,625	$1,625	$3,148	$139	$24,317	$30,550	$60,881	$26,501
13	3	bet Arizona & Firethorne	8	240	ACWP	0	0	0	0	0	1975	85	57	$1,625	$0	$3,148	$139	$26,528	$33,327	$64,242	$43,080
13	3	Buskirk St	6	165	ACWP	0	0	0	0	0	1975	85	57	$1,430	$0	$3,148	$129	$17,258	$21,212	$42,478	$28,485
13	6	Amur Ct	4	150	ACWP	0	1	0	0	0	1975	85	57	$1,365	$1,365	$3,148	$120	$14,850	$18,050	$38,248	$25,649
13	6	Amur Ct	6	40	ACWP	0	0	1	0	0	1975	85	57	$1,430	$0	$3,148	$129	$4,184	$5,142	$12,815	$8,593
13	6	cross N. Milpitas Blvd	8	90	ACWP	0	1	0	0	0	1975	85	57	$1,625	$1,625	$3,148	$139	$9,948	$12,498	$27,883	$18,698
13	6	Firethorne St	8	430	ACWP	0	2	0	0	0	1975	85	57	$1,625	$3,250	$3,148	$139	$47,529	$59,711	$115,901	$77,722
13	6	N. Milpitas Blvd	6	280	PVC	0	1	2	0	0	1975	70	42	$1,430	$1,430	$3,148	$129	$0	$35,997	$41,469	$24,881
13	6	N. Milpitas Blvd	8	595	ACWP	0	0	0	0	0	1975	85	57	$1,625	$0	$3,148	$139	$65,767	$82,624	$154,353	$103,507
13	6	N. Milpitas Blvd	8	485	ACWP	0	2	2	0	0	1975	85	57	$1,625	$3,250	$3,148	$139	$53,608	$67,349	$129,862	$87,084
13	6	off N. Milpitas Blvd	6	50	PVC	0	1	0	0	0	1985	70	52	$1,430	$1,430	$3,148	$129	$0	$6,428	$11,374	$8,449
13	6	off N. Milpitas Blvd	6	80	PVC	0	1	0	0	0	1985	70	52	$1,430	$1,430	$3,148	$129	$0	$10,285	$15,299	$11,365
13	6	off N. Milpitas Blvd	8	415	PVC	0	1	0	0	0	1985	70	52	$1,625	$1,625	$3,148	$139	$0	$57,628	$63,691	$47,313
13	6	off N. Milpitas Blvd	8	130	PVC	0	1	0	0	0	1985	70	52	$1,625	$1,625	$3,148	$139	$0	$18,052	$23,411	$17,391
13	6	off N. Milpitas Blvd	8	300	PVC	0	1	1	0	0	1985	70	52	$1,625	$1,625	$3,148	$139	$0	$41,659	$47,438	$35,239
13	6	off N. Milpitas Blvd	8	120	PVC	0	1	0	0	0	1985	70	52	$1,625	$1,625	$3,148	$139	$0	$16,664	$21,998	$16,341
13	6	off N. Milpitas Blvd	8	360	PVC	0	3	1	0	0	1985	70	52	$1,625	$4,875	$3,148	$139	$0	$49,991	$59,348	$44,087
13	3,6	Firethorne Ct	8	320	ACWP	0	1	1	0	0	1975	85	57	$1,625	$1,625	$3,148	$139	$35,370	$44,436	$86,264	$57,848

Schaaf & Wheeler Worksheet B - Water System Pipe Components and Estimated Replacement Costs

Enter Current SFENR Date (mm/yyyy):	02/2003
Enter Current SFENR Construction Cost Index:	7821

Enter Current Year: 2003

Enter Coupling Unit Cost: $1,574

A	B	C	D	E	F	G	H	I	J	K	L	M	N=M-(Year-L)	O	P=(G+H)*O	Q	R	S	T=R*E	U=P+Q+S+T	
W-Plat #	Section #	Street	Pipe Diameter (inches)	Pipe Length (FT)	Pipe Material	B	G	FH	BO	ARV A&V	Year Pipe Installed	Pipe Life Expectancy (yr)	Pipe Life Left (yr)	Valve Unit Cost ($) (see Worksheet D)	Valve Cost ($)	Coupling Cost ($)	Pipe Repl. Cost ($/LF) (see Worksheet C)	ACWP & ACP Disposal ($/LF) (see Worksheet E)	Total Pipe Replacement Cost ($)	Total Cost Current SFENR ($)	Estimated Value Feb 2003 ($) SFENR=7821
												SFENR Construction Cost Index:		7410	7410	7410	7684	7684	7684	7821	
14	1	Milmont Dr	8	530	ACWP	0	2	2	2	1	1975	85	57	$1,625	$3,250	$3,148	$139	$58,582	$73,598	$141,284	$94,743
14	1	Milmont Dr	12	230	ACWP	0	1	1	0	0	1975	85	57	$2,155	$2,155	$3,148	$166	$29,361	$38,243	$74,404	$49,895
14	3	Dixon Rd	10	340	ACWP	0	2	1	0	0	1965	85	47	$1,925	$3,850	$3,148	$153	$40,400	$51,968	$101,398	$56,067
14	3	N. Milpitas Blvd	8	260	ACWP	0	1	1	0	0	1965	85	47	$1,625	$1,625	$3,148	$139	$28,738	$36,104	$71,034	$39,278
14	3	N. Milpitas Blvd	10	590	ACWP	0	2	1	0	0	1965	85	47	$1,925	$3,850	$3,148	$153	$70,107	$90,181	$170,525	$94,290
14	4	Teresa Marie Ter	10	130	PVC	0	1	1	0	0	1995	70	62	$1,925	$1,925	$3,148	$153	$0	$19,870	$25,578	$22,655
14	5	Milmont Dr	12	1,325	PVC	0	4	3	0	1	1975	70	42	$2,155	$8,620	$3,148	$166	$0	$220,313	$236,653	$141,992
14	6	Homme Wy	6	110	ACWP	0	1	0	0	0	1985	85	67	$1,430	$1,430	$3,148	$129	$11,506	$14,142	$30,935	$24,384
14	6	Jason Dr	6	160	ACWP	0	1	0	0	0	1985	85	67	$1,430	$1,430	$3,148	$129	$16,735	$20,570	$42,800	$33,737
14	6	Sunnyhills Ct	8	200	ACWP	0	1	0	0	0	1975	85	57	$1,625	$1,625	$3,148	$139	$22,107	$27,773	$55,804	$37,422
14	1,2	Milmont Dr	10	340	ACWP	0	2	1	0	0	1975	85	57	$1,925	$3,850	$3,148	$153	$40,400	$51,968	$101,398	$67,996
14	1,2,4	Dixon Landing Rd	12	1,520	ACWP	0	3	1	0	1	1975	85	57	$2,155	$6,465	$3,148	$166	$194,040	$252,737	$464,872	$311,738
14	2,3	Dixon Landing Rd	10	1,330	ACWP	0	3	3	0	0	1965	85	47	$1,925	$5,775	$3,148	$153	$158,037	$203,288	$377,172	$208,554
14	3,6	N. Milpitas Blvd	8	1,190	ACWP	0	1	0	0	0	1975	85	57	$1,625	$1,625	$3,148	$139	$131,534	$165,247	$307,099	$205,937
14	3,6	N. Milpitas Blvd	8	1,240	ACWP	0	1	3	0	0	1975	85	57	$1,625	$1,625	$3,148	$139	$137,060	$172,190	$319,790	$214,448
15	1	Alegra Ter	10	340	PVC	0	2	2	0	0	1995	70	62	$1,925	$3,850	$3,148	$153	$0	$51,968	$60,279	$53,390
15	1	Cascadita Ter	10	300	PVC	0	2	4	0	0	1995	70	62	$1,925	$3,850	$3,148	$153	$0	$45,855	$54,056	$47,878
15	1	off Terra Mesa Wy	10	625	PVC	0	1	1	0	0	1995	70	62	$1,925	$1,925	$3,148	$153	$0	$95,530	$102,584	$90,860
15	2	Aspenridge Dr	8	160	PVC	0	1	0	0	0	1995	70	62	$1,625	$1,625	$3,148	$139	$0	$22,218	$27,651	$24,491
15	2	Jurgens Dr	8	640	PVC	0	2	1	0	1	1995	70	62	$1,625	$3,250	$3,148	$139	$0	$88,872	$97,206	$86,097
15	2	Montecito Wy	10	400	PVC	0	3	2	0	0	1995	70	62	$1,925	$5,775	$3,148	$153	$0	$61,139	$71,645	$63,457
15	2	off Montecito Wy	10	260	PVC	0	2	1	0	1	1995	70	62	$1,925	$3,850	$3,148	$153	$0	$39,741	$47,834	$42,367
15	3	N. Milpitas Blvd	8	120	ACWP	0	0	0	0	0	1975	85	57	$1,625	$0	$3,148	$139	$13,264	$16,664	$33,782	$22,654
15	3	N. Milpitas Blvd	8	110	ACWP	0	1	1	0	0	1975	85	57	$1,625	$1,625	$3,148	$139	$12,159	$15,275	$32,959	$22,102
15	3	N. Milpitas Blvd	12	670	ACWP	0	1	2	0	0	1975	85	57	$2,155	$2,155	$3,148	$166	$85,531	$111,404	$206,035	$138,165
15	3	off N. Milpitas Blvd	12	1,180	ACWP	0	3	1	0	0	1975	85	57	$2,155	$6,465	$3,148	$166	$150,637	$196,204	$363,157	$243,529
15	5	Aspenridge Dr	8	545	PVC	0	2	1	0	1	1995	70	62	$1,625	$3,250	$3,148	$139	$0	$75,680	$83,780	$74,205
15	5	Woodruff Wy	8	520	PVC	0	1	1	0	0	1995	70	62	$1,625	$1,625	$3,148	$139	$0	$72,209	$78,531	$69,556
15	6	Minnis Ct	8	830	ACWP	0	3	3	0	0	1975	85	57	$1,625	$4,875	$3,148	$139	$91,742	$115,257	$219,149	$146,959
15	6	Minnis Ct	12	300	ACWP	0	0	1	0	0	1975	85	57	$2,155	$0	$3,148	$166	$38,297	$49,882	$93,071	$62,412
15	6	off Minnis Ct	8	640	ACWP	0	0	0	0	0	1975	85	57	$1,625	$0	$3,148	$139	$70,741	$88,872	$165,776	$111,167
15	6	Seaside Wy	6	410	PVC	0	2	1	0	0	1985	70	52	$1,430	$2,860	$3,148	$129	$0	$52,709	$59,988	$44,563
15	6	Summerwind Wy	8	630	PVC	0	2	0	0	0	1985	70	52	$1,625	$3,250	$3,148	$139	$0	$87,484	$95,793	$71,160
15	1,2	Larkwood Ct	10	670	PVC	0	4	2	0	0	1995	70	62	$1,925	$7,700	$3,148	$153	$0	$102,408	$115,680	$102,459
15	1,2	Terra Mesa Wy	10	290	PVC	0	2	2	1	1	1995	70	62	$1,925	$3,850	$3,148	$153	$0	$44,326	$52,501	$46,500
15	1,2,5	Calle Del Sol	8	740	PVC	0	3	2	0	0	1995	70	62	$1,625	$4,875	$3,148	$139	$0	$102,759	$113,055	$100,134
15	1,4	California Cir	12	1,790	ACWP	0	6	6	0	3	1985	85	67	$2,155	$12,930	$3,148	$166	$228,508	$297,631	$552,469	$435,476
15	2,3,5,6	Milmont Dr	12	2,435	PVC	0	5	5	1	0	1985	70	52	$2,155	$10,775	$3,148	$166	$0	$404,878	$426,776	$317,033
15	2,5,6	Gingerwood & Elkwood	8	3,410	PVC	0	10	8	0	2	1985	70	52	$1,625	$16,250	$3,148	$139	$0	$473,524	$502,422	$373,228
15	5,6	Balboa Dr	8	660	PVC	0	4	2	0	0	1985	70	52	$1,625	$6,500	$3,148	$139	$0	$91,650	$103,463	$76,858
15	5,6	Minnis Cir	12	490	ACWP	0	2	1	0	0	1975	85	57	$2,155	$4,310	$3,148	$166	$62,553	$81,474	$154,461	$103,580
16	2	off California Cir	12	965	ACWP	0	1	0	0	0	1985	85	67	$2,155	$2,155	$3,148	$166	$123,190	$160,455	$294,288	$231,968
16	3	off Pescadero St	14	660	ACWP	1	0	0	0	0	1975	85	57	$3,142	$3,142	$3,148	$178	$90,455	$117,155	$217,943	$146,150
16	3	San Andreas Ct	4	150	ACWP	0	0	1	0	0	1975	85	57	$1,365	$0	$3,148	$120	$14,850	$18,050	$36,808	$24,683
16	3	San Andreas Ct	6	70	ACWP	0	1	0	0	0	1975	85	57	$1,430	$1,430	$3,148	$129	$7,322	$8,999	$21,443	$14,379
16	4	Field Rd	12	1,080	ACWP	0	2	2	0	0	1985	85	67	$2,155	$4,310	$3,148	$166	$137,871	$179,576	$330,966	$260,879
16	4	off Cadillac Ct	12	400	ACWP	0	0	1	0	0	1985	85	67	$2,155	$0	$3,148	$166	$51,063	$66,510	$122,987	$96,943
16	4	off Glenmoor Ct	6	300	ACWP	0	1	0	0	0	1985	85	67	$1,430	$1,430	$3,148	$129	$31,379	$38,568	$76,023	$59,924
16	6	Pescadero Ct	4	160	ACWP	0	0	1	0	0	1975	85	57	$1,365	$0	$3,148	$120	$15,840	$19,253	$39,040	$26,180
16	6	Pescadero Ct	6	80	ACWP	0	1	0	0	0	1975	85	57	$1,430	$1,430	$3,148	$129	$8,368	$10,285	$23,816	$16,971
16	1,2	California Cir	12	880	ACWP	0	3	3	0	0	1985	85	67	$2,155	$6,465	$3,148	$166	$112,339	$146,321	$273,408	$215,510

Schaaf & Wheeler Worksheet B - Water System Pipe Components and Estimated Replacement Costs

Enter Current SFENR Date (mm/yyyy):	02/2003
Enter Current SFENR Construction Cost Index:	7821

Enter Current Year: 2003 | Enter Coupling Unit Cost: $1,574

A	B	C	D	E	F	G	H	I	J	K	L	M	N=M-(Year-L)	O	P=(G+H)*O	Q	R	S	T=R*E	U=P+Q+S+T	
W-Plat #	Section #	Street	Pipe Diameter (Inches)	Pipe Length (FT)	Pipe Material	B	G	FH	BO	ARV A&V	Year Pipe Installed	Pipe Life Expectancy (yr)	Pipe Life Left (yr)	Valve Unit Cost ($) (see Worksheet D)	Valve Cost ($)	Coupling Cost ($)	Pipe Repl. Cost ($/LF) (see Worksheet C)	ACWP & ACP Disposal ($/LF) (see Worksheet E)	Total Pipe Replacement Cost ($)	Total Cost Current SFENR ($)	Estimated Value Feb 2003 ($) SFENR=7821
												SFENR Construction Cost Index:		7410	7410	7410	7684	7684	7684	7821	
16	1,2	Fairview Wy	8	1,110	ACWP	0	2	3	0	0	1985	85	67	$1,625	$3,250	$3,148	$139	$122,691	$154,138	$288,507	$227,412
16	1,4	Cadillac Ct	8	1,250	ACWP	0	7	4	0	0	1985	85	67	$1,625	$11,375	$3,148	$139	$138,166	$173,579	$332,619	$262,182
16	2,3	San Andreas Dr	12	870	ACWP	0	4	0	0	2	1975	85	57	$2,155	$8,620	$3,148	$166	$111,063	$144,659	$272,691	$182,863
16	2,3	Seaside Dr	8	580	PVC	0	1	1	0	1	1985	70	52	$1,625	$1,625	$3,148	$139	$0	$80,541	$87,011	$64,637
16	2,3	Summerwind Dr	8	1,430	PVC	0	3	3	0	1	1985	70	52	$1,625	$4,875	$3,148	$139	$0	$198,574	$210,575	$156,427
16	2,5	Abbott Ave	12	1,515	ACWP	0	4	8	0	1	1975	85	57	$2,155	$8,620	$3,148	$166	$193,402	$251,905	$465,651	$312,260
16	2,5	Hermina St	8	740	ACWP	0	2	1	0	0	1975	85	57	$1,625	$3,250	$3,148	$139	$81,794	$102,759	$194,589	$130,489
16	3,6	Pescadero St	12	1,440	ACWP	0	4	3	0	1	1975	85	57	$2,155	$8,620	$3,148	$166	$183,828	$239,435	$443,213	$297,214
16	4,5	off Abbott Ave	14	1,160	ACWP	3	0	5	0	0	1985	85	67	$3,142	$9,427	$3,148	$178	$158,981	$205,910	$384,656	$303,199
16	5,6	La Honda Dr	6	810	ACWP	0	2	2	0	0	1975	85	57	$1,430	$2,860	$3,148	$129	$84,723	$104,133	$198,558	$133,150
16	5,6	Laguna Dr	6	760	ACWP	0	3	2	0	0	1975	85	57	$1,430	$4,290	$3,148	$129	$79,494	$97,705	$188,202	$126,206
17	1	Heath	6	150	ACWP	0	0	0	0	0	1965	85	47	$1,430	$0	$3,148	$129	$15,690	$19,284	$38,918	$21,519
17	1	off Glenmoor Ct	6	270	ACWP	0	1	0	0	0	1985	85	67	$1,430	$1,430	$3,148	$129	$28,241	$34,711	$68,904	$54,313
17	3	Calero St	6	370	ACWP	0	0	1	0	0	1955	85	37	$1,430	$0	$3,148	$129	$38,701	$47,567	$91,125	$39,666
17	3	cross Abel St	8	250	ACWP	0	1	0	0	0	1955	85	37	$1,625	$1,625	$3,148	$139	$27,633	$34,716	$68,496	$29,816
17	3	Pescadero St	12	780	ACWP	0	2	2	0	0	1975	85	57	$2,155	$4,310	$3,148	$166	$99,573	$129,694	$241,218	$161,758
17	4	Easter Ave	6	365	ACWP	0	1	0	0	0	1955	85	37	$1,430	$1,430	$3,148	$129	$38,178	$46,924	$91,448	$39,807
17	5	Elm Ct	6	100	ACWP	0	1	0	1	0	1955	85	37	$1,430	$1,430	$3,148	$129	$10,460	$12,856	$28,562	$12,433
17	6	Almaden Ave	6	120	ACWP	0	1	0	0	0	1955	85	37	$1,430	$1,430	$3,148	$129	$12,552	$15,427	$33,308	$14,499
17	6	Marylinn Dr	10	250	ACWP	0	2	0	0	0	1955	85	37	$1,925	$3,850	$3,148	$153	$29,706	$38,212	$76,513	$33,305
17	1,2	Glenmoor Ct	6	1,710	ACWP	0	2	4	1	0	1985	85	67	$1,430	$2,860	$3,148	$129	$178,861	$219,837	$412,132	$324,857
17	1,2	Maple	6	870	ACWP	0	3	2	0	0	1965	85	47	$1,430	$4,290	$3,148	$129	$90,999	$111,847	$214,305	$118,498
17	1,2	Redwood	6	1,160	ACWP	0	3	3	0	0	1965	85	47	$1,430	$4,290	$3,148	$129	$121,332	$149,129	$283,123	$156,551
17	1,4	Heath	8	1,380	ACWP	0	5	3	0	0	1965	85	47	$1,625	$8,125	$3,148	$139	$152,535	$191,631	$362,187	$200,268
17	1,4	Larch St	6	510	ACWP	0	2	0	0	0	1955	85	37	$1,430	$2,860	$3,148	$129	$53,344	$65,565	$127,366	$55,442
17	2,3	Redwood	12	830	ACWP	0	4	2	1	0	1955	85	37	$2,155	$8,620	$3,148	$166	$105,956	$138,008	$260,725	$113,492
17	2,5	Abbott Ave	12	2,035	ACWP	0	9	5	0	0	1955	85	37	$2,155	$19,395	$3,148	$166	$259,784	$338,368	$632,587	$275,361
17	3,6	Abel St	10	1,560	ACWP	0	3	3	0	0	1955	85	37	$1,925	$5,775	$3,148	$153	$185,367	$238,444	$440,768	$191,864
17	3,6	Coyote St	6	1,410	ACWP	0	3	3	0	0	1965	85	47	$1,430	$4,290	$3,148	$129	$147,482	$181,269	$342,450	$189,354
17	3,6	Lexington St	6	1,395	ACWP	0	4	3	0	0	1965	85	47	$1,430	$5,720	$3,148	$129	$145,913	$179,340	$340,399	$188,221
17	3,6	Vasona St	6	1,870	ACWP	0	3	3	0	0	1955	85	37	$1,430	$4,290	$3,148	$129	$195,596	$240,406	$451,610	$196,583
17	4,5	Chestnut Ave	6	1,070	ACWP	0	3	2	0	0	1955	85	37	$1,430	$4,290	$3,148	$129	$111,919	$137,559	$261,766	$113,945
17	4,5	Elm Ave	8	995	ACWP	0	4	2	0	0	1955	85	37	$1,625	$6,500	$3,148	$139	$109,980	$138,169	$262,747	$114,372
17	4,5	Walnut Dr	6	530	ACWP	0	2	1	0	0	1955	85	37	$1,430	$2,860	$3,148	$129	$55,436	$68,136	$132,112	$57,508
17	4,5	Willow Ave	6	765	ACWP	0	1	1	0	0	1955	85	37	$1,430	$1,430	$3,148	$129	$80,017	$98,348	$186,370	$81,126
18	2	Abbott Ave	10	250	ACWP	0	1	0	0	0	1955	85	37	$1,925	$1,925	$3,148	$153	$29,706	$38,212	$74,481	$32,421
18	2	Abbott Ave	12	350	ACWP	0	2	1	0	0	1955	85	37	$2,155	$4,310	$3,148	$166	$44,680	$58,196	$112,578	$49,005
18	2	Barker St	10	250	ACWP	0	1	1	0	0	1955	85	37	$1,925	$1,925	$3,148	$153	$29,706	$38,212	$74,481	$32,421
18	2	Easter Ave	4	40	ACWP	0	0	0	1	0	1955	85	37	$1,365	$0	$3,148	$120	$3,960	$4,813	$12,252	$5,333
18	2	Penitencia St	6	200	ACWP	0	1	0	0	0	1965	85	47	$1,430	$1,430	$3,148	$129	$20,919	$25,712	$52,293	$28,915
18	2	Walnut Dr	6	320	ACWP	0	1	0	0	0	1955	85	37	$1,430	$1,430	$3,148	$129	$33,471	$41,139	$80,769	$35,158
18	3	Abel St	10	45	ACWP	0	0	0	0	0	1955	85	37	$1,925	$0	$3,148	$153	$5,347	$6,878	$15,765	$6,863
18	3	Marylinn Dr	12	110	ACWP	0	0	0	1	0	1965	85	47	$2,155	$0	$3,148	$166	$14,042	$18,290	$36,230	$20,033
18	3	Penitencia St	8	1,210	ACWP	0	3	3	1	0	1965	85	47	$1,625	$4,875	$3,148	$139	$133,744	$168,025	$315,606	$174,511
18	3	Uvas	8	310	ACWP	0	2	1	0	0	1965	85	47	$1,625	$3,250	$3,148	$139	$34,265	$43,048	$85,441	$47,244
18	4	Ranch Dr	16	680	DIP	1	0	1	0	0	1995	100	92	$5,035	$5,035	$3,148	$190	$0	$129,534	$140,475	$129,237
18	4	Rudyard Dr	8	240	ACWP	0	1	0	0	0	1955	85	37	$1,625	$1,625	$3,148	$139	$26,528	$33,327	$65,957	$28,711
18	5	Abbott Ave	10	235	ACWP	0	1	0	0	0	1955	85	37	$1,925	$1,925	$3,148	$153	$27,924	$35,919	$70,333	$30,616
18	5	Barker St	6	720	ACWP	0	2	1	0	0	1955	85	37	$1,430	$2,860	$3,148	$129	$75,310	$92,563	$177,200	$77,134
18	5	Keniston Ave	6	255	ACWP	0	1	1	0	0	1955	85	37	$1,430	$1,430	$3,148	$129	$26,672	$32,783	$65,344	$28,444
18	5	Rudyard Dr	6	250	ACWP	0	1	1	0	0	1955	85	37	$1,430	$1,430	$3,148	$129	$26,149	$32,140	$64,158	$27,928

Schaaf & Wheeler Worksheet B - Water System Pipe Components and Estimated Replacement Costs

Enter Current SFENR Date (mm/yyyy):	02/2003											Enter Current Year			Enter Coupling Unit Cost					
Enter Current SFENR Construction Cost Index:	7821											2003			$1,574					
A	B	C	D	E	F	G	H	I	J	K	L	M	N=M-(Year-L)	O	P=(G+H)*O	Q	R	S	T=R*E	U=P+Q+S+T	
W-Plat #	Section #	Street	Pipe Diameter (inches)	Pipe Length (FT)	Pipe Material	B	G	FH	BO	ARV A&V	Year Pipe Installed	Pipe Life Expectancy (yr)	Pipe Life Left (yr)	Valve Unit Cost ($) (see Worksheet D)	Valve Cost ($)	Coupling Cost ($)	Pipe Repl. Cost ($/LF) (see Worksheet C)	ACWP & ACP Disposal ($/LF) (see Worksheet E)	Total Pipe Replacement Cost ($)	Total Cost Current SFENR ($)	Estimated Value Feb 2003 ($) SFENR=7821
											SFENR Construction Cost Index:			7410	7410	7410	7684	7684	7684	7821	
18	6	Butler St	6	965	ACWP	0	2	2	0	0	1955	85	37	$1,430	$2,860	$3,148	$129	$100,936	$124,060	$235,340	$102,442
18	6	Casper St	6	1,010	ACWP	0	3	2	0	0	1955	85	37	$1,430	$4,290	$3,148	$129	$105,643	$129,845	$247,528	$107,747
18	6	Ogden Ct	4	140	ACWP	0	0	0	1	0	1955	85	37	$1,365	$0	$3,148	$120	$13,860	$16,847	$34,575	$15,050
18	6	Ohio Ct	4	150	ACWP	0	0	0	1	0	1955	85	37	$1,365	$0	$3,148	$120	$14,850	$18,050	$36,808	$16,022
18	6	Ophir Ct	4	140	ACWP	0	0	0	1	0	1955	85	37	$1,365	$0	$3,148	$120	$13,860	$16,847	$34,575	$15,050
18	6	Orion Ct	4	140	ACWP	0	0	0	1	0	1955	85	37	$1,365	$0	$3,148	$120	$13,860	$16,847	$34,575	$15,050
18	1,2	Easter Ave	6	850	ACWP	0	3	2	0	0	1955	85	37	$1,430	$4,290	$3,148	$129	$88,907	$109,276	$209,559	$91,220
18	1,2,3	Marylinn Dr	10	2,510	ACWP	0	7	2	0	0	1965	85	47	$1,925	$13,475	$3,148	$153	$298,250	$383,650	$711,576	$393,460
18	1,2,5	Silvera St	6	1,310	ACWP	0	2	2	0	1	1955	85	37	$1,430	$2,860	$3,148	$129	$137,022	$168,413	$317,210	$138,080
18	1,4	Heath	8	2,020	ACWP	0	4	5	0	0	1965	85	47	$1,625	$6,500	$3,148	$139	$223,276	$280,504	$522,925	$289,147
18	1,4	Smithwood St	6	1,710	ACWP	0	4	2	0	0	1955	85	37	$1,430	$5,720	$3,148	$129	$178,861	$219,837	$415,150	$180,712
18	2,3,6	Norwich & Alton	10	1,690	ACWP	0	3	2	0	0	1955	85	37	$1,925	$5,775	$3,148	$153	$200,814	$258,314	$476,714	$207,511
18	2,5	Abbott Ave	8	1,210	ACWP	0	3	1	0	0	1955	85	37	$1,625	$4,875	$3,148	$139	$133,744	$168,025	$315,606	$137,381
18	2,5	Krismer St	6	740	ACWP	0	2	1	0	1	1955	85	37	$1,430	$2,860	$3,148	$129	$77,402	$95,134	$181,946	$79,200
18	3,6	Abel St	12	1,110	ACWP	0	3	4	1	1	1975	85	57	$2,155	$6,465	$3,148	$166	$141,701	$184,564	$342,216	$229,486
18	5,6	Rudyard Dr	8	995	ACWP	0	4	3	0	2	1955	85	37	$1,625	$6,500	$3,148	$139	$109,980	$138,169	$262,747	$114,372
19	1	Ranch Dr	16	885	DIP	3	0	3	0	0	1995	100	92	$5,035	$15,105	$3,148	$190	$0	$168,585	$190,849	$175,581
19	2	Abbott Ave	10	720	ACWP	0	3	1	0	0	1965	85	47	$1,925	$5,775	$3,148	$153	$85,554	$110,051	$208,502	$115,290
19	2	Smithwood St	8	780	ACWP	0	2	2	0	0	1965	85	47	$1,625	$3,250	$3,148	$139	$86,215	$108,313	$204,742	$113,210
19	3	Alton St	10	300	ACWP	0	1	0	0	0	1955	85	37	$1,925	$1,925	$3,148	$153	$35,647	$45,856	$88,306	$38,439
19	3	Butler St	6	375	ACWP	0	1	1	0	0	1955	85	37	$1,430	$1,430	$3,148	$129	$39,224	$48,210	$93,821	$40,840
19	3	Butler St	8	450	ACWP	0	5	1	0	1	1975	85	57	$1,625	$8,125	$3,148	$139	$49,740	$62,488	$126,123	$84,576
19	3	Casper St	6	460	ACWP	0	1	1	0	0	1955	85	37	$1,430	$1,430	$3,148	$129	$48,115	$59,137	$113,992	$49,620
19	6	Calaveras Blvd	12	915	ACWP	0	2	3	0	0	1965	85	47	$2,155	$4,310	$3,148	$166	$116,807	$152,141	$281,605	$155,711
19	6	Junipero Dr	8	245	ACWP	0	0	1	0	0	1975	85	57	$1,625	$0	$3,148	$139	$27,080	$34,022	$65,512	$43,931
19	6	off Rio Verde Pl	8	350	ACWP	0	2	1	0	0	1975	85	57	$1,625	$3,250	$3,148	$139	$38,686	$48,602	$95,594	$64,104
19	6	off Rio Verde Pl	8	710	ACWP	0	3	2	0	0	1985	85	67	$1,625	$4,875	$3,148	$139	$78,478	$98,593	$188,689	$148,731
19	6	Rio Verde Pl	12	600	ACWP	0	1	2	0	0	1985	85	67	$2,155	$2,155	$3,148	$166	$76,595	$99,765	$185,094	$145,898
19	6	Rio Verde Pl	14	570	ACWP	3	0	2	0	0	1985	85	67	$3,142	$9,427	$3,148	$178	$78,120	$101,180	$195,762	$154,307
19	1,2	Heath	8	1,230	ACWP	0	3	2	0	0	1965	85	47	$1,625	$4,875	$3,148	$139	$135,955	$170,802	$320,682	$177,318
19	2,3	Spence Ave	8	1,450	ACWP	0	7	4	1	0	1955	85	37	$1,625	$11,375	$3,148	$139	$160,272	$201,352	$383,386	$166,886
19	2,5	Valley Wy	8	1,140	ACWP	0	5	7	0	2	1965	85	47	$1,625	$8,125	$3,148	$139	$126,007	$158,304	$301,267	$166,583
19	2,5,6	Abbott Ave	12	990	ACWP	0	3	2	0	0	1965	85	47	$2,155	$6,465	$3,148	$166	$126,382	$164,611	$306,316	$169,375
19	3,6	Calaveras Blvd	8	570	ACWP	0	1	2	0	0	1965	85	47	$1,625	$1,625	$3,148	$139	$63,004	$79,152	$149,722	$82,788
19	3,6	off Abbott Ave	8	1,140	ACWP	0	4	5	0	0	1985	85	67	$1,625	$6,500	$3,148	$139	$126,007	$158,304	$299,552	$236,118
19	5,6	Route 237	8	245	ACWP	0	1	1	0	0	1965	85	47	$1,625	$1,625	$3,148	$139	$27,080	$34,022	$67,227	$37,172
20	3	Corning Ave	8	860	ACWP	0	4	2	0	0	1955	85	37	$1,625	$6,500	$3,148	$139	$95,058	$119,422	$228,479	$99,456
20	3	Corning Ave	14	840	ACWP	1	0	0	1	0	1955	85	37	$3,142	$3,142	$3,148	$178	$115,124	$149,107	$275,572	$119,955
20	3	Junipero Dr	8	445	ACWP	0	2	1	0	0	1975	85	57	$1,625	$3,250	$3,148	$139	$49,187	$61,794	$119,708	$80,275
20	3	off San Petra Ct	6	320	ACWP	0	2	0	0	0	1975	85	57	$1,430	$2,860	$3,148	$129	$33,471	$41,139	$82,278	$55,175
20	3	Rio Verde Pl	6	190	ACWP	0	1	1	0	0	1985	85	67	$1,430	$1,430	$3,148	$129	$19,873	$24,426	$49,920	$39,348
20	3	Rio Verde Pl & Junipero Dr	14	905	ACWP	3	0	2	0	0	1975	85	57	$3,142	$9,427	$3,148	$178	$124,033	$160,645	$303,015	$203,198
20	3	San Miguel Ct	6	340	ACWP	0	1	1	0	0	1975	85	57	$1,430	$1,430	$3,148	$129	$35,563	$43,710	$85,515	$57,346
20	3	San Petra Ct	6	320	ACWP	0	1	1	0	0	1975	85	57	$1,430	$1,430	$3,148	$129	$33,471	$41,139	$80,769	$54,163
20	3	Sylvia Ave	8	670	ACWP	0	1	2	0	0	1955	85	37	$1,625	$1,625	$3,148	$139	$74,057	$93,038	$175,106	$76,222
20	3	Sylvia Ct	8	80	ACWP	0	0	0	1	0	1956	85	37	$1,625	$0	$3,148	$139	$8,843	$11,109	$23,629	$10,286
20	4	Bellew Dr	14	510	ACWP	2	0	1	0	0	1985	85	67	$3,142	$6,285	$3,148	$178	$69,897	$90,529	$173,236	$136,551
20	1,4	Barber Ln	14	740	ACWP	8	0	6	1	0	1985	85	67	$3,142	$25,139	$3,148	$178	$101,419	$131,356	$266,772	$210,279
20	2,3	off Junipero Dr	8	705	ACWP	0	1	3	0	0	1985	85	67	$1,625	$1,625	$3,148	$139	$77,925	$97,899	$183,990	$145,027
20	2,4	Rio Verde Pl	12	1,710	ACWP	0	5	6	0	0	1985	85	67	$2,155	$10,775	$3,148	$166	$218,296	$284,329	$526,262	$414,818
20	3,6	Palmer Ave	8	460	ACWP	0	1	0	1	0	1955	85	37	$1,625	$1,625	$3,148	$139	$50,845	$63,877	$121,801	$53,019

Schaaf & Wheeler Worksheet B - Water System Pipe Components and Estimated Replacement Costs

Enter Current SFENR Date (mm/yyyy):	02/2003												Enter Current Year		Enter Coupling Unit Cost					
Enter Current SFENR Construction Cost Index	7821												2003		$1,574					
A	B	C	D	E	F	G	H	I	J	K	L	M	N=M-(Year-L)	O	P=(G+H)*O	Q	R	S	T=R*E	U=P+Q+S+T	
W-Plat #	Section #	Street	Pipe Diameter (Inches)	Pipe Length (FT)	Pipe Material	B	G	FH	BO	ARV A&V	Year Pipe Installed	Pipe Life Expectancy (yr)	Pipe Life Left (yr)	Valve Unit Cost ($) (see Worksheet D)	Valve Cost ($)	Coupling Cost ($)	Pipe Repl. Cost ($/LF) (see Worksheet C)	ACWP & ACP Disposal ($/LF) (see Worksheet E)	Total Pipe Replacement Cost ($)	Total Cost Current SFENR ($)	Estimated Value Feb 2003 ($) SFENR=7821
												SFENR Construction Cost Index:		7410	7410	7410	7684	7684	7684	7821	
20	4,5,6	off Barber Ln	16	2,515	PVC	5	0	2	0	0	1985	70	52	$5,035	$25,175	$3,148	$190	$0	$479,085	$517,502	$384,430
21	4	Alder Dr	12	810	ACP	0	3	3	0	0	1985	85	67	$2,155	$6,465	$3,148	$166	$103,403	$134,682	$252,467	$199,003
21	1,2,5	Barber Ln	14	2,210	ACWP	8	0	7	0	0	1985	85	67	$3,142	$25,139	$3,148	$178	$302,887	$392,293	$737,403	$581,247
21	4,5,6	Tasman Dr	14	2,270	DIP	5	0	0	0	0	1995	100	92	$3,142	$15,712	$3,148	$178	$0	$402,944	$430,018	$395,617
22	1	Tasman Dr	12	1,170	ACP	0	3	1	0	0	1985	85	67	$2,155	$6,465	$3,148	$166	$149,360	$194,541	$360,165	$283,895
22	1	Tasman Dr	12	1,050	DIP	0	3	1	0	2	1995	100	92	$2,155	$6,465	$3,148	$166	$0	$174,588	$187,840	$172,813
22	1	Tasman Dr	14	140	DIP	1	0	0	0	0	1995	100	92	$3,142	$3,142	$3,148	$178	$0	$24,851	$31,932	$29,378
22	2	Barber Ln	14	170	ACP	1	0	1	0	0	1985	85	67	$3,142	$3,142	$3,148	$178	$23,299	$30,176	$61,066	$48,134
22	3	Capitol Ave	12	990	ACWP	0	3	1	1	0	1985	85	67	$2,155	$6,465	$3,148	$166	$126,382	$164,611	$306,316	$241,449
22	3	Capitol Ave	18	1,215	DIP	3	0	0	0	2	1985	100	82	$5,385	$16,156	$3,148	$207	$0	$251,803	$276,657	$226,858
22	3	Galaxy Ct	6	220	ACWP	0	1	1	1	0	1975	85	57	$1,430	$1,430	$3,148	$129	$23,011	$28,283	$57,039	$38,249
22	5	Buckeye Dr	12	100	ACWP	0	0	0	0	0	1985	85	67	$2,155	$0	$3,148	$166	$12,766	$16,627	$33,239	$26,200
22	6	off Starlite Dr	8	460	ACWP	0	1	0	0	0	1985	85	67	$1,625	$1,625	$3,148	$139	$50,845	$63,877	$121,801	$96,008
22	6	Starlite Ct	6	200	ACWP	0	1	1	1	0	1985	85	67	$1,430	$1,430	$3,148	$129	$20,919	$25,712	$52,293	$41,219
22	1,2	Alder Dr	12	1,435	ACP	0	8	5	0	0	1985	85	67	$2,155	$17,240	$3,148	$166	$183,190	$238,604	$450,815	$355,349
22	2,3,6	Barber Ln	12	1,945	ACWP	0	8	7	0	0	1985	85	67	$2,155	$17,240	$3,148	$166	$248,295	$323,403	$603,388	$475,612
22	3,6	Moonlight Wy	6	860	ACWP	0	1	1	0	0	1965	85	47	$1,430	$1,430	$3,148	$129	$89,953	$110,561	$208,914	$115,517
22	3,6	Starlite Dr	10	1,450	ACWP	0	4	3	0	0	1975	85	57	$1,925	$7,700	$3,148	$153	$172,296	$221,630	$412,384	$276,540
22	5,6	Sycamore Dr	12	1,520	ACWP	0	4	5	0	1	1985	85	67	$2,155	$8,620	$3,148	$166	$194,040	$252,737	$467,146	$368,221
23	1	Sycamore Dr	12	1,030	ACWP	0	1	3	0	1	1985	85	67	$2,155	$2,155	$3,148	$166	$131,488	$171,262	$313,734	$247,296
23	2	Buckeye Ct	12	365	ACWP	0	1	2	1	0	1985	85	67	$2,155	$2,155	$3,148	$166	$46,595	$60,690	$114,791	$90,482
23	3	Fir Tree Ct	6	125	ACWP	0	0	0	0	0	1965	85	47	$1,430	$0	$3,148	$129	$13,075	$16,070	$32,986	$18,239
23	3	Gibbons Ct	6	190	ACWP	0	1	0	1	0	1975	85	57	$1,430	$1,430	$3,148	$129	$19,873	$24,426	$49,920	$33,475
23	3	Live Oak Ct	14	470	ACWP	1	0	1	0	0	1975	85	57	$3,142	$3,142	$3,148	$178	$64,415	$83,429	$157,113	$105,358
23	3	Starlite Dr	10	180	ACWP	0	1	0	0	0	1975	85	57	$1,925	$1,925	$3,148	$153	$21,388	$27,513	$55,125	$36,966
23	3	Timber Wy	6	160	ACWP	0	1	1	0	0	1965	85	47	$1,430	$1,430	$3,148	$129	$16,735	$20,570	$42,800	$23,666
23	6	Manzanita Ct	6	80	ACWP	0	1	0	0	0	1965	85	47	$1,430	$1,430	$3,148	$129	$8,368	$10,285	$23,816	$13,169
23	1,4,5	McCarthy Blvd	12	1,830	ACWP	0	1	6	0	2	1985	85	67	$2,155	$2,155	$3,148	$166	$233,615	$304,282	$553,063	$435,944
23	2,5	Buckeye Dr	12	1,580	ACWP	0	3	4	0	1	1985	85	67	$2,155	$6,465	$3,148	$166	$201,700	$262,713	$482,822	$380,577
23	3,6	Barber Ln	12	2,020	ACWP	0	7	7	0	0	1985	85	67	$2,155	$15,085	$3,148	$166	$257,870	$335,874	$623,551	$491,505
23	4,6	Cottonwood Dr	12	1,760	ACWP	0	4	6	1	1	1985	85	67	$2,155	$8,620	$3,148	$166	$224,678	$292,643	$538,945	$424,816
24	2,3	Barber Ln	12	1,680	ACWP	0	4	6	0	1	1985	85	67	$2,155	$8,620	$3,148	$166	$214,466	$279,341	$515,012	$405,951
24	2,5	McCarthy Blvd	12	1,940	ACWP	0	6	7	0	2	1985	85	67	$2,155	$12,930	$3,148	$166	$247,657	$322,572	$597,343	$470,847
24	3,5,6	Montague Expy	8	1,810	ACWP	0	3	0	1	0	1985	85	67	$1,625	$4,875	$3,148	$139	$200,064	$251,343	$467,905	$368,820
25	2	Montague Expy	8	460	ACWP	0	1	0	1	0	1985	85	67	$1,625	$1,625	$3,148	$139	$50,845	$63,877	$121,801	$96,008
26	5	Levin St	6	180	ACWP	0	0	0	0	0	1955	85	37	$1,430	$0	$3,148	$129	$18,827	$23,141	$46,037	$20,040
26	6	Bolton Dr	8	430	ACWP	0	1	1	0	0	1985	85	67	$1,625	$1,625	$3,148	$139	$47,529	$59,711	$114,186	$90,005
26	6	Devon Pl	4	150	ACWP	0	0	0	1	0	1985	85	67	$1,365	$0	$3,148	$120	$14,850	$18,050	$36,808	$29,013
26	6	Devon Pl	6	90	ACWP	0	0	1	0	0	1985	85	67	$1,430	$0	$3,148	$129	$9,414	$11,570	$24,680	$19,454
26	6	Stratford Dr	6	340	ACWP	0	1	1	0	0	1985	85	67	$1,430	$1,430	$3,148	$129	$35,563	$43,710	$85,515	$67,406
26	6	Victoria Dr	8	540	ACWP	0	7	1	1	1	1985	85	67	$1,625	$11,375	$3,148	$139	$59,688	$74,986	$152,398	$120,125
27	1	Buskirk St	6	740	ACWP	0	2	2	0	0	1975	85	57	$1,430	$2,860	$3,148	$129	$77,402	$95,134	$181,946	$122,011
27	1	Toscano St	6	255	ACWP	0	1	0	0	0	1975	85	57	$1,430	$1,430	$3,148	$129	$26,672	$32,783	$65,344	$43,819
27	2	Gross St	6	830	ACWP	0	2	1	0	0	1955	85	37	$1,430	$2,860	$3,148	$129	$86,815	$106,704	$203,304	$88,497
27	2	Levin St	6	200	ACWP	0	1	0	0	0	1955	85	37	$1,430	$1,430	$3,148	$129	$20,919	$25,712	$52,293	$22,763
27	2	Levin St	6	610	ACWP	0	2	2	0	0	1955	85	37	$1,430	$2,860	$3,148	$129	$63,804	$78,421	$151,097	$65,772
27	2	Oliver St	6	635	ACWP	0	1	1	0	0	1955	85	37	$1,430	$1,430	$3,148	$129	$66,419	$81,635	$155,520	$67,697
27	3	Devon Pl	6	295	ACWP	0	1	0	0	0	1985	85	67	$1,430	$1,430	$3,148	$129	$30,856	$37,925	$74,837	$58,989
27	3	Kirkwall Pl	6	120	ACWP	0	0	0	1	0	1985	85	67	$1,430	$0	$3,148	$129	$12,552	$15,427	$31,799	$25,065
27	3	Kirkwall Pl	6	220	ACWP	0	1	1	0	0	1985	85	67	$1,430	$1,430	$3,148	$129	$23,011	$28,283	$57,039	$44,960
27	3	Park Victoria Dr	8	850	ACWP	0	1	1	0	2	1985	85	67	$1,625	$1,625	$3,148	$139	$93,953	$118,034	$220,796	$174,039

Schaaf & Wheeler Worksheet B - Water System Pipe Components and Estimated Replacement Costs

Enter Current SFENR Date (mm/yyyy):	02/2003											Enter Current Year			Enter Coupling Unit Cost				
Enter Current SFENR Construction Cost Index:	7821											2003			$1,574				
A	B	C	D	E	F	G	H	I	J	K	L	M	N=M-(Year-L)	O	P=(G+H)*O	Q	R	S	T=R*E	U=P+Q+S+T	
W-Plat #	Section #	Street	Pipe Diameter (Inches)	Pipe Length (FT)	Pipe Material	B	G	FH	BO	ARV A&V	Year Pipe Installed	Pipe Life Expectancy (yr)	Pipe Life Left (yr)	Valve Unit Cost ($) (see Worksheet D)	Valve Cost ($)	Coupling Cost ($)	Pipe Repl. Cost ($/LF) (see Worksheet C)	ACWP & ACP Disposal ($/LF) (see Worksheet E)	Total Pipe Replacement Cost ($)	Total Cost Current SFENR ($)	Estimated Value Feb 2003 ($) SFENR=7821
												SFENR Construction Cost Index:		7410	7410	7410	7684	7684	7684	7821	
27	3	Sussex Pl	4	80	ACWP	0	0	0	1	0	1985	85	67	$1,365	$0	$3,148	$120	$7,920	$9,627	$21,181	$16,696
27	3	Sussex Pl	6	180	ACWP	0	1	1	0	0	1985	85	67	$1,430	$1,430	$3,148	$129	$18,827	$23,141	$47,547	$37,478
27	4	Arizona	8	1,100	ACWP	0	5	2	0	0	1955	85	37	$1,625	$8,125	$3,148	$139	$121,586	$152,750	$291,114	$126,720
27	4	Autrey St	6	840	ACWP	0	3	0	1	0	1955	85	37	$1,430	$4,290	$3,148	$129	$87,861	$107,990	$207,186	$90,187
27	4	Callan St	6	910	ACWP	0	2	1	0	0	1955	85	37	$1,430	$2,860	$3,148	$129	$95,183	$116,989	$222,288	$96,761
27	4	Mazey St	6	935	ACWP	0	4	2	0	0	1955	85	37	$1,430	$5,720	$3,148	$129	$97,798	$120,203	$231,239	$100,657
27	4	off N Milpitas	6	100	PVC	0	1	0	1	0	1985	70	52	$1,430	$1,430	$3,148	$129	$0	$12,856	$17,916	$13,309
27	4	off N Milpitas	8	330	PVC	0	1	1	0	1	1985	70	52	$1,625	$1,625	$3,148	$139	$0	$45,825	$51,678	$38,389
27	4	Vega Ave	6	130	ACWP	0	1	0	0	0	1955	85	37	$1,430	$1,430	$3,148	$129	$13,598	$16,713	$35,681	$15,532
27	5	Conway	8	645	ACWP	0	3	1	0	0	1965	85	47	$1,625	$4,875	$3,148	$139	$71,294	$89,567	$172,190	$95,211
27	5	Murray St	6	730	ACWP	0	2	1	0	0	1955	85	37	$1,430	$2,860	$3,148	$129	$76,356	$93,848	$179,573	$78,167
27	6	between Dixon & Greathouse	8	270	ACWP	0	1	0	0	0	1965	85	47	$1,625	$1,625	$3,148	$139	$29,844	$37,493	$73,572	$40,681
27	6	Matthews Ct	6	460	ACWP	0	1	2	1	0	1965	85	47	$1,430	$1,430	$3,148	$129	$48,115	$59,137	$113,992	$63,031
27	6	Woodcock Ct	6	70	ACWP	0	0	0	1	0	1965	85	47	$1,430	$0	$3,148	$129	$7,322	$8,999	$19,934	$11,022
27	1,2	Manferd St	8	1,890	ACWP	0	5	3	1	2	1955	85	37	$1,625	$8,125	$3,148	$139	$208,907	$262,452	$491,642	$214,009
27	1,4	Tiny St	6	1,150	ACWP	0	3	2	0	0	1955	85	37	$1,430	$4,290	$3,148	$129	$120,286	$147,843	$280,750	$122,209
27	2,3	Gosser St	6	940	ACWP	0	2	2	0	0	1955	85	37	$1,430	$2,860	$3,148	$129	$98,321	$120,846	$229,407	$99,860
27	2,5	Conway St	8	1,230	ACWP	0	5	2	0	0	1955	85	37	$1,625	$8,125	$3,148	$139	$135,955	$170,802	$324,112	$141,084
27	3,6	Park Victoria Dr	12	650	ACWP	0	2	2	0	1	1985	85	67	$2,155	$4,310	$3,148	$166	$82,978	$108,078	$202,327	$159,481
27	3,6	Stirling Dr	6	210	ACWP	0	1	0	0	0	1985	85	67	$1,430	$1,430	$3,148	$129	$21,965	$26,997	$54,666	$43,089
27	4,5,6	Dixon Rd	8	2,190	ACWP	0	4	5	1	1	1965	85	47	$1,625	$6,500	$3,148	$139	$242,066	$304,111	$566,077	$313,007
27	5,6	Greathouse Dr	6	1,370	ACWP	0	3	3	1	0	1965	85	47	$1,430	$4,290	$3,148	$129	$143,298	$176,126	$332,957	$184,106
28	1	Dixon Rd	10	400	ACWP	0	1	1	0	0	1965	85	47	$1,925	$1,925	$3,148	$153	$47,530	$61,139	$115,957	$64,117
28	1	Vegas	6	520	ACWP	0	1	1	0	0	1955	85	37	$1,430	$1,430	$3,148	$129	$54,390	$66,851	$128,230	$55,818
28	3	Coehlo Ct	6	130	ACWP	0	1	0	1	0	1965	85	47	$1,430	$1,430	$3,148	$129	$13,598	$16,713	$35,681	$19,730
28	3	Coehlo St	8	610	ACWP	0	2	1	0	0	1965	85	47	$1,625	$3,250	$3,148	$139	$67,425	$84,707	$161,591	$89,350
28	3	Coehlo St	10	560	ACWP	0	2	1	0	1	1955	85	37	$1,925	$3,850	$3,148	$153	$66,542	$85,595	$162,230	$70,618
28	3	Conway St	8	810	ACWP	0	3	2	0	0	1965	85	47	$1,625	$4,875	$3,148	$139	$89,531	$112,479	$214,072	$118,369
28	3	off Taylor Dr	8	180	ACWP	0	0	0	0	0	1965	85	47	$1,625	$0	$3,148	$139	$19,896	$24,995	$49,012	$27,101
28	3	Taylor Dr	6	720	ACWP	0	3	1	0	0	1965	85	47	$1,430	$4,290	$3,148	$129	$75,310	$92,563	$178,709	$98,816
28	3	Woodcock Ct	6	370	ACWP	0	1	1	0	0	1965	85	47	$1,430	$1,430	$3,148	$129	$38,701	$47,567	$92,634	$51,221
28	4	Coehlo St	6	670	ACWP	0	0	2	0	0	1955	85	37	$1,430	$0	$3,148	$129	$70,080	$86,135	$162,316	$70,655
28	4	Homme Wy	6	250	ACWP	0	0	1	0	0	1985	85	67	$1,430	$0	$3,148	$129	$26,149	$32,140	$62,649	$49,382
28	4	Jason Dr	6	420	ACWP	0	1	1	0	1	1985	85	67	$1,430	$1,430	$3,148	$129	$43,931	$53,995	$104,500	$82,370
28	4	Rand St	6	235	ACWP	0	1	0	0	0	1955	85	37	$1,430	$1,430	$3,148	$129	$24,580	$30,211	$60,598	$26,378
28	4	Sunnyhills Ct	8	200	ACWP	0	0	2	0	0	1975	85	57	$1,625	$0	$3,148	$139	$22,107	$27,773	$54,089	$36,272
28	4	Valmy St	6	1,610	ACWP	0	1	4	0	0	1955	85	37	$1,430	$1,430	$3,148	$129	$168,401	$206,981	$386,892	$168,412
28	5	Arizona Ave	12	830	ACWP	0	4	1	0	0	1965	85	47	$2,155	$8,620	$3,148	$166	$105,956	$138,008	$260,725	$144,165
28	5	Duarte Ct	6	290	ACWP	0	1	0	0	0	1965	85	47	$1,430	$1,430	$3,148	$129	$30,333	$37,282	$73,650	$40,724
28	5	Washington Dr	6	450	ACWP	0	2	1	0	0	1965	85	47	$1,430	$2,860	$3,148	$129	$47,069	$57,852	$113,128	$62,553
28	5	Washington Dr	14	1,130	ACWP	1	0	1	0	1	1965	85	47	$3,142	$3,142	$3,148	$178	$154,870	$200,584	$368,417	$203,713
28	6	Escuela Pkwy	8	405	ACWP	0	1	1	0	0	1965	85	47	$1,625	$1,625	$3,148	$139	$44,766	$56,240	$107,840	$59,629
28	6	Escuela Pkwy	14	745	ACWP	2	0	1	0	0	1965	85	47	$3,142	$6,285	$3,148	$178	$102,104	$132,244	$248,473	$137,391
28	6	Roger St	12	500	ACWP	0	3	1	0	0	1965	85	47	$2,155	$6,465	$3,148	$166	$63,829	$83,137	$159,727	$88,320
28	1,2	Boulder St	6	925	ACWP	0	2	2	0	0	1955	85	37	$1,430	$2,860	$3,148	$129	$96,752	$118,917	$225,848	$98,310
28	1,2	Boyd St	6	925	ACWP	0	2	1	0	0	1955	85	37	$1,430	$2,860	$3,148	$129	$96,752	$118,917	$225,848	$98,310
28	1,4	Arizona Ave	10	1,365	ACWP	0	6	1	0	0	1955	85	37	$1,925	$11,550	$3,148	$153	$162,196	$208,638	$392,944	$171,046
28	2,5	Coehlo St	12	1,060	ACWP	0	3	2	0	0	1955	85	37	$2,155	$6,465	$3,148	$166	$135,318	$176,251	$327,257	$142,453
28	2,5	Cortez St	6	990	ACWP	0	3	2	0	0	1955	85	37	$1,430	$4,290	$3,148	$129	$103,551	$127,274	$242,782	$105,681
28	3,6	Curtner St	12	750	ACWP	0	1	2	0	0	1955	85	37	$2,155	$2,155	$3,148	$166	$95,744	$124,706	$229,968	$100,104
28	3,6	off Coehlo St	12	410	ACWP	0	1	1	0	0	1965	85	47	$2,155	$2,155	$3,148	$166	$52,340	$68,172	$128,253	$70,917

Schaaf & Wheeler Worksheet B - Water System Pipe Components and Estimated Replacement Costs

Enter Current SFENR Date (mm/yyyy):	02/2003												Enter Current Year		Enter Coupling Unit Cost					
Enter Current SFENR Construction Cost Index	7821												2003		$1,574					
A	B	C	D	E	F	G	H	I	J	K	L	M	N=M-(Year-L)	O	P=(G+H)*O	Q	R	S	T=R*E	U=P+Q+S+T	
W-Plat #	Section #	Street	Pipe Diameter (inches)	Pipe Length (FT)	Pipe Material	B	G	FH	BO	ARV A&V	Year Pipe Installed	Pipe Life Expectancy (yr)	Pipe Life Left (yr)	Valve Unit Cost ($) (see Worksheet D)	Valve Cost ($)	Coupling Cost ($)	Pipe Repl. Cost ($/LF) (see Worksheet C)	ACWP & ACP Disposal ($/LF) (see Worksheet E)	Total Pipe Replacement Cost ($)	Total Cost Current SFENR ($)	Estimated Value Feb 2003 ($) SFENR=7821
												SFENR Construction Cost Index:		7410	7410	7410	7684	7684	7684	7821	
28	3,6	Roger St	6	230	ACWP	0	2	0	0	0	1965	85	47	$1,430	$2,860	$3,148	$129	$24,057	$29,569	$60,921	$33,686
28	4,5	Washington Dr	12	970	ACWP	0	2	2	0	0	1965	85	47	$2,155	$4,310	$3,148	$166	$123,828	$161,286	$298,058	$164,809
29	1	Fontainbleu Ave	6	660	ACWP	0	2	0	0	0	1965	85	47	$1,430	$2,860	$3,148	$129	$69,034	$84,849	$162,962	$90,108
29	1	Fontainbleu Ct	6	810	ACWP	0	1	1	1	0	1965	85	47	$1,430	$1,430	$3,148	$129	$84,723	$104,133	$197,048	$108,956
29	1	off N Main	8	990	PVC	0	1	8	0	0	1975	70	42	$1,625	$1,625	$3,148	$139	$0	$137,475	$144,958	$86,975
29	1	off Washington Dr	8	40	PVC	0	1	1	0	0	1975	70	42	$1,625	$1,625	$3,148	$139	$0	$5,555	$10,691	$6,415
29	1	off Washington Dr	10	310	PVC	0	0	2	0	0	1975	70	42	$1,925	$0	$3,148	$153	$0	$47,383	$51,549	$30,929
29	1	off Washington Dr	10	210	PVC	0	1	1	0	0	1975	70	42	$1,925	$1,925	$3,148	$153	$0	$32,098	$38,023	$22,814
29	1	Vargas Ct	6	360	ACWP	0	1	1	0	0	1965	85	47	$1,430	$1,430	$3,148	$129	$37,655	$46,281	$90,261	$49,909
29	1	Vienna Dr	6	470	ACWP	0	2	0	1	0	1965	85	47	$1,430	$2,860	$3,148	$129	$49,161	$60,423	$117,874	$65,177
29	1	Washington Dr	12	290	ACWP	0	0	1	0	0	1965	85	47	$2,155	$0	$3,148	$166	$37,021	$48,220	$90,079	$49,809
29	2	Garcia Ct	6	240	ACWP	0	1	1	0	0	1965	85	47	$1,430	$1,430	$3,148	$129	$25,103	$30,854	$61,785	$34,163
29	2	Pashote Ct	6	270	ACWP	0	1	1	0	0	1965	85	47	$1,430	$1,430	$3,148	$129	$28,241	$34,711	$68,904	$38,100
29	3	Cirolero	6	80	ACWP	0	1	1	0	0	1975	85	57	$1,430	$1,430	$3,148	$129	$8,368	$10,285	$23,816	$15,971
29	3	Escuela Pkwy	14	740	ACWP	1	0	0	0	0	1965	85	47	$3,142	$3,142	$3,148	$178	$101,419	$131,356	$243,556	$134,672
29	3	Manzano	6	360	ACWP	0	1	1	0	0	1975	85	57	$1,430	$1,430	$3,148	$129	$37,655	$46,281	$90,261	$60,528
29	3	off Escuela Pkwy	4	90	ACWP	0	1	0	1	0	1965	85	47	$1,365	$1,365	$3,148	$120	$8,910	$10,830	$24,854	$13,743
29	4	Belbrook Pl	4	90	ACWP	0	0	1	1	0	1975	85	57	$1,365	$0	$3,148	$120	$8,910	$10,830	$23,414	$15,701
29	4	Belbrook Pl	6	60	ACWP	0	1	0	0	0	1975	85	57	$1,430	$1,430	$3,148	$129	$6,276	$7,714	$19,070	$12,788
29	4	Belbrook Wy	8	770	ACWP	0	2	2	0	0	1965	85	47	$1,625	$3,250	$3,148	$139	$85,110	$106,925	$202,204	$111,807
29	4	Kovanda Wy	6	330	ACWP	0	0	0	0	0	1975	85	57	$1,430	$0	$3,148	$129	$34,517	$42,425	$81,633	$54,742
29	4	Midwick Dr	10	270	ACWP	0	2	1	0	0	1965	85	47	$1,925	$3,850	$3,148	$153	$32,083	$41,269	$82,043	$45,365
29	4	N Main St	12	1,210	ACWP	0	2	2	0	0	1975	85	57	$2,155	$4,310	$3,148	$166	$154,466	$201,192	$369,857	$248,022
29	4	Sudbury Ct	6	145	ACWP	0	0	1	1	0	1975	85	57	$1,430	$0	$3,148	$129	$15,167	$18,641	$37,732	$25,302
29	5	Berrendo Dr	8	390	ACWP	0	2	1	0	0	1975	85	57	$1,625	$3,250	$3,148	$139	$43,108	$54,157	$105,747	$70,913
29	5	Oregon Wy	8	150	PVC	0	1	1	0	0	1985	70	52	$1,625	$1,625	$3,148	$139	$0	$20,829	$26,238	$19,491
29	5	Sudbury Dr	8	405	ACWP	0	1	1	0	0	1975	85	57	$1,625	$1,625	$3,148	$139	$44,766	$56,240	$107,840	$72,316
29	6	Altamont Dr	10	430	PVC	0	1	0	0	0	1985	70	52	$1,925	$1,925	$3,148	$153	$0	$65,725	$72,248	$53,670
29	6	Escuela Pkwy	6	290	PVC	0	0	0	0	0	1985	70	52	$1,430	$0	$3,148	$129	$0	$37,282	$41,268	$30,656
29	6	Escuela Pkwy	12	170	ACWP	0	1	0	0	0	1985	85	67	$2,155	$2,155	$3,148	$166	$21,702	$28,267	$56,454	$44,499
29	6	Idaho Ct	6	240	PVC	0	1	1	1	0	1985	70	52	$1,430	$1,430	$3,148	$129	$0	$30,854	$36,235	$26,917
29	6	off Arizona Ave	10	545	PVC	0	1	2	0	0	1985	70	52	$1,925	$1,925	$3,148	$153	$0	$83,302	$90,139	$66,960
29	6	Sandalwood	8	670	PVC	0	2	0	0	0	1985	70	52	$1,625	$3,250	$3,148	$139	$0	$93,038	$101,446	$75,360
29	6	Sandalwood	10	240	PVC	0	2	1	0	0	1985	70	52	$1,925	$3,850	$3,148	$153	$0	$36,684	$44,722	$33,222
29	6	Tamont Dr	8	85	PVC	0	1	0	0	0	1985	70	52	$1,625	$1,625	$3,148	$139	$0	$11,803	$17,051	$12,666
29	1,2	Rose Dr	6	910	ACWP	0	2	1	0	0	1965	85	47	$1,430	$2,860	$3,148	$129	$95,183	$116,989	$222,288	$122,912
29	1,2	Vienna Dr	8	950	ACWP	0	3	2	0	0	1965	85	47	$1,625	$4,875	$3,148	$139	$105,006	$131,920	$249,609	$138,019
29	1,4	Belbrook Wy	6	540	ACWP	0	3	1	0	0	1975	85	57	$1,430	$4,290	$3,148	$129	$56,482	$69,422	$135,995	$91,196
29	1,4	Fontainbleu Ave	8	700	ACWP	0	3	2	0	0	1965	85	47	$1,625	$4,875	$3,148	$139	$77,373	$97,204	$186,151	$102,930
29	2,5	Arizona Ave	10	2,030	ACWP	0	2	2	0	1	1965	85	47	$1,925	$3,850	$3,148	$153	$241,214	$310,282	$568,695	$314,455
29	2,5	Knollview Dr	6	605	ACWP	0	2	1	0	0	1965	85	47	$1,430	$2,860	$3,148	$129	$63,281	$77,778	$149,910	$82,892
29	4,5	Beaumere Wy	6	650	ACWP	0	1	1	0	0	1965	85	47	$1,430	$1,430	$3,148	$129	$67,988	$83,564	$159,080	$87,962
29	4,5	Berrendo Dr	6	610	ACWP	0	1	1	0	0	1975	85	57	$1,430	$1,430	$3,148	$129	$63,804	$78,421	$149,587	$100,312
29	4,5	Midwick Dr	12	1,230	ACWP	0	4	3	0	0	1965	85	47	$2,155	$8,620	$3,148	$166	$157,020	$204,517	$380,389	$210,333
29	5,6	off Arizona Ave	10	935	PVC	0	3	2	0	0	1985	70	52	$1,925	$5,775	$3,148	$153	$0	$142,913	$154,874	$115,049
30	1	Belbrook & Sudbury	8	820	ACWP	0	2	0	0	0	1975	85	57	$1,625	$3,250	$3,148	$139	$90,637	$113,868	$214,896	$144,107
30	1	Hanson Ct	8	600	ACWP	0	3	2	1	0	1975	85	57	$1,625	$4,875	$3,148	$139	$66,320	$83,318	$160,767	$107,809
30	1	Koyanda Wy	6	185	ACWP	0	1	1	0	0	1975	85	57	$1,430	$1,430	$3,148	$129	$19,350	$23,783	$48,733	$32,680
30	1	off Hanson Ct	14	270	ACWP	0	0	0	0	0	1975	85	57	$3,142	$0	$3,148	$178	$37,004	$47,927	$89,765	$60,195
30	2	Arizona Ave	10	400	ACWP	0	1	2	0	0	1985	85	67	$1,925	$1,925	$3,148	$153	$47,530	$61,139	$115,957	$91,401
30	2	Jacklin Pl	6	380	ACWP	0	2	1	0	0	1985	85	67	$1,430	$2,860	$3,148	$129	$39,747	$48,853	$96,517	$76,078

Schaaf & Wheeler Worksheet B - Water System Pipe Components and Estimated Replacement Costs

Enter Current SFENR Date (mm/yyyy):	02/2003											Enter Current Year			Enter Coupling Unit Cost					
Enter Current SFENR Construction Cost Index:	7821											2003			$1,574					
A	B	C	D	E	F	G	H	I	J	K	L	M	N=M-(Year-L)	O	P=(G+H)*O	Q	R	S	T=R*E	U=P+Q+S+T	
W-Plat #	Section #	Street	Pipe Diameter (inches)	Pipe Length (FT)	Pipe Material	B	G	FH	BO	ARV A&V	Year Pipe Installed	Pipe Life Expectancy (yr)	Pipe Life Left (yr)	Valve Unit Cost ($) (see Worksheet D)	Valve Cost ($)	Coupling Cost ($)	Pipe Repl. Cost ($/LF) (see Worksheet C)	ACWP & ACP Disposal ($/LF) (see Worksheet E)	Total Pipe Replacement Cost ($)	Total Cost Current SFENR ($)	Estimated Value Feb 2003 ($) SFENR=7821
												SFENR Construction Cost Index:		7410	7410	7410	7684	7684	7684	7821	
30	2	Merz Ct	4	415	ACWP	0	0	1	1	0	1985	85	67	$1,365	$0	$3,148	$120	$41,085	$49,938	$95,965	$75,643
30	2	off Arizona Ave	10	430	PVC	0	1	1	0	0	1985	70	52	$1,925	$1,925	$3,148	$153	$0	$65,725	$72,248	$53,670
30	2	Oregon Ct	6	120	PVC	0	0	0	1	0	1985	70	52	$1,430	$0	$3,148	$129	$0	$15,427	$19,024	$14,132
30	2	Oregon Ct	8	130	PVC	0	1	1	0	0	1985	70	52	$1,625	$1,625	$3,148	$139	$0	$18,052	$23,411	$17,391
30	2	Oregon Wy	8	500	PVC	0	1	1	0	0	1985	70	52	$1,625	$1,625	$3,148	$139	$0	$69,432	$75,704	$56,238
30	3	Escuela Pkwy	12	975	ACWP	0	2	1	0	0	1975	85	57	$2,155	$4,310	$3,148	$166	$124,467	$162,117	$299,554	$200,878
30	3	Gemma Dr	6	715	ACWP	0	3	2	0	1	1975	85	57	$1,430	$4,290	$3,148	$129	$74,787	$91,920	$177,523	$119,045
30	3	Gemma Dr	12	860	ACWP	0	2	1	0	2	1975	85	57	$2,155	$4,310	$3,148	$166	$109,786	$142,996	$265,151	$177,807
30	3	Martil Wy	6	130	ACWP	0	1	0	0	0	1975	85	57	$1,430	$1,430	$3,148	$129	$13,598	$16,713	$35,681	$23,927
30	3	Martil Wy	12	160	ACWP	0	1	0	0	0	1975	85	57	$2,155	$2,155	$3,148	$166	$20,425	$26,604	$53,463	$35,852
30	3	off Escuela Pkwy	6	180	ACWP	0	1	0	0	0	1975	85	57	$1,430	$1,430	$3,148	$129	$18,827	$23,141	$47,547	$31,884
30	3	Sandalwood Ct	6	280	PVC	0	1	1	1	0	1985	70	52	$1,430	$1,430	$3,148	$129	$0	$35,997	$41,469	$30,805
30	3	Sandalwood Ct	10	150	PVC	0	0	0	0	0	1985	70	52	$1,925	$0	$3,148	$153	$0	$22,927	$26,658	$19,803
30	4	Erie Cir	6	110	ACWP	0	1	0	0	0	1985	85	67	$1,430	$1,430	$3,148	$129	$11,506	$14,142	$30,935	$24,384
30	4	Jennifer Wy	6	150	ACWP	0	1	0	0	0	1985	85	67	$1,430	$1,430	$3,148	$129	$15,690	$19,284	$40,427	$31,866
30	5	Coventry Cir	6	980	PVC	0	4	2	1	1	1985	70	52	$1,430	$5,720	$3,148	$129	$0	$125,988	$137,589	$102,209
30	5	Enriquez Ct	6	320	ACWP	0	0	1	1	0	1985	85	67	$1,430	$0	$3,148	$129	$33,471	$41,139	$79,260	$62,476
30	5	Fulton Ct	4	130	ACWP	0	0	0	1	0	1985	85	67	$1,365	$0	$3,148	$120	$12,870	$15,643	$32,343	$25,494
30	5	Hamilton Ave	6	140	ACWP	0	1	0	0	0	1985	85	67	$1,430	$1,430	$3,148	$129	$14,644	$17,998	$38,054	$29,996
30	5	N Milpitas Blvd	14	130	ACWP	1	0	1	0	0	1975	85	57	$3,142	$3,142	$3,148	$178	$17,817	$23,076	$48,260	$32,362
30	5	off Erie Cir	8	270	ACWP	0	2	1	2	0	1985	85	67	$1,625	$3,250	$3,148	$139	$29,844	$37,493	$75,288	$59,344
30	5	Superior Rd	6	395	ACWP	0	3	1	0	0	1985	85	67	$1,430	$4,290	$3,148	$129	$41,316	$50,781	$101,586	$80,073
30	5	Tramway Dr	8	200	ACWP	0	1	2	0	0	1985	85	67	$1,625	$1,625	$3,148	$139	$22,107	$27,773	$55,804	$43,987
30	6	Aaron Park Dr	6	535	ACWP	0	3	1	0	1	1985	85	67	$1,430	$4,290	$3,148	$129	$55,959	$68,779	$134,808	$106,261
30	6	Chad Dr	6	350	ACWP	0	1	0	0	1	1985	85	67	$1,430	$1,430	$3,148	$129	$36,609	$44,996	$87,888	$69,277
30	6	Clauser Dr	6	750	ACWP	0	1	2	0	0	1975	85	57	$1,430	$1,430	$3,148	$129	$78,448	$96,420	$182,810	$122,590
30	6	Singley Dr	6	810	ACWP	0	2	2	0	0	1985	85	67	$1,430	$2,860	$3,148	$129	$84,723	$104,133	$198,558	$156,510
30	6	Tramway Dr	12	740	ACWP	0	1	2	0	0	1985	85	67	$2,155	$2,155	$3,148	$166	$94,467	$123,043	$226,977	$178,911
30	6	Tramway Pl	4	100	ACWP	0	1	0	1	0	1985	85	67	$1,365	$1,365	$3,148	$120	$9,900	$12,033	$27,087	$21,351
30	1,2	Jacklin Cir	6	800	ACWP	0	4	1	1	0	1985	85	67	$1,430	$5,720	$3,148	$129	$83,677	$102,848	$199,203	$157,019
30	1,2	Jacklin Ct	8	1,170	ACWP	0	6	2	0	0	1985	85	67	$1,625	$9,750	$3,148	$139	$129,323	$162,470	$310,598	$244,824
30	1,2,5	N Milpitas Blvd	12	2,500	ACWP	0	3	2	0	2	1975	85	57	$2,155	$6,465	$3,148	$166	$319,146	$415,686	$758,051	$508,340
30	2,3	Jacklin Rd	10	1,120	ACWP	0	1	2	0	0	1985	85	67	$1,925	$1,925	$3,148	$153	$133,084	$171,190	$315,042	$248,327
30	2,3	Jacklin Rd	12	1,450	ACWP	0	5	1	0	0	1985	85	67	$2,155	$10,775	$3,148	$166	$185,104	$241,098	$448,480	$353,507
30	2,5	Hamilton Ave	8	1,710	ACWP	0	9	3	0	1	1985	85	67	$1,625	$14,625	$3,148	$139	$189,011	$237,456	$452,813	$356,923
30	3,6	Corinthia Dr	8	530	ACWP	0	1	1	0	0	1975	85	57	$1,625	$1,625	$3,148	$139	$58,582	$73,598	$139,569	$93,593
30	4,5	Coventry Wy	6	1,590	PVC	0	5	3	0	0	1985	70	52	$1,430	$7,150	$3,148	$129	$0	$204,409	$218,915	$162,623
30	4,5	Erie Cir	8	1,180	ACWP	0	5	4	0	0	1985	85	67	$1,625	$8,125	$3,148	$139	$130,428	$163,859	$311,421	$245,473
30	4,5	Michigan Rd	6	385	ACWP	0	2	1	0	0	1985	85	67	$1,430	$2,860	$3,148	$129	$40,270	$49,495	$97,703	$77,013
30	5,6	Strickroth Dr	6	950	ACWP	0	3	1	0	1	1985	85	67	$1,430	$4,290	$3,148	$129	$99,367	$122,131	$233,290	$183,887
30	5,6	Tramway Dr	12	670	ACWP	0	2	1	0	0	1985	85	67	$2,155	$4,310	$3,148	$166	$85,531	$111,404	$208,310	$164,197
31	1	Calero St	6	175	ACWP	0	1	0	0	0	1955	85	37	$1,430	$1,430	$3,148	$129	$18,304	$22,498	$46,360	$20,180
31	1	Erie Cir	6	210	ACWP	0	0	1	0	0	1985	85	67	$1,430	$0	$3,148	$129	$21,965	$26,997	$53,156	$41,900
31	1	Jennifer Wy	6	170	ACWP	0	1	0	0	0	1985	85	67	$1,430	$1,430	$3,148	$129	$17,781	$21,855	$45,174	$35,607
31	2	Folsom Dr	8	200	ACWP	0	2	0	0	0	1985	85	67	$1,625	$3,250	$3,148	$139	$22,107	$27,773	$57,519	$45,339
31	2	Geneva Rd	6	240	ACWP	0	2	1	0	0	1985	85	67	$1,430	$2,860	$3,148	$129	$25,103	$30,854	$63,294	$49,891
31	2	Klamath Rd	6	320	ACWP	0	2	0	0	0	1985	85	67	$1,430	$2,860	$3,148	$129	$33,471	$41,139	$82,278	$64,855
31	2	Perth Ct	4	80	ACWP	0	1	0	1	0	1985	85	67	$1,365	$1,365	$3,148	$120	$7,920	$9,627	$22,622	$17,831
31	2	Superior Rd	6	220	ACWP	0	2	1	0	0	1985	85	67	$1,430	$2,860	$3,148	$129	$23,011	$28,283	$58,548	$46,150
31	3	Donahe Dr	6	780	ACWP	0	2	1	0	0	1985	85	67	$1,430	$2,860	$3,148	$129	$81,586	$100,276	$191,438	$150,899
31	3	Donahe Dr	8	380	ACWP	0	2	1	0	0	1985	85	67	$1,625	$3,250	$3,148	$139	$42,002	$52,768	$103,209	$81,353

Schaaf & Wheeler Worksheet B - Water System Pipe Components and Estimated Replacement Costs

Enter Current SFENR Date (mm/yyyy):	02/2003
Enter Current SFENR Construction Cost Index	7821

Enter Current Year: 2003

Enter Coupling Unit Cost: $1,574

A	B	C	D	E	F	G	H	I	J	K	L	M	N=M-(Year-L)	O	P=(G+H)*O	Q	R	S	T=R*E	U=P+Q+S+T	
W-Plat #	Section #	Street	Pipe Diameter (inches)	Pipe Length (FT)	Pipe Material	B	G	FH	BO	ARV A&V	Year Pipe Installed	Pipe Life Expectancy (yr)	Pipe Life Left (yr)	Valve Unit Cost ($) (see Worksheet D)	Valve Cost ($)	Coupling Cost ($)	Pipe Repl. Cost ($/LF) (see Worksheet C)	ACWP & ACP Disposal ($/LF) (see Worksheet E)	Total Pipe Replacement Cost ($)	Total Cost Current SFENR ($)	Estimated Value Feb 2003 ($) SFENR=7821
												SFENR Construction Cost Index:		7410	7410	7410	7684	7684	7684	7821	
31	3	Donahe Pl	4	100	ACWP	0	1	0	0	0	1985	85	67	$1,365	$1,365	$3,148	$120	$9,900	$12,033	$27,087	$21,351
31	3	Escuela Pkwy	12	820	ACWP	0	3	0	0	0	1975	85	57	$2,155	$6,465	$3,148	$166	$104,680	$136,345	$255,459	$171,308
31	3	off Hamilton Ave	4	60	ACWP	0	1	0	1	0	1985	85	67	$1,365	$1,365	$3,148	$120	$5,940	$7,220	$18,157	$14,312
31	3	Sark Ct	4	140	ACWP	0	0	0	1	0	1985	85	67	$1,365	$0	$3,148	$120	$13,860	$16,847	$34,575	$27,254
31	3	Sark Ct	6	370	ACWP	0	1	1	0	1	1985	85	67	$1,430	$1,430	$3,148	$129	$38,701	$47,567	$92,634	$73,018
31	3	Tramway Dr	12	200	ACWP	0	1	1	0	0	1985	85	67	$2,155	$2,155	$3,148	$166	$25,532	$33,255	$65,429	$51,574
31	4	Almaden Ave	6	390	ACWP	0	2	0	0	0	1955	85	37	$1,430	$2,860	$3,148	$129	$40,793	$50,138	$98,890	$43,046
31	4	Calero St	6	650	ACWP	0	2	2	0	0	1955	85	37	$1,430	$2,860	$3,148	$129	$67,988	$83,564	$160,589	$69,903
31	4	Marylinn Dr	10	495	ACWP	0	2	2	0	0	1955	85	37	$1,925	$3,850	$3,148	$153	$58,818	$75,660	$144,257	$62,794
31	4	off Marylinn Dr	6	180	ACWP	0	0	0	0	0	1985	85	67	$1,430	$0	$3,148	$129	$18,827	$23,141	$46,037	$36,288
31	4	Railroad Ct	8	115	ACWP	0	1	1	0	0	1985	85	67	$1,625	$1,625	$3,148	$139	$12,711	$15,969	$34,228	$26,980
31	5	Hedgestone Ct	6	125	ACWP	0	1	0	0	0	1995	85	77	$1,430	$1,430	$3,148	$129	$13,075	$16,070	$34,495	$31,248
31	5	Meadowhaven Wy	8	450	ACWP	0	1	2	0	0	1995	85	77	$1,625	$1,625	$3,148	$139	$49,740	$62,488	$119,262	$108,038
31	6	Dundee Ave	6	480	PVC	0	2	1	0	0	1975	70	42	$1,430	$2,860	$3,148	$129	$0	$61,709	$69,147	$41,488
31	6	Escuela Dr	6	225	ACWP	0	2	0	0	0	1985	85	67	$1,430	$2,860	$3,148	$129	$23,534	$28,926	$59,735	$47,085
31	6	Loch Lomond Ct	6	280	PVC	0	1	0	0	0	1995	70	62	$1,430	$1,430	$3,148	$129	$0	$35,997	$41,469	$36,730
31	6	N Milpitas Blvd	16	1,080	ACWP	2	0	0	0	0	1975	85	57	$5,035	$10,070	$3,148	$190	$158,794	$205,731	$384,960	$258,150
31	6	Paseo Refugio	12	760	PVC	0	2	1	0	0	1995	70	62	$2,155	$4,310	$3,148	$166	$0	$126,368	$136,488	$120,889
31	6	Silverlake Ct	6	260	PVC	0	0	1	1	0	1995	70	62	$1,430	$0	$3,148	$129	$0	$33,425	$37,343	$33,075
31	1,2	Berryessa St	6	1,890	ACWP	0	4	4	0	0	1955	85	37	$1,430	$5,720	$3,148	$129	$197,688	$242,977	$457,865	$199,306
31	1,2	Erie Cir	8	1,010	ACWP	0	2	3	0	0	1985	85	67	$1,625	$3,250	$3,148	$139	$111,638	$140,252	$263,124	$207,404
31	1,2	Ontario Rd	6	560	ACWP	0	3	2	0	0	1985	85	67	$1,430	$4,290	$3,148	$129	$58,574	$71,993	$140,741	$110,937
31	2,3	Hamilton & Angus	6	1,580	ACWP	0	4	3	0	1	1985	85	67	$1,430	$5,720	$3,148	$129	$165,263	$203,124	$384,301	$302,919
31	2,3	Milpitas Blvd	14	1,400	ACWP	2	0	2	0	0	1985	85	67	$3,142	$6,285	$3,148	$178	$191,874	$248,512	$458,176	$361,151
31	2,3,6	Folsom Cir	8	1,135	ACWP	0	5	3	3	1	1985	85	67	$1,625	$8,125	$3,148	$139	$125,455	$157,610	$299,998	$236,469
31	2,5	Folsom Cir	6	1,570	ACWP	0	4	3	0	0	1985	85	67	$1,430	$5,720	$3,148	$129	$164,217	$201,838	$381,928	$301,049
31	2,5	Oroville Rd	6	880	ACWP	0	4	1	0	0	1985	85	67	$1,430	$5,720	$3,148	$129	$92,045	$113,132	$218,187	$171,983
31	5,6	Edgewater Dr	8	2,700	PVC	0	0	7	0	0	1995	70	62	$1,625	$0	$3,148	$139	$0	$374,931	$384,924	$340,933
32	1	Crystal Ct	6	180	PVC	0	1	0	1	1	1995	70	62	$1,430	$1,430	$3,148	$129	$0	$23,141	$28,384	$25,140
32	1	Diamond Wy	6	150	PVC	0	1	0	0	1	1995	70	62	$1,430	$1,430	$3,148	$129	$0	$19,284	$24,459	$21,663
32	1	Gemstone Dr	6	160	PVC	0	1	0	1	1	1995	70	62	$1,430	$1,430	$3,148	$129	$0	$20,570	$25,767	$22,822
32	1	Gemstone Dr	8	200	PVC	0	1	1	0	0	1995	70	62	$1,625	$1,625	$3,148	$139	$0	$27,773	$33,304	$29,498
32	1	Glistening Ct	6	150	PVC	0	1	0	1	0	1995	70	62	$1,430	$1,430	$3,148	$129	$0	$19,284	$24,459	$21,663
32	1	Images Cir	8	1,860	PVC	0	7	2	0	3	1995	70	62	$1,625	$11,375	$3,148	$139	$0	$258,286	$278,209	$246,414
32	1	Marylinn Dr	10	160	ACWP	0	1	0	0	0	1955	85	37	$1,925	$1,925	$3,148	$153	$19,012	$24,456	$49,595	$21,589
32	1	off Marylinn Dr	6	210	ACWP	0	1	0	0	0	1985	85	67	$1,430	$1,430	$3,148	$129	$21,965	$26,997	$54,666	$43,089
32	1	off Marylinn Dr	6	410	ACWP	0	2	1	0	0	1985	85	67	$1,430	$2,860	$3,148	$129	$42,885	$52,709	$103,636	$81,689
32	1	off Marylinn Dr	6	860	ACWP	0	4	2	0	0	1985	85	67	$1,430	$5,720	$3,148	$129	$89,953	$110,561	$213,441	$168,242
32	1	Pond Ct	6	180	PVC	0	1	0	1	1	1995	70	62	$1,430	$1,430	$3,148	$129	$0	$23,141	$28,384	$25,140
32	1	Railroad Ct	8	50	ACWP	0	0	1	0	0	1985	85	67	$1,625	$0	$3,148	$139	$5,527	$6,943	$16,014	$12,623
32	1	Reflection Ln	6	160	PVC	0	1	0	1	1	1995	70	62	$1,430	$1,430	$3,148	$129	$0	$20,570	$25,767	$22,822
32	1	Reflection Ln	8	255	PVC	0	5	1	0	0	1995	70	62	$1,625	$8,125	$3,148	$139	$0	$35,410	$47,938	$42,459
32	1	Twinkle Ct	6	160	PVC	0	1	0	1	1	1995	70	62	$1,430	$1,430	$3,148	$129	$0	$20,570	$25,767	$22,822
32	2	Brockstone Ct	6	110		0	1	0	0	0	1995	-	-	$1,430	$1,430	$3,148	$129	$0	$14,142	$19,225	$0
32	2	Meadowhaven Wy	8	545	PVC	0	2	2	0	0	1995	70	62	$1,625	$3,250	$3,148	$139	$0	$75,680	$83,780	$74,205
32	2	Meadowhaven Wy	8	360	PVC	0	2	1	0	0	1995	70	62	$1,625	$3,250	$3,148	$139	$0	$49,991	$57,633	$51,046
32	2	Meadowland Dr	8	240	PVC	0	1	0	0	0	1995	70	62	$1,625	$1,625	$3,148	$139	$0	$33,327	$38,958	$34,505
32	2	Millwater Ct	6	360		0	3	0	0	0	1995	-	-	$1,430	$4,290	$3,148	$129	$0	$46,281	$54,955	$0
32	2	Waterford Meadow Wy	6	80		0	1	0	0	0	1995	-	-	$1,430	$1,430	$3,148	$129	$0	$10,285	$15,299	$0
32	2	Waterford Meadow Wy	8	125		0	2	1	0	0	1995	-	-	$1,625	$3,250	$3,148	$139	$0	$17,358	$24,419	$0
32	3	Edgewater Dr	8	130	PVC	0	1	0	0	0	1995	70	62	$1,625	$1,625	$3,148	$139	$0	$18,052	$23,411	$20,735

Schaaf & Wheeler Worksheet B - Water System Pipe Components and Estimated Replacement Costs

Enter Current SFENR Date (mm/yyyy): 02/2003
Enter Current SFENR Construction Cost Index: 7821
Enter Current Year: 2003
Enter Coupling Unit Cost: $1,574

A	B	C	D	E	F	G	H	I	J	K	L	M	N=M-(Year-L)	O	P=(G+H)*O	Q	R	S	T=R*E	U=P+Q+S+T	
W-Plat #	Section #	Street	Pipe Diameter (inches)	Pipe Length (FT)	Pipe Material	B	G	FH	BO	ARV A&V	Year Pipe Installed	Pipe Life Expectancy (yr)	Pipe Life Left (yr)	Valve Unit Cost ($) (see Worksheet D)	Valve Cost ($)	Coupling Cost ($)	Pipe Repl. Cost ($/LF) (see Worksheet C)	ACWP & ACP Disposal ($/LF) (see Worksheet E)	Total Pipe Replacement Cost ($)	Total Cost Current SFENR ($)	Estimated Value Feb 2003 ($) SFENR=7821
												SFENR Construction Cost Index:		7410	7410	7410	7684	7684	7684	7821	
32	3	Milpitas Blvd	16	300	ACWP	2	0	1	0	0	1975	85	57	$5,035	$10,070	$3,148	$190	$44,109	$57,147	$117,009	$78,465
32	3	off Bresford Ct	8	240	ACP	0	1	1	0	0	1985	85	67	$1,625	$1,625	$3,148	$139	$26,528	$33,327	$65,957	$51,990
32	3	Silverlake Ct	6	150	PVC	0	1	0	0	0	1995	70	62	$1,430	$1,430	$3,148	$129	$0	$19,284	$24,459	$21,663
32	4	Abel St	12	930	ACWP	0	3	3	0	0	1975	85	57	$2,155	$6,465	$3,148	$166	$126,382	$164,611	$306,316	$205,412
32	4	Main St	8	970	ACWP	0	0	2	0	0	1975	85	57	$1,625	$0	$3,148	$139	$107,217	$134,697	$249,541	$167,339
32	4	Weller Ln	8	580	ACWP	0	4	2	0	1	1955	85	37	$1,625	$6,500	$3,148	$139	$64,109	$80,541	$157,406	$68,518
32	4	Winsor St	6	1,220	ACWP	0	4	2	0	0	1985	85	67	$1,430	$5,720	$3,148	$129	$127,608	$156,843	$298,871	$235,581
32	5	off Calaveras Blvd	8	1,000	ACWP	0	3	3	0	2	1985	85	67	$1,625	$4,875	$3,148	$139	$110,533	$138,863	$262,301	$206,755
32	6	Milpitas Blvd	6	140	ACWP	0	1	1	0	0	1975	85	57	$1,430	$1,430	$3,148	$129	$14,644	$17,998	$38,054	$25,519
32	6	Milpitas Blvd	16	550	SCP	3	0	1	0	1	1975	35	7	$5,035	$15,105	$3,148	$190	$0	$104,770	$125,899	$25,180
32	1,2	N Main & Marylinn	12	1,055	ACWP	0	4	4	0	0	1975	85	57	$2,155	$8,620	$3,148	$166	$134,679	$175,419	$328,036	$219,977
32	1,2	Railroad Ct	12	400	ACWP	0	1	0	0	1	1985	85	67	$2,155	$2,155	$3,148	$166	$51,063	$66,510	$125,262	$98,736
32	1,2	Summer Ct	8	265	PVC	0	3	0	0	1	1995	70	62	$1,625	$4,875	$3,148	$139	$0	$36,799	$45,921	$40,673
32	1,2,3	off Main & Beresford	14	2,965	DIP	11	0	3	1	1	1995	100	92	$3,142	$34,566	$3,148	$178	$0	$526,312	$575,480	$529,442
32	2,3	Silverlake Dr	12	720	PVC	0	3	2	0	0	1995	70	62	$2,155	$6,465	$3,148	$166	$0	$119,717	$131,993	$116,908
32	2,5	off Calaveras Blvd	12	765	ACWP	0	1	2	0	0	1985	85	67	$2,155	$2,155	$3,148	$166	$97,659	$127,200	$234,456	$184,806
32	3,6	Milpitas & Calaveras	18	1,650	DIP	0	0	0	0	3	1975	100	72	$5,385	$0	$3,148	$207	$0	$341,955	$351,361	$252,980
32	3,6	Milpitas Blvd	18	1,190	ACWP	1	0	3	0	0	1975	85	57	$5,385	$5,385	$3,148	$207	$187,565	$246,622	$450,918	$302,380
32	3,6	off Bresford Ct	12	720	ACWP	0	1	3	0	0	1985	85	67	$2,155	$2,155	$3,148	$166	$91,914	$119,717	$220,994	$174,195
33	1	Carlo St	6	600	ACWP	0	2	2	0	0	1975	85	57	$1,430	$2,860	$3,148	$129	$62,758	$77,136	$148,724	$99,732
33	1	Carlo St	12	850	ACWP	0	2	1	0	0	1975	85	57	$2,155	$4,310	$3,148	$166	$108,509	$141,333	$262,159	$175,801
33	3	Topaz St	12	830	ACWP	0	3	2	0	2	1985	85	67	$2,155	$6,465	$3,148	$166	$105,956	$138,008	$258,450	$203,720
33	4	Abel St	12	60	ACWP	0	1	0	0	0	1965	85	47	$2,155	$2,155	$3,148	$166	$7,659	$9,976	$23,547	$13,020
33	4	Abel St	12	70	DIP	0	1	0	0	0	1965	100	62	$2,155	$2,155	$3,148	$166	$0	$11,639	$17,443	$10,815
33	4	Ethyl St	6	100	ACWP	0	1	0	0	0	1975	85	57	$1,430	$1,430	$3,148	$129	$10,460	$12,856	$28,562	$19,153
33	4	Junipero Dr	8	580	ACWP	0	4	1	0	0	1975	85	57	$1,625	$6,500	$3,148	$139	$64,109	$80,541	$157,406	$105,555
33	4	off Junipero Dr	8	420	ACWP	0	1	1	0	0	1985	85	67	$1,625	$1,625	$3,148	$139	$46,424	$58,323	$111,647	$88,004
33	4	Serra & Abel	12	1,275	DIP	0	2	1	0	0	1965	100	62	$2,155	$4,310	$3,148	$166	$0	$212,000	$223,643	$138,659
33	5	off Sinnott Ln	8	440	PVC	0	3	2	0	0	1955	70	22	$1,625	$4,875	$3,148	$139	$0	$61,100	$70,655	$22,206
33	5	Sinnott Ln	6	750	ACWP	0	3	0	0	0	1955	85	37	$1,430	$4,290	$3,148	$129	$78,448	$96,420	$185,829	$80,890
33	1,2	E Carlo St	8	400	ACWP	0	2	2	0	0	1975	85	57	$1,625	$3,250	$3,148	$139	$44,213	$55,545	$108,286	$72,615
33	1,4	Abel St	12	2,060	ACWP	0	5	3	0	0	1975	85	57	$2,155	$10,775	$3,148	$166	$262,976	$342,525	$630,968	$423,120
33	1,4	off Abel St	10	660	ACWP	0	1	1	0	0	1975	85	57	$1,925	$1,925	$3,148	$153	$78,424	$100,880	$187,849	$125,969
33	1,5	N Main St	8	2,040	ACWP	0	4	7	0	0	1975	85	57	$1,625	$6,500	$3,148	$139	$225,487	$283,281	$528,002	$354,072
34	1	Abel St	6	515	ACWP	0	1	0	0	0	1985	85	67	$1,430	$1,430	$3,148	$129	$53,867	$66,208	$127,044	$100,140
34	1	Ethyl Ct	6	260	ACWP	0	1	1	1	1	1975	85	57	$1,430	$1,430	$3,148	$129	$27,195	$33,425	$66,531	$44,615
34	1	Ethyl St	6	455	ACWP	0	1	1	0	1	1975	85	57	$1,430	$1,430	$3,148	$129	$47,592	$58,495	$112,805	$75,646
34	1	Sylvia Ave	6	730	ACWP	0	2	1	0	1	1955	85	37	$1,430	$2,860	$3,148	$129	$76,356	$93,848	$179,573	$78,167
34	2	Hammond Wy	8	860	PVC	0	3	2	0	0	1985	70	52	$1,625	$4,875	$3,148	$139	$0	$119,422	$130,015	$96,582
34	6	Curtis Ave	18	370	DIP	1	0	0	0	0	1985	100	82	$5,385	$5,385	$3,148	$207	$0	$76,681	$87,051	$71,382
34	6	Curtis Ave	18	330	DIP	1	0	1	0	0	1985	100	82	$5,385	$5,385	$3,148	$207	$0	$68,391	$78,614	$64,463
34	1,2	Corning Ave	8	1,285	ACWP	0	3	2	0	1	1955	85	37	$1,625	$4,875	$3,148	$139	$142,034	$178,439	$334,643	$145,668
34	1,4	Abel St	12	1,230	ACWP	0	4	2	0	1	1985	85	67	$2,155	$8,620	$3,148	$166	$157,020	$204,517	$380,389	$299,836
34	1,4	Abel St	12	2,075	DIP	0	4	0	0	1	1985	100	82	$2,155	$8,620	$3,148	$166	$0	$345,019	$363,578	$298,134
34	1,4	Corning & Abel	14	2,470	ACWP	5	0	1	0	4	1955	85	37	$3,142	$15,712	$3,148	$178	$338,521	$438,445	$810,695	$352,891
34	2,3	off S Main St	12	880	ACWP	0	1	0	0	0	1965	85	47	$2,155	$2,155	$3,148	$166	$112,339	$146,321	$268,859	$148,663
34	2,3	off S Main St	18	870	ACWP	2	0	0	0	0	1965	85	47	$5,385	$10,771	$3,148	$207	$137,127	$180,303	$337,768	$186,766
34	2,5	Hammond Wy	8	1,190	ACWP	0	2	2	0	0	1965	85	47	$1,625	$3,250	$3,148	$139	$131,534	$165,247	$308,814	$170,756
34	2,5	S Main St	8	2,040	ACWP	0	3	5	0	0	1955	85	37	$1,625	$4,875	$3,148	$139	$225,487	$283,281	$526,287	$229,090
34	3,6	Ford Creek	14	1,600	ACWP	3	0	0	0	0	1955	85	37	$3,142	$9,427	$3,148	$178	$219,285	$284,013	$525,524	$228,758
34	4,5	between Abel & S Main	24	540	ACWP	0	0	0	0	1	1955	85	37	$13,412	$0	$3,148	$240	$100,333	$129,589	$237,336	$103,311

Schaaf & Wheeler Worksheet B - Water System Pipe Components and Estimated Replacement Costs

Enter Current SFENR Date (mm/yyyy):	02/2003
Enter Current SFENR Construction Cost Index:	7821

Enter Current Year: 2003

Enter Coupling Unit Cost: $1,574

A	B	C	D	E	F	G	H	I	J	K	L	M	N=M-(Year-L)	O	P=(G+H)*O	Q	R	S	T=R*E	U=P+Q+S+T	
W-Plat #	Section #	Street	Pipe Diameter (Inches)	Pipe Length (FT)	Pipe Material	B	G	FH	BO	ARV A&V	Year Pipe Installed	Pipe Life Expectancy (yr)	Pipe Life Left (yr)	Valve Unit Cost ($) (see Worksheet D)	Valve Cost ($)	Coupling Cost ($)	Pipe Repl. Cost ($/LF) (see Worksheet C)	ACWP & ACP Disposal ($/LF) (see Worksheet E)	Total Pipe Replacement Cost ($)	Total Cost Current SFENR ($)	Estimated Value Feb 2003 ($) SFENR=7821
												SFENR Construction Cost Index:		7410	7410	7410	7684	7684	7684	7821	
35	2	Curtis & Hammond	8	540	ACWP	0	2	0	0	0	1965	85	47	$1,625	$3,250	$3,148	$139	$59,688	$74,986	$143,822	$79,525
35	2	Curtis Ave	10	555	ACWP	0	2	1	0	0	1985	85	67	$1,925	$3,850	$3,148	$153	$77,830	$100,116	$188,498	$148,581
35	5	Great Mall Pkwy	12	1,030	DIP	0	7	4	1	0	1995	100	92	$2,155	$15,085	$3,148	$166	$0	$171,262	$193,553	$178,069
35	6	Escort Dr	12	360	PVC	0	2	1	1	1	1995	70	62	$2,155	$4,310	$3,148	$166	$0	$59,859	$68,795	$60,933
35	6	Main St	12	110	DIP	0	1	0	0	0	1955	100	52	$2,155	$2,155	$3,148	$166	$0	$18,290	$24,213	$12,591
35	2,3	Curtis Ave	18	1,680	DIP	4	0	0	0	2	1985	100	82	$5,385	$21,541	$3,148	$207	$0	$348,172	$380,424	$311,948
35	2,3,5	Curtis & Abel	18	3,150	DIP	4	0	0	0	4	1985	100	82	$5,385	$21,541	$3,148	$207	$0	$652,822	$690,495	$566,206
35	2,5	Abel St	12	2,030	DIP	0	7	0	0	2	1985	100	82	$2,155	$15,085	$3,148	$166	$0	$337,537	$362,786	$297,484
35	2,5	Abel St	14	2,050	ACWP	3	0	2	0	2	1985	85	67	$3,142	$9,427	$3,148	$178	$280,959	$363,892	$669,595	$527,799
35	2,5	S Main St	8	1,975	ACWP	0	2	5	0	1	1955	85	37	$1,625	$3,250	$3,148	$139	$218,302	$274,255	$508,073	$221,161
35	3,6	Great Mall Dr	12	1,430	PVC	0	3	2	0	0	1995	70	62	$2,155	$6,465	$3,148	$166	$0	$237,772	$252,148	$223,331
35	4,5	Evening Star	10	520	ACWP	0	2	1	0	0	1975	85	57	$1,925	$3,850	$3,148	$153	$61,789	$79,481	$151,169	$101,372
35	4,5	Great Mall Pkwy	14	1,235	DIP	5	0	1	2	2	1995	100	92	$3,142	$15,712	$3,148	$178	$0	$219,223	$243,028	$223,586
36	1	Evening Star	10	200	ACWP	0	1	1	0	0	1975	85	57	$1,925	$1,925	$3,148	$153	$23,765	$30,570	$60,656	$40,675
36	1	Venus Wy	8	100	ACWP	0	1	0	1	0	1975	85	57	$1,625	$1,625	$3,148	$139	$11,053	$13,886	$30,421	$20,400
36	2	Abel St	12	650	ACWP	0	1	3	0	0	1965	85	47	$2,155	$2,155	$3,148	$166	$82,978	$108,078	$200,052	$110,617
36	2	Abel St	14	320	ACWP	1	0	0	0	0	1965	85	47	$3,142	$3,142	$3,148	$178	$43,857	$56,803	$109,090	$60,320
36	2	Fallen Leaf Dr	6	640	ACWP	0	3	1	0	0	1965	85	47	$1,430	$4,290	$3,148	$129	$66,942	$82,278	$159,725	$88,319
36	2	Moon Ct	6	235	ACWP	0	1	0	1	0	1965	85	47	$1,430	$1,430	$3,148	$129	$24,580	$30,211	$60,598	$33,507
36	2	Polaris Ct	6	350	ACWP	0	1	1	1	0	1965	85	47	$1,430	$1,430	$3,148	$129	$36,609	$44,996	$87,888	$48,597
36	2	Sun Ct	6	160	ACWP	0	1	0	1	0	1965	85	47	$1,430	$1,430	$3,148	$129	$16,735	$20,570	$42,800	$23,666
36	3	Great Mall Dr	12	610	PVC	0	1	0	0	0	1995	70	62	$2,155	$2,155	$3,148	$166	$0	$101,427	$108,829	$96,391
36	3	Great Mall Pkwy & S Main	12	1,330	ACWP	0	4	0	0	3	1975	85	57	$2,155	$8,620	$3,148	$166	$169,785	$221,145	$410,306	$275,146
36	4	Moonlight Cir	6	885	ACWP	0	3	2	0	0	1975	85	57	$1,430	$4,290	$3,148	$129	$92,568	$113,775	$217,865	$146,098
36	4	Moonlight Cir	8	260	ACWP	0	0	1	0	0	1965	85	47	$1,625	$0	$3,148	$139	$28,738	$36,104	$69,319	$38,329
36	4	Moonlight Wy	6	110	ACWP	0	1	0	0	1	1965	85	47	$1,430	$1,430	$3,148	$129	$11,506	$14,142	$30,936	$17,105
36	4	off Lonetree Ct	12	100	SCP	0	0	0	0	0	1965	35	-3	$2,155	$0	$3,148	$166	$0	$16,627	$20,246	$0
36	4	Woodland Wy	6	480	ACWP	0	3	0	0	1	1965	85	47	$1,430	$4,290	$3,148	$129	$50,206	$61,709	$121,756	$67,324
36	5	Fallen Leaf Dr	12	840	ACWP	0	4	0	0	0	1965	85	47	$2,155	$8,620	$3,148	$166	$107,233	$139,670	$263,716	$145,820
36	5	Greentree Cir	6	720	ACWP	0	3	1	0	0	1975	85	57	$1,430	$4,290	$3,148	$129	$75,310	$92,563	$178,709	$119,840
36	5	Lonetree Ct	6	300	ACWP	0	1	1	0	0	1965	85	47	$1,430	$1,430	$3,148	$129	$31,379	$38,568	$76,023	$42,036
36	1,2	Capitol & Abel	18	2,020	DIP	2	0	0	0	2	1985	100	82	$5,385	$10,771	$3,148	$207	$0	$418,635	$440,773	$361,434
36	1,2,3	Capitol Ave	12	2,310	ACWP	0	11	3	0	0	1985	85	67	$2,155	$23,705	$3,148	$166	$294,890	$384,093	$719,405	$567,061
36	1,4	Moonbeam Wy	6	990	ACWP	0	3	2	0	0	1965	85	47	$1,430	$4,290	$3,148	$129	$103,651	$127,274	$242,782	$134,244
36	1,4	Stardust Wy	6	1,045	ACWP	0	3	2	0	0	1965	85	47	$1,430	$4,290	$3,148	$129	$109,304	$134,345	$255,833	$141,461
36	1,4	Stellar Wy	6	1,130	ACWP	0	4	2	0	1	1975	85	57	$1,430	$5,720	$3,148	$129	$118,194	$145,272	$277,514	$186,097
36	1,4	Sunrise Wy	6	1,100	ACWP	0	3	2	0	0	1975	85	57	$1,430	$4,290	$3,148	$129	$115,057	$141,415	$268,885	$180,311
36	2,5	Fallen Leaf Dr	8	240	ACWP	0	1	1	0	0	1965	85	47	$1,625	$1,625	$3,148	$139	$26,528	$33,327	$65,957	$36,471
36	2,5	S Main St	8	1,170	DIP	0	1	0	0	0	1985	100	82	$1,625	$1,625	$3,148	$139	$0	$162,470	$170,398	$139,726
36	2,5	Woodland Ct	12	570	ACWP	0	2	1	0	0	1965	85	47	$2,155	$4,310	$3,148	$166	$72,765	$94,776	$178,394	$98,641
36	2,6	Abel & S Main	8	470	ACWP	0	2	1	0	0	1975	85	57	$1,625	$3,250	$3,148	$139	$51,950	$65,266	$126,054	$84,530
36	3,6	McCandless	12	1,230	ACWP	0	2	5	0	1	1985	85	67	$2,155	$4,310	$3,148	$166	$157,020	$204,517	$375,841	$296,251
36	3,6	S Main St	8	1,650	ACWP	0	1	5	0	0	1955	85	37	$1,625	$1,625	$3,148	$139	$171,326	$215,238	$398,479	$173,456
36	4,5	Evergreen Wy	8	780	ACWP	0	2	2	0	0	1965	85	47	$1,625	$3,250	$3,148	$139	$86,215	$108,313	$204,742	$113,210
36	4,5	Greentree Wy	6	1,770	ACWP	0	7	4	0	0	1965	85	47	$1,430	$10,010	$3,148	$129	$185,136	$227,550	$433,916	$239,930
36	4,5	Lonetree Ct	8	560	ACWP	0	2	1	0	0	1965	85	47	$1,625	$3,250	$3,148	$139	$61,898	$77,763	$148,899	$82,332
36	4,5	Woodland Wy	8	640	ACWP	0	2	1	0	1	1965	85	47	$1,625	$3,250	$3,148	$139	$70,741	$88,872	$169,206	$93,561
37	1	Fir Tree Ct	6	180	ACWP	0	1	1	0	0	1965	85	47	$1,430	$1,430	$3,148	$129	$18,827	$23,141	$47,547	$26,290
37	1	Live Oak Ct	14	70	ACWP	1	0	1	0	0	1975	85	57	$3,142	$3,142	$3,148	$178	$9,594	$12,426	$29,050	$19,481
37	1	off Greenwood Wy	8	315	ACWP	0	0	1	0	1	1965	85	47	$1,625	$0	$3,148	$139	$34,818	$43,742	$83,280	$46,049
37	1	off Starlite & Pinewood	8	280	ACWP	0	1	0	0	0	1965	85	47	$1,625	$1,625	$3,148	$139	$30,949	$38,882	$76,111	$42,085

Schaaf & Wheeler Worksheet B - Water System Pipe Components and Estimated Replacement Costs

Enter Current SFENR Date (mm/yyyy):	02/2003											Enter Current Year		Enter Coupling Unit Cost					
Enter Current SFENR Construction Cost Index	7821											2003		$1,574					
A	B	C	D	E	F	G	H	I	J	K	L	M	N=M-(Year-L)	O	P=(G+H)*O	Q	R	S	T=R*E	U=P+Q+S+T	
W-Plat #	Section #	Street	Pipe Diameter (inches)	Pipe Length (FT)	Pipe Material	B	G	FH	BO	ARV A&V	Year Pipe Installed	Pipe Life Expectancy (yr)	Pipe Life Left (yr)	Valve Unit Cost ($) (see Worksheet D)	Valve Cost ($)	Coupling Cost ($)	Pipe Repl. Cost ($/LF) (see Worksheet C)	ACWP & ACP Disposal ($/LF) (see Worksheet E)	Total Pipe Replacement Cost ($)	Total Cost Current SFENR ($)	Estimated Value Feb 2003 ($) SFENR=7821
												SFENR Construction Cost Index:		7410	7410	7410	7684	7684	7684	7821	
37	1	Timber & Spruce	8	495	ACWP	0	2	2	1	0	1965	85	47	$1,625	$3,250	$3,148	$139	$54,714	$68,737	$132,400	$73,209
37	2	Cedar Ct	6	200	ACWP	0	1	0	1	0	1965	85	47	$1,430	$1,430	$3,148	$129	$20,919	$25,712	$52,293	$28,916
37	2	Cedar Wy	6	570	ACWP	0	3	1	0	0	1965	85	47	$1,430	$4,290	$3,148	$129	$59,620	$73,279	$143,114	$79,134
37	2	Lonetree Ct	6	80	ACWP	0	0	0	1	0	1965	85	47	$1,430	$0	$3,148	$129	$8,368	$10,285	$22,307	$12,334
37	2	off Fallen Leaf Dr	6	150	ACWP	0	1	0	1	0	1965	85	47	$1,430	$1,430	$3,148	$129	$15,690	$19,284	$40,427	$22,354
37	3	McCandless	12	1,170	ACWP	0	2	4	0	4	1985	85	67	$2,155	$4,310	$3,148	$166	$149,360	$194,541	$357,891	$282,102
37	4	Blue Spruce & Forest	6	1,050	ACWP	0	3	2	0	0	1965	85	47	$1,430	$4,290	$3,148	$129	$109,827	$134,987	$257,020	$142,117
37	4	Camphor Ct	6	170	ACWP	0	0	0	0	0	1965	85	47	$1,430	$0	$3,148	$129	$17,781	$21,855	$43,664	$24,144
37	4	Fallen Leaf Dr	8	790	ACWP	0	4	1	0	0	1965	85	47	$1,625	$6,500	$3,148	$139	$87,321	$109,702	$210,711	$116,511
37	4	Fallen Leaf Dr	10	230	ACWP	0	1	0	0	0	1965	85	47	$1,925	$1,925	$3,148	$153	$27,330	$35,155	$68,951	$38,126
37	4	Manzanita Ct	6	340	ACWP	0	1	1	0	0	1965	85	47	$1,430	$1,430	$3,148	$129	$35,563	$43,710	$85,515	$47,285
37	4	off Camphor Ct	6	280	ACWP	0	1	0	0	0	1965	85	47	$1,430	$1,430	$3,148	$129	$29,287	$35,997	$71,277	$39,412
37	4	Silvertip Ct	6	490	ACWP	0	1	1	0	0	1965	85	47	$1,430	$1,430	$3,148	$129	$51,252	$62,994	$121,111	$66,967
37	5	Pinewood Ct	12	1,040	ACWP	0	2	2	0	1	1965	85	47	$2,155	$4,310	$3,148	$166	$132,765	$172,925	$319,000	$176,388
37	6	Montague Expy	12	700	ACWP	0	1	2	0	0	1965	85	47	$2,155	$2,155	$3,148	$166	$89,361	$116,392	$215,010	$118,888
37	1,2	Greenwood Wy	6	1,090	ACWP	0	5	3	0	0	1965	85	47	$1,430	$7,150	$3,148	$129	$114,011	$140,130	$269,531	$149,035
37	1,4	Pinewood Wy	6	970	ACWP	0	3	2	0	0	1965	85	47	$1,430	$4,290	$3,148	$129	$101,459	$124,703	$238,036	$131,620
37	1,4	Spruce Wy	6	730	ACWP	0	4	2	0	0	1965	85	47	$1,430	$5,720	$3,148	$129	$76,356	$93,848	$182,592	$100,963
37	1,4	Starlite Dr	10	1,345	ACWP	0	4	2	0	0	1965	85	47	$1,925	$7,700	$3,148	$153	$159,819	$205,581	$383,351	$211,970
37	2,5	Fallen Leaf Dr	12	1,250	ACWP	0	2	2	0	0	1965	85	47	$2,155	$4,310	$3,148	$166	$159,573	$207,843	$381,824	$211,126
37	2,5	S Main St	8	1,640	ACWP	0	3	4	0	0	1955	85	37	$1,625	$4,875	$3,148	$139	$181,273	$227,736	$424,754	$184,893
37	2,5	S Main St	8	1,635	DIP	0	4	3	0	2	1985	100	82	$1,625	$6,500	$3,148	$139	$0	$227,041	$241,264	$197,836
37	4,5	Starlite Dr	6	560	ACWP	0	2	1	0	0	1965	85	47	$1,430	$2,860	$3,148	$129	$58,574	$71,993	$139,232	$76,987
37	5,6	Montague Expy	6	460	ACWP	0	1	1	0	0	1965	85	47	$1,430	$1,430	$3,148	$129	$48,115	$59,137	$113,992	$63,031
37	5,6	Montague Expy	10	540	ACWP	0	2	0	0	1	1965	85	47	$1,925	$3,850	$3,148	$153	$64,165	$82,538	$156,700	$86,646
39	4	Bolton Dr	8	420	ACWP	0	1	1	0	0	1985	85	67	$1,625	$1,625	$3,148	$139	$46,424	$58,323	$111,647	$88,004
39	4	Churchill Dr	6	770	ACWP	0	2	2	0	1	1985	85	67	$1,430	$2,860	$3,148	$129	$80,540	$98,991	$189,065	$149,028
39	4	Inverness Dr	6	270	ACWP	0	0	0	0	0	1985	85	67	$1,430	$0	$3,148	$129	$28,241	$34,711	$67,395	$53,123
39	4	Stratford Dr	6	170	ACWP	0	0	0	0	0	1985	85	67	$1,430	$0	$3,148	$129	$17,781	$21,855	$43,664	$34,418
39	4	Wellington Dr	6	340	ACWP	0	1	1	0	1	1985	85	67	$1,430	$1,430	$3,148	$129	$35,563	$43,710	$85,515	$67,406
40	1	Hastings Dr	6	350	ACWP	0	2	1	0	0	1985	85	67	$1,430	$2,860	$3,148	$129	$36,609	$44,996	$89,398	$70,466
40	1	Stirling Dr	6	330	ACWP	0	1	1	0	1	1985	85	67	$1,430	$1,430	$3,148	$129	$34,517	$42,425	$83,142	$65,536
40	1	Stratford Dr	6	865	ACWP	0	2	2	0	0	1985	85	67	$1,430	$2,860	$3,148	$129	$90,476	$111,204	$211,609	$166,798
40	4	Baron Pl	6	315	ACWP	0	1	1	1	0	1985	85	67	$1,430	$1,430	$3,148	$129	$32,948	$40,496	$79,583	$62,730
40	4	Berkshire Pl	6	130	ACWP	0	0	0	1	0	1985	85	67	$1,430	$0	$3,148	$129	$13,598	$16,713	$34,172	$26,936
40	4	Berkshire Pl	8	440	ACWP	0	1	1	0	0	1985	85	67	$1,625	$1,625	$3,148	$139	$48,634	$61,100	$116,724	$92,006
40	4	London Dr	8	1,110	ACWP	0	3	2	1	0	1985	85	67	$1,625	$4,875	$3,148	$139	$122,691	$154,138	$290,222	$228,763
40	4	Park Victoria Dr	8	840	ACWP	0	4	0	0	0	1985	85	67	$1,625	$6,500	$3,148	$139	$92,847	$116,645	$223,402	$176,094
40	4	Park Victoria Dr	12	820	ACWP	0	2	2	0	0	1985	85	67	$2,155	$4,310	$3,148	$166	$104,680	$136,345	$253,184	$199,569
40	1,4	Wellington Dr	6	1,175	ACWP	0	3	2	0	0	1985	85	67	$1,430	$4,290	$3,148	$129	$122,901	$151,057	$286,683	$225,974
41	1	Coelho St	8	80	ACWP	0	1	1	0	0	1965	85	47	$1,625	$1,625	$3,148	$139	$8,843	$11,109	$25,344	$14,014
41	1	Curtner Ct	6	150	ACWP	0	1	0	0	0	1965	85	47	$1,430	$1,430	$3,148	$129	$15,690	$19,284	$40,427	$22,354
41	1	Curtner Dr	12	380	ACWP	0	1	0	0	0	1965	85	47	$2,155	$2,155	$3,148	$166	$48,510	$63,184	$119,278	$65,954
41	1	Diel Dr	12	470	ACWP	0	1	1	0	1	1965	85	47	$2,155	$2,155	$3,148	$166	$59,999	$78,149	$146,203	$80,842
41	1	off Diel Dr	12	4,600	ACWP	0	1	0	0	0	1965	85	47	$2,155	$2,155	$3,148	$166	$587,228	$764,861	$1,381,742	$764,022
41	2	Ann Pl	6	150	ACWP	0	0	0	1	0	1985	85	67	$1,430	$0	$3,148	$129	$15,690	$19,284	$38,918	$30,677
41	2	Canterbury Pl	6	110	ACWP	0	0	0	1	0	1985	85	67	$1,430	$0	$3,148	$129	$11,506	$14,142	$29,426	$23,195
41	2	Cardiff Pl	6	140	ACWP	0	0	0	1	0	1985	85	67	$1,430	$0	$3,148	$129	$14,644	$17,998	$36,545	$28,806
41	2	Cardiff Pl	8	370	ACWP	0	1	1	0	0	1985	85	67	$1,625	$1,625	$3,148	$139	$40,897	$51,379	$98,956	$78,000
41	2	Wessex Pl	6	60	ACWP	0	0	0	0	0	1985	85	67	$1,430	$0	$3,148	$129	$6,276	$7,714	$17,561	$13,842
41	4	Columbus Cir	6	400	ACWP	0	1	1	1	0	1965	85	47	$1,430	$1,430	$3,148	$129	$41,839	$51,424	$99,754	$55,158

Schaaf & Wheeler Worksheet B - Water System Pipe Components and Estimated Replacement Costs

Enter Current SFENR Date (mm/yyyy): 02/2003
Enter Current SFENR Construction Cost Index: 7821
Enter Current Year: 2003
Enter Coupling Unit Cost: $1,674

A	B	C	D	E	F	G	H	I	J	K	L	M	N=M-(Year-L)	O	P=(G+H)*O	Q	R	S	T=R*E	U=P+Q+S+T	
W-Plat #	Section #	Street	Pipe Diameter (inches)	Pipe Length (FT)	Pipe Material	B	G	FH	BO	ARV A&V	Year Pipe Installed	Pipe Life Expectancy (yr)	Pipe Life Left (yr)	Valve Unit Cost ($) (see Worksheet D)	Valve Cost ($)	Coupling Cost ($)	Pipe Repl. Cost ($/LF) (see Worksheet C)	ACWP & ACP Disposal ($/LF) (see Worksheet E)	Total Pipe Replacement Cost ($)	Total Cost Current SFENR ($)	Estimated Value Feb 2003 ($) SFENR=7821
												SFENR Construction Cost Index:		7410	7410	7410	7684	7684	7684	7821	
41	4	Founders Ln	6	480	ACWP	0	2	1	0	0	1965	85	47	$1,430	$2,860	$3,148	$129	$50,206	$61,709	$120,247	$66,490
41	4	Manzano Ct	4	120	ACWP	0	0	0	1	0	1975	85	57	$1,365	$0	$3,148	$120	$11,880	$14,440	$30,111	$20,192
41	4	Manzano Ct	6	240	ACWP	0	1	1	0	0	1975	85	57	$1,430	$1,430	$3,148	$129	$25,103	$30,854	$61,785	$41,432
41	5	Hampton Ct	6	200	ACWP	0	1	0	1	0	1985	85	67	$1,430	$1,430	$3,148	$129	$20,919	$25,712	$52,293	$41,219
41	5	Princess Pl	6	160	ACWP	0	1	0	1	1	1985	85	67	$1,430	$1,430	$3,148	$129	$16,735	$20,570	$42,800	$33,737
41	5	Princess Pl	8	340	ACWP	0	1	1	0	0	1985	85	67	$1,625	$1,625	$3,148	$139	$37,581	$47,214	$91,341	$71,998
41	6	El Camino Higuera	6	650	ACWP	0	3	2	1	0	1975	85	57	$1,430	$4,290	$3,148	$129	$67,988	$83,564	$162,098	$108,701
41	6	off El Camino Higuera	4	130	ACWP	0	1	0	1	0	1975	85	57	$1,365	$1,365	$3,148	$120	$12,870	$15,643	$33,784	$22,655
41	1,2	Canterbury Pl	8	340	ACWP	0	1	1	0	0	1985	85	67	$1,625	$1,625	$3,148	$139	$37,581	$47,214	$91,341	$71,998
41	1,2	Wessex Pl	8	510	ACWP	0	2	1	0	0	1985	85	67	$1,625	$3,250	$3,148	$139	$56,372	$70,820	$136,207	$107,364
41	1,2,5	Park Victoria Dr	12	2,410	ACWP	0	8	3	0	1	1985	85	67	$2,155	$17,240	$3,148	$166	$307,656	$400,721	$742,498	$585,263
41	1,4,5	Hillview & Diel	10	1,620	ACWP	0	3	3	0	1	1965	85	47	$1,925	$5,775	$3,148	$153	$192,496	$247,614	$457,358	$252,892
41	2,5	Ann Pl	8	380	ACWP	0	1	1	0	0	1985	85	67	$1,625	$1,625	$3,148	$139	$42,002	$52,768	$101,494	$80,001
41	5,6	Carson Wy	6	410	ACWP	0	1	1	0	0	1975	85	57	$1,430	$1,430	$3,148	$129	$42,885	$52,709	$102,127	$68,485
42	1	Cirolero	6	535	ACWP	0	1	1	0	0	1975	85	57	$1,430	$1,430	$3,148	$129	$55,959	$68,779	$131,790	$88,377
42	1	Columbus Dr	6	780	ACWP	0	3	2	0	0	1965	85	47	$1,430	$4,290	$3,148	$129	$81,586	$100,276	$192,948	$106,689
42	1	Escuela Pkwy	14	370	ACWP	1	0	0	0	0	1965	85	47	$3,142	$3,142	$3,148	$178	$50,710	$65,678	$125,097	$69,171
42	1	Madalen Dr	6	750	ACWP	0	3	2	0	0	1965	85	47	$1,430	$4,290	$3,148	$129	$78,448	$96,420	$185,829	$102,752
42	2	Hillview Dr	10	660	ACWP	0	3	2	0	0	1965	85	47	$1,925	$5,775	$3,148	$153	$78,424	$100,880	$191,912	$106,116
42	2	Nieves Ct	6	320	ACWP	0	1	1	1	0	1965	85	47	$1,430	$1,430	$3,148	$129	$33,471	$41,139	$80,769	$44,661
42	3	Berg Ct	4	120	ACWP	0	0	1	1	0	1975	85	57	$1,365	$0	$3,148	$120	$11,880	$14,440	$30,111	$20,192
42	3	Berg Ct	6	120	ACWP	0	1	0	0	0	1975	85	57	$1,430	$1,430	$3,148	$129	$12,552	$15,427	$33,308	$22,336
42	3	El Camino Higuera	6	430	ACWP	0	1	1	0	0	1975	85	57	$1,430	$1,430	$3,148	$129	$44,977	$55,281	$106,873	$71,668
42	3	Zamora Ct	4	140	ACWP	0	0	1	0	0	1975	85	57	$1,365	$0	$3,148	$120	$13,860	$16,847	$34,575	$23,186
42	3	Zamora Ct	6	120	ACWP	0	1	0	0	0	1975	85	57	$1,430	$1,430	$3,148	$129	$12,552	$15,427	$33,308	$22,336
42	4	Altamont Dr	8	200	PVC	0	1	0	0	0	1985	70	52	$1,625	$1,625	$3,148	$139	$0	$27,773	$33,304	$24,740
42	4	Clifford Ln	8	620	PVC	0	3	1	0	0	1985	70	52	$1,625	$4,875	$3,148	$139	$0	$86,095	$96,095	$71,385
42	4	Costigan Cir	6	430	PVC	0	2	1	0	0	1985	70	52	$1,430	$2,860	$3,148	$129	$0	$55,281	$62,605	$46,507
42	4	Escuela Pkwy	6	270	PVC	0	1	0	0	0	1985	70	52	$1,430	$1,430	$3,148	$129	$0	$34,711	$40,160	$29,833
42	4	Gordon St	8	290	PVC	0	2	1	0	0	1985	70	52	$1,625	$3,250	$3,148	$139	$0	$40,270	$47,739	$35,464
42	4	Kevinaire Dr	8	120	ACWP	0	1	1	0	0	1975	85	57	$1,625	$1,625	$3,148	$139	$13,264	$16,664	$35,498	$23,804
42	4	Sandalwood & Grayson	8	1,290	PVC	0	3	1	0	0	1985	70	52	$1,625	$4,875	$3,148	$139	$0	$179,134	$190,788	$141,729
42	4	Sandalwood Ct	6	200	PVC	0	1	1	0	2	1985	70	52	$1,430	$1,430	$3,148	$129	$0	$25,712	$31,001	$23,029
42	5	Heather Ct	6	120	ACWP	0	0	1	0	0	1975	85	57	$1,430	$0	$3,148	$129	$12,552	$15,427	$31,799	$21,324
42	5	Hillview Dr	16	515	ACWP	1	0	1	0	0	1975	85	57	$5,035	$5,035	$3,148	$190	$75,721	$98,103	$185,553	$124,430
42	5	Kevinaire Dr	8	680	ACWP	0	1	1	0	0	1975	85	57	$1,625	$1,625	$3,148	$139	$75,162	$94,427	$177,644	$119,126
42	5	La Palma Pl	6	470	PVC	0	2	1	0	0	1995	70	62	$1,430	$2,860	$3,148	$129	$0	$60,423	$67,839	$60,086
42	1,2	Kizer St	6	890	ACWP	0	3	2	0	1	1975	85	57	$1,430	$4,290	$3,148	$129	$93,091	$114,418	$219,051	$146,893
42	1,2	Nieves St	6	715	ACWP	0	3	1	0	0	1965	85	47	$1,430	$4,290	$3,148	$129	$74,787	$91,920	$177,523	$98,160
42	1,2	Russell Ln	10	1,480	ACWP	0	5	1	0	0	1965	85	47	$1,925	$9,625	$3,148	$153	$175,861	$226,216	$422,711	$233,734
42	1,4,5	Columbus & Horcajo	16	1,970	SCP	5	0	1	0	0	1975	35	7	$5,035	$25,175	$3,148	$190	$0	$375,268	$411,837	$82,367
42	2,3	Park Victoria Dr	12	580	ACWP	0	2	1	0	0	1985	85	67	$2,155	$4,310	$3,148	$166	$74,042	$96,439	$181,385	$142,974
42	2,3	Park Victoria Dr	14	1,590	ACWP	3	0	1	0	0	1985	85	67	$3,142	$9,427	$3,148	$178	$217,914	$282,238	$522,323	$411,713
42	2,5	Hillview Dr	8	1,010	ACWP	0	4	2	0	0	1985	85	67	$1,625	$6,500	$3,148	$139	$111,638	$140,252	$266,554	$210,107
42	2,5	Tice Dr	8	770	ACWP	0	3	2	0	0	1975	85	57	$1,625	$4,875	$3,148	$139	$85,110	$106,925	$203,919	$136,746
42	2,5,6	Horcajo Cir	6	1,170	ACWP	0	3	2	0	0	1985	85	67	$1,430	$4,290	$3,148	$129	$122,378	$150,415	$285,496	$225,038
42	3,6	Creed & Ranklin	8	715	ACWP	0	2	2	0	0	1975	85	57	$1,625	$3,250	$3,148	$139	$79,031	$99,287	$188,243	$126,234
42	3,6	Nicklaus & Bialock	8	1,300	ACWP	0	4	3	1	1	1975	85	57	$1,625	$6,500	$3,148	$139	$143,692	$180,522	$340,166	$228,111
42	4,5	Heflin St	6	710	ACWP	0	3	2	0	1	1975	85	57	$1,430	$4,290	$3,148	$129	$74,264	$91,277	$176,336	$118,249
42	4,5	Rivera St	6	830	ACWP	0	3	2	0	1	1975	85	57	$1,430	$4,290	$3,148	$129	$86,815	$106,704	$204,813	$137,345
43	1	Corinthia Dr	8	1,190	ACWP	0	4	2	0	0	1975	85	57	$1,625	$6,500	$3,148	$139	$131,534	$165,247	$312,244	$209,387

Schaaf & Wheeler Worksheet B - Water System Pipe Components and Estimated Replacement Costs

Enter Current SFENR Date (mm/yyyy):	02/2003											Enter Current Year		Enter Coupling Unit Cost					
Enter Current SFENR Construction Cost Index	7821											2003		$1,574					
A	B	C	D	E	F	G	H	I	J	K	L	M	N=M-(Year-L)	O	P=(G+H)*O	Q	R	S	T=R*E	U=P+Q+S+T	
W-Plat #	Section #	Street	Pipe Diameter (inches)	Pipe Length (FT)	Pipe Material	B	G	FH	BO	ARV A&V	Year Pipe Installed	Pipe Life Expectancy (yr)	Pipe Life Left (yr)	Valve Unit Cost ($) (see Worksheet D)	Valve Cost ($)	Coupling Cost ($)	Pipe Repl. Cost ($/LF) (see Worksheet C)	ACWP & ACP Disposal ($/LF) (see Worksheet E)	Total Pipe Replacement Cost ($)	Total Cost Current SFENR ($)	Estimated Value Feb 2003 ($) SFENR=7821
												SFENR Construction Cost Index:		7410	7410	7410	7684	7684	7684	7821	
43	1	Kevinaire Dr	6	260	ACWP	0	1	1	0	0	1975	85	57	$1,430	$1,430	$3,148	$129	$27,195	$33,425	$66,531	$44,615
43	1	Kevinaire Dr	8	460	ACWP	0	1	1	0	1	1975	85	57	$1,625	$1,625	$3,148	$139	$50,845	$63,877	$121,801	$81,678
43	1	Martil Wy	6	660	ACWP	0	3	1	0	1	1975	85	57	$1,430	$4,290	$3,148	$129	$69,034	$84,849	$164,471	$110,292
43	1	Tirol Ct	6	90	ACWP	0	0	0	1	0	1975	85	57	$1,430	$0	$3,148	$129	$9,414	$11,570	$24,680	$16,550
43	2	Alisal Ct	4	160	ACWP	0	1	0	0	0	1975	85	57	$1,365	$1,365	$3,148	$120	$15,840	$19,253	$40,481	$27,146
43	2	De Anza Ct	4	100	ACWP	0	0	0	0	0	1975	85	57	$1,365	$0	$3,148	$120	$9,900	$12,033	$25,646	$17,198
43	2	De Anza Ct	6	120	ACWP	0	1	1	0	0	1975	85	57	$1,430	$1,430	$3,148	$129	$12,552	$15,427	$33,308	$22,336
43	2	Del Valle Ct	4	110	ACWP	0	0	0	0	0	1975	85	57	$1,365	$0	$3,148	$120	$10,890	$13,237	$27,878	$18,695
43	2	Del Valle Ct	6	160	ACWP	0	1	1	0	0	1975	85	57	$1,430	$1,430	$3,148	$129	$16,735	$20,570	$42,800	$28,701
43	2	Heather Ct	6	130	ACWP	0	0	0	0	0	1975	85	57	$1,430	$0	$3,148	$129	$13,598	$16,713	$34,172	$22,915
43	2	La Palma Pl	8	390	PVC	0	1	1	0	3	1995	70	62	$1,625	$1,625	$3,148	$139	$0	$54,157	$60,158	$53,283
43	2	Santa Rita Ct	4	180	ACWP	0	0	1	0	0	1975	85	57	$1,365	$0	$3,148	$120	$17,820	$21,660	$43,505	$29,174
43	3	Calle Oriente	6	150	ACWP	0	0	1	0	0	1975	85	57	$1,430	$0	$3,148	$129	$15,690	$19,284	$38,918	$26,098
43	3	off Jacklin Rd	8	190	ACWP	0	0	1	0	0	1965	85	47	$1,625	$0	$3,148	$139	$21,001	$26,384	$51,551	$28,505
43	4	Escuela Pkwy	12	1,095	ACWP	0	5	2	0	0	1975	85	57	$2,155	$10,775	$3,148	$166	$139,786	$182,070	$342,277	$229,527
43	4	Wyoma Pl	6	150	ACWP	0	0	0	1	0	1975	85	57	$1,430	$0	$3,148	$129	$15,690	$19,284	$38,918	$26,098
43	5	Calle del Prado	4	245	ACWP	0	1	1	0	0	1975	85	57	$1,365	$1,365	$3,148	$120	$24,255	$29,481	$59,456	$39,870
43	5	Folsom Dr	8	360	ACWP	0	2	0	0	2	1975	85	57	$1,625	$3,250	$3,148	$139	$39,792	$49,991	$98,133	$65,807
43	5	Los Pinos Ave	6	480	ACWP	0	2	1	0	0	1975	85	57	$1,430	$2,860	$3,148	$129	$50,206	$61,709	$120,247	$80,636
43	5	Mercado Ct	4	120	ACWP	0	1	0	0	0	1975	85	57	$1,365	$1,365	$3,148	$120	$11,880	$14,440	$31,551	$21,158
43	5	Santa Rita Dr	6	690	ACWP	0	3	1	0	1	1975	85	57	$1,430	$4,290	$3,148	$129	$72,172	$88,706	$171,590	$115,066
43	5	Via Baja Dr	6	250	ACWP	0	2	1	0	1	1975	85	57	$1,430	$2,860	$3,148	$129	$26,149	$32,140	$65,667	$44,036
43	6	Decoto Ct	4	160	ACWP	0	1	0	0	0	1975	85	57	$1,365	$1,365	$3,148	$120	$15,840	$19,253	$40,481	$27,146
43	6	Del Rio Ct	4	130	ACWP	0	1	0	0	0	1975	85	57	$1,365	$1,365	$3,148	$120	$12,870	$15,643	$33,784	$22,655
43	6	Del Rio Ct	4	155	ACWP	0	1	0	0	0	1975	85	57	$1,365	$1,365	$3,148	$120	$15,345	$18,651	$39,365	$26,397
43	1,2,4	Parvin Dr	6	1,135	ACWP	0	3	2	0	0	1975	85	57	$1,430	$4,290	$3,148	$129	$118,717	$145,915	$277,191	$185,881
43	1,2,5	between Jacklin & Tramway	8	2,020	ACWP	0	7	1	0	0	1975	85	57	$1,625	$11,375	$3,148	$139	$223,276	$280,504	$528,071	$354,118
43	1,4	Clauser Dr	6	1,250	ACWP	0	4	2	0	0	1975	85	57	$1,430	$5,720	$3,148	$129	$130,746	$160,699	$305,990	$205,193
43	2,3	Jacklin Rd	16	1,360	ACWP	4	0	2	0	0	1975	85	57	$5,035	$20,140	$3,148	$190	$199,962	$259,068	$491,776	$329,779
43	2,3,6	Hillview Dr	16	2,400	ACWP	5	0	4	1	0	1975	85	57	$5,035	$25,175	$3,148	$190	$352,875	$457,179	$854,359	$572,923
43	3,6	Wool & Traughber	10	1,280	ACWP	0	3	4	0	0	1965	85	47	$1,925	$5,775	$3,148	$153	$152,096	$195,646	$363,346	$200,909
43	4,5	Flume Ct	6	460	ACWP	0	0	1	1	0	1975	85	57	$1,430	$0	$3,148	$129	$48,115	$59,137	$112,483	$75,429
43	4,5	Singley Rd	6	1,330	ACWP	0	4	2	0	1	1975	85	57	$1,430	$5,720	$3,148	$129	$139,114	$170,984	$324,974	$217,924
43	4,5	Tramway Dr	12	1,560	ACWP	0	7	3	0	0	1975	85	57	$2,155	$15,085	$3,148	$166	$199,147	$259,388	$485,936	$325,863
43	5,6	Tassara Dr	6	870	ACWP	0	2	2	0	0	1975	85	57	$1,430	$2,860	$3,148	$129	$90,999	$111,847	$212,796	$142,698
43	5,6	Tramway Dr	12	510	ACWP	0	2	0	1	0	1975	85	57	$2,155	$4,310	$3,148	$166	$65,106	$84,800	$160,444	$107,592
44	1	Donahe Dr	8	40	ACWP	0	1	0	0	0	1985	85	67	$1,625	$1,625	$3,148	$139	$4,421	$5,555	$15,191	$11,974
44	1	Dundee Ave	6	500	ACWP	0	2	1	0	0	1975	85	57	$1,430	$2,860	$3,148	$129	$52,298	$64,280	$124,993	$83,819
44	1	Escuela Pkwy	12	520	ACWP	0	3	1	1	1	1975	85	57	$2,155	$6,465	$3,148	$166	$66,382	$86,463	$165,710	$111,123
44	1	Escuela Pl	4	100	ACWP	0	1	0	0	0	1975	85	57	$1,365	$1,365	$3,148	$120	$9,900	$12,033	$27,087	$18,164
44	1	Los Pinos & Dundee	6	1,040	ACWP	0	3	3	0	0	1975	85	57	$1,430	$4,290	$3,148	$129	$108,781	$133,702	$254,647	$170,763
44	1	off Aberdeen Wy	4	120	ACWP	0	4	0	1	0	1975	85	57	$1,365	$5,460	$3,148	$120	$11,880	$14,440	$35,873	$24,056
44	2	Aberdeen Ct	4	150	ACWP	0	0	0	1	0	1975	85	57	$1,365	$0	$3,148	$120	$14,850	$18,050	$36,808	$24,683
44	2	Aberdeen Ct	6	100	ACWP	0	1	1	0	0	1975	85	57	$1,430	$1,430	$3,148	$129	$10,460	$12,856	$28,562	$19,153
44	3	Hillview Dr	16	375	ACWP	0	0	0	0	0	1975	85	57	$5,035	$0	$3,148	$190	$55,137	$71,434	$132,145	$88,615
44	3	off Hillview Dr	14	40	ACWP	0	0	0	0	0	1975	85	57	$3,142	$0	$3,148	$178	$5,482	$7,100	$16,129	$10,816
44	3	off Hillview Dr	16	350	ACWP	0	0	0	0	0	1975	85	57	$5,035	$0	$3,148	$190	$51,461	$66,672	$123,557	$82,856
44	4	Loch Lomond & Clyde	6	890	PVC	0	3	2	0	1	1995	70	62	$1,430	$4,290	$3,148	$129	$0	$114,418	$124,304	$110,098
44	4	Paseo Refugio	6	820	PVC	0	1	2	0	2	1995	70	62	$1,430	$1,430	$3,148	$129	$0	$105,419	$112,126	$99,312
44	5	Anacapa Ct	6	360	ACWP	0	1	1	0	0	1985	85	67	$1,430	$1,430	$3,148	$129	$37,655	$46,281	$90,261	$71,147
44	6	off Hillview Dr	12	380	ACWP	0	2	1	0	0	1985	85	67	$2,155	$4,310	$3,148	$166	$48,510	$63,184	$121,553	$95,812

Schaaf & Wheeler Worksheet B - Water System Pipe Components and Estimated Replacement Costs

Enter Current SFENR Date (mm/yyyy):	02/2003
Enter Current SFENR Construction Cost Index:	7821

Enter Current Year: 2003 — Enter Coupling Unit Cost: $1,574

A	B	C	D	E	F	G	H	I	J	K	L	M	N=M-(Year-L)	O	P=(G+H)*O	Q	R	S	T=R*E	U=P+Q+S+T	
W-Plat #	Section #	Street	Pipe Diameter (inches)	Pipe Length (FT)	Pipe Material	B	G	FH	BO	ARV A&V	Year Pipe Installed	Pipe Life Expectancy (yr)	Pipe Life Left (yr)	Valve Unit Cost ($) (see Worksheet D)	Valve Cost ($)	Coupling Cost ($)	Pipe Repl. Cost ($/LF) (see Worksheet C)	ACWP & ACP Disposal ($/LF) (see Worksheet E)	Total Pipe Replacement Cost ($)	Total Cost Current SFENR ($)	Estimated Value Feb 2003 ($) SFENR=7821
												SFENR Construction Cost Index:		7410	7410	7410	7684	7684	7684	7821	
44	1,2	Aberdeen Wy	6	1,120	ACWP	0	4	1	0	0	1975	85	57	$1,430	$5,720	$3,148	$129	$117,148	$143,987	$275,141	$184,506
44	1,2	Glasgow & Shetland	6	1,240	ACWP	0	4	3	0	0	1975	85	57	$1,430	$5,720	$3,148	$129	$129,700	$159,414	$303,617	$203,602
44	1,2,5	Shelley & Troon	6	1,240	PVC	0	3	2	0	1	1995	70	62	$1,430	$4,290	$3,148	$129	$0	$159,414	$170,100	$150,660
44	1,4	Angus Dr	6	1,050	PVC	0	1	2	0	1	1995	70	62	$1,430	$1,430	$3,148	$129	$0	$134,987	$142,221	$125,967
44	2,3	Alcosta Dr	6	1,030	ACWP	0	2	2	0	0	1975	85	57	$1,430	$2,860	$3,148	$129	$107,735	$132,416	$250,765	$168,160
44	2,3	Canada Dr	6	1,010	ACWP	0	3	2	0	0	1975	85	57	$1,430	$4,290	$3,148	$129	$105,643	$129,845	$247,528	$165,989
44	2,3	Los Positos Dr	6	1,210	ACWP	0	2	3	0	0	1975	85	57	$1,430	$2,860	$3,148	$129	$126,562	$155,557	$293,479	$196,804
44	2,3,5	Las Lomas Dr	6	1,360	ACWP	0	2	3	1	0	1975	85	57	$1,430	$2,860	$3,148	$129	$142,252	$174,841	$329,075	$220,674
44	2,4,5	Santa Rita Dr	8	2,020	ACWP	0	4	1	0	1	1975	85	57	$1,625	$6,500	$3,148	$139	$223,276	$280,504	$522,925	$350,668
44	3,6	Hillview Dr	12	2,050	ACWP	0	6	5	0	2	1975	85	57	$2,155	$12,930	$3,148	$166	$261,699	$340,862	$630,251	$422,639
44	5,6	Pacheco Dr	6	1,150	ACWP	0	3	2	0	0	1975	85	57	$1,430	$4,290	$3,148	$129	$120,286	$147,843	$280,750	$188,268
44	5,6	Terra Bella Dr	6	850	ACWP	0	2	1	0	1	1985	85	67	$1,430	$2,860	$3,148	$129	$88,907	$109,276	$208,050	$163,992
44	5,6	Valencia Dr	6	1,160	ACWP	0	2	2	0	0	1985	85	67	$1,430	$2,860	$3,148	$129	$121,332	$149,129	$281,614	$221,978
45	2	Anacapa Ct	6	215	ACP	0	1	0	0	0	1985	85	67	$1,430	$1,430	$3,148	$129	$22,488	$27,640	$55,852	$44,026
45	2	Hillview Dr	12	1,200	ACP	0	3	4	0	1	1985	85	67	$2,155	$6,465	$3,148	$166	$153,190	$199,529	$369,140	$290,969
45	2	Paseo Refugio	6	530	ACP	0	1	2	0	0	1985	85	67	$1,430	$1,430	$3,148	$129	$55,436	$68,136	$130,603	$102,946
45	3	off E Calaveras Blvd	12	690	ACP	0	4	4	0	0	1975	85	57	$2,155	$8,620	$3,148	$166	$88,084	$114,729	$218,842	$146,753
45	3	off Hillview Dr	12	680	ACP	0	1	0	0	0	1985	85	67	$2,155	$2,155	$3,148	$166	$86,808	$113,066	$209,027	$164,762
45	4	Milpitas Blvd	16	170	SCP	0	0	1	0	0	1975	35	7	$5,035	$0	$3,148	$190	$0	$32,384	$36,282	$7,256
45	5	Hillview Dr	12	345	ACP	0	1	1	0	0	1975	85	57	$2,155	$2,155	$3,148	$166	$44,042	$57,365	$108,808	$72,965
45	5	Hillview Dr	24	600	SCP	1	0	1	0	0	1975	35	7	$13,412	$13,412	$3,148	$240	$0	$143,988	$164,027	$32,805
45	1,2	off Hillview Dr	12	1,540	ACWP	0	6	6	0	2	1975	85	57	$2,155	$12,930	$3,148	$166	$196,594	$256,062	$477,679	$320,326
45	1,2,4	off E Calaveras Blvd	12	3,000	ACWP	0	14	12	0	2	1975	85	57	$2,155	$30,170	$3,148	$166	$382,975	$498,823	$932,650	$625,424
45	2,3	Hillview Ct	12	580	ACP	0	3	2	1	1	1985	85	67	$2,155	$6,465	$3,148	$166	$74,042	$96,439	$183,660	$144,767
45	3,5,6	E Calaveras Blvd	14	2,110	ACWP	4	0	1	0	1	1975	85	57	$3,142	$12,570	$3,148	$178	$289,182	$374,542	$692,121	$464,129
45	4,5	Calaveras & Hillview	24	1,800	SCP	5	0	2	0	3	1975	35	7	$13,412	$67,060	$3,148	$240	$0	$431,963	$513,748	$102,750
45	4,5	Los Coches St	12	1,330	DIP	0	4	4	0	2	1975	100	72	$2,155	$8,620	$3,148	$166	$0	$221,145	$237,499	$171,000
45	5,6	Los Coches St	18	1,190	SCP	2	0	0	0	0	1975	35	7	$5,385	$10,771	$3,148	$207	$0	$246,622	$265,700	$53,140
46	1	Los Coches St	12	370	ACP	0	1	1	0	0	1975	85	57	$2,155	$2,155	$3,148	$166	$47,234	$61,521	$116,287	$77,981
46	1	Los Coches St	12	400	ACWP	0	2	2	0	0	1975	85	57	$2,155	$4,310	$3,148	$166	$51,063	$66,510	$127,536	$85,524
46	4	Topaz & Turquoise	12	1,400	ACWP	0	5	5	0	3	1975	85	57	$2,155	$10,775	$3,148	$166	$178,721	$232,784	$433,521	$290,714
46	6	Vista & Wrigley	12	620	ACWP	0	1	3	0	1	1975	85	57	$2,155	$2,155	$3,148	$166	$79,148	$103,090	$191,077	$128,134
46	1,4,5	S Milpitas Blvd	16	2,370	SCP	7	0	7	0	3	1975	35	7	$5,035	$35,245	$3,148	$190	$0	$451,464	$500,017	$100,003
46	1,4,5	S Milpitas Blvd	18	2,450	DIP	3	0	0	0	3	1985	100	82	$5,385	$16,156	$3,148	$207	$0	$507,751	$537,158	$440,470
46	3,5,6	Hillview Dr	12	2,260	ACWP	0	4	8	0	0	1975	85	57	$2,155	$8,620	$3,148	$166	$288,508	$375,780	$688,526	$461,718
47	3	Hillview Dr	12	750	ACWP	0	2	3	0	0	1975	85	57	$2,155	$4,310	$3,148	$166	$95,744	$124,706	$232,243	$155,739
47	4	Curtis Ave	12	630	ACWP	0	1	0	0	0	1985	85	67	$2,155	$2,155	$3,148	$166	$80,425	$104,753	$194,069	$152,972
47	4	Curtis Ave	12	1,000	ACWP	0	2	3	0	2	1985	85	67	$2,155	$4,310	$3,148	$166	$127,658	$166,274	$307,033	$242,014
47	4	Curtis Ave	18	690	DIP	0	0	1	2	1	1985	100	82	$5,385	$0	$3,148	$207	$0	$142,999	$148,866	$122,070
47	5	S Milpitas Blvd	14	1,060	ACWP	3	0	7	0	0	1975	85	57	$3,142	$9,427	$3,148	$178	$145,276	$188,159	$352,639	$236,476
47	1,4	off Curtis Ave	18	640	DIP	0	0	0	0	0	1985	100	82	$5,385	$0	$3,148	$207	$0	$132,637	$138,319	$113,422
47	1,4	off Curtis Ave	24	640	DIP	0	0	0	0	0	1985	100	82	$13,412	$0	$3,148	$240	$0	$153,587	$159,642	$130,906
47	1,4,5	Gibraltor Ct	24	1,060	DIP	1	0	0	0	0	1995	100	92	$13,412	$13,412	$3,148	$240	$0	$254,378	$276,382	$254,271
47	1,4,5	Gibraltor Dr	10	1,435	ACWP	0	7	6	0	0	1975	85	57	$1,925	$13,475	$3,148	$153	$170,514	$219,338	$414,332	$277,846
47	2,3	Milpitas & Yosemite	16	2,535	ACWP	5	0	7	0	3	1985	85	67	$5,035	$25,175	$3,148	$190	$372,724	$482,895	$900,735	$709,991
47	2,4,5	Milpitas & Yosemite	18	2,200	DIP	3	0	4	0	1	1985	100	82	$5,385	$16,156	$3,148	$207	$0	$455,939	$484,425	$397,229
47	3,4,5	Yosemite Dr	18	2,565	DIP	4	0	2	0	4	1985	100	82	$5,385	$21,541	$3,148	$207	$0	$531,584	$567,099	$465,021
47	4,5	Yosemite Dr	16	1,120	SCP	1	0	1	0	0	1985	35	17	$5,035	$5,035	$3,148	$190	$0	$213,350	$225,783	$109,666
48	3	Ames Ave	12	580	ACWP	0	1	2	0	0	1955	85	37	$2,155	$2,155	$3,148	$166	$74,042	$96,439	$179,111	$77,966
48	3	S Milpitas Blvd	14	1,200	ACWP	1	0	4	0	0	1975	85	57	$3,142	$3,142	$3,148	$178	$164,464	$213,010	$390,828	$262,085
48	1,2,5	off Piper Dr	12	2,180	ACWP	0	2	0	0	0	1955	85	37	$2,155	$4,310	$3,148	$166	$278,295	$362,478	$660,044	$287,313

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Schaaf & Wheeler Worksheet B - Water System Pipe Components and Estimated Replacement Costs

Enter Current SFENR Date (mm/yyyy): 02/2003
Enter Current SFENR Construction Cost Index: 7821
Enter Current Year: 2003
Enter Coupling Unit Cost: $1,674

A	B	C	D	E	F	G	H	I	J	K	L	M	N=M-(Year-L)	O	P=(G+H)*O	Q	R	S	T=R*E	U=P+Q+S+T	
W-Plat #	Section #	Street	Pipe Diameter (inches)	Pipe Length (FT)	Pipe Material	B	G	FH	BO	ARV A&V	Year Pipe Installed	Pipe Life Expectancy (yr)	Pipe Life Left (yr)	Valve Unit Cost ($) (see Worksheet D)	Valve Cost ($)	Coupling Cost ($)	Pipe Repl. Cost ($/LF) (see Worksheet C)	ACWP & ACP Disposal ($/LF) (see Worksheet E)	Total Pipe Replacement Cost ($)	Total Cost Current SFENR ($)	Estimated Value Feb 2003 ($) SFENR=7821
												SFENR Construction Cost Index:		7410	7410	7410	7684	7684	7684	7821	
48	2,5,6	Gibraltor Dr	10	2,430	ACWP	0	8	8	0	1	1975	85	57	$1,925	$15,400	$3,148	$153	$288,744	$371,422	$691,487	$463,703
49	1	Fairlane Dr	8	200	PVC	0	4	1	1	1	1995	70	62	$1,625	$6,500	$3,148	$139	$0	$27,773	$38,450	$34,055
49	4	Centre Pointe Dr	12	900	ACWP	0	2	3	0	1	1985	85	67	$2,155	$4,310	$3,148	$166	$114,892	$149,647	$277,117	$218,433
49	4	Mustang Dr	8	210	PVC	0	1	1	1	1	1995	70	62	$1,625	$1,625	$3,148	$139	$0	$29,161	$34,718	$30,750
49	5	Falcon & Montague	12	1,160	PVC	0	3	2	0	0	1995	70	62	$2,155	$6,465	$3,148	$166	$0	$192,878	$206,456	$182,861
49	5	Montague Expy	10	440	ACWP	0	1	0	0	0	1985	85	67	$1,925	$1,925	$3,148	$153	$52,283	$67,253	$127,017	$100,119
49	5	Montague Expy	12	545	ACWP	0	1	0	0	2	1985	85	67	$2,155	$2,155	$3,148	$166	$69,574	$90,619	$168,640	$132,928
49	5	off Falcon Dr	12	670	WM	0	3	1	0	0	1995	85	77	$2,155	$6,465	$3,148	$166	$0	$111,404	$123,532	$111,905
49	6	Montague Expy	10	935	ACWP	0	2	3	0	1	1955	85	37	$1,925	$3,850	$3,148	$153	$111,101	$142,913	$265,920	$115,753
49	1,2	Great Mall Dr	12	2,110	PVC	0	3	3	5	3	1995	70	62	$2,155	$6,465	$3,148	$166	$0	$350,839	$367,226	$325,258
49	1,4,5	Great Mall Pkwy	12	2,420	ACWP	0	4	7	0	0	1975	85	57	$2,155	$8,620	$3,148	$166	$308,933	$402,384	$736,392	$493,816
49	2,3,6	Piper Dr	12	2,170	ACWP	0	3	3	0	0	1955	85	37	$2,155	$6,465	$3,148	$166	$277,018	$360,815	$659,327	$287,001
50	1	Centre Pointe Dr	12	510	ACWP	0	1	2	0	0	1985	85	67	$2,155	$2,155	$3,148	$166	$65,106	$84,800	$158,170	$124,675
50	1	Houret Dr	12	900	ACWP	0	2	2	0	0	1975	85	57	$2,155	$4,310	$3,148	$166	$114,892	$149,647	$277,117	$185,831
50	1	Montague Expy	12	400	ACWP	0	2	0	1	1	1985	85	67	$2,155	$4,310	$3,148	$166	$51,063	$66,510	$127,536	$100,528
50	2	Montague Expy	10	240	ACWP	0	0	1	0	0	1985	85	67	$1,925	$0	$3,148	$153	$28,518	$36,684	$69,684	$54,927
50	3	Capitol Ave	12	1,445	ACWP	0	2	1	0	1	1975	85	57	$2,155	$4,310	$3,148	$166	$184,466	$240,266	$440,160	$295,166
50	3	off Capitol Ave	8	350	ACWP	0	1	0	0	0	1965	85	47	$1,625	$1,625	$3,148	$139	$38,686	$48,602	$93,879	$51,910
50	3	off Capitol Ave	12	1,120	ACWP	0	1	3	0	0	1965	85	47	$2,155	$2,155	$3,148	$166	$142,977	$186,227	$340,658	$188,364
50	4	McCandless Dr	12	585	ACWP	0	2	3	0	1	1985	85	67	$2,155	$4,310	$3,148	$166	$74,680	$97,270	$182,881	$144,153
50	1,4	Houret Ct	12	1,220	ACWP	0	3	1	0	1	1975	85	57	$2,155	$6,465	$3,148	$166	$155,743	$202,855	$375,123	$251,553
50	2,5	off Sango & Trade Zone	12	1,180	ACWP	0	5	0	0	0	1975	85	57	$2,155	$10,775	$3,148	$166	$150,637	$196,204	$367,706	$246,579
50	2,6	Sango & Tarob	12	1,870	ACWP	0	6	5	0	1	1975	85	57	$2,155	$12,930	$3,148	$166	$238,721	$310,933	$576,402	$386,528
50	4,5,6	Trade Zone & Lundy	12	3,540	ACWP	0	7	8	0	1	1965	85	47	$2,155	$15,085	$3,148	$166	$451,910	$588,611	$1,078,277	$596,224
52	6	Pebble Beach Ct	6	370	ACWP	0	1	2	0	0	1985	85	67	$1,430	$1,430	$3,148	$129	$38,701	$47,567	$92,634	$73,018
52	2,3	Calera Creek Heights Dr	8	1,850	ACP	0	5	4	0	1	1985	85	67	$1,625	$8,125	$3,148	$139	$204,485	$256,897	$481,489	$379,527
52	2,5	Calera Creek Heights Dr	6	1,440	ACWP	0	2	1	0	0	1985	85	67	$1,430	$2,860	$3,148	$129	$150,619	$185,126	$348,059	$274,353
53	3	Country Club Dr	8	200	ACWP	0	1	0	0	0	1985	85	67	$1,625	$1,625	$3,148	$139	$22,107	$27,773	$55,804	$43,987
53	3	Tularcitos Dr	12	390	ACWP	0	1	0	0	0	1985	85	67	$2,155	$2,155	$3,148	$166	$49,787	$64,847	$122,270	$96,378
53	3,5,6	Country Club Dr	12	2,620	ACWP	0	11	8	0	1	1985	85	67	$2,155	$23,705	$3,148	$166	$334,464	$435,638	$812,146	$640,162
54	1	Camarillo Ct	6	480	ACWP	0	1	1	0	0	1985	85	67	$1,430	$1,430	$3,148	$129	$50,206	$61,709	$118,738	$93,593
54	2	Country Club Dr	12	140	ACWP	0	0	0	0	0	1985	85	67	$2,155	$0	$3,148	$166	$17,872	$23,278	$45,205	$35,632
54	4	Fox Hollow Ct	6	90	ACWP	0	0	0	0	0	1985	85	67	$1,430	$0	$3,148	$129	$9,414	$11,570	$24,680	$19,454
54	4	Fox Hollow Ct	8	380	ACWP	0	2	1	0	0	1985	85	67	$1,625	$3,250	$3,148	$139	$42,002	$52,768	$103,209	$81,353
54	4	Jacklin Rd	16	600	ACWP	3	0	2	0	0	1975	85	57	$5,035	$15,105	$3,148	$190	$88,219	$114,295	$225,381	$151,138
54	4	Jacklin Rd	16	400	SCP	2	0	1	0	0	1975	35	7	$5,035	$10,070	$3,148	$190	$0	$76,196	$91,503	$18,301
54	4	Park Victoria Dr	12	590	ACP	0	5	2	0	0	1975	85	57	$2,155	$10,775	$3,148	$166	$75,318	$98,102	$191,200	$128,217
54	4	St Joseph Ct	6	260	C900	0	2	1	0	1	1985	70	52	$1,430	$2,860	$3,148	$129	$0	$33,425	$40,361	$29,983
54	5	Daniel Ct	6	220	ACP	0	1	0	0	0	1975	85	57	$1,430	$1,430	$3,148	$129	$23,011	$28,283	$57,039	$38,249
54	1,4	Cervantez Ct	8	450	ACWP	0	1	1	0	0	1985	85	67	$1,625	$1,625	$3,148	$139	$49,740	$62,488	$119,262	$94,007
54	1,4	Country Club Dr	12	1,425	ACWP	0	7	4	0	0	1985	85	67	$2,155	$15,085	$3,148	$166	$181,913	$236,941	$445,549	$351,198
54	1,4	Park Victoria Dr	14	730	ACWP	1	0	1	0	1	1975	85	57	$3,142	$3,142	$3,148	$178	$100,049	$129,581	$240,354	$161,179
54	2,5,6	Calaveras Ridge Dr	8	2,830	ACWP	0	6	5	0	0	1985	85	67	$1,625	$9,750	$3,148	$139	$312,807	$392,983	$731,960	$576,957
54	4,5	off St Joseph Ct	14	860	ACWP	0	0	1	0	0	1985	85	67	$3,142	$0	$3,148	$178	$117,866	$152,657	$278,658	$219,648
55	1	Daniel Ct	6	1,050	ACWP	0	4	4	0	0	1975	85	57	$1,430	$5,720	$3,148	$129	$109,827	$134,987	$258,529	$173,367
55	1	off Calle Oriente	8	330	ACWP	0	2	0	0	0	1975	85	57	$1,625	$3,250	$3,148	$139	$36,476	$45,825	$90,518	$60,700
55	1	Park Victoria Dr	12	440	ACWP	0	1	1	0	0	1965	85	47	$2,155	$2,155	$3,148	$166	$56,170	$73,161	$137,228	$75,879
55	1	Traughber St	6	220	ACWP	0	2	0	0	0	1975	85	57	$1,430	$2,860	$3,148	$129	$23,011	$28,283	$58,548	$39,262
55	1	Traughber St	10	690	ACWP	0	2	1	0	0	1965	85	47	$1,925	$3,850	$3,148	$153	$81,989	$105,465	$198,176	$109,579
55	2	Evans Rd	12	410	ACWP	0	2	2	1	1	1965	85	47	$2,155	$4,310	$3,148	$166	$52,340	$68,172	$130,528	$72,174
55	2	off Santos Ct	4	480	ACWP	0	0	0	0	0	1975	85	57	$1,365	$0	$3,148	$120	$47,520	$57,759	$110,475	$74,083

Schaaf & Wheeler Worksheet B - Water System Pipe Components and Estimated Replacement Costs

Enter Current SFENR Date (mm/yyyy):	02/2003												Enter Current Year			Enter Coupling Unit Cost				
Enter Current SFENR Construction Cost Index:	7821												2003			$1,574				
A	B	C	D	E	F	G	H	I	J	K	L	M	N=M-(Year-L)	O	P=(G+H)*O	Q	R	S	T=R*E	U=P+Q+S+T	
W-Plat #	Section #	Street	Pipe Diameter (Inches)	Pipe Length (FT)	Pipe Material	B	G	FH	BO	ARV A&V	Year Pipe Installed	Pipe Life Expectancy (yr)	Pipe Life Left (yr)	Valve Unit Cost ($) (see Worksheet D)	Valve Cost ($)	Coupling Cost ($)	Pipe Repl. Cost ($/LF) (see Worksheet C)	ACWP & ACP Disposal ($/LF) (see Worksheet E)	Total Pipe Replacement Cost ($)	Total Cost Current SFENR ($)	Estimated Value Feb 2003 ($) SFENR=7821
												SFENR Construction Cost Index:		7410	7410	7410	7684	7684	7684	7821	
55	2	Traughber St	4	180	ACWP	0	0	0	1	0	1975	85	57	$1,365	$0	$3,148	$120	$17,820	$21,660	$43,505	$29,174
55	2	Traughber St	6	590	ACWP	0	1	1	0	0	1975	85	57	$1,430	$1,430	$3,148	$129	$61,712	$75,850	$144,841	$97,129
55	3	Serra Dr	6	235	ACWP	0	0	0	0	0	1975	85	57	$1,430	$0	$3,148	$129	$24,580	$30,211	$59,089	$39,624
55	3	Stemel Ct	4	240	ACWP	0	1	1	1	0	1975	85	57	$1,365	$1,365	$3,148	$120	$23,760	$28,880	$58,340	$39,122
55	4	Admire Ct	6	270	ACWP	0	1	1	0	0	1965	85	47	$1,430	$1,430	$3,148	$129	$28,241	$34,711	$68,904	$38,100
55	4	Cestaric Dr	8	710	ACWP	0	1	1	0	0	1965	85	47	$1,625	$1,625	$3,148	$139	$78,478	$98,593	$185,259	$102,437
55	4	Guerrero Ct	6	300	ACWP	0	1	1	0	0	1965	85	47	$1,430	$1,430	$3,148	$129	$31,379	$38,568	$76,023	$42,036
55	4	Printy Ave	8	910	ACWP	0	1	2	0	0	1965	85	47	$1,625	$1,625	$3,148	$139	$100,585	$126,366	$236,026	$130,508
55	4	Torres Ave	6	620	ACWP	0	3	1	0	0	1965	85	47	$1,430	$4,290	$3,148	$129	$64,850	$79,707	$154,979	$85,694
55	5	Fanyon St	10	190	ACWP	0	1	0	0	0	1965	85	47	$1,925	$1,925	$3,148	$153	$22,577	$29,041	$57,890	$32,010
55	5	Kennedy Dr	4	330	ACWP	0	1	0	0	0	1975	85	57	$1,365	$1,365	$3,148	$120	$32,670	$39,710	$78,431	$52,595
55	5	Kennedy Dr	6	150	ACWP	0	1	1	0	0	1975	85	57	$1,430	$1,430	$3,148	$129	$15,690	$19,284	$40,427	$27,110
55	5	Prada Ct	4	210	ACWP	0	0	0	0	1	1975	85	57	$1,365	$0	$3,148	$120	$20,790	$25,270	$50,202	$33,665
55	5	Prada Ct	6	340	ACWP	0	1	1	0	0	1975	85	57	$1,430	$1,430	$3,148	$129	$35,563	$43,710	$85,515	$57,346
55	6	Kennedy Dr	6	760	ACWP	0	1	1	0	0	1965	85	47	$1,430	$1,430	$3,148	$129	$79,494	$97,705	$185,183	$102,395
55	6	Lynn Ave	8	430	ACWP	0	1	1	0	0	1965	85	47	$1,625	$1,625	$3,148	$139	$47,529	$59,711	$114,186	$63,138
55	6	Quail Dr	4	130	ACWP	0	0	1	1	0	1975	85	57	$1,365	$0	$3,148	$120	$12,870	$15,643	$32,343	$21,689
55	6	Quail Dr	6	590	ACWP	0	3	0	0	0	1975	85	57	$1,430	$4,290	$3,148	$129	$61,712	$75,850	$147,860	$99,153
55	6	Ramos Ct	4	210	ACWP	0	1	1	1	0	1975	85	57	$1,365	$1,365	$3,148	$120	$20,790	$25,270	$51,643	$34,631
55	6	Simas Dr	8	765	ACWP	0	3	1	0	1	1975	85	57	$1,625	$4,875	$3,148	$139	$84,557	$106,230	$202,650	$135,895
55	1,2	Calle Oriente	12	1,480	ACWP	0	4	3	0	0	1965	85	47	$2,155	$8,620	$3,148	$166	$188,934	$246,086	$455,180	$251,688
55	1,2,5	Prada Dr	8	1,325	ACWP	0	3	2	0	1	1975	85	57	$1,625	$4,875	$3,148	$139	$146,456	$183,994	$344,796	$231,216
55	1,4	Burdett Wy	8	690	ACWP	0	2	1	0	0	1965	85	47	$1,625	$3,250	$3,148	$139	$76,268	$95,816	$181,897	$100,579
55	1,4	Park Victoria Dr	10	1,610	ACWP	0	3	3	0	0	1965	85	47	$1,925	$5,775	$3,148	$153	$191,308	$246,086	$454,593	$251,363
55	2,3	Evans Rd	18	1,090	SCP	1	0	3	1	1	1965	35	-3	$5,385	$5,385	$3,148	$207	$0	$225,897	$238,923	$0
55	2,3	off Evans Rd	6	410	ACWP	0	1	1	1	0	1985	85	67	$1,430	$1,430	$3,148	$129	$42,885	$52,709	$102,127	$80,500
55	2,3	off Evans Rd	6	660	ACWP	0	2	3	0	0	1985	85	67	$1,430	$2,860	$3,148	$129	$69,034	$84,849	$162,962	$128,452
55	2,5	Santos Ct	6	360	ACWP	0	1	1	0	0	1975	85	57	$1,430	$1,430	$3,148	$129	$37,655	$46,281	$90,261	$60,528
55	3,5	Stemel Wy	8	1,640	ACWP	0	5	3	0	0	1975	85	57	$1,625	$8,125	$3,148	$139	$181,273	$227,736	$428,184	$287,135
55	3,6	Serra Dr	6	600	ACWP	0	2	1	0	0	1975	85	57	$1,430	$2,860	$3,148	$129	$62,758	$77,136	$148,724	$99,732
55	5,6	Kennedy Dr	10	1,850	ACWP	0	3	3	0	0	1965	85	47	$1,925	$5,775	$3,148	$153	$219,826	$282,770	$520,955	$288,057
56	1	Cestaric Dr	8	110	ACWP	0	1	0	0	0	1965	85	47	$1,625	$1,625	$3,148	$139	$12,159	$15,275	$32,959	$18,224
56	1	Kennedy Dr	8	690	ACWP	0	3	2	0	0	1965	85	47	$1,625	$4,875	$3,148	$139	$76,268	$95,816	$183,612	$101,527
56	1	Kennedy Dr	12	110	ACWP	0	0	0	0	0	1965	85	47	$2,155	$0	$3,148	$166	$14,042	$18,290	$36,230	$20,033
56	1	Kennedy Dr	14	40	ACWP	1	0	0	0	0	1965	85	47	$3,142	$3,142	$3,148	$178	$5,482	$7,100	$19,445	$10,752
56	1	off Kennedy Dr	10	160	ACWP	0	1	0	0	0	1965	85	47	$1,925	$1,925	$3,148	$153	$19,012	$24,456	$49,595	$27,423
56	1	Park Glen Ct	6	380	ACWP	0	1	1	1	0	1965	85	47	$1,430	$1,430	$3,148	$129	$39,747	$48,853	$95,007	$52,534
56	1	Park Hill Dr	6	540	ACWP	0	2	1	0	0	1965	85	47	$1,430	$2,860	$3,148	$129	$56,482	$69,422	$134,485	$74,363
56	1	Park View Dr	10	600	ACWP	0	4	1	0	0	1965	85	47	$1,925	$7,700	$3,148	$153	$71,295	$91,709	$177,353	$98,066
56	1	Park Willow Ct	6	385	ACWP	0	1	1	1	0	1965	85	47	$1,430	$1,430	$3,148	$129	$40,270	$49,495	$96,194	$53,190
56	1	Printy Ave	8	180	ACWP	0	1	0	0	0	1965	85	47	$1,625	$1,625	$3,148	$139	$19,896	$24,995	$50,727	$28,049
56	3	Dennis Ave	6	560	ACWP	0	1	1	0	0	1965	85	47	$1,430	$1,430	$3,148	$129	$58,574	$71,993	$137,722	$76,152
56	3	Dennis Ave	8	285	ACWP	0	1	0	0	0	1965	85	47	$1,625	$1,625	$3,148	$139	$31,502	$39,576	$77,380	$42,787
56	3	Ellis Ave	6	910	ACWP	0	3	1	0	0	1965	85	47	$1,430	$4,290	$3,148	$129	$95,183	$116,989	$223,797	$123,747
56	3	Lynn Ave	8	260	ACWP	0	1	1	0	0	1965	85	47	$1,625	$1,625	$3,148	$139	$28,738	$36,104	$71,034	$39,278
56	4	Park Brook Ct	6	390	ACWP	0	1	1	1	0	1965	85	47	$1,430	$1,430	$3,148	$129	$40,793	$50,138	$97,380	$53,846
56	4	Park Grove Dr	8	610	ACWP	0	2	2	0	0	1965	85	47	$1,625	$3,250	$3,148	$139	$67,425	$84,707	$161,591	$89,350
56	4	Park Heights Dr	8	600	ACWP	0	2	1	0	0	1965	85	47	$1,625	$3,250	$3,148	$139	$66,320	$83,318	$159,052	$87,947
56	4	Park Hill Dr	6	560	ACWP	0	2	1	0	0	1965	85	47	$1,430	$2,860	$3,148	$129	$58,574	$71,993	$139,232	$76,987
56	4	Park Hill Dr	8	540	ACWP	0	2	1	0	0	1965	85	47	$1,625	$3,250	$3,148	$139	$59,688	$74,986	$143,822	$79,525
56	4	Park Oak Ct	6	390	ACWP	0	1	1	1	0	1965	85	47	$1,430	$1,430	$3,148	$129	$40,793	$50,138	$97,380	$53,846

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Schaaf & Wheeler Worksheet B - Water System Pipe Components and Estimated Replacement Costs

Enter Current SFENR Date (mm/yyyy):	02/2003
Enter Current SFENR Construction Cost Index:	7821

Enter Current Year: 2003

Enter Coupling Unit Cost: $1,574

A	B	C	D	E	F	G	H	I	J	K	L	M	N=M-(Year-L)	O	P=(G+H)*O	Q	R	S	T=R*E	U=P+Q+S+T	
W-Plat #	Section #	Street	Pipe Diameter (inches)	Pipe Length (FT)	Pipe Material	B	G	FH	BO	ARV A&V	Year Pipe Installed	Pipe Life Expectancy (yr)	Pipe Life Left (yr)	Valve Unit Cost ($) (see Worksheet D)	Valve Cost ($)	Coupling Cost ($)	Pipe Repl. Cost ($/LF) (see Worksheet C)	ACWP & ACP Disposal ($/LF) (see Worksheet E)	Total Pipe Replacement Cost ($)	Total Cost Current SFENR ($)	Estimated Value Feb 2003 ($) SFENR=7821
											SFENR Construction Cost Index:			7410	7410	7410	7684	7684	7684	7821	
56	5	off Park Victoria Dr	6	45	ACWP	0	1	0	0	0	1965	85	47	$1,430	$1,430	$3,148	$129	$4,707	$5,785	$15,510	$8,576
56	6	Adams Ave	10	640	ACWP	0	2	1	0	0	1965	85	47	$1,925	$3,850	$3,148	$153	$76,048	$97,823	$184,350	$101,935
56	6	Braly Ave	6	420	ACWP	0	1	0	0	0	1965	85	47	$1,430	$1,430	$3,148	$129	$43,931	$53,995	$104,500	$57,782
56	6	Calaveras Blvd	6	250	ACWP	0	1	0	0	0	1975	85	57	$1,430	$1,430	$3,148	$129	$26,149	$32,140	$64,158	$43,024
56	6	Carl Ave	6	490	ACWP	0	1	1	0	0	1965	85	47	$1,430	$1,430	$3,148	$129	$51,252	$62,994	$121,111	$66,967
56	6	Gadsden Dr	12	340	ACWP	0	1	0	0	0	1965	85	47	$2,155	$2,155	$3,148	$166	$43,404	$56,533	$107,312	$59,337
56	1,2	Kennedy Dr	10	380	ACWP	0	1	1	0	0	1965	85	47	$1,925	$1,925	$3,148	$153	$45,153	$58,082	$110,427	$61,059
56	1,2,5	Park Victoria Dr	10	1,980	ACWP	0	6	3	0	0	1965	85	47	$1,925	$11,550	$3,148	$153	$235,273	$302,640	$562,996	$311,304
56	1,4	Moretti & Ayer	8	1,800	PVC	0	5	4	0	3	1985	70	52	$1,625	$8,125	$3,148	$139	$0	$249,954	$266,299	$197,822
56	3,6	Fanyon St	10	1,800	ACWP	0	3	5	0	0	1965	85	47	$1,925	$5,775	$3,148	$153	$213,885	$275,127	$507,130	$280,413
56	3,6	Gadsden Dr	8	840	ACWP	0	4	1	0	0	1965	85	47	$1,625	$6,500	$3,148	$139	$92,847	$116,645	$223,402	$123,528
57	1	Ayer Ln	8	450	PVC	0	2	0	0	0	1965	70	32	$1,625	$3,250	$3,148	$139	$0	$62,488	$70,353	$32,161
57	1	Calaveras Blvd	14	650	ACWP	2	0	0	0	0	1955	85	37	$3,142	$6,285	$3,148	$178	$89,084	$115,380	$218,058	$94,919
57	1	off Calaveras Blvd	14	490	ACWP	2	0	1	0	0	1965	85	47	$3,142	$6,285	$3,148	$178	$67,156	$86,979	$166,833	$92,249
57	2	Dempsey Rd	8	310	ACWP	0	1	1	1	0	1975	85	57	$1,625	$1,625	$3,148	$139	$34,265	$43,048	$83,726	$56,146
57	2	Park Victoria Dr	10	420	ACWP	0	1	2	0	0	1965	85	47	$1,925	$1,925	$3,148	$153	$49,906	$64,196	$121,487	$67,175
57	3	Canton Dr	6	980	ACWP	0	3	1	0	1	1955	85	37	$1,430	$4,290	$3,148	$129	$102,505	$125,988	$240,409	$104,648
57	3	Gadsden Dr	6	1,025	ACWP	0	4	3	0	0	1955	85	37	$1,430	$5,720	$3,148	$129	$107,212	$131,773	$252,597	$109,954
57	3	Jupiter Ct	6	480	ACWP	0	2	1	1	0	1955	85	37	$1,430	$2,860	$3,148	$129	$50,206	$61,709	$120,247	$52,343
57	3	off Calaveras Blvd	12	250	ACWP	0	1	0	0	0	1975	85	57	$2,155	$2,155	$3,148	$166	$31,915	$41,569	$80,387	$53,907
57	3	Solar Ct	6	350	ACWP	0	1	1	1	0	1955	85	37	$1,430	$1,430	$3,148	$129	$36,609	$44,996	$87,888	$38,257
57	4	off Route 680	18	865	SCP	2	0	2	0	2	1975	35	7	$5,385	$10,771	$3,148	$207	$0	$179,267	$197,147	$39,429
57	5	Canton Dr	8	520	ACWP	0	2	1	0	0	1965	85	47	$1,625	$3,250	$3,148	$139	$57,477	$72,209	$138,746	$76,718
57	5	Shirley Dr	6	280	ACWP	0	1	1	0	0	1965	85	47	$1,430	$1,430	$3,148	$129	$29,287	$35,997	$71,277	$39,412
57	6	Ashland Dr	6	610	ACWP	0	2	2	0	0	1955	85	37	$1,430	$2,860	$3,148	$129	$63,804	$78,421	$151,097	$65,772
57	6	Mercury Ct	6	390	ACWP	0	1	1	1	0	1955	85	37	$1,430	$1,430	$3,148	$129	$40,793	$50,138	$97,380	$42,389
57	6	Perry St	6	1,040	ACWP	0	4	3	0	0	1965	85	47	$1,430	$5,720	$3,148	$129	$108,781	$133,702	$256,156	$141,639
57	6	Saturn Ct	6	420	ACWP	0	1	1	1	0	1955	85	37	$1,430	$1,430	$3,148	$129	$43,931	$53,995	$104,500	$45,488
57	1,2	Ayer Ln	6	470	ACWP	0	1	2	0	0	1965	85	47	$1,430	$1,430	$3,148	$129	$49,161	$60,423	$116,365	$64,343
57	1,2	Calaveras Blvd	12	2,320	ACWP	0	5	6	1	0	1975	85	57	$2,155	$10,775	$3,148	$166	$296,167	$385,756	$708,750	$475,280
57	1,4	Dempsey Rd	12	1,450	CIWP	0	2	2	0	1	1955	65	17	$2,155	$4,310	$3,148	$166	$0	$241,098	$253,258	$66,237
57	2,5	Park Victoria Dr	8	1,640	ACWP	0	4	4	0	0	1965	85	47	$1,625	$6,500	$3,148	$139	$181,273	$227,736	$426,469	$235,812
57	3,6	Carnegie Dr	8	1,850	ACWP	0	3	2	0	1	1955	85	37	$1,625	$4,875	$3,148	$139	$204,485	$256,897	$478,059	$208,096
57	4,5	Selwyn Dr	6	1,210	ACWP	0	4	3	0	1	1955	85	37	$1,430	$5,720	$3,148	$129	$126,562	$155,557	$296,498	$129,064
57	5,6	Rodrigues St	6	1,100	ACWP	0	4	2	0	0	1965	85	47	$1,430	$5,720	$3,148	$129	$115,057	$141,415	$270,394	$149,512
58	1	off Sinclair Frontage Rd	8	750	ACWP	0	2	5	0	0	1985	85	67	$1,625	$3,250	$3,148	$139	$82,899	$104,147	$197,127	$155,383
58	1	Wrigley Wy	12	900	ACWP	0	2	2	0	0	1975	85	57	$2,155	$4,310	$3,148	$166	$114,892	$149,647	$277,117	$185,831
58	2	Edsel Dr	10	740	ACWP	0	3	1	0	0	1965	85	47	$1,925	$5,775	$3,148	$153	$87,930	$113,108	$214,033	$118,347
58	2	Park Victoria Dr	8	220	ACWP	0	1	0	0	0	1965	85	47	$1,625	$1,625	$3,148	$139	$24,317	$30,550	$60,881	$33,664
58	2	Shirley Dr	6	340	ACWP	0	1	1	0	0	1965	85	47	$1,430	$1,430	$3,148	$129	$35,563	$43,710	$85,515	$47,285
58	2	Shirley Dr	6	320	ACWP	0	1	1	0	0	1965	85	47	$1,430	$1,430	$3,148	$129	$33,471	$41,139	$80,769	$44,661
58	3	Carnegie Dr	8	1,150	ACWP	0	3	0	0	0	1955	85	37	$1,625	$4,875	$3,148	$139	$127,113	$159,693	$300,376	$130,752
58	3	Freeland Dr	6	190	ACWP	0	1	1	0	0	1955	85	37	$1,430	$1,430	$3,148	$129	$19,873	$24,426	$49,920	$21,730
58	3	Perry St	6	240	ACWP	0	1	0	0	0	1965	85	47	$1,430	$1,430	$3,148	$129	$25,103	$30,854	$61,785	$34,163
58	4	Vista Wy	12	400	ACWP	0	1	2	0	1	1975	85	57	$2,155	$2,155	$3,148	$166	$51,063	$66,510	$125,262	$83,999
58	5	off Dempsey Rd	12	280	ACWP	0	2	0	1	0	1985	85	67	$2,155	$4,310	$3,148	$166	$35,744	$46,557	$91,637	$72,231
58	5	Yosemite Dr	24	370	SCP	1	0	0	0	1	1985	35	17	$13,412	$13,412	$3,148	$240	$0	$88,792	$107,850	$52,384
58	6	Arcadia Ave	6	675	ACWP	0	2	1	0	0	1965	85	47	$1,430	$2,860	$3,148	$129	$70,603	$86,778	$166,522	$92,077
58	6	Arcadia Ave	6	440	ACWP	0	2	1	0	0	1965	85	47	$1,430	$2,860	$3,148	$129	$46,023	$56,566	$110,755	$61,241
58	6	Bryce Ct	6	350	ACWP	0	1	1	1	0	1966	85	47	$1,430	$1,430	$3,148	$129	$36,609	$44,996	$87,888	$48,597
58	6	Glacier Dr	6	505	ACWP	0	1	0	0	0	1965	85	47	$1,430	$1,430	$3,148	$129	$52,821	$64,923	$124,670	$68,935

Schaaf & Wheeler Worksheet B - Water System Pipe Components and Estimated Replacement Costs

Enter Current SFENR Date (mm/yyyy):	02/2003											Enter Current Year		Enter Coupling Unit Cost					
Enter Current SFENR Construction Cost Index	7821											2003		$1,674					
A	B	C	D	E	F	G	H	I	J	K	L	M	N=M-(Year-L)	O	P=(G+H)*O	Q	R	S	T=R*E	U=P+Q+S+T	
W-Plat #	Section #	Street	Pipe Diameter (inches)	Pipe Length (FT)	Pipe Material	B	G	FH	BO	ARV A&V	Year Pipe Installed	Pipe Life Expectancy (yr)	Pipe Life Left (yr)	Valve Unit Cost ($) (see Worksheet D)	Valve Cost ($)	Coupling Cost ($)	Pipe Repl. Cost ($/LF) (see Worksheet C)	ACWP & ACP Disposal ($/LF) (see Worksheet E)	Total Pipe Replacement Cost ($)	Total Cost Current SFENR ($)	Estimated Value Feb 2003 ($) SFENR=7821
													SFENR Construction Cost Index:	7410	7410	7410	7684	7684	7684	7821	
58	6	Lassen Ave	6	60	ACWP	0	0	0	0	0	1965	85	47	$1,430	$0	$3,148	$129	$6,276	$7,714	$17,561	$9,710
58	6	off Arcadia Ave	6	70	ACWP	0	1	0	1	0	1965	85	47	$1,430	$1,430	$3,148	$129	$7,322	$8,999	$21,443	$11,857
58	6	off Arcadia Ave	6	70	ACWP	0	1	0	1	0	1965	85	47	$1,430	$1,430	$3,148	$129	$7,322	$8,999	$21,443	$11,857
58	6	Zion Ct	6	180	ACWP	0	1	0	1	0	1965	85	47	$1,430	$1,430	$3,148	$129	$18,827	$23,141	$47,547	$26,290
58	1,5	Sinclair Frontage Rd	18	2,165	SCP	2	0	3	0	2	1975	35	7	$5,385	$10,771	$3,148	$207	$0	$448,686	$471,359	$94,272
58	2,3	Edsel Dr	6	1,220	ACWP	0	3	2	1	0	1965	85	47	$1,430	$4,290	$3,148	$129	$127,608	$156,843	$297,362	$164,424
58	2,5	Dempsey Rd	12	2,140	SCP	0	5	4	0	1	1955	35	-13	$2,155	$10,775	$3,148	$166	$0	$355,827	$376,852	$0
58	2,6	Park Victoria Dr	10	1,990	ACWP	0	7	5	0	1	1965	85	47	$1,925	$13,475	$3,148	$153	$236,461	$304,168	$567,793	$313,956
58	5,6	Yosemite Dr	12	730	ACWP	0	2	0	0	1	1985	85	67	$2,155	$4,310	$3,148	$166	$93,190	$121,380	$226,260	$176,346
58	5,6	Yosemite Dr	12	1,590	ACWP	0	5	3	0	0	1985	85	67	$2,155	$10,775	$3,148	$166	$202,977	$264,376	$490,362	$386,521
59	1	Vista Wy	12	475	ACWP	0	1	2	0	0	1985	85	67	$2,155	$2,155	$3,148	$166	$60,638	$78,980	$147,699	$116,421
59	2	Aberfeldy & Methven	6	580	ACWP	0	3	2	0	0	1985	85	67	$1,430	$4,290	$3,148	$129	$60,666	$74,564	$145,487	$114,678
59	3	Acadia Ave	6	80	ACWP	0	0	0	0	0	1965	85	47	$1,430	$0	$3,148	$129	$8,368	$10,285	$22,307	$12,334
59	3	Acadia Ave	8	1,030	ACWP	0	3	3	0	0	1965	85	47	$1,625	$4,875	$3,148	$139	$113,849	$143,029	$269,916	$149,248
59	3	Glacier Dr	6	465	ACWP	0	1	1	0	0	1965	85	47	$1,430	$1,430	$3,148	$129	$48,638	$59,780	$115,178	$63,687
59	3	Lassen Ave	6	250	ACWP	0	1	0	0	0	1965	85	47	$1,430	$1,430	$3,148	$129	$26,149	$32,140	$64,158	$35,476
59	3	Lassen Ave	8	670	ACWP	0	2	1	0	0	1965	85	47	$1,625	$3,250	$3,148	$139	$74,057	$93,038	$176,821	$97,771
59	3	Olympic Dr	6	165	ACWP	0	1	0	0	0	1965	85	47	$1,430	$1,430	$3,148	$129	$17,258	$21,212	$43,987	$24,322
59	3	Olympic Dr	8	780	ACWP	0	2	1	0	0	1965	85	47	$1,625	$3,250	$3,148	$139	$86,215	$108,313	$204,742	$113,210
59	3	Pheland Ct	6	190	ACWP	0	1	1	1	0	1965	85	47	$1,430	$1,430	$3,148	$129	$19,873	$24,426	$49,920	$27,603
59	3	Platt Ave	12	770	ACWP	0	4	1	0	0	1965	85	47	$2,155	$8,620	$3,148	$166	$98,297	$128,031	$242,775	$134,240
59	3	Platt Ct	6	180	ACWP	0	1	0	1	0	1965	85	47	$1,430	$1,430	$3,148	$129	$18,827	$23,141	$47,547	$26,290
59	3	S Park Victoria	10	640	ACWP	0	1	2	0	0	1965	85	47	$1,925	$1,925	$3,148	$153	$76,048	$97,823	$182,318	$100,811
59	4	Ames Ave	12	420	ACWP	0	0	0	0	1	1955	85	37	$2,155	$0	$3,148	$166	$53,616	$69,835	$128,970	$56,140
59	6	Big Bear Ct	6	640	ACWP	0	2	1	0	0	1975	85	57	$1,430	$2,860	$3,148	$129	$66,942	$82,278	$158,216	$106,098
59	6	Jungfrau Ct	6	870	ACWP	0	2	2	0	0	1975	85	57	$1,430	$2,860	$3,148	$129	$90,999	$111,847	$212,796	$142,698
59	6	Matterhorn Ct	6	700	ACWP	0	2	2	0	0	1975	85	57	$1,430	$2,860	$3,148	$129	$73,218	$89,992	$172,454	$115,646
59	6	Mt Shasta Ave	8	920	ACWP	0	4	2	0	0	1975	85	57	$1,625	$6,500	$3,148	$139	$101,690	$127,754	$243,709	$163,428
59	6	off Richter Ct	10	480	ACWP	0	1	0	0	0	1985	85	67	$1,925	$1,925	$3,148	$153	$57,036	$73,367	$138,077	$108,837
59	6	off Richter Ct	14	330	ACWP	1	0	0	1	0	1985	85	67	$3,142	$3,142	$3,148	$178	$45,227	$58,578	$112,291	$88,512
59	1,2	Yosemite Dr	16	1,300	SCWP	3	0	2	0	0	1975	35	7	$5,035	$15,105	$3,148	$190	$0	$247,639	$271,309	$54,262
59	1,2	Yosemite Dr	18	1,440	DIP	3	0	0	0	0	1985	100	82	$5,385	$16,156	$3,148	$207	$0	$298,433	$324,116	$265,775
59	2,3	Creighon Ct	6	210	ACWP	0	1	1	0	0	1985	85	67	$1,430	$1,430	$3,148	$129	$21,965	$26,997	$54,666	$43,089
59	2,5	Sinclair Frontage Rd	12	2,110	SCP	0	6	4	1	0	1985	35	17	$2,155	$12,930	$3,148	$166	$0	$350,839	$374,050	$181,681
59	2,5	Sinclair Frontage Rd	12	2,040	DIP	0	5	0	0	2	1985	100	82	$2,155	$10,775	$3,148	$166	$0	$339,199	$359,929	$295,142
59	2,5,6	Dempsey Rd	12	2,030	ACWP	0	4	2	0	1	1955	85	37	$2,155	$8,620	$3,148	$166	$259,146	$337,537	$619,719	$269,760
59	4,5	Ames Ave	10	1,340	ACWP	0	4	4	0	1	1955	85	37	$1,925	$7,700	$3,148	$153	$159,225	$204,817	$381,968	$166,269
59	5,6	Richter Ct	8	270	ACWP	0	1	1	0	0	1985	85	67	$1,625	$1,625	$3,148	$139	$29,844	$37,493	$73,572	$57,992
60	3	Big Bear Ct	4	140	ACWP	0	0	1	1	0	1975	85	57	$1,365	$0	$3,148	$120	$13,860	$16,847	$34,575	$23,186
60	3	Chewpon Ave	8	900	ACWP	0	3	2	0	1	1985	85	67	$1,625	$4,875	$3,148	$139	$99,479	$124,977	$236,917	$186,747
60	3	Hay Ct	4	100	ACWP	0	0	0	1	0	1985	85	67	$1,365	$0	$3,148	$120	$9,900	$12,033	$25,646	$20,215
60	3	Hay Ct	6	200	ACWP	0	1	1	0	0	1985	85	67	$1,430	$1,430	$3,148	$129	$20,919	$25,712	$52,293	$41,219
60	3	off Dempsey	12	655	ACWP	0	2	1	0	0	1995	85	77	$2,155	$4,310	$3,148	$166	$83,616	$108,910	$203,822	$184,639
60	3		4	90	ACWP	0	0	0	1	0	1975	85	57	$1,365	$0	$3,148	$120	$8,910	$10,830	$23,414	$15,701
60	4	Milpitas Blvd	14	1,115	ACWP	2	0	3	0	0	1975	85	57	$3,142	$6,285	$3,148	$178	$152,814	$197,922	$366,931	$246,060
60	6	Landess Ave	16	520	SCP	1	0	0	1	0	1975	35	7	$5,035	$5,035	$3,148	$190	$0	$99,055	$109,454	$21,891
60	2,5,6	Sinclair Frontage Rd	12	2,060	ACWP	0	3	1	0	0	1985	85	67	$2,155	$6,465	$3,148	$166	$262,976	$342,525	$626,419	$493,766
60	3,6	Dempsey Rd	12	1,965	ACWP	0	4	4	0	0	1955	85	37	$2,155	$8,620	$3,148	$166	$250,848	$326,729	$600,273	$261,296
61	1	S Milpitas Blvd	14	800	ACWP	1	0	0	0	1	1975	85	57	$3,142	$3,142	$3,148	$178	$109,642	$142,007	$262,765	$176,207
61	2	off Montague Expy	12	310	ACWP	0	2	0	0	0	1985	85	67	$2,155	$4,310	$3,148	$166	$39,574	$51,545	$100,612	$79,306
61	2	Pecten Ct	8	210	ACWP	0	1	1	1	0	1985	85	67	$1,625	$1,625	$3,148	$139	$23,212	$29,161	$58,342	$45,988

Schaaf & Wheeler Worksheet B - Water System Pipe Components and Estimated Replacement Costs

Enter Current SFENR Date (mm/yyyy):	02/2003											Enter Current Year		Enter Coupling Unit Cost					
Enter Current SFENR Construction Cost Index:	7821											2003		$1,574					
A	B	C	D	E	F	G	H	I	J	K	L	M	N=M-(Year-L)	O	P=(G+H)*O	Q	R	S	T=R*E	U=P+Q+S+T	
W-Plat #	Section #	Street	Pipe Diameter (Inches)	Pipe Length (FT)	Pipe Material	B	G	FH	BO	ARV A&V	Year Pipe Installed	Pipe Life Expectancy (yr)	Pipe Life Left (yr)	Valve Unit Cost ($) (see Worksheet D)	Valve Cost ($)	Coupling Cost ($)	Pipe Repl. Cost ($/LF) (see Worksheet C)	ACWP & ACP Disposal ($/LF) (see Worksheet E)	Total Pipe Replacement Cost ($)	Total Cost Current SFENR ($)	Estimated Value Feb 2003 ($) SFENR=7821
												SFENR Construction Cost Index:		7410	7410	7410	7684	7684	7684	7821	
61	2	Pecten Ct	12	380	ACWP	0	1	3	0	0	1985	85	67	$2,155	$2,155	$3,148	$166	$48,510	$63,184	$119,278	$94,019
61	3	Montague Expy	16	310	SCP	0	0	0	0	1	1975	35	7	$5,035	$0	$3,148	$190	$0	$59,052	$63,425	$12,685
61	4	Gladding Ct	12	630	ACWP	0	2	3	0	0	1985	85	67	$2,155	$4,310	$3,148	$166	$80,425	$104,763	$196,343	$154,765
61	1,2	Montague Expy	8	1,410	ACWP	0	4	2	0	0	1975	85	57	$1,625	$6,500	$3,148	$139	$155,851	$195,797	$368,087	$246,836
61	1,2	Montague Expy	10	2,395	ACWP	0	5	5	0	0	1975	85	57	$1,925	$9,625	$3,148	$153	$284,586	$366,072	$675,715	$453,126
61	1,4	off Montague Expy	8	650	ACWP	0	2	2	0	0	1985	85	67	$1,625	$3,250	$3,148	$139	$71,846	$90,261	$171,744	$135,375
61	1,5	Watson Ct	12	1,050	ACWP	0	4	8	1	1	1975	85	57	$2,155	$8,620	$3,148	$166	$134,041	$174,588	$326,540	$218,974
61	2,3	Montague Expy	12	420	ACWP	0	1	0	0	0	1975	85	57	$2,155	$2,155	$3,148	$166	$53,616	$69,835	$131,245	$88,011
62	1	Capitol Ave	12	370	CIP	0	0	0	0	0	1965	65	27	$2,155	$0	$3,148	$166	$0	$61,521	$65,939	$27,390
62	1	off Capitol Ave	8	230	ACWP	0	0	0	1	0	1965	85	47	$1,625	$0	$3,148	$139	$25,423	$31,939	$61,704	$34,119
62	1,2	Tremble Rd	12	380	CIP	0	0	2	0	0	1965	65	27	$2,155	$0	$3,148	$166	$0	$63,184	$67,631	$28,093
64	4	Calaveras Ridge Dr	8	160	ACWP	0	1	1	0	0	1985	85	67	$1,625	$1,625	$3,148	$139	$17,685	$22,218	$45,651	$35,984
65	1	off Evans Rd	6	160	ACWP	0	0	0	0	0	1985	85	67	$1,430	$0	$3,148	$129	$16,735	$20,570	$41,291	$32,547
65	1	Quince & Evans	8	1,230	PVC	0	2	2	1	0	1985	70	52	$1,625	$3,250	$3,148	$139	$0	$170,802	$180,593	$134,156
65	4	Alexander Dr	6	530	ACWP	0	3	1	0	1	1985	85	67	$1,430	$4,290	$3,148	$129	$55,436	$68,136	$133,622	$105,326
65	4	Arana Ct	6	220	ACWP	0	1	1	0	0	1975	85	57	$1,430	$1,430	$3,148	$129	$23,011	$28,283	$57,039	$38,249
65	4	Evans & Spring Valley	16	760	SCP	2	0	1	0	0	1975	35	7	$5,035	$10,070	$3,148	$190	$0	$144,773	$161,300	$32,260
65	4	Fair Hill	6	560	ACWP	0	2	1	0	0	1975	85	57	$1,430	$2,860	$3,148	$129	$58,574	$71,993	$139,232	$93,367
65	4	Kennedy Dr	6	300	ACWP	0	1	0	0	0	1975	85	57	$1,430	$1,430	$3,148	$129	$31,379	$38,568	$76,023	$50,980
65	4	Kennedy Dr	10	150	ACWP	0	1	0	0	0	1965	85	47	$1,925	$1,925	$3,148	$153	$17,824	$22,927	$46,830	$25,894
65	4	Kennedy Dr	12	670	ACWP	0	2	2	1	0	1965	85	47	$2,155	$4,310	$3,148	$166	$85,531	$111,404	$208,310	$115,183
65	4	Old Evans Rd	6	530	ACWP	0	1	1	0	1	1975	85	57	$1,430	$1,430	$3,148	$129	$55,436	$68,136	$130,603	$87,581
65	4	Temple Dr	12	530	ACWP	0	2	1	0	0	1975	85	57	$2,155	$4,310	$3,148	$166	$67,659	$88,125	$166,427	$111,604
65	1,4	Bayview Park Dr	6	930	ACWP	0	2	2	0	0	1985	85	67	$1,430	$2,860	$3,148	$129	$97,275	$119,560	$227,034	$178,956
66	1	Arana Ct	6	130	ACWP	0	1	0	0	0	1975	85	57	$1,430	$1,430	$3,148	$129	$13,598	$16,713	$35,681	$23,927
66	1	Carl Ave	6	210	ACWP	0	1	0	0	0	1965	85	47	$1,430	$1,430	$3,148	$129	$21,965	$26,997	$54,666	$30,227
66	1	Dennis Ave	6	490	ACWP	0	1	1	1	0	1965	85	47	$1,430	$1,430	$3,148	$129	$51,252	$62,994	$121,111	$66,967
66	1	Dennis Ave	6	430	ACWP	0	2	2	0	0	1965	85	47	$1,430	$2,860	$3,148	$129	$44,977	$55,281	$108,382	$59,929
66	1	View Dr	6	650	ACWP	0	2	1	0	0	1975	85	57	$1,430	$2,860	$3,148	$129	$67,988	$83,564	$160,589	$107,689
66	4	Adams Ave	10	500	ACWP	0	2	2	0	0	1965	85	47	$1,925	$3,850	$3,148	$153	$59,412	$76,424	$145,639	$80,530
66	4	Braly Ave	6	300	ACWP	0	1	1	0	0	1965	85	47	$1,430	$1,430	$3,148	$129	$31,379	$38,568	$76,023	$42,036
66	4	Calaveras Blvd	6	800	ACWP	0	2	1	0	0	1965	85	47	$1,430	$2,860	$3,148	$129	$83,677	$102,848	$196,185	$108,479
66	4	Jupiter Dr	12	290	ACWP	0	0	0	0	0	1965	85	47	$2,155	$0	$3,148	$166	$37,021	$48,220	$90,079	$49,809
66	5	Armand Dr	6	885	ACWP	0	2	2	0	0	1965	85	47	$1,430	$2,860	$3,148	$129	$92,568	$113,775	$216,355	$119,632
66	5	Burley Dr	12	130	ACWP	0	0	1	1	0	1965	85	47	$2,155	$0	$3,148	$166	$16,596	$21,616	$42,214	$23,342
66	5	off Calaveras Blvd	6	390	ACWP	0	1	1	0	0	1975	85	57	$1,430	$1,430	$3,148	$129	$40,793	$50,138	$97,380	$65,302
66	5	off Calaveras Blvd	6	150	ACWP	0	1	1	0	0	1975	85	57	$1,430	$1,430	$3,148	$129	$15,690	$19,284	$40,427	$27,110
66	5	off Calaveras Blvd	8	350	ACWP	0	4	1	0	0	1975	85	57	$1,625	$6,500	$3,148	$139	$38,686	$48,602	$99,024	$66,405
66	5	off Strawberry Ln	6	340	ACWP	0	2	0	0	0	1975	85	57	$1,430	$2,860	$3,148	$129	$35,563	$43,710	$87,025	$58,358
66	5	Poppy Ct	6	150	ACWP	0	1	1	0	0	1975	85	57	$1,430	$1,430	$3,148	$129	$15,690	$19,284	$40,427	$27,110
66	1,2	Golden Hills Dr	6	750	ACWP	0	3	2	0	0	1965	85	47	$1,430	$4,290	$3,148	$129	$78,448	$96,420	$185,829	$102,752
66	1,2,5,6	Spring Valley & Evans	16	2,510	SCP	11	0	5	5	1	1975	35	7	$5,035	$55,385	$3,148	$190	$0	$478,133	$548,417	$109,683
66	1,4	Lynn Ave	8	1,240	ACWP	0	4	1	0	0	1965	85	47	$1,625	$6,500	$3,148	$139	$137,060	$172,190	$324,936	$179,670
66	1,4	N Temple Dr	12	1,860	ACWP	0	12	5	0	1	1975	85	57	$2,155	$25,860	$3,148	$166	$237,444	$309,270	$587,057	$393,674
66	2,4	Strawberry Ln	10	910	ACWP	0	5	3	0	0	1975	85	57	$1,925	$9,625	$3,148	$153	$108,131	$139,092	$265,102	$177,774
66	4,5	Calaveras Blvd	8	700	ACWP	0	3	2	0	0	1975	85	57	$1,625	$4,875	$3,148	$139	$77,373	$97,204	$186,151	$124,831
66	4,5	Hemlock Ct	6	150	ACWP	0	1	1	0	0	1975	85	57	$1,430	$1,430	$3,148	$129	$15,690	$19,284	$40,427	$27,110
66	5,6	Calaveras Blvd	12	430	DIP	0	1	1	1	0	1975	100	72	$2,155	$2,155	$3,148	$166	$0	$71,498	$78,367	$56,424
67	1	Albany Ct	6	250	ACWP	0	0	0	1	0	1955	85	37	$1,430	$0	$3,148	$129	$26,149	$32,140	$62,649	$27,271
67	1	Beacon Dr	6	720	ACWP	0	1	1	0	0	1955	85	37	$1,430	$1,430	$3,148	$129	$75,310	$92,563	$175,691	$76,477
67	1	Burley Dr	8	520	ACWP	0	2	1	0	0	1965	85	47	$1,625	$3,250	$3,148	$139	$57,477	$72,209	$138,746	$76,718

Schaaf & Wheeler Worksheet B - Water System Pipe Components and Estimated Replacement Costs

Enter Current SFENR Date (mm/yyyy):	02/2003											Enter Current Year		Enter Coupling Unit Cost				
Enter Current SFENR Construction Cost Index	7821											2003		$1,574				
A	B	C	D	E	F	G	H	I	J	K	L	M	N=M-(Year-L)	O	P=(G+H)*O	Q	R	S	T=R*E	U=P+Q+S+T	
W-Plat #	Section #	Street	Pipe Diameter (inches)	Pipe Length (FT)	Pipe Material	B	G	FH	BO	ARV A&V	Year Pipe Installed	Pipe Life Expectancy (yr)	Pipe Life Left (yr)	Valve Unit Cost ($) (see Worksheet D)	Valve Cost ($)	Coupling Cost ($)	Pipe Repl. Cost ($/LF) (see Worksheet C)	ACWP & ACP Disposal ($/LF) (see Worksheet E)	Total Pipe Replacement Cost ($)	Total Cost Current SFENR ($)	Estimated Value Feb 2003 ($) SFENR=7821
													SFENR Construction Cost Index:	7410	7410	7410	7684	7684	7684	7821	
67	1	Jupiter Dr	12	630	ACWP	0	1	2	0	0	1965	85	47	$2,155	$2,155	$3,148	$166	$80,425	$104,753	$194,069	$107,309
67	1	Jupiter Wy	6	130	ACWP	0	0	0	1	0	1965	85	47	$1,430	$0	$3,148	$129	$13,598	$16,713	$34,172	$18,895
67	1	Lawton Dr	6	720	ACWP	0	2	1	0	0	1955	85	37	$1,430	$2,860	$3,148	$129	$75,310	$92,563	$177,200	$77,134
67	1	Temple Dr	12	205	ACWP	0	0	0	0	0	1965	85	47	$2,155	$0	$3,148	$166	$26,170	$34,086	$64,651	$35,748
67	2	Burley Dr	12	790	ACWP	0	3	2	0	0	1965	85	47	$2,155	$6,465	$3,148	$166	$100,850	$131,357	$246,484	$136,291
67	2	Ellwell Dr	6	625	ACWP	0	2	2	0	0	1965	85	47	$1,430	$2,860	$3,148	$129	$65,373	$80,350	$154,656	$85,516
67	2	Findley Dr	6	630	ACWP	0	2	1	0	0	1965	85	47	$1,430	$2,860	$3,148	$129	$65,896	$80,992	$155,843	$86,172
67	3	Aguilar Ct	6	150	ACWP	0	1	0	0	0	1975	85	57	$1,430	$1,430	$3,148	$129	$15,690	$19,284	$40,427	$27,110
67	3	Falcato Dr	6	350	ACWP	0	0	1	1	0	1975	85	57	$1,430	$0	$3,148	$129	$36,609	$44,996	$86,379	$57,925
67	3	Frank Ct	4	150	ACWP	0	0	0	1	0	1975	85	57	$1,365	$0	$3,148	$120	$14,850	$18,050	$36,808	$24,683
67	3	Frank Ct	8	255	ACWP	0	1	1	0	0	1975	85	57	$1,625	$1,625	$3,148	$139	$28,186	$35,410	$69,765	$46,784
67	3	off Piedmont Dr	8	180	ACWP	0	1	0	0	0	1975	85	57	$1,625	$1,625	$3,148	$139	$19,896	$24,995	$50,727	$34,017
67	3	Piedmont Dr	16	935	DIP	3	0	2	0	1	1975	100	72	$5,035	$15,105	$3,148	$190	$0	$178,109	$200,543	$144,391
67	3	Sepulveda Ave	8	740	ACWP	0	2	0	0	0	1975	85	57	$1,625	$3,250	$3,148	$139	$81,794	$102,759	$194,589	$130,489
67	3	Sepulveda Ct	4	120	ACWP	0	0	0	0	0	1975	85	57	$1,365	$0	$3,148	$120	$11,880	$14,440	$30,111	$20,192
67	3	Sepulveda Ct	6	110	ACWP	0	1	1	0	0	1975	85	57	$1,430	$1,430	$3,148	$129	$11,506	$14,142	$30,935	$20,745
67	3	Uridias Ranch Rd	8	480	ACWP	0	2	1	0	0	1975	85	57	$1,625	$3,250	$3,148	$139	$53,056	$66,654	$128,592	$86,233
67	4	Ashland Dr	6	390	ACWP	0	2	0	0	0	1955	85	37	$1,430	$2,860	$3,148	$129	$40,793	$50,138	$98,890	$43,046
67	4	Canton Dr	6	310	ACWP	0	0	1	0	0	1965	85	47	$1,430	$0	$3,148	$129	$32,425	$39,853	$76,887	$42,514
67	4	Monmouth Dr	6	590	ACWP	0	1	2	0	0	1955	85	37	$1,430	$1,430	$3,148	$129	$61,712	$75,850	$144,841	$63,049
67	4	Roswell Dr	8	920	ACWP	0	2	1	0	0	1955	85	37	$1,625	$3,250	$3,148	$139	$101,690	$127,754	$240,279	$104,592
67	5	Girard Dr	6	630	ACWP	0	2	1	0	0	1965	85	47	$1,430	$2,860	$3,148	$129	$65,896	$80,992	$155,843	$86,172
67	5	Stulman	6	510	ACWP	0	1	1	0	0	1965	85	47	$1,430	$1,430	$3,148	$129	$53,344	$65,565	$125,857	$69,592
67	5	Wylie Dr	8	255	ACWP	0	1	0	0	0	1965	85	47	$1,625	$1,625	$3,148	$139	$28,186	$35,410	$69,765	$38,576
67	6	Edsel Dr	10	270	ACWP	0	1	0	0	0	1975	85	57	$1,925	$1,925	$3,148	$153	$32,083	$41,269	$80,011	$53,654
67	6	Ferreira Ct	6	360	ACWP	0	1	1	1	0	1975	85	57	$1,430	$1,430	$3,148	$129	$37,655	$46,281	$90,261	$60,528
67	6	La Baree	6	575	ACWP	0	1	1	0	0	1965	85	47	$1,430	$1,430	$3,148	$129	$60,143	$73,922	$141,282	$78,121
67	6	Lacey Dr	8	465	ACWP	0	1	1	0	0	1975	85	57	$1,625	$1,625	$3,148	$139	$51,398	$64,571	$123,070	$82,529
67	6	Louise	6	150	ACWP	0	1	0	1	0	1965	85	47	$1,430	$1,430	$3,148	$129	$15,690	$19,284	$40,427	$22,354
67	6	Patricia	6	220	ACWP	0	0	0	1	0	1965	85	47	$1,430	$0	$3,148	$129	$23,011	$28,283	$55,529	$30,705
67	6	Pedro Ave	8	530	ACWP	0	2	1	0	0	1975	85	57	$1,625	$3,250	$3,148	$139	$58,582	$73,598	$141,284	$94,743
67	1,2,4	Canton Dr	10	860	ACWP	0	2	1	0	0	1955	85	37	$1,925	$3,850	$3,148	$153	$102,189	$131,450	$245,182	$106,726
67	1,4	Roswell Dr	6	360	ACWP	0	1	1	1	0	1955	85	37	$1,430	$1,430	$3,148	$129	$37,655	$46,281	$90,261	$39,290
67	2,3	Canton Dr	8	1,130	ACWP	0	6	2	0	0	1965	85	47	$1,625	$9,750	$3,148	$139	$124,902	$156,916	$300,444	$166,128
67	2,3,6	La Crosse Dr	8	1,480	ACWP	0	5	3	0	0	1965	85	47	$1,625	$8,125	$3,148	$139	$163,588	$205,518	$387,571	$214,304
67	2,5	Bixby Dr	6	2,060	ACWP	0	8	3	0	0	1965	85	47	$1,430	$11,440	$3,148	$129	$215,469	$264,832	$504,244	$278,817
67	2,5	Temple Dr	10	1,860	ACWP	0	5	4	0	0	1965	85	47	$1,925	$9,625	$3,148	$153	$221,014	$284,298	$527,783	$291,833
67	3,6	Falcato Dr	8	1,700	ACWP	0	9	1	0	2	1975	85	57	$1,625	$14,625	$3,148	$139	$187,905	$236,068	$450,274	$301,949
67	5,6	Dalton Dr	6	630	ACWP	0	2	1	0	0	1965	85	47	$1,430	$2,860	$3,148	$129	$65,896	$80,992	$155,843	$86,172
67	5,6	Wylie Dr	8	1,030	ACWP	0	5	2	0	0	1965	85	47	$1,625	$8,125	$3,148	$139	$113,849	$143,029	$273,346	$151,144
68	1	Edsel Dr	6	695	ACWP	0	1	1	0	0	1955	85	37	$1,430	$1,430	$3,148	$129	$72,695	$89,349	$169,758	$73,895
68	1	Freeland Dr	6	575	ACWP	0	1	1	0	0	1955	85	37	$1,430	$1,430	$3,148	$129	$60,143	$73,922	$141,282	$61,499
68	1	Holly Wy	6	290	ACWP	0	0	1	1	0	1965	85	47	$1,430	$0	$3,148	$129	$30,333	$37,282	$72,141	$39,890
68	1	Mars Ct	6	80	ACWP	0	1	0	0	0	1955	85	37	$1,430	$1,430	$3,148	$129	$8,368	$10,285	$23,816	$10,367
68	1	Monmouth Dr	6	350	ACWP	0	1	1	0	0	1955	85	37	$1,430	$1,430	$3,148	$129	$36,609	$44,996	$87,888	$38,257
68	1	Roswell Dr	8	870	ACWP	0	2	2	0	1	1955	85	37	$1,625	$3,250	$3,148	$139	$96,163	$120,811	$227,587	$99,067
68	2	Bixby Dr	6	260	ACWP	0	1	1	0	0	1965	85	47	$1,430	$1,430	$3,148	$129	$27,195	$33,425	$66,531	$36,788
68	2	Lomer Wy	6	270	ACWP	0	1	0	1	0	1965	85	47	$1,430	$1,430	$3,148	$129	$28,241	$34,711	$68,904	$38,100
68	2	Stulman	6	200	ACWP	0	1	0	0	0	1965	85	47	$1,430	$1,430	$3,148	$129	$20,919	$25,712	$52,293	$28,915
68	2	Temple Dr	10	660	ACWP	0	2	1	0	1	1965	85	47	$1,925	$3,850	$3,148	$153	$78,424	$100,880	$189,880	$104,993
68	3	Carlsbad Ct	6	60	ACWP	0	1	0	0	0	1975	85	57	$1,430	$1,430	$3,148	$129	$6,276	$7,714	$19,070	$12,788

Schaaf & Wheeler Worksheet B - Water System Pipe Components and Estimated Replacement Costs

Enter Current SFENR Date (mm/yyyy):	02/2003												Enter Current Year		Enter Coupling Unit Cost					
Enter Current SFENR Construction Cost Index:	7821												2003		$1,574					
A	B	C	D	E	F	G	H	I	J	K	L	M	N=M-(Year-L)	O	P=(G+H)*O	Q	R	S	T=R*E	U=P+Q+S+T	
W-Plat #	Section #	Street	Pipe Diameter (inches)	Pipe Length (FT)	Pipe Material	B	G	FH	BO	ARV A&V	Year Pipe Installed	Pipe Life Expectancy (yr)	Pipe Life Left (yr)	Valve Unit Cost ($) (see Worksheet D)	Valve Cost ($)	Coupling Cost ($)	Pipe Repl. Cost ($/LF) (see Worksheet C)	ACWP & ACP Disposal ($/LF) (see Worksheet E)	Total Pipe Replacement Cost ($)	Total Cost Current SFENR ($)	Estimated Value Feb 2003 ($) SFENR=7821
												SFENR Construction Cost Index:		7410	7410	7410	7684	7684	7684	7821	
68	3	La Baree	6	130	ACWP	0	1	0	0	0	1965	85	47	$1,430	$1,430	$3,148	$129	$13,598	$16,713	$35,681	$19,730
68	3	Patricia	6	60	ACWP	0	1	0	0	0	1965	85	47	$1,430	$1,430	$3,148	$129	$5,276	$7,714	$19,070	$10,545
68	4	Acadia Ave	6	350	ACWP	0	0	1	0	0	1965	85	47	$1,430	$0	$3,148	$129	$36,609	$44,996	$86,379	$47,763
68	4	Glacier Dr	6	430	ACWP	0	1	1	0	0	1965	85	47	$1,430	$1,430	$3,148	$129	$44,977	$55,281	$106,873	$59,094
68	4	Lassen Ave	6	650	ACWP	0	2	1	0	0	1965	85	47	$1,430	$2,860	$3,148	$129	$67,988	$83,564	$160,589	$88,796
68	4	off Acadia Ave	8	910	ACWP	0	4	1	0	0	1965	85	47	$1,625	$6,500	$3,148	$139	$100,585	$126,366	$241,171	$133,353
68	4	off Crater Lake Ave	8	700	ACWP	0	1	0	0	0	1965	85	47	$1,625	$1,625	$3,148	$139	$77,373	$97,204	$182,721	$101,034
68	4	Olympic Dr	6	380	ACWP	0	1	0	0	0	1965	85	47	$1,430	$1,430	$3,148	$129	$39,747	$48,853	$95,007	$52,534
68	5	Mt Rainier Ave	6	970	ACWP	0	2	1	0	0	1965	85	47	$1,430	$2,860	$3,148	$129	$101,459	$124,703	$236,526	$130,785
68	6	Grand Teton Dr	6	850	ACWP	0	2	2	0	0	1975	85	57	$1,430	$2,860	$3,148	$129	$88,907	$109,276	$208,050	$139,516
68	1,2,3	Edsel Dr	10	1,120	ACWP	0	11	3	0	0	1965	85	47	$1,925	$21,175	$3,148	$153	$133,084	$171,190	$335,359	$185,434
68	1,2,3	Yosemite Dr	12	3,110	ACWP	0	7	6	0	0	1955	85	37	$2,155	$15,085	$3,148	$166	$397,017	$517,113	$949,637	$413,371
68	2,3	Shenandoah Ave	6	1,995	ACWP	0	5	3	0	0	1965	85	47	$1,430	$7,150	$3,148	$129	$208,671	$256,476	$484,291	$267,785
68	2,5,6	Sequoia Dr	10	1,470	ACWP	0	7	3	0	0	1965	85	47	$1,925	$13,475	$3,148	$153	$174,672	$224,687	$424,009	$234,452
68	3,5,6	Big Bend Dr	6	2,000	ACWP	0	5	3	0	1	1965	85	47	$1,430	$7,150	$3,148	$129	$209,194	$257,119	$485,478	$268,441
68	3,6	Falcato Dr	8	1,295	ACWP	0	4	0	0	0	1975	85	57	$1,625	$6,500	$3,148	$139	$143,140	$179,828	$338,897	$227,260
68	4,5	off Yosemite Dr	8	1,220	ACWP	0	6	2	0	0	1965	85	47	$1,625	$9,750	$3,148	$139	$134,850	$169,413	$323,289	$178,760
68	5,6	Crater Lake Ave	6	1,990	ACWP	0	5	3	0	1	1965	85	47	$1,430	$7,150	$3,148	$129	$208,148	$255,833	$483,105	$267,128
68	5,6	Everglades Dr	6	1,990	ACWP	0	5	3	0	1	1965	85	47	$1,430	$7,150	$3,148	$129	$208,148	$255,833	$483,105	$267,128
69	1	off Saratoga Dr	8	130	ACWP	0	1	1	0	0	1965	85	47	$1,625	$1,625	$3,148	$139	$14,369	$18,052	$38,036	$21,032
69	1	Olympic Dr	6	430	ACWP	0	0	1	0	0	1965	85	47	$1,430	$0	$3,148	$129	$44,977	$55,281	$105,363	$58,260
69	1	Platt Ave	6	920	ACWP	0	1	1	0	0	1965	85	47	$1,430	$1,430	$3,148	$129	$96,229	$118,275	$223,152	$123,390
69	1	Saratoga Dr	6	1,050	ACWP	0	2	1	0	0	1965	85	47	$1,430	$2,860	$3,148	$129	$109,827	$134,987	$255,511	$141,282
69	3	Galindo Ct	6	490	PVC	0	2	0	2	0	1985	70	52	$1,430	$2,860	$3,148	$129	$0	$62,994	$70,456	$52,339
69	3	Skyline Dr	8	390	PVC	0	2	1	0	0	1985	70	52	$1,625	$3,250	$3,148	$139	$0	$54,157	$61,873	$45,963
69	3	West Ridge Dr	10	225	PVC	0	1	0	0	0	1985	70	52	$1,925	$1,925	$3,148	$153	$0	$34,391	$40,357	$29,979
69	3	West Ridge Dr	10	410	PVC	0	2	1	0	0	1985	70	52	$1,925	$3,850	$3,148	$153	$0	$62,668	$71,169	$52,868
69	4	Courtland Ave	6	930	ACWP	0	3	2	0	0	1975	85	57	$1,430	$4,290	$3,148	$129	$97,275	$119,560	$228,543	$153,259
69	4	Mt Shasta Ave	8	340	ACWP	0	1	1	0	0	1965	85	47	$1,625	$1,625	$3,148	$139	$37,581	$47,214	$91,341	$50,506
69	4	Park Victoria Dr	12	100	ACWP	0	0	1	0	0	1965	85	47	$2,155	$0	$3,148	$166	$12,766	$16,627	$33,239	$18,379
69	5	Clear Lake Ct	4	150	ACWP	0	0	0	1	0	1975	85	57	$1,365	$0	$3,148	$120	$14,850	$18,050	$36,808	$24,683
69	5	Clear Lake Ct	6	80	ACWP	0	0	1	0	0	1975	85	57	$1,430	$0	$3,148	$129	$8,368	$10,285	$22,307	$14,959
69	6	Eagle Ridge Wy	6	200	PVC	0	1	1	1	0	1985	70	52	$1,430	$1,430	$3,148	$129	$0	$25,712	$31,001	$23,029
69	6	Eagle Ridge Wy	8	320	PVC	0	1	1	0	0	1985	70	52	$1,625	$1,625	$3,148	$139	$0	$44,436	$50,264	$37,339
69	6	Rocky Mountain Ave	8	810	ACWP	0	2	2	0	0	1965	85	47	$1,625	$3,250	$3,148	$139	$89,531	$112,479	$212,357	$117,421
69	6	Tahoe Dr	6	1,200	ACWP	0	2	2	0	0	1965	85	47	$1,430	$2,860	$3,148	$129	$125,516	$154,271	$291,106	$160,965
69	1,2,3	Yellowstone Ave	10	2,115	ACWP	0	5	4	0	0	1965	85	47	$1,925	$9,625	$3,148	$153	$251,314	$323,274	$598,293	$330,821
69	1,4	Park Victoria Dr	10	1,315	ACWP	0	6	3	0	0	1965	85	47	$1,925	$11,550	$3,148	$153	$156,255	$200,996	$379,119	$209,631
69	2,3	Grand Teton Dr	6	890	ACWP	0	1	1	0	0	1975	85	57	$1,430	$1,430	$3,148	$129	$93,091	$114,418	$216,033	$144,869
69	2,4	Mt Diablo Ave	6	1,040	ACWP	0	2	1	0	0	1965	85	47	$1,430	$2,860	$3,148	$129	$108,781	$133,702	$253,138	$139,970
69	2,5	off Yellowstone Ave	8	2,060	ACWP	0	6	3	0	0	1965	85	47	$1,625	$9,750	$3,148	$139	$227,697	$286,058	$536,509	$296,658
69	3,6	Yellowstone Ave	12	2,000	ACWP	0	5	4	0	0	1965	85	47	$2,155	$10,775	$3,148	$166	$255,316	$332,548	$613,019	$338,963
69	4,5	Mt Shasta Ave	6	1,200	ACWP	0	3	1	0	0	1965	85	47	$1,430	$4,290	$3,148	$129	$125,516	$154,271	$292,616	$161,799
69	4,5	Portola Dr	6	1,030	ACWP	0	2	1	0	0	1965	85	47	$1,430	$2,860	$3,148	$129	$107,735	$132,416	$250,765	$138,658
69	4,5	Sonoma Dr	6	1,030	ACWP	0	2	1	0	0	1965	85	47	$1,430	$2,860	$3,148	$129	$107,735	$132,416	$250,765	$138,658
70	1	Bee Ct	6	240	ACWP	0	1	1	1	0	1985	85	67	$1,430	$1,430	$3,148	$129	$25,103	$30,854	$61,785	$48,701
70	1	Chewpoint Ave	8	210	ACWP	0	1	0	0	1	1975	85	57	$1,625	$1,625	$3,148	$139	$23,212	$29,161	$58,342	$39,124
70	1	Courtland Ave	6	340	ACWP	0	1	1	0	1	1975	85	57	$1,430	$1,430	$3,148	$129	$35,563	$43,710	$85,515	$57,346
70	1	off Park Victoria Dr	12	750	ACWP	0	2	0	0	0	1975	85	57	$2,155	$4,310	$3,148	$166	$95,744	$124,706	$232,243	$155,739
70	2	Clear Lake Ave	8	1,015	ACWP	0	3	2	0	1	1975	85	57	$1,625	$4,875	$3,148	$139	$112,191	$140,946	$266,108	$178,449
70	2	Clear Lake Ct	6	180	ACWP	0	1	1	0	0	1975	85	57	$1,430	$1,430	$3,148	$129	$18,827	$23,141	$47,547	$31,884

Schaaf & Wheeler Worksheet B - Water System Pipe Components and Estimated Replacement Costs

Enter Current SFENR Date (mm/yyyy):	02/2003											Enter Current Year		Enter Coupling Unit Cost					
Enter Current SFENR Construction Cost Index:	7821											2003			$1,574				
A	B	C	D	E	F	G	H	I	J	K	L	M	N=M-(Year-L)	O	P=(G+H)*O	Q	R	S	T=R*E	U=P+Q+S+T	
W-Plat #	Section #	Street	Pipe Diameter (inches)	Pipe Length (FT)	Pipe Material	B	G	FH	BO	ARV A&V	Year Pipe Installed	Pipe Life Expectancy (yr)	Pipe Life Left (yr)	Valve Unit Cost ($) (see Worksheet D)	Valve Cost ($)	Coupling Cost ($)	Pipe Repl. Cost ($/LF) (see Worksheet C)	ACWP & ACP Disposal ($/LF) (see Worksheet E)	Total Pipe Replacement Cost ($)	Total Cost Current SFENR ($)	Estimated Value Feb 2003 ($) SFENR=7821
												SFENR Construction Cost Index:		7410	7410	7410	7684	7684	7684	7821	
70	2	Rocky Mountain Ave	8	450	ACWP	0	1	0	0	0	1965	85	47	$1,625	$1,625	$3,148	$139	$49,740	$62,488	$119,262	$65,945
70	2	Sassone Ct	8	240	PVC	0	1	1	1	0	1975	70	42	$1,625	$1,625	$3,148	$139	$0	$33,327	$38,958	$23,375
70	3	Highland Ct	6	570	ACWP	0	7	3	0	0	1975	85	57	$1,430	$10,010	$3,148	$129	$59,620	$73,279	$149,151	$100,019
70	3	Landess Ave	14	980	ACWP	2	0	2	0	0	1975	85	57	$3,142	$6,285	$3,148	$178	$134,312	$173,958	$323,710	$217,076
70	3	Lowland Ct	6	550	ACWP	0	4	1	0	0	1975	85	57	$1,430	$5,720	$3,148	$129	$57,528	$70,708	$139,877	$93,800
70	4	Dempsey Rd	12	330	PVC	0	2	2	0	0	1985	70	52	$2,155	$4,310	$3,148	$166	$0	$54,870	$63,718	$47,333
70	4	Landess Ave	16	850	ACWP	1	0	2	0	1	1975	85	57	$5,035	$5,035	$3,148	$190	$124,977	$161,918	$300,635	$201,602
70	1,2	Big Basin Dr	8	1,020	ACWP	0	2	2	0	0	1975	85	57	$1,625	$3,250	$3,148	$139	$112,743	$141,641	$265,662	$178,150
70	1,2	Clear Lake Ave	6	1,070	ACWP	0	3	2	0	0	1975	85	57	$1,430	$4,290	$3,148	$129	$111,919	$137,559	$261,766	$175,537
70	1,4	Park Victoria Dr	12	1,535	ACWP	0	3	6	0	1	1965	85	47	$2,155	$6,465	$3,148	$166	$195,955	$255,231	$469,369	$259,528
70	2,3	Butano Dr	6	1,325	ACWP	0	4	3	0	0	1965	85	47	$1,430	$5,720	$3,148	$129	$138,591	$170,341	$323,788	$179,036
70	2,3	off Landess Ave	8	1,180	ACWP	0	2	0	0	0	1965	85	47	$1,625	$3,250	$3,148	$139	$130,428	$163,859	$306,276	$169,352
70	3,4,5	Landess Ave	12	1,490	ACWP	0	3	4	0	0	1975	85	57	$2,155	$6,465	$3,148	$166	$190,211	$247,749	$455,897	$305,719
75	1	off Sepulveda	8	130	ACWP	0	1	0	0	0	1975	85	57	$1,625	$1,625	$3,148	$139	$14,369	$18,052	$38,036	$25,506
75	1	Piedmont Rd	10	90	DIP	0	0	0	0	0	1975	100	72	$1,925	$0	$3,148	$153	$0	$13,756	$17,324	$12,473
75	4	Dolores Dr	6	310	ACWP	0	1	1	0	0	1975	85	57	$1,430	$1,430	$3,148	$129	$32,425	$39,853	$78,396	$52,572
75	4	Lacey Dr	8	1,470	ACWP	0	4	3	0	1	1975	85	57	$1,625	$6,500	$3,148	$139	$162,483	$204,129	$383,317	$257,048
75	4	Mattos Dr	8	910	ACWP	0	3	3	0	0	1975	85	57	$1,625	$4,875	$3,148	$139	$100,585	$126,366	$239,456	$160,576
75	5	Piedmont Rd	16	260	SCP	1	0	0	0	0	1975	35	7	$5,035	$5,035	$3,148	$190	$0	$49,528	$59,045	$11,809
75	1,4	Sepulveda	8	420	ACWP	0	1	1	0	1	1975	85	57	$1,625	$1,625	$3,148	$139	$46,424	$58,323	$111,647	$74,869
75	4,5	Edsel Dr	10	1,280	ACWP	0	4	3	0	1	1975	85	57	$1,925	$7,700	$3,148	$153	$152,096	$195,646	$365,378	$245,018
75	4,5	Yosemite Dr	12	430	ACWP	0	2	1	0	0	1965	85	47	$2,155	$4,310	$3,148	$166	$54,893	$71,498	$136,511	$75,483
76	1	Carlsbad Ct	6	110	ACWP	0	1	1	0	0	1975	85	57	$1,430	$1,430	$3,148	$129	$11,506	$14,142	$30,935	$20,745
76	1	Carlsbad St	4	340	ACWP	0	0	1	0	0	1975	85	57	$1,365	$0	$3,148	$120	$33,660	$40,913	$79,222	$53,126
76	1	Carlsbad St	6	280	ACWP	0	2	1	0	0	1975	85	57	$1,430	$2,860	$3,148	$129	$29,287	$35,997	$72,786	$48,810
76	1	off Yosemite Dr	8	710	ACWP	0	2	0	0	0	1965	85	47	$1,625	$3,250	$3,148	$139	$78,478	$98,593	$186,974	$103,386
76	1	Yosemite Dr	12	860	ACWP	0	2	2	0	0	1965	85	47	$2,155	$4,310	$3,148	$166	$109,786	$142,996	$265,151	$146,613
76	4	Glenview Ct	6	200	PVC	0	1	1	1	0	1985	70	52	$1,430	$1,430	$3,148	$129	$0	$25,712	$31,001	$23,029
76	4	Grand Teton Dr	6	170	ACWP	0	1	1	0	0	1975	85	57	$1,430	$1,430	$3,148	$129	$17,781	$21,855	$45,174	$30,293
76	4	Grand Teton Dr	8	425	ACWP	0	1	1	0	0	1975	85	57	$1,625	$1,625	$3,148	$139	$46,976	$59,017	$112,917	$75,721
76	4	off Crater Lake Ave	10	350	ACWP	0	1	0	0	0	1965	85	47	$1,925	$1,925	$3,148	$153	$41,589	$53,497	$102,132	$56,473
76	5	Lauryn Ridge Ct	6	270	PVC	0	1	1	1	0	1985	70	52	$1,430	$1,430	$3,148	$129	$0	$34,711	$40,160	$29,833
76	1,2	Bliss Ave	6	975	ACWP	0	4	3	0	0	1965	85	47	$1,430	$5,720	$3,148	$129	$101,982	$126,345	$240,731	$133,110
76	1,2	Mesa Verde Dr	8	965	ACWP	0	3	1	0	0	1965	85	47	$1,625	$4,875	$3,148	$139	$106,664	$134,003	$253,417	$140,124
76	1,2	Petersburg Dr	6	985	ACWP	0	3	2	0	0	1965	85	47	$1,430	$4,290	$3,148	$129	$103,028	$126,631	$241,595	$133,588
76	1,4	off Seacliff Dr	8	610	ACWP	0	2	0	0	0	1965	85	47	$1,625	$3,250	$3,148	$139	$67,425	$84,707	$161,591	$89,350
76	2,4	Shiloh Ave	6	1,130	ACWP	0	4	3	0	0	1965	85	47	$1,430	$5,720	$3,148	$129	$118,194	$145,272	$277,514	$153,449
76	2,5	Piedmont Rd	16	1,360	SCP	2	0	0	1	0	1965	35	-3	$5,035	$10,070	$3,148	$190	$0	$259,068	$277,628	$0
76	4,5	Glenview Dr	8	1,400	PVC	0	4	3	0	1	1985	70	52	$1,625	$6,500	$3,148	$139	$0	$194,409	$208,050	$154,552
76	4,5	Seacliff Dr	8	1,120	ACWP	0	2	2	0	0	1965	85	47	$1,625	$3,250	$3,148	$139	$123,797	$155,527	$291,046	$160,931
76	4,5	Skyline & Kristin Ridge	8	1,970	PVC	0	7	5	0	0	1985	70	52	$1,625	$11,375	$3,148	$139	$0	$273,561	$293,756	$218,218
77	1	Cresent Ter	8	540	PVC	0	1	1	0	0	1985	70	52	$1,625	$1,625	$3,148	$139	$0	$74,986	$81,358	$60,437
77	1	Incline Ct	8	450	PVC	0	3	1	0	1	1985	70	52	$1,625	$4,875	$3,148	$139	$0	$62,488	$72,068	$53,536
77	1	Skyline Dr	10	160	PVC	0	0	0	0	0	1985	70	52	$1,925	$0	$3,148	$153	$0	$24,456	$28,213	$20,956
77	1	West Ridge Dr	10	365	PVC	0	1	1	0	0	1985	70	52	$1,925	$1,925	$3,148	$153	$0	$55,790	$62,136	$46,158
77	1	Whitecomb Ct	8	645	PVC	0	1	2	1	0	1985	70	52	$1,625	$1,625	$3,148	$139	$0	$89,567	$96,198	$71,461
77	4	Calle De Cuestanara	8	355	PVC	0	2	1	0	0	1985	70	52	$1,625	$3,250	$3,148	$139	$0	$49,296	$56,926	$42,288
77	4	Calle Mesa Alta	8	390	PVC	0	1	1	0	0	1985	70	52	$1,625	$1,625	$3,148	$139	$0	$54,157	$60,158	$44,689
77	4	Calle Vista Verde	8	740	PVC	0	4	1	0	0	1985	70	52	$1,625	$6,500	$3,148	$139	$0	$102,759	$114,770	$85,258
77	4	Eagle Ridge Wy	8	525	PVC	0	1	2	0	0	1985	70	52	$1,625	$1,625	$3,148	$139	$0	$72,903	$79,238	$58,862
77	4	Ornellas & Monte	8	680	PVC	0	5	3	1	3	1985	70	52	$1,625	$8,125	$3,148	$139	$0	$94,427	$108,005	$80,232

Schaaf & Wheeler Worksheet B - Water System Pipe Components and Estimated Replacement Costs

Enter Current SFENR Date (mm/yyyy):	02/2003											Enter Current Year		Enter Coupling Unit Cost					
Enter Current SFENR Construction Cost Index:	7821											2003			$1,574				
A	B	C	D	E	F	G	H	I	J	K	L	M	N=M-(Year-L)	O	P=(G+H)*O	Q	R	S	T=R*E	U=P+Q+S+T	
W-Plat #	Section #	Street	Pipe Diameter (inches)	Pipe Length (FT)	Pipe Material	B	G	FH	BO	ARV A&V	Year Pipe Installed	Pipe Life Expectancy (yr)	Pipe Life Left (yr)	Valve Unit Cost ($) (see Worksheet D)	Valve Cost ($)	Coupling Cost ($)	Pipe Repl. Cost ($/LF) (see Worksheet C)	ACWP & ACP Disposal ($/LF) (see Worksheet E)	Total Pipe Replacement Cost ($)	Total Cost Current SFENR ($)	Estimated Value Feb 2003 ($) SFENR=7821
												SFENR Construction Cost Index:		7410	7410	7410	7684	7684	7684	7821	
77	5	Cresthaven St	8	500	PVC	0	2	0	0	0	1985	70	52	$1,625	$3,250	$3,148	$139	$0	$69,432	$77,420	$57,512
77	5	Moulton & Dubois	8	1,020	PVC	0	3	3	0	0	1985	70	52	$1,625	$4,875	$3,148	$139	$0	$141,641	$152,628	$113,381
77	1,2	Chipman Dr	8	1,250	PVC	0	3	1	0	0	1985	70	52	$1,625	$4,875	$3,148	$139	$0	$173,579	$185,135	$137,529
77	1,2	Lynwood Ter	8	700	PVC	0	2	1	0	0	1985	70	52	$1,625	$3,250	$3,148	$139	$0	$97,204	$105,686	$78,510
77	1,2	Pinard St	8	1,130	PVC	0	4	2	1	0	1985	70	52	$1,625	$6,500	$3,148	$139	$0	$156,916	$169,890	$126,204
77	1,4	Fieldcrest & Blueridge	8	1,810	PVC	0	5	3	0	0	1985	70	52	$1,625	$8,125	$3,148	$139	$0	$251,343	$267,712	$198,872
77	2,5	Cascade St	8	520	PVC	0	2	2	0	0	1985	70	52	$1,625	$3,250	$3,148	$139	$0	$72,209	$80,246	$59,611
77	2,5	Ridgemont Dr	8	1,220	PVC	0	5	3	0	0	1985	70	52	$1,625	$8,125	$3,148	$139	$0	$169,413	$184,325	$136,927
77	4,5	Calle Mesa Alta	8	610	PVC	0	3	4	0	0	1985	70	52	$1,625	$4,875	$3,148	$139	$0	$84,707	$94,681	$70,335
77	4,5	Cuesta Dr	8	1,540	PVC	0	5	3	0	2	1985	70	52	$1,625	$8,125	$3,148	$139	$0	$213,849	$229,552	$170,524
77	4,5	off Blueridge Dr	10	440	PVC	0	2	0	0	0	1985	70	52	$1,925	$3,850	$3,148	$153	$0	$67,253	$75,836	$56,335
78	1	Calle Mesa Alta	8	350	PVC	0	1	0	0	0	1985	70	52	$1,625	$1,625	$3,148	$139	$0	$48,602	$54,504	$40,489
78	1	Landess Ave	12	130	ACWP	0	2	0	0	0	1975	85	57	$2,155	$4,310	$3,148	$166	$16,596	$21,616	$46,762	$31,358
78	1	Landess Ave	14	80	ACWP	0	0	0	0	0	1975	85	57	$3,142	$0	$3,148	$178	$10,964	$14,201	$28,935	$19,404
78	1	Montara Dr	6	140	PVC	0	1	1	0	0	1985	70	52	$1,430	$1,430	$3,148	$129	$0	$17,998	$23,150	$17,197
78	1	Terra Alta Ct	6	180	PVC	0	2	0	1	1	1985	70	52	$1,430	$2,860	$3,148	$129	$0	$23,141	$29,893	$22,207
78	1	Terra Alta Dr	8	480	PVC	0	2	3	0	0	1985	70	52	$1,625	$3,250	$3,148	$139	$0	$66,654	$74,593	$55,412
78	1	Yellowstone Ave	12	380	ACWP	0	0	1	0	0	1965	85	47	$2,155	$0	$3,148	$166	$48,510	$63,184	$117,004	$64,696
87	1	Emergency Access Rd	8	1,000	ACWP	0	1	2	0	1	1985	85	67	$1,625	$1,625	$3,148	$139	$110,533	$138,863	$258,871	$204,051
87	1,4,5	Emergency Access Rd	12	1,820	ACWP	0	1	0	0	0	1985	85	67	$2,155	$2,155	$3,148	$166	$232,338	$302,619	$550,072	$433,586
87	3,6	off Emergency Access Rd	12	1,620	ACWP	0	0	1	0	0	1985	85	67	$2,155	$0	$3,148	$166	$206,806	$269,364	$487,965	$384,631
87	4,5	Pebble Beach Ct	8	1,140	ACWP	0	1	2	0	1	1985	85	67	$1,625	$1,625	$3,148	$139	$126,007	$158,304	$294,407	$232,062
88	1	Andrews Ct	6	440	ACWP	0	1	1	1	1	1985	85	67	$1,430	$1,430	$3,148	$129	$46,023	$56,566	$109,246	$86,111
88	1	Country Club Dr	8	1,430	ACWP	0	2	3	0	1	1985	85	67	$1,625	$3,250	$3,148	$139	$158,062	$198,574	$369,734	$291,437
88	2	Augusta Ct	6	255	ACWP	0	1	1	0	0	1985	85	67	$1,430	$1,430	$3,148	$129	$26,672	$32,783	$65,344	$51,507
88	2	off Augusta & Pinehurst	6	955	PVC	0	2	1	2	1	1985	70	52	$1,430	$2,860	$3,148	$129	$0	$122,774	$131,300	$97,537
88	2	Pebble Beach Ct	8	185	ACWP	0	1	0	0	0	1985	85	67	$1,625	$1,625	$3,148	$139	$20,449	$25,690	$51,997	$40,986
88	2	Pinehurst Ct	12	120	ACWP	0	1	1	0	0	1985	85	67	$2,155	$2,155	$3,148	$166	$15,319	$19,953	$41,496	$32,709
88	2	Tularcitos Dr	8	375	ACWP	0	3	1	0	0	1985	85	67	$1,625	$4,875	$3,148	$139	$41,450	$52,074	$103,655	$81,705
88	1,2	Andrews Ct	8	415	ACWP	0	1	1	0	0	1985	85	67	$1,625	$1,625	$3,148	$139	$45,871	$57,628	$110,378	$87,004
88	1,2	Pinehurst Ct	6	340	ACWP	0	1	1	1	1	1985	85	67	$1,430	$1,430	$3,148	$129	$35,563	$43,710	$85,515	$67,406
88	1,2	Tularcitos Dr	6	340	ACWP	0	1	1	0	0	1985	85	67	$1,430	$1,430	$3,148	$129	$35,563	$43,710	$85,515	$67,406
88	1,4	Tularcitos Dr	12	1,215	ACWP	0	2	1	0	0	1985	85	67	$2,155	$4,310	$3,148	$166	$155,105	$202,023	$371,353	$292,714
88	2,4	Tularcitos Dr	12	1,060	ACWP	0	2	0	0	0	1985	85	67	$2,155	$4,310	$3,148	$166	$135,318	$176,251	$324,983	$256,163
93	1,2	N/A	12	1,685	ACP	0	2	1	0	0	1985	85	67	$2,155	$4,310	$3,148	$166	$215,104	$280,172	$511,959	$403,544
		Final Sum:		######		251	2291	1716	195	292					$5,082,498	#########		$80,573,310	$130,746,227	$224,456,994	$144,115,428

Schaaf & Wheeler Worksheet F - Water Tanks

Input Cell
Output Cell

Enter Current Year = 2003

Table 1 - Cost Analysis

A	B	C	D	
Location[a]	Capacity (gal)[a]	Unit Cost ($/gal)[b] SFENR=6846	Total Cost ($) Feb 2003 SFENR=7821	Estimated Value Feb 2003 ($) SFENR=7821
Gibraltar (SFWD)	5,000,000	$0.79	**$4,513,000**	$4,016,570
Gibraltar (SCVWD)	5,000,000	$0.79	**$4,513,000**	$4,016,570
Tularcitos (SFWD)	300,000	$0.79	**$271,000**	$189,700
Minnis (SFWD)	340,000	$0.79	**$307,000**	$214,900
Zone 2A-Ayer (SFWD)	5,000,000	$0.79	**$4,513,000**	$4,106,830
				$12,544,570

Table 2 - Storage Tank Life Expectancy

A	B	C	D	E	F
Location[a]	Year Installed	Tank Material	Concrete Tank Life Expectancy (yr)[c]	Steel Tank Life Expectancy (yr)[c]	**Remaining Tank Life (yr)**
Gibraltar (SFWD)	1992	Concrete	100	70	**89**
Gibraltar (SCVWD)	1992	Concrete	100	70	**89**
Tularcitos (SFWD)	1982	Steel	100	70	**49**
Minnis (SFWD)	1982	Steel	100	70	**49**
Zone 2A-Ayer (SFWD)	1994	Concrete	100	70	**91**

[a]Source: City of Milpitas, Utility System Inventory

[b]Cost for tank ($/gallon) is taken from the City of Milpitas 1999 Concept Level Cost Estimate, received from the City 10/12/2001

[c]Source: Peder C. Jorgenson PE, Schaaf & Wheeler

Schaaf & Wheeler Worksheet G - Water System - Booster Pump Stations

Input Cell
Output Cell

Table 1 - Cost Analysis

A	B	C	D	E	F	G	H		
Location[a]	Pump Type[a]	Horse Power (HP)[a]	Number of Pumps[a]	Building, Pump, and Electrical Unit Cost SFENR=6846 ($/HP)[b]	Replace only Pump and Electrical[c] SFENR=7410($)	Replace only Building[d] SFENR=7410($)	Total Cost ($) Feb 2003 SFENR=7821	Estimated Value Pump and Elec. Feb 2003 SFENR=7821	Estimated Value Building Feb 2003 SFENR=7821
Gibraltar (SFWD/SCVWD)	DSL	600	2	$1,950	$6,059,000	$1,515,000	**$7,574,000**	$3,393,040	$1,181,700
	DSL	400	3	$1,950					
	VFD/ELEC	400	2	$1,950					
	VFD/ELEC	200	1	$1,950					
Country Club	ELEC	250	2	$1,950	$891,000	$223,000	**$1,114,000**	$142,560	$129,340
Tularcitos	ELEC	250	2	$1,950	$891,000	$223,000	**$1,114,000**	$142,560	$129,340
Zone 2A-Ayer	ELEC	200	3	$1,950	$1,070,000	$267,000	**$1,337,000**	$684,800	$218,940
								$4,362,960	$1,659,320

TOTAL	**$6,022,280**

Table 2 - Pump and Electrical, and Building Life Expectancy

A	B	C	D	E	F
Location[a]	Year Installed	Pump and Electrical Life Expectancy (yr)	**Remaining Pump and Electrical Life (yr)**	Building Life Expectancy (yr)	**Remaining Building Life (yr)**
Gibraltar (SFWD/SCVWD)	1992	25	14	50	39
Country Club	1982	25	4	50	29
Tularcitos	1982	25	4	50	29
Zone 2A-Ayer	1994	25	16	50	41

[a]Source: City of Milpitas Utility System Inventory

[b]Cost for pumps ($/horsepower) is an average cost taken from the City of Milpitas 1999 Concept Level Cost Estimate, received from the City 10/12/2002

[c]Pump and Electical replacement cost assumes 80 percent of total cost in Column E

[d]Building replacement cost assumes 20 percent of total cost in Column E

Schaaf & Wheeler Worksheet B - Sewer System Pipe Components and Estimated Replacement Costs

Enter Current SFENR Date (mm/yyyy):			02/2003					Enter Current Year			Enter Removal Unit Cost	Enter Install Unit Cost		
Enter Current SFENR Construction Cost Index			7821					2003			$1,500	$6,000		
A	B	C	D	E	F	G	H	I	J=I-(Year-H)	K	L=K*E	M	N	O=L+M+N	
S-Plat #	Section #	Street	Pipe Diameter (inches)	Pipe Length (FT)	Pipe Material	Man Holes	Year Pipe Installed	Pipe Life Expectancy (yr)	Pipe Life Left (yr)	Pipe Cost ($/LF) (see Worksheet C)	Total Pipe Cost ($)	Remove Manhole Cost ($)	Install Manhole Cost ($)	Total Cost Current SFENR ($)	Estimated Value Feb-2003 ($) SFENR=7821
								SFENR Construction Cost Index:		7821	7821	7821	7821	7821	
4	6	cross Nimitz	42	360	RCP	1	1975	25	-3	$418	$150,580	$1,500	$6,000	$158,080	$0
4	6	cross Nimitz	18	660	RCP	2	1985	25	7	$236	$156,036	$3,000	$12,000	$171,036	$47,890
4	6	McCarthy Blvd	48	60	RCP	0	1995	25	17	$462	$27,716	$0	$0	$27,716	$18,847
4	6	off McCarthy Blvd	54	470	RCP	1	1995	25	17	$510	$239,523	$1,500	$6,000	$247,023	$167,976
4	5,6	off Field Rd	36	510	RCP	0	1995	25	17	$453	$231,134	$0	$0	$231,134	$157,171
5	3	off Cadillac Ct	42	490	RCP	1	1975	25	-3	$418	$204,956	$1,500	$6,000	$212,456	$0
5	3,6	McCarthy Blvd	48	2,020	RCP	5	1995	25	17	$462	$933,103	$7,500	$30,000	$970,603	$660,010
6	2,3,5	McCarthy Blvd	48	2,200	RCP	6	1995	25	17	$462	$1,016,251	$9,000	$36,000	$1,061,251	$721,651
7	3	McCarthy Blvd	48	400	RCP	1	1995	25	17	$462	$184,773	$1,500	$6,000	$192,273	$130,746
7	3	off McCarthy Blvd	30	820	SS	1	1995	75	67	$367	$300,562	$1,500	$6,000	$308,062	$275,202
7	3,6	McCarthy Blvd	36	1,720	RCP	6	1995	25	17	$453	$779,509	$9,000	$36,000	$824,509	$560,666
8	3	off Ranch Dr	6	40	VCP	0	1995	75	67	$147	$5,863	$0	$0	$5,863	$5,238
8	3	off McCarthy Blvd	8	710	VCP	1	1995	75	67	$154	$109,307	$1,500	$6,000	$116,807	$104,347
8	3	off Ranch Dr	8	100	VCP	2	1995	75	67	$154	$15,395	$3,000	$12,000	$30,395	$27,153
8	6	off Ranch Dr	6	140	VCP	0	1995	75	67	$147	$20,521	$0	$0	$20,521	$18,332
8	2,3,5	McCarthy Blvd	36	2,220	RCP	7	1995	25	17	$453	$1,006,111	$10,500	$42,000	$1,058,611	$719,855
8	3,6	Ranch Dr	8	850	SS	7	1995	75	67	$154	$130,860	$10,500	$42,000	$183,360	$163,802
8	5,6	Ranch Dr	8	610	VCP	3	1995	75	67	$154	$93,911	$4,500	$18,000	$116,411	$103,994
9	6	McCarthy Blvd	24	1,120	RCP	5	1985	25	7	$296	$331,201	$7,500	$30,000	$368,701	$103,236
9	6	Technology Dr	30	370	RCP	1	1985	25	7	$367	$135,619	$1,500	$6,000	$143,119	$40,073
9	3,6	Cypress Dr	27	1,410	RCP	8	1985	25	7	$327	$461,097	$12,000	$48,000	$521,097	$145,907
9	3,6	Cypress Dr	36	1,660	SS	9	1995	75	67	$453	$752,317	$13,500	$54,000	$819,817	$732,370
9	5,6	Technology Dr	12	1,130	VCP	4	1985	75	57	$177	$200,417	$6,000	$24,000	$230,417	$175,117
10	3	Sumac Dr	10	330	VCP	1	1985	75	57	$170	$56,138	$1,500	$6,000	$63,638	$48,365
10	3	McCarthy Blvd	21	600	VCP	2	1985	75	57	$257	$154,214	$3,000	$12,000	$169,214	$128,603
10	5	Murphy Ranch Rd	8	250	VCP	2	1985	75	57	$154	$38,488	$3,000	$12,000	$53,488	$40,651
10	6	McCarthy Blvd	12	600	VCP	1	1985	75	57	$177	$106,416	$1,500	$6,000	$113,916	$86,576
10	6	Alder Dr	12	400	VCP	0	1985	75	57	$177	$70,944	$0	$0	$70,944	$53,917
10	1,2	Murphy Ranch Rd	8	890	VCP	4	1985	75	57	$154	$137,018	$6,000	$24,000	$167,018	$126,934
10	1,2	Technology Dr	10	600	VCP	2	1985	75	57	$170	$102,069	$3,000	$12,000	$117,069	$88,973
10	3,6	McCarthy Blvd	18	890	VCP	3	1985	75	57	$236	$210,413	$4,500	$18,000	$232,913	$177,014
10	5,2,3	Sumac Dr	8	1,100	VCP	3	1985	75	57	$154	$169,348	$4,500	$18,000	$191,848	$145,805
10	5,6	Murphy Ranch Rd	8	360	VCP	1	1985	75	57	$154	$55,423	$1,500	$6,000	$62,923	$47,822
11	3	Murphy Ranch Rd	8	490	VCP	1	1985	75	57	$154	$75,437	$1,500	$6,000	$82,937	$63,032
11	6	Tasman Dr	8	510	VCP	2	1985	75	57	$154	$78,516	$3,000	$12,000	$93,516	$71,072
11	6	McCarthy Blvd	8	750	VCP	1	1985	75	57	$154	$115,465	$1,500	$6,000	$122,965	$93,453
11	6	McCarthy Blvd	10	170	VCP	1	1985	75	57	$170	$28,920	$1,500	$6,000	$36,420	$27,679
11	3,6	McCarthy Blvd	10	590	VCP	2	1985	75	57	$170	$100,368	$3,000	$12,000	$115,368	$87,680
11	3,6	McCarthy Blvd	12	220	VCP	1	1985	75	57	$177	$39,019	$1,500	$6,000	$46,519	$35,355
12	3	McCarthy Blvd	8	200	VCP	0	1985	75	57	$154	$30,791	$0	$0	$30,791	$23,401
12	3	McCarthy Blvd	10	530	VCP	1	1985	75	57	$170	$90,161	$1,500	$6,000	$97,661	$74,222
12	3	Sycamore Dr	12	120	VCP	1	1985	75	57	$177	$21,283	$1,500	$6,000	$28,783	$21,875
13	3	Manferd	8	40	VCP	0	1955	75	27	$154	$6,158	$0	$0	$6,158	$2,217
13	3	Buskirk St	6	150	VCP	0	1975	75	47	$147	$21,987	$0	$0	$21,987	$13,778
13	3	Arizona Ave	8	350	VCP	2	1975	75	47	$154	$53,884	$3,000	$12,000	$68,884	$43,167

Schaaf & Wheeler Worksheet B - Sewer System Pipe Components and Estimated Replacement Costs

Enter Current SFENR Date (mm/yyyy):			02/2003						Enter Current Year			Enter Removal Unit Cost	Enter Install Unit Cost		
Enter Current SFENR Construction Cost Index			7821						2003			$1,500	$6,000		
A	B	C	D	E	F	G	H	I	J=I-(Year-H)	K	L=K*E	M	N	O=L+M+N	
S-Plat #	Section #	Street	Pipe Diameter (inches)	Pipe Length (FT)	Pipe Material	Man Holes	Year Pipe Installed	Pipe Life Expectancy (yr)	Pipe Life Left (yr)	Pipe Cost ($/LF) (see Worksheet C)	Total Pipe Cost ($)	Remove Manhole Cost ($)	Install Manhole Cost ($)	Total Cost Current SFENR ($)	Estimated Value Feb-2003 ($) SFENR=7821
13	6	Firethorne St	6	430	VCP	2	1985	75	57	$147	$63,029	$3,000	$12,000	$78,029	$59,302
13	6	off N Milpitas Blvd	6	420	VCP	1	1985	75	57	$147	$61,563	$1,500	$6,000	$69,063	$52,488
13	6	off N Milpitas Blvd	6	190	VCP	2	1985	75	57	$147	$27,850	$3,000	$12,000	$42,850	$32,566
13	6	off N Milpitas Blvd	6	370	VCP	4	1985	75	57	$147	$54,234	$6,000	$24,000	$84,234	$64,018
13	6	off N Milpitas Blvd	6	360	VCP	1	1985	75	57	$147	$52,768	$1,500	$6,000	$60,268	$45,804
13	6	Amur Ct	6	150	VCP	1	1985	75	57	$147	$21,987	$1,500	$6,000	$29,487	$22,410
13	6	off N Milpitas Blvd	6	140	VCP	0	1985	75	57	$147	$20,521	$0	$0	$20,521	$15,596
13	6	off Wilson Wy	6	180	VCP	1	1985	75	57	$147	$26,384	$1,500	$6,000	$33,884	$25,752
13	6	N Milpitas Blvd	8	660	VCP	3	1985	75	57	$154	$101,609	$4,500	$18,000	$124,109	$94,323
13	6	off N Milpitas Blvd	8	250	VCP	1	1985	75	57	$154	$38,488	$1,500	$6,000	$45,988	$34,951
13	3,6	Firethorne Ct	6	300	VCP	0	1985	75	57	$147	$43,973	$0	$0	$43,973	$33,420
14	1	Milmont Dr	10	440	VCP	1	1975	75	47	$170	$74,851	$1,500	$6,000	$82,351	$51,606
14	3	Dixon Landing Rd	6	370	VCP	0	1965	75	37	$147	$54,234	$0	$0	$54,234	$26,755
14	3	off Milpitas Blvd	8	160	VCP	0	1985	75	57	$154	$24,632	$0	$0	$24,632	$18,721
14	4	Cascadita Ter	6	340	ABS	4	1995	50	42	$147	$49,837	$6,000	$24,000	$79,837	$67,063
14	6	off Milpitas Blvd	6	150	VCP	0	1955	75	27	$147	$21,987	$0	$0	$21,987	$7,915
14	6	off Milpitas Blvd	6	90	VCP	0	1955	75	27	$147	$13,192	$0	$0	$13,192	$4,749
14	6	off Milpitas Blvd	8	160	VCP	0	1955	75	27	$154	$24,632	$0	$0	$24,632	$8,868
14	6	Milpitas Blvd	10	40	VCP	0	1965	75	37	$170	$6,805	$0	$0	$6,805	$3,357
14	6	Milpitas Blvd	12	160	VCP	2	1965	75	37	$177	$28,378	$3,000	$12,000	$43,378	$21,400
14	1,4	Dixon Landing Rd	10	1,640	VCP	8	1965	75	37	$170	$278,989	$12,000	$48,000	$338,989	$167,235
14	2,3	Dixon Landing Rd	6	1,020	VCP	3	1965	75	37	$147	$149,510	$4,500	$18,000	$172,010	$84,858
14	2,5	Dixon Landing Rd	8	1,850	VCP	5	1965	75	37	$154	$284,813	$7,500	$30,000	$322,313	$159,008
14	3,6	Milpitas Blvd	8	1,870	VCP	8	1965	75	37	$154	$287,892	$12,000	$48,000	$347,892	$171,627
15	1	Cascadita Ter	6	740	PVC	4	1995	50	42	$147	$108,468	$6,000	$24,000	$138,468	$116,313
15	1	Portifino Ter	6	170	PVC	1	1995	50	42	$147	$24,918	$1,500	$6,000	$32,418	$27,231
15	1	off Dixon Landing Rd	10	200	VCP	1	1965	75	37	$170	$34,023	$1,500	$6,000	$41,523	$20,485
15	1	off Jurgens Dr	12	570	VCP	2	1965	75	37	$177	$101,095	$3,000	$12,000	$116,095	$57,274
15	1	California Cir	8	740	VCP	3	1985	75	57	$154	$113,925	$4,500	$18,000	$136,425	$103,683
15	2	Monte Sol Ter	6	300	PVC	3	1995	50	42	$147	$43,973	$4,500	$18,000	$66,473	$55,838
15	2	Los Buellis Wy	6	460	PVC	3	1995	50	42	$147	$67,426	$4,500	$18,000	$89,926	$75,538
15	2	Montecito Wy	6	870	PVC	8	1995	50	42	$147	$127,523	$12,000	$48,000	$187,523	$157,519
15	2	Milano Ter	6	190	PVC	1	1995	50	42	$147	$27,850	$1,500	$6,000	$35,350	$29,694
15	2	Medeiras Ter	6	200	PVC	1	1995	50	42	$147	$29,316	$1,500	$6,000	$36,816	$30,925
15	3	off Minnis Cir	6	380	VCP	2	1975	75	47	$147	$55,700	$3,000	$12,000	$70,700	$44,305
15	3	Minnis Cir	8	430	VCP	2	1975	75	47	$154	$66,200	$3,000	$12,000	$81,200	$50,885
15	3	N Main St	10	90	VCP	0	1975	75	47	$170	$15,310	$0	$0	$15,310	$9,594
15	3	Washington Dr	10	60	VCP	0	1975	75	47	$170	$10,207	$0	$0	$10,207	$6,396
15	3	off N Main St	12	930	VCP	2	1975	75	47	$177	$164,945	$3,000	$12,000	$179,945	$112,765
15	3	N Main St	12	356	VCP	1	1975	75	47	$177	$63,140	$1,500	$6,000	$70,640	$44,268
15	5	Aspenridge	6	260	PVC	1	1995	50	42	$147	$38,110	$1,500	$6,000	$45,610	$38,313
15	5	Woodruff Wy	6	490	PVC	1	1995	50	42	$147	$71,823	$1,500	$6,000	$79,323	$66,631
15	5	Pacifica Wy	6	430	PVC	2	1995	50	42	$147	$63,029	$3,000	$12,000	$78,029	$65,544
15	5	Elkwood Dr	6	400	PVC	1	1995	50	42	$147	$58,631	$1,500	$6,000	$66,131	$55,550
15	5	off Milmont Dr	8	40	ABS	0	1985	50	32	$154	$6,158	$0	$0	$6,158	$3,941
15	5	Aspenridge	8	490	PVC	1	1995	50	42	$154	$75,437	$1,500	$6,000	$82,937	$69,667

Schaaf & Wheeler Worksheet B - Sewer System Pipe Components and Estimated Replacement Costs

Enter Current SFENR Date (mm/yyyy)			02/2003					Enter Current Year			Enter Removal Unit Cost	Enter Install Unit Cost		
Enter Current SFENR Construction Cost Index			7821					2003			$1,500	$6,000		
A	B	C	D	E	F	G	H	I	J=I-(Year-H)	K	L=K*E	M	N	O=L+M+N	
S-Plat #	Section #	Street	Pipe Diameter (inches)	Pipe Length (FT)	Pipe Material	Man Holes	Year Pipe Installed	Pipe Life Expectancy (yr)	Pipe Life Left (yr)	Pipe Cost ($/LF) (see Worksheet C)	Total Pipe Cost ($)	Remove Manhole Cost ($)	Install Manhole Cost ($)	Total Cost Current SFENR ($)	Estimated Value Feb-2003 ($) SFENR=7821
15	5	Elkwood Dr	8	880	PVC	4	1995	50	42	$154	$135,479	$6,000	$24,000	$165,479	$139,002
15	5	off Milmont Dr	42	310	RCP	1	1955	25	-23	$418	$129,666	$1,500	$6,000	$137,166	$0
15	6	Seaside Wy	6	200	PVC	0	1985	50	32	$147	$29,316	$0	$0	$29,316	$18,762
15	6	Summerwind Wy	6	240	PVC	1	1985	50	32	$147	$35,179	$1,500	$6,000	$42,679	$27,314
15	6	Summerwind Wy	6	270	PVC	0	1985	50	32	$147	$39,576	$0	$0	$39,576	$25,329
15	6	N/A	6	360	VCP	1	1985	75	57	$147	$52,768	$1,500	$6,000	$60,268	$45,804
15	6	off Summerwind Wy	42	630	RCP	3	1985	25	7	$418	$263,515	$4,500	$18,000	$286,015	$80,084
15	6	Seaside Wy	66	210	RCP	1	1985	25	7	$609	$127,899	$1,500	$6,000	$135,399	$37,912
15	6	Balboa Dr	66	200	RCP	1	1985	25	7	$609	$121,809	$1,500	$6,000	$129,309	$36,206
15	1,2	Lisbon Ter	6	350	PVC	3	1995	50	42	$147	$51,302	$4,500	$18,000	$73,802	$61,994
15	1,2	Alegra Ter	6	760	PVC	4	1995	50	42	$147	$111,399	$6,000	$24,000	$141,399	$118,775
15	1,2	Marlina Ter	6	330	PVC	2	1995	50	42	$147	$48,371	$3,000	$12,000	$63,371	$53,231
15	1,2	Crodillo Ter	6	160	PVC	1	1995	50	42	$147	$23,452	$1,500	$6,000	$30,952	$26,000
15	1,2	Jurgens Dr	15	1,200	RCP	6	1995	25	17	$203	$244,071	$9,000	$36,000	$289,071	$196,568
15	1,2	California Cir	18	1,770	VCP	5	1985	75	57	$236	$418,461	$7,500	$30,000	$455,961	$346,530
15	2,3,6	off Jurgens Dr	8	1,850	VCP	6	1995	75	67	$154	$284,813	$9,000	$36,000	$329,813	$294,633
15	2,5	Gingerwood Dr	8	1,440	PVC	7	1995	50	42	$154	$221,692	$10,500	$42,000	$274,192	$230,322
15	3,6	Minnis Ct	8	810	VCP	3	1975	75	47	$154	$124,702	$4,500	$18,000	$147,202	$92,247
15	5,6	Balboa Dr	6	470	PVC	1	1985	50	32	$147	$68,892	$1,500	$6,000	$76,392	$48,891
15	5,6	Milmont Dr	66	640	RCP	3	1985	25	7	$609	$389,788	$4,500	$18,000	$412,288	$115,441
16	2	San Andreas Dr	6	90	VCP	1	1975	75	47	$147	$13,192	$1,500	$6,000	$20,692	$12,967
16	6	Pescadero St	6	810	VCP	3	1975	75	47	$147	$118,728	$4,500	$18,000	$141,228	$88,503
16	6	Pescadero Ct	6	210	VCP	1	1975	75	47	$147	$30,781	$1,500	$6,000	$38,281	$23,990
16	6	off Laguna Dr	8	890	VCP	2	1975	75	47	$154	$137,018	$3,000	$12,000	$152,018	$95,265
16	6	Abel St	27	280	VCP	1	1975	75	47	$327	$91,565	$1,500	$6,000	$99,065	$62,081
16	1,2	Fairview Wy	8	810	VCP	3	1985	75	57	$154	$124,702	$4,500	$18,000	$147,202	$111,873
16	1,2	off Cadillac Ct	42	1,120	RCP	3	1985	25	7	$418	$468,471	$4,500	$18,000	$490,971	$137,472
16	1,4	Cadillac Ct	8	1,800	VCP	5	1985	75	57	$154	$277,115	$7,500	$30,000	$314,615	$239,108
16	2,3	Seaside Dr	6	600	ABS	2	1985	50	32	$147	$87,947	$3,000	$12,000	$102,947	$65,886
16	2,3	Summerwind Rd	6	1,430	ABS	3	1985	50	32	$147	$209,607	$4,500	$18,000	$232,107	$148,548
16	2,3	San Andreas Dr	8	610	VCP	3	1975	75	47	$154	$93,911	$4,500	$18,000	$116,411	$72,951
16	2,5	Abbott Ave	8	2,210	ABS	9	1975	50	22	$154	$340,236	$13,500	$54,000	$407,736	$179,404
16	3,6	Hermina St	8	730	VCP	3	1975	75	47	$154	$112,386	$4,500	$18,000	$134,886	$84,528
16	3,6	Pescadero St	8	640	VCP	0	1975	75	47	$154	$98,530	$0	$0	$98,530	$61,745
16	3,6	San Andreas Ct	8	490	VCP	2	1975	75	47	$154	$75,437	$3,000	$12,000	$90,437	$56,674
16	5,6	Laguna Dr	8	740	VCP	2	1975	75	47	$154	$113,925	$3,000	$12,000	$128,925	$80,793
16	5,6	La Honda Dr	8	820	VCP	2	1975	75	47	$154	$126,241	$3,000	$12,000	$141,241	$88,511
17	2	Glenmoor Ct	6	110	VCP	1	1985	75	57	$147	$16,124	$1,500	$6,000	$23,624	$17,954
17	2	Glenmoor Ct	6	100	VCP	1	1985	75	57	$147	$14,658	$1,500	$6,000	$22,158	$16,840
17	2	Glenmoor Ct	6	220	VCP	1	1985	75	57	$147	$32,247	$1,500	$6,000	$39,747	$30,208
17	3	Pescadero St	6	550	VCP	2	1955	75	27	$147	$80,618	$3,000	$12,000	$95,618	$34,422
17	3	Adobe Ave	6	220	VCP	0	1955	75	27	$147	$32,247	$0	$0	$32,247	$11,609
17	3	off Vasona St	6	250	VCP	0	1955	75	27	$147	$36,644	$0	$0	$36,644	$13,192
17	3	Calero St	6	100	VCP	1	1955	75	27	$147	$14,658	$1,500	$6,000	$22,158	$7,977
17	3	Redwood Ave	8	510	VCP	1	1955	75	27	$154	$78,516	$1,500	$6,000	$86,016	$30,966
17	3	N/A	8	200	VCP	1	1955	75	27	$154	$30,791	$1,500	$6,000	$38,291	$13,785

Schaaf & Wheeler Worksheet B - Sewer System Pipe Components and Estimated Replacement Costs

Enter Current SFENR Date (mm/yyyy)			02/2003					Enter Current Year			Enter Removal Unit Cost	Enter Install Unit Cost	
Enter Current SFENR Construction Cost Index			7821					2003			$1,500	$6,000	
A	B	C	D	E	F	G	H	I	J=I-(Year-H)	K	L=K*E	M	N	O=L+M+N	
S-Plat #	Section #	Street	Pipe Diameter (inches)	Pipe Length (FT)	Pipe Material	Man Holes	Year Pipe Installed	Pipe Life Expectancy (yr)	Pipe Life Left (yr)	Pipe Cost ($/LF) (see Worksheet C)	Total Pipe Cost ($)	Remove Manhole Cost ($)	Install Manhole Cost ($)	Total Cost Current SFENR ($)	**Estimated Value Feb-2003 ($) SFENR=7821**
17	4	Easter Ave	6	390	VCP	0	1955	75	27	$147	$57,165	$0	$0	$57,165	$20,580
17	4	Heath St	8	510	VCP	1	1965	75	37	$154	$78,516	$1,500	$6,000	$86,016	$42,435
17	4	Chestnut Ave	8	250	VCP	1	1955	75	27	$154	$38,488	$1,500	$6,000	$45,988	$16,556
17	4	Heath St	10	400	VCP	2	1955	75	27	$170	$68,046	$3,000	$12,000	$83,046	$29,897
17	5	Elm Ct	6	110	VCP	1	1955	75	27	$147	$16,124	$1,500	$6,000	$23,624	$8,504
17	6	Abel St	6	20	VCP	0	1955	75	27	$147	$2,932	$0	$0	$2,932	$1,055
17	6	Marylinn Dr	6	40	VCP	0	1955	75	27	$147	$5,863	$0	$0	$5,863	$2,111
17	6	Almaden Ave	6	100	VCP	0	1955	75	27	$147	$14,658	$0	$0	$14,658	$5,277
17	6	Marylinn Dr	8	270	VCP	1	1955	75	27	$154	$41,567	$1,500	$6,000	$49,067	$17,664
17	6	Marylinn Dr	27	80	VCP	0	1955	75	27	$327	$26,162	$0	$0	$26,162	$9,418
17	1,2	N/A	6	1,170	VCP	2	1955	75	27	$147	$171,496	$3,000	$12,000	$186,496	$67,139
17	1,2	N/A	6	870	VCP	3	1955	75	27	$147	$127,523	$4,500	$18,000	$150,023	$54,008
17	1,2	Glenmoor Ct	8	1,640	VCP	7	1985	75	57	$154	$252,483	$10,500	$42,000	$304,983	$231,787
17	1,4	Heath St	6	620	VCP	2	1985	75	57	$147	$90,878	$3,000	$12,000	$105,878	$80,468
17	1,4	Larch St	6	510	VCP	0	1955	75	27	$147	$74,755	$0	$0	$74,755	$26,912
17	2,3	Redwood Ave	6	220	VCP	2	1955	75	27	$147	$32,247	$3,000	$12,000	$47,247	$17,009
17	2,5	Abbott Ave	6	1,500	VCP	3	1955	75	27	$147	$219,867	$4,500	$18,000	$242,367	$87,252
17	2,5	Penitencia St	6	1,410	VCP	3	1955	75	27	$147	$206,675	$4,500	$18,000	$229,175	$82,503
17	3,6	Vasona St	6	1,870	VCP	4	1955	75	27	$147	$274,101	$6,000	$24,000	$304,101	$109,476
17	3,6	Lexington St	6	1,410	VCP	2	1965	75	37	$147	$206,675	$3,000	$12,000	$221,675	$109,360
17	3,6	Coyote St	6	1,190	VCP	2	1965	75	37	$147	$174,428	$3,000	$12,000	$189,428	$93,451
17	3,6	Abel St	27	2,210	VCP	8	1965	75	37	$327	$722,712	$12,000	$48,000	$782,712	$386,138
17	4,5	Elm Ave	6	1,000	VCP	3	1955	75	27	$147	$146,578	$4,500	$18,000	$169,078	$60,868
17	4,5	Chestnut Ave	6	830	VCP	2	1955	75	27	$147	$121,660	$3,000	$12,000	$136,660	$49,197
17	4,5	Willow Ave	6	790	VCP	3	1955	75	27	$147	$115,797	$4,500	$18,000	$138,297	$49,787
17	4,5	Walnut Dr	6	590	VCP	1	1955	75	27	$147	$86,481	$1,500	$6,000	$93,981	$33,833
18	1	Heath St	10	280	VCP	1	1965	75	37	$170	$47,632	$1,500	$6,000	$55,132	$27,199
18	1	off McCarthy Blvd	30	170	SS	1	1955	75	27	$367	$62,312	$1,500	$6,000	$69,812	$25,132
18	2	Easter Ave	6	210	VCP	1	1955	75	27	$147	$30,781	$1,500	$6,000	$38,281	$13,781
18	2	Walnut Dr	6	260	VCP	1	1955	75	27	$147	$38,110	$1,500	$6,000	$45,610	$16,420
18	2	Marylinn Dr	8	460	VCP	2	1955	75	27	$154	$70,818	$3,000	$12,000	$85,818	$30,895
18	2	Easter Ave	8	390	VCP	1	1955	75	27	$154	$60,042	$1,500	$6,000	$67,542	$24,315
18	2	Abbott Ave	8	210	VCP	1	1955	75	27	$154	$32,330	$1,500	$6,000	$39,830	$14,339
18	2	Abbott Ave	10	360	VCP	3	1955	75	27	$170	$61,241	$4,500	$18,000	$83,741	$30,147
18	2	Barker St	10	250	VCP	1	1955	75	27	$170	$42,529	$1,500	$6,000	$50,029	$18,010
18	3	Images Cir	6	70	PVC	1	1995	50	42	$147	$10,260	$1,500	$6,000	$17,760	$14,919
18	3	Abel St	6	940	VCP	2	1955	75	27	$147	$137,783	$3,000	$12,000	$152,783	$55,002
18	3	Penitencia St	6	720	VCP	2	1965	75	37	$147	$105,536	$3,000	$12,000	$120,536	$59,464
18	3	Penitencia Ct	6	150	VCP	1	1965	75	37	$147	$21,987	$1,500	$6,000	$29,487	$14,547
18	3	N/A	6	360	VCP	1	1965	75	37	$147	$52,768	$1,500	$6,000	$60,268	$29,732
18	3	Images Cir	8	130	PVC	1	1995	50	42	$154	$20,014	$1,500	$6,000	$27,514	$23,112
18	3	Abel St	18	20	VCP	0	1955	75	27	$236	$4,728	$0	$0	$4,728	$1,702
18	5	Rudyard Dr	6	250	VCP	1	1955	75	27	$147	$36,644	$1,500	$6,000	$44,144	$15,892
18	5	Heath Ave	8	150	VCP	0	1965	75	37	$154	$23,093	$0	$0	$23,093	$11,393
18	5	Kenisto	8	120	VCP	2	1955	75	27	$154	$18,474	$3,000	$12,000	$33,474	$12,051
18	6	Orion Ct	6	100	VCP	1	1955	75	27	$147	$14,658	$1,500	$6,000	$22,158	$7,977

Schaaf & Wheeler Worksheet B - Sewer System Pipe Components and Estimated Replacement Costs

Enter Current SFENR Date (mm/yyyy)			02/2003						Enter Current Year			Enter Removal Unit Cost	Enter Install Unit Cost		
Enter Current SFENR Construction Cost Index			7821						2003			$1,500	$6,000		
A	B	C	D	E	F	G	H	I	J=I-(Year-H)	K	L=K*E	M	N	O=L+M+N	
S-Plat #	Section #	Street	Pipe Diameter (inches)	Pipe Length (FT)	Pipe Material	Man Holes	Year Pipe Installed	Pipe Life Expectancy (yr)	Pipe Life Left (yr)	Pipe Cost (S/LF) (see Worksheet C)	Total Pipe Cost ($)	Remove Manhole Cost ($)	Install Manhole Cost ($)	Total Cost Current SFENR ($)	**Estimated Value Feb-2003 ($) SFENR=7821**
18	6	Ophir Ct	6	100	VCP	1	1955	75	27	$147	$14,658	$1,500	$6,000	$22,158	$7,977
18	6	Ogden Ct	6	100	VCP	1	1955	75	27	$147	$14,658	$1,500	$6,000	$22,158	$7,977
18	6	Ohio Ct	6	100	VCP	1	1955	75	27	$147	$14,658	$1,500	$6,000	$22,158	$7,977
18	6	Alton St	8	940	VCP	4	1955	75	27	$154	$144,716	$6,000	$24,000	$174,716	$62,898
18	6	Norwich	8	490	VCP	2	1955	75	27	$154	$75,437	$3,000	$12,000	$90,437	$32,557
18	6	Butler St	8	970	VCP	1	1955	75	27	$154	$149,334	$1,500	$6,000	$156,834	$56,460
18	6	Casper St	10	1,010	VCP	2	1955	75	27	$170	$171,816	$3,000	$12,000	$186,816	$67,254
18	6	Smithwood St	15	190	VCP	1	1965	75	37	$203	$38,645	$1,500	$6,000	$46,145	$22,765
18	1,2	Marylinn Dr	6	410	VCP	3	1965	75	37	$147	$60,097	$4,500	$18,000	$82,597	$40,748
18	1,2	Easter Ave	6	450	VCP	1	1955	75	27	$147	$65,960	$1,500	$6,000	$73,460	$26,446
18	1,2,3	Marylinn Dr	27	2,920	VCP	9	1965	75	37	$327	$954,896	$13,500	$54,000	$1,022,396	$504,382
18	1,2,5	Silvera St	8	1,300	VCP	4	1955	75	27	$154	$200,139	$6,000	$24,000	$230,139	$82,850
18	1,4	Heath Ave	15	1,580	VCP	4	1965	75	37	$203	$321,360	$6,000	$24,000	$351,360	$173,337
18	1,4,5	Smithwood St	8	1,430	VCP	3	1955	75	27	$154	$220,153	$4,500	$18,000	$242,653	$87,355
18	2,3	Norwich	10	260	VCP	1	1955	75	27	$170	$44,230	$1,500	$6,000	$51,730	$18,623
18	2,3	Marylinn Dr	27	1,180	VCP	4	1955	75	27	$327	$385,883	$6,000	$24,000	$415,883	$149,718
18	2,5	Abbott Ave	8	1,190	VCP	3	1955	75	27	$154	$183,204	$4,500	$18,000	$205,704	$74,053
18	2,5	Krismer St	8	1,320	VCP	4	1955	75	27	$154	$203,218	$6,000	$24,000	$233,218	$83,958
18	2,5	Barker St	8	500	VCP	2	1955	75	27	$154	$76,977	$3,000	$12,000	$91,977	$33,112
18	5,6	Rudyard Dr	15	250	VCP	1	1955	75	27	$203	$50,848	$1,500	$6,000	$58,348	$21,005
19	1	off Ranch Dr	8	290	VCP	0	1995	75	67	$154	$44,646	$0	$0	$44,646	$39,884
19	1	Ranch Dr	8	500	VCP	3	1995	75	67	$154	$76,977	$4,500	$18,000	$99,477	$88,866
19	2	Smithwood Ave	15	740	VCP	3	1965	75	37	$203	$150,510	$4,500	$18,000	$173,010	$85,352
19	2	Valley Wy	8	118	VCP	1	1975	75	47	$154	$18,166	$1,500	$6,000	$25,666	$16,084
19	3	Butler St	6	160	VCP	2	1955	75	27	$147	$23,452	$3,000	$12,000	$38,452	$13,843
19	3	Whitter St	6	450	VCP	1	1955	75	27	$147	$65,960	$1,500	$6,000	$73,460	$26,446
19	3	Spence Ave	8	690	VCP	1	1955	75	27	$154	$106,228	$1,500	$6,000	$113,728	$40,942
19	3	Alton St	8	90	VCP	1	1955	75	27	$154	$13,856	$1,500	$6,000	$21,356	$7,688
19	3	Casper St	10	430	VCP	2	1955	75	27	$170	$73,150	$3,000	$12,000	$88,150	$31,734
19	3	Spence Ave	6	360	VCP	1	1975	75	47	$147	$52,768	$1,500	$6,000	$60,268	$37,768
19	3	Butler St	8	880	VCP	2	1975	75	47	$154	$135,479	$3,000	$12,000	$150,479	$94,300
19	3	Calaveras Blvd	8	250	VCP	2	1975	75	47	$154	$38,488	$3,000	$12,000	$53,488	$33,519
19	5	Valley Wy	8	430	VCP	2	1975	75	47	$154	$66,200	$3,000	$12,000	$81,200	$50,885
19	6	off Calaveras Blvd	15	450	VCP	1	1965	75	37	$203	$91,526	$1,500	$6,000	$99,026	$48,853
19	6	off Junipero Dr	6	350	VCP	0	1975	75	47	$147	$51,302	$0	$0	$51,302	$32,149
19	6	Calaveras Blvd	8	700	VCP	4	1985	75	57	$154	$107,767	$6,000	$24,000	$137,767	$104,703
19	1,2	Heath St	8	1,200	VCP	3	1965	75	37	$154	$184,744	$4,500	$18,000	$207,244	$102,240
19	1,4	off Ranch Dr	8	390	VCP	3	1995	75	67	$154	$60,042	$4,500	$18,000	$82,542	$73,737
19	2,3	Spence Ave	6	300	VCP	1	1955	75	27	$147	$43,973	$1,500	$6,000	$51,473	$18,530
19	2,5,6	Abbott Ave	15	1,200	VCP	5	1955	75	27	$203	$244,071	$7,500	$30,000	$281,571	$101,365
19	3,6	off Butler St	6	650	VCP	2	1975	75	47	$147	$95,276	$3,000	$12,000	$110,276	$69,106
19	4,5	Calaveras Blvd	15	310	VCP	2	1965	75	37	$203	$63,052	$3,000	$12,000	$78,052	$38,505
20	1	off Barber St	27	340	RCP	0	1985	25	7	$327	$111,187	$0	$0	$111,187	$31,132
20	1	Barber Ct	8	300	VCP	1	1985	75	57	$154	$46,186	$1,500	$6,000	$53,686	$40,801
20	3	Sylvia Ct	6	100	VCP	1	1955	75	27	$147	$14,658	$1,500	$6,000	$22,158	$7,977
20	3	Sylvia Ave	8	550	VCP	3	1955	75	27	$154	$84,674	$4,500	$18,000	$107,174	$38,583

Schaaf & Wheeler Worksheet B - Sewer System Pipe Components and Estimated Replacement Costs

Enter Current SFENR Date (mm/yyyy):			02/2003					Enter Current Year			Enter Removal Unit Cost	Enter Install Unit Cost		
Enter Current SFENR Construction Cost Index			7821					2003			$1,500	$6,000		
A	B	C	D	E	F	G	H	I	J=I-(Year-H)	K	L=K*E	M	N	O=L+M+N	
S-Plat #	Section #	Street	Pipe Diameter (inches)	Pipe Length (FT)	Pipe Material	Man Holes	Year Pipe Installed	Pipe Life Expectancy (yr)	Pipe Life Left (yr)	Pipe Cost ($/LF) (see Worksheet C)	Total Pipe Cost ($)	Remove Manhole Cost ($)	Install Manhole Cost ($)	Total Cost Current SFENR ($)	Estimated Value Feb-2003 ($) SFENR=7821
20	3	Corning Ave	8	850	VCP	3	1955	75	27	$154	$130,860	$4,500	$18,000	$153,360	$55,210
20	3	off Junipero Dr	6	580	VCP	0	1975	75	47	$147	$85,015	$0	$0	$85,015	$53,276
20	3	off Junipero Dr	6	520	VCP	1	1975	75	47	$147	$76,221	$1,500	$6,000	$83,721	$52,465
20	3	off San Petra Ct	6	560	VCP	1	1975	75	47	$147	$82,084	$1,500	$6,000	$89,584	$56,139
20	3	off Junipero Ct	6	200	VCP	1	1975	75	47	$147	$29,316	$1,500	$6,000	$36,816	$23,071
20	3	Junipero Dr	6	300	VCP	2	1985	75	57	$147	$43,973	$3,000	$12,000	$58,973	$44,820
20	4	Bellew Dr	30	500	RCP	2	1985	25	7	$367	$183,270	$3,000	$12,000	$198,270	$55,515
20	4	Barber Ct	30	1,260	RCP	3	1985	25	7	$367	$461,839	$4,500	$18,000	$484,339	$135,615
20	6	off Barber Ct	30	1,210	RCP	3	1985	25	7	$367	$443,512	$4,500	$18,000	$466,012	$130,483
20	1,2	Barber Ct	27	1,350	RCP	5	1985	25	7	$327	$441,476	$7,500	$30,000	$478,976	$134,113
20	2,3,6	off Corning Ave	15	2,100	VCP	8	1985	75	57	$203	$427,123	$12,000	$48,000	$487,123	$370,214
20	3,6	Palmer Ave	8	480	VCP	2	1955	75	27	$154	$73,897	$3,000	$12,000	$88,897	$32,003
21	3	off Great Mall Pkwy	8	420	VCP	0	1965	75	37	$154	$64,660	$0	$0	$64,660	$31,899
21	4	Alder Dr	10	720	VCP	1	1985	75	57	$170	$122,483	$1,500	$6,000	$129,983	$98,787
21	4	Alder Dr	12	120	VCP	1	1985	75	57	$177	$21,283	$1,500	$6,000	$28,783	$21,875
21	5	Barber Ln	21	790	RCP	1	1985	25	7	$257	$203,049	$1,500	$6,000	$210,549	$58,954
21	1,2	Barber Ln	27	390	RCP	1	1985	25	7	$327	$127,537	$1,500	$6,000	$135,037	$37,810
21	1,2	off Barber Ln	30	1,240	RCP	5	1985	25	7	$367	$454,508	$7,500	$30,000	$492,008	$137,762
21	2,5	Barber Ln	24	1,220	RCP	6	1985	25	7	$296	$360,772	$9,000	$36,000	$405,772	$113,616
21	3,6	off Great Mall Pkwy	15	1,810	VCP	5	1965	75	37	$203	$368,140	$7,500	$30,000	$405,640	$200,116
22	1	Tasman Dr	8	1,160	VCP	2	1985	75	57	$154	$178,585	$3,000	$12,000	$193,585	$147,125
22	1	Alder Dr	10	240	VCP	1	1985	75	57	$170	$40,828	$1,500	$6,000	$48,328	$36,729
22	3	Capitol Ave	10	470	VCP	2	1965	75	37	$170	$79,954	$3,000	$12,000	$94,954	$46,844
22	3	Starlite Dr	6	140	VCP	0	1975	75	47	$147	$20,521	$0	$0	$20,521	$12,860
22	3	Galaxy Ct	6	180	VCP	0	1975	75	47	$147	$26,384	$0	$0	$26,384	$16,534
22	5	Buckeye Dr	10	130	VCP	0	1985	75	57	$170	$22,115	$0	$0	$22,115	$16,807
22	6	Starlite Ct	6	160	VCP	0	1975	75	47	$147	$23,452	$0	$0	$23,452	$14,697
22	6	Barber Ln	12	660	VCP	1	1985	75	57	$177	$117,058	$1,500	$6,000	$124,558	$94,664
22	1,2	Alder Dr	8	1,160	VCP	3	1985	75	57	$154	$178,585	$4,500	$18,000	$201,085	$152,825
22	2,3	Barber Ln	21	600	RCP	3	1985	25	7	$257	$154,214	$4,500	$18,000	$176,714	$49,480
22	3,6	Moonlight Wy	10	780	VCP	1	1965	75	37	$170	$132,690	$1,500	$6,000	$140,190	$69,160
22	3,6	Starlite Dr	8	1,430	VCP	3	1975	75	47	$154	$220,153	$4,500	$18,000	$242,653	$152,062
22	3,6	Barber Ln	18	850	VCP	2	1985	75	57	$236	$200,956	$3,000	$12,000	$215,956	$164,126
22	4,5	Sycamore Dr	12	250	VCP	0	1985	75	57	$177	$44,340	$0	$0	$44,340	$33,698
22	5,6	Sycamore Dr	18	1,190	VCP	3	1985	75	57	$236	$281,338	$4,500	$18,000	$303,838	$230,917
23	1	Sycamore Dr	12	990	VCP	2	1985	75	57	$177	$175,586	$3,000	$12,000	$190,586	$144,846
23	2	Buckeye Ct	6	350	VCP	1	1985	75	57	$147	$51,302	$1,500	$6,000	$58,802	$44,690
23	2	Buckeye Dr	10	710	VCP	2	1985	75	57	$170	$120,782	$3,000	$12,000	$135,782	$103,194
23	3	Timber Wy	6	120	VCP	1	1965	75	37	$147	$17,589	$1,500	$6,000	$25,089	$12,377
23	3	Fir Tree Ct	6	70	VCP	1	1965	75	37	$147	$10,260	$1,500	$6,000	$17,760	$8,762
23	3	Timber Wy	8	20	VCP	0	1965	75	37	$154	$3,079	$0	$0	$3,079	$1,519
23	3	Blue Spruce Wy	8	30	VCP	1	1965	75	37	$154	$4,619	$1,500	$6,000	$12,119	$5,979
23	3	Gibbons Ct	6	170	VCP	0	1975	75	47	$147	$24,918	$0	$0	$24,918	$15,615
23	3	Live Oak Ct	6	210	VCP	0	1975	75	47	$147	$30,781	$0	$0	$30,781	$19,290
23	3	Starlite Dr	8	210	VCP	1	1975	75	47	$154	$32,330	$1,500	$6,000	$39,830	$24,960
23	3	Barber Ln	12	840	VCP	2	1985	75	57	$177	$148,982	$3,000	$12,000	$163,982	$124,627

Schaaf & Wheeler Worksheet B - Sewer System Pipe Components and Estimated Replacement Costs

Enter Current SFENR Date (mm/yyyy)			02/2003					Enter Current Year			Enter Removal Unit Cost	Enter Install Unit Cost		
Enter Current SFENR Construction Cost Index			7821					2003			$1,500	$6,000		
A	B	C	D	E	F	G	H	I	J=I-(Year-H)	K	L=K*E	M	N	O=L+M+N	
S-Plat #	Section #	Street	Pipe Diameter (inches)	Pipe Length (FT)	Pipe Material	Man Holes	Year Pipe Installed	Pipe Life Expectancy (yr)	Pipe Life Left (yr)	Pipe Cost ($/LF) (see Worksheet C)	Total Pipe Cost ($)	Remove Manhole Cost ($)	Install Manhole Cost ($)	Total Cost Current SFENR ($)	**Estimated Value Feb-2003 ($) SFENR=7821**
23	1,4	McCarthy Blvd	8	1,790	VCP	4	1985	75	57	$154	$275,576	$6,000	$24,000	$305,576	$232,238
23	2,5	Buckeye Dr	8	840	VCP	2	1985	75	57	$154	$129,321	$3,000	$12,000	$144,321	$109,684
23	3,6	Barber Ln	10	1,190	VCP	2	1985	75	57	$170	$202,437	$3,000	$12,000	$217,437	$165,252
23	5,6	Cottonwood Dr	8	800	VCP	2	1985	75	57	$154	$123,162	$3,000	$12,000	$138,162	$105,003
24	2	McCarthy Blvd	8	140	VCP	1	1985	75	57	$154	$21,553	$1,500	$6,000	$29,053	$22,081
24	3	Barber Ln	10	800	VCP	2	1985	75	57	$170	$136,092	$3,000	$12,000	$151,092	$114,830
24	1,2	off McCarthy Blvd	6	380	SS	4	1985	75	57	$147	$55,700	$6,000	$24,000	$85,700	$65,132
24	2,5	McCarthy Blvd	8	1,260	VCP	4	1985	75	57	$154	$193,981	$6,000	$24,000	$223,981	$170,225
24	2,6	Barber Ln	8	880	VCP	1	1985	75	57	$154	$135,479	$1,500	$6,000	$142,979	$108,664
26	5	Levin St	6	180	VCP	1	1955	75	27	$147	$26,384	$1,500	$6,000	$33,884	$12,198
26	5	Levin St	6	80	VCP	0	1955	75	27	$147	$11,726	$0	$0	$11,726	$4,221
26	6	Bolton Dr	6	410	VCP	2	1985	75	57	$147	$60,097	$3,000	$12,000	$75,097	$57,074
26	6	Devon Pl	6	200	VCP	1	1985	75	57	$147	$29,316	$1,500	$6,000	$36,816	$27,980
26	6	Park Victoria Dr	6	320	VCP	1	1985	75	57	$147	$46,905	$1,500	$6,000	$54,405	$41,348
26	6	Stratford Dr	6	290	VCP	1	1985	75	57	$147	$42,508	$1,500	$6,000	$50,008	$38,006
27	1	Tiny St	6	240	VCP	1	1955	75	27	$147	$35,179	$1,500	$6,000	$42,679	$15,364
27	1	Manferd St	8	990	VCP	3	1955	75	27	$154	$152,413	$4,500	$18,000	$174,913	$62,969
27	1	Buskirk St	6	760	VCP	2	1975	75	47	$147	$111,399	$3,000	$12,000	$126,399	$79,210
27	1	Toscano St	6	240	VCP	0	1975	75	47	$147	$35,179	$0	$0	$35,179	$22,045
27	2	Levin St	6	300	VCP	0	1955	75	27	$147	$43,973	$0	$0	$43,973	$15,830
27	2	Levin St	6	180	VCP	0	1955	75	27	$147	$26,384	$0	$0	$26,384	$9,498
27	2	Gross St	6	590	VCP	2	1955	75	27	$147	$86,481	$3,000	$12,000	$101,481	$36,533
27	2	Gross St	6	240	VCP	0	1955	75	27	$147	$35,179	$0	$0	$35,179	$12,664
27	2	Oliver St	6	640	VCP	2	1955	75	27	$147	$93,810	$3,000	$12,000	$108,810	$39,172
27	2	Manferd St	8	650	VCP	3	1955	75	27	$154	$100,069	$4,500	$18,000	$122,569	$44,125
27	3	Gosser St	6	240	VCP	0	1955	75	27	$147	$35,179	$0	$0	$35,179	$12,664
27	3	Devon Plave	6	300	VCP	0	1985	75	57	$147	$43,973	$0	$0	$43,973	$33,420
27	3	Sussex Pl	6	220	VCP	1	1985	75	57	$147	$32,247	$1,500	$6,000	$39,747	$30,208
27	3	Kirkwall Pl	6	300	VCP	1	1985	75	57	$147	$43,973	$1,500	$6,000	$51,473	$39,120
27	4	Autrey St	6	810	VCP	3	1955	75	27	$147	$118,728	$4,500	$18,000	$141,228	$50,842
27	4	Mazey St	6	230	VCP	0	1955	75	27	$147	$33,713	$0	$0	$33,713	$12,137
27	4	Mazey St	6	700	VCP	2	1955	75	27	$147	$102,605	$3,000	$12,000	$117,605	$42,338
27	4	Vegas Ave	6	80	VCP	1	1955	75	27	$147	$11,726	$1,500	$6,000	$19,226	$6,921
27	4	Arizona Ave	8	130	VCP	1	1955	75	27	$154	$20,014	$1,500	$6,000	$27,514	$9,905
27	4	off N Milpitas Blvd	6	270	VCP	2	1985	75	57	$147	$39,576	$3,000	$12,000	$54,576	$41,478
27	4	off N Milpitas Blvd	6	200	VCP	0	1985	75	57	$147	$29,316	$0	$0	$29,316	$22,280
27	4	off Arizona Ave	8	400	VCP	1	1985	75	57	$154	$61,581	$1,500	$6,000	$69,081	$52,502
27	5	Dixon Rd	6	300	VCP	1	1965	75	37	$147	$43,973	$1,500	$6,000	$51,473	$25,394
27	6	Greathouse Dr	6	740	VCP	1	1965	75	37	$147	$108,468	$1,500	$6,000	$115,968	$57,211
27	6	Matthews Ct	6	410	VCP	1	1965	75	37	$147	$60,097	$1,500	$6,000	$67,597	$33,348
27	6	Woodcock Ct	6	80	VCP	1	1965	75	37	$147	$11,726	$1,500	$6,000	$19,226	$9,485
27	1,4	Tiny St	6	900	VCP	2	1955	75	27	$147	$131,920	$3,000	$12,000	$146,920	$52,891
27	1,4	Callan St	6	900	VCP	2	1955	75	27	$147	$131,920	$3,000	$12,000	$146,920	$52,891
27	1,4	Arizona Ave	8	920	VCP	5	1955	75	27	$154	$141,637	$7,500	$30,000	$179,137	$64,489
27	2,3,5	Gosser St	6	690	VCP	2	1955	75	27	$147	$101,139	$3,000	$12,000	$116,139	$41,810
27	2,5	Conway St	8	1,460	VCP	6	1955	75	27	$154	$224,771	$9,000	$36,000	$269,771	$97,118

Schaaf & Wheeler Worksheet B - Sewer System Pipe Components and Estimated Replacement Costs

Enter Current SFENR Date (mm/yyyy):			02/2003					Enter Current Year			Enter Removal Unit Cost	Enter Install Unit Cost		
Enter Current SFENR Construction Cost Index			7821					2003			$1,500	$6,000		
A	B	C	D	E	F	G	H	I	J=I-(Year-H)	K	L=K*E	M	N	O=L+M+N	
S-Plat #	Section #	Street	Pipe Diameter (inches)	Pipe Length (FT)	Pipe Material	Man Holes	Year Pipe Installed	Pipe Life Expectancy (yr)	Pipe Life Left (yr)	Pipe Cost ($/LF) (see Worksheet C)	Total Pipe Cost ($)	Remove Manhole Cost ($)	Install Manhole Cost ($)	Total Cost Current SFENR ($)	Estimated Value Feb-2003 ($) SFENR=7821
27	3,5,6	Murray St	6	730	VCP	2	1955	75	27	$147	$107,002	$3,000	$12,000	$122,002	$43,921
27	3,6	Park Victoria Dr	6	1,450	VCP	4	1985	75	57	$147	$212,538	$6,000	$24,000	$242,538	$184,329
27	3,6	Stirling Dr	6	200	VCP	1	1985	75	57	$147	$29,316	$1,500	$6,000	$36,816	$27,980
27	4,5,6	Dixon Rd	8	2,110	VCP	8	1955	75	27	$154	$324,841	$12,000	$48,000	$384,841	$138,543
27	5,6	Conway St	6	670	VCP	3	1965	75	37	$147	$98,207	$4,500	$18,000	$120,707	$59,549
27	5,6	Greathouse Dr	6	660	VCP	0	1965	75	37	$147	$96,741	$0	$0	$96,741	$47,726
28	1	Vegas Ave	6	490	VCP	1	1955	75	27	$147	$71,823	$1,500	$6,000	$79,323	$28,556
28	1	Dixon Rd	6	110	VCP	1	1965	75	37	$147	$16,124	$1,500	$6,000	$23,624	$11,654
28	3	Coelho St	6	970	VCP	2	1965	75	37	$147	$142,181	$3,000	$12,000	$157,181	$77,542
28	3	Conway St	6	770	VCP	2	1965	75	37	$147	$112,865	$3,000	$12,000	$127,865	$63,080
28	3	Coelho Ct	6	110	VCP	1	1965	75	37	$147	$16,124	$1,500	$6,000	$23,624	$11,654
28	3	Taylor Dr	6	680	VCP	2	1965	75	37	$147	$99,673	$3,000	$12,000	$114,673	$56,572
28	3	Woodcock Ct	6	340	VCP	0	1965	75	37	$147	$49,837	$0	$0	$49,837	$24,586
28	3	Greathouse Dr	6	30	VCP	1	1965	75	37	$147	$4,397	$1,500	$6,000	$11,897	$5,869
28	4	off Milpitas Blvd	6	710	VCP	3	1955	75	27	$147	$104,070	$4,500	$18,000	$126,570	$45,565
28	4	Coelho St	6	590	VCP	2	1955	75	27	$147	$86,481	$3,000	$12,000	$101,481	$36,533
28	4	Rand St	6	400	VCP	1	1955	75	27	$147	$58,631	$1,500	$6,000	$66,131	$23,807
28	4	off Arizona Ave	8	1,030	VCP	3	1955	75	27	$154	$158,572	$4,500	$18,000	$181,072	$65,186
28	4	Fontainbleu Ave	6	80	VCP	0	1965	75	37	$147	$11,726	$0	$0	$11,726	$5,785
28	5	Pashot Ct	6	10	VCP	1	1965	75	37	$147	$1,466	$1,500	$6,000	$8,966	$4,423
28	5	Valmy St	6	810	VCP	2	1955	75	27	$147	$118,728	$3,000	$12,000	$133,728	$48,142
28	5	Arizona Ave	6	360	VCP	1	1960	75	32	$147	$52,768	$1,500	$6,000	$60,268	$25,714
28	5	Duarte Ct	6	230	VCP	1	1960	75	32	$147	$33,713	$1,500	$6,000	$41,213	$17,584
28	6	Roger St	8	240	VCP	2	1965	75	37	$154	$36,949	$3,000	$12,000	$51,949	$25,628
28	1,2	Hazen St	6	760	VCP	2	1955	75	27	$147	$111,399	$3,000	$12,000	$126,399	$45,504
28	1,2	Boyd St	6	920	VCP	1	1955	75	27	$147	$134,852	$1,500	$6,000	$142,352	$51,247
28	1,2	Boulder St	8	570	VCP	2	1955	75	27	$154	$87,753	$3,000	$12,000	$102,753	$36,991
28	1,4	off Dixon Rd	6	1,160	VCP	3	1955	75	27	$147	$170,030	$4,500	$18,000	$192,530	$69,311
28	1,4,5	Arizona Ave	8	1,720	VCP	7	1955	75	27	$154	$264,799	$10,500	$42,000	$317,299	$114,228
28	2,3,5	Coelho St	8	1,250	VCP	3	1955	75	27	$154	$192,441	$4,500	$18,000	$214,941	$77,379
28	2,5	Cortez St	6	960	VCP	5	1955	75	27	$147	$140,715	$7,500	$30,000	$178,215	$64,157
28	3,6	Roger St	6	240	VCP	0	1965	75	37	$147	$35,179	$0	$0	$35,179	$17,355
28	3,6	Curtner Dr	8	740	VCP	1	1965	75	37	$154	$113,925	$1,500	$6,000	$121,425	$59,903
28	4,5	Valmy St	6	610	VCP	3	1955	75	27	$147	$89,413	$4,500	$18,000	$111,913	$40,289
28	4,5,6	Washington Dr	10	2,170	VCP	6	1965	75	37	$170	$369,150	$9,000	$36,000	$414,150	$204,314
29	1	Fontainbleu Ave	6	670	VCP	3	1965	75	37	$147	$98,207	$4,500	$18,000	$120,707	$59,549
29	1	Vargas Ct	6	300	VCP	1	1965	75	37	$147	$43,973	$1,500	$6,000	$51,473	$25,394
29	1	off Washington Dr	8	530	VCP	5	1965	75	37	$154	$81,595	$7,500	$30,000	$119,095	$58,754
29	1	Washington Dr	10	240	VCP	1	1965	75	37	$170	$40,828	$1,500	$6,000	$48,328	$23,842
29	1	off N Main St	6	360	VCP	3	1975	75	47	$147	$52,768	$4,500	$18,000	$75,268	$47,168
29	1	off N Main St	6	380	VCP	4	1975	75	47	$147	$55,700	$6,000	$24,000	$85,700	$53,705
29	2	Pashot Ct	6	260	VCP	0	1965	75	37	$147	$38,110	$0	$0	$38,110	$18,801
29	3	Manzano St	6	370	VCP	1	1975	75	47	$147	$54,234	$1,500	$6,000	$61,734	$38,687
29	3	Escuela Pkwy	6	590	VCP	2	1975	75	47	$147	$86,481	$3,000	$12,000	$101,481	$63,595
29	4	Kovanda Wy	6	360	VCP	2	1975	75	47	$147	$52,768	$3,000	$12,000	$67,768	$42,468
29	4	Sudbury Ct	6	110	VCP	1	1975	75	47	$147	$16,124	$1,500	$6,000	$23,624	$14,804

Schaaf & Wheeler Worksheet B - Sewer System Pipe Components and Estimated Replacement Costs

Enter Current SFENR Date (mm/yyyy):			02/2003						Enter Current Year			Enter Removal Unit Cost	Enter Install Unit Cost		
Enter Current SFENR Construction Cost Index			7821						2003			$1,500	$6,000		
A	B	C	D	E	F	G	H	I	J=I-(Year-H)	K	L=K*E	M	N	O=L+M+N	
S-Plat #	Section #	Street	Pipe Diameter (inches)	Pipe Length (FT)	Pipe Material	Man Holes	Year Pipe Installed	Pipe Life Expectancy (yr)	Pipe Life Left (yr)	Pipe Cost ($/LF) (see Worksheet C)	Total Pipe Cost ($)	Remove Manhole Cost ($)	Install Manhole Cost ($)	Total Cost Current SFENR ($)	Estimated Value Feb-2003 ($) SFENR=7821
29	5	N Main St	33	410	RCP	2	1975	25	-3	$408	$167,368	$3,000	$12,000	$182,368	$0
29	5	N Main St	39	400	RCP	1	1975	25	-3	$389	$155,535	$1,500	$6,000	$163,035	$0
29	5	off N Main St	42	180	RCP	2	1975	25	-3	$418	$75,290	$3,000	$12,000	$90,290	$0
29	5	Belbrook Wy	6	620	VCP	2	1945	75	17	$147	$90,878	$3,000	$12,000	$105,878	$23,999
29	5	Midwick Dr	10	500	VCP	2	1965	75	37	$170	$85,058	$3,000	$12,000	$100,058	$49,362
29	5	Arizona Ave	8	190	VCP	2	1975	75	47	$154	$29,251	$3,000	$12,000	$44,251	$27,731
29	6	Sandalwood Dr	6	920	ABS	2	1985	50	32	$147	$134,852	$3,000	$12,000	$149,852	$95,905
29	6	Idaho Ct	6	225	ABS	1	1985	50	32	$147	$32,980	$1,500	$6,000	$40,480	$25,907
29	6	Altamond Dr	6	360	ABS	1	1985	50	32	$147	$52,768	$1,500	$6,000	$60,268	$38,572
29	6	Altamont Dr	6	20	ABS	1	1985	50	32	$147	$2,932	$1,500	$6,000	$10,432	$6,676
29	6	Altamont Dr	6	20	VCP	1	1985	75	57	$147	$2,932	$1,500	$6,000	$10,432	$7,928
29	1,2	Rose Dr	6	1,120	VCP	4	1965	75	37	$147	$164,167	$6,000	$24,000	$194,167	$95,789
29	1,2	Vienna Dr	6	1,440	VCP	1	1975	75	47	$147	$211,072	$1,500	$6,000	$218,572	$136,972
29	1,2	Fontainbleu Ct	6	400	VCP	1	1975	75	47	$147	$58,631	$1,500	$6,000	$66,131	$41,442
29	1,4	Belbrook Wy	6	390	VCP	2	1975	75	47	$147	$57,165	$3,000	$12,000	$72,165	$45,224
29	1,4	Belbrook Pl	6	120	VCP	1	1975	75	47	$147	$17,589	$1,500	$6,000	$25,089	$15,723
29	1,4	N Main St	12	870	VCP	4	1975	75	47	$177	$154,303	$6,000	$24,000	$184,303	$115,497
29	1,4	N Main St	15	570	VCP	3	1975	75	47	$203	$115,934	$4,500	$18,000	$138,434	$86,752
29	1,5	Fontainbleu Ave	8	750	VCP	4	1975	75	47	$154	$115,465	$6,000	$24,000	$145,465	$91,158
29	2,5	Arizona Ave	6	1,330	VCP	2	1975	75	47	$147	$194,949	$3,000	$12,000	$209,949	$131,568
29	2,5	Knollview Dr	6	490	VCP	1	1975	75	47	$147	$71,823	$1,500	$6,000	$79,323	$49,709
29	4,5	Midwick Dr	8	1,000	VCP	4	1965	75	37	$154	$153,953	$6,000	$24,000	$183,953	$90,750
29	4,5	Berrendo Dr	6	1,090	VCP	3	1975	75	47	$147	$159,770	$4,500	$18,000	$182,270	$114,223
29	4,5	Sudbury Dr	6	310	VCP	2	1975	75	47	$147	$45,439	$3,000	$12,000	$60,439	$37,875
29	4,5	Beaumere Wy	6	620	VCP	2	1975	75	47	$147	$90,878	$3,000	$12,000	$105,878	$66,350
30	1	N Milpitas Blvd	33	910	RCP	3	1975	25	-3	$408	$371,475	$4,500	$18,000	$393,975	$0
30	1	Sudbury Dr	6	580	VCP	7	1975	75	47	$147	$85,015	$10,500	$42,000	$137,515	$86,176
30	1	Belbrook Wy	6	190	VCP	0	1975	75	47	$147	$27,850	$0	$0	$27,850	$17,453
30	1	Kovanda Wy	6	160	VCP	0	1975	75	47	$147	$23,452	$0	$0	$23,452	$14,697
30	1	off Belbrook Wy	8	130	VCP	2	1975	75	47	$154	$20,014	$3,000	$12,000	$35,014	$21,942
30	2	Arizona Ave	8	370	VCP	1	1975	75	47	$154	$56,963	$1,500	$6,000	$64,463	$40,397
30	2	Oregon Ct	6	220	VCP	1	1985	75	57	$147	$32,247	$1,500	$6,000	$39,747	$30,208
30	2	Jacklin Rd	6	290	VCP	2	1985	75	57	$147	$42,508	$3,000	$12,000	$57,508	$43,706
30	2	Jacklin Pl	6	340	VCP	3	1985	75	57	$147	$49,837	$4,500	$18,000	$72,337	$54,976
30	2	Oregeon Wy	8	570	VCP	1	1985	75	57	$154	$87,753	$1,500	$6,000	$95,253	$72,392
30	3	Sandalwood Dr	6	830	ABS	2	1985	50	32	$147	$121,660	$3,000	$12,000	$136,660	$87,462
30	3	Gemma Dr	6	940	VCP	2	1975	75	47	$147	$137,783	$3,000	$12,000	$152,783	$95,744
30	3	Jacklin Rd	6	180	VCP	2	1985	75	57	$147	$26,384	$3,000	$12,000	$41,384	$31,452
30	4	Erie Pl	6	100	VCP	1	1985	75	57	$147	$14,658	$1,500	$6,000	$22,158	$16,840
30	4	Erie Ct	6	100	VCP	1	1985	75	57	$147	$14,658	$1,500	$6,000	$22,158	$16,840
30	4	Erie Cir	6	90	VCP	0	1985	75	57	$147	$13,192	$0	$0	$13,192	$10,026
30	4	Jennifer Rd	6	140	VCP	0	1985	75	57	$147	$20,521	$0	$0	$20,521	$15,596
30	4	off Jacklin Rd	27	900	VCP	8	1985	75	57	$327	$294,317	$12,000	$48,000	$354,317	$269,281
30	5	Hamilton Ave	6	160	VCP	0	1975	75	47	$147	$23,452	$0	$0	$23,452	$14,697
30	5	Eriquez Ct	6	290	VCP	2	1975	75	47	$147	$42,508	$3,000	$12,000	$57,508	$36,038
30	5	Hamilton Ave	8	350	VCP	1	1975	75	47	$154	$53,884	$1,500	$6,000	$61,384	$38,467

Schaaf & Wheeler Worksheet B - Sewer System Pipe Components and Estimated Replacement Costs

Enter Current SFENR Date (mm/yyyy):			02/2003											
Enter Current SFENR Construction Cost Index			7821					Enter Current Year			Enter Removal Unit Cost	Enter Install Unit Cost		
								2003			$1,500	$6,000		
A	B	C	D	E	F	G	H	I	J=I-(Year-H)	K	L=K*E	M	N	O=L+M+N	
S-Plat #	Section #	Street	Pipe Diameter (inches)	Pipe Length (FT)	Pipe Material	Man Holes	Year Pipe Installed	Pipe Life Expectancy (yr)	Pipe Life Left (yr)	Pipe Cost (S/LF) (see Worksheet C)	Total Pipe Cost ($)	Remove Manhole Cost ($)	Install Manhole Cost ($)	Total Cost Current SFENR ($)	Estimated Value Feb-2003 ($) SFENR=7821
30	5	Tramway Dr	15	480	VCP	3	1975	75	47	$203	$97,628	$4,500	$18,000	$120,128	$75,280
30	5	off Coventry Cir	6	140	SS	1	1985	75	57	$147	$20,521	$1,500	$6,000	$28,021	$21,296
30	5	Superior Rd	6	410	VCP	0	1985	75	57	$147	$60,097	$0	$0	$60,097	$45,674
30	5	Tramway Dr	6	160	VCP	0	1985	75	57	$147	$23,452	$0	$0	$23,452	$17,824
30	5	Erie Dr	6	70	VCP	1	1985	75	57	$147	$10,260	$1,500	$6,000	$17,760	$13,498
30	5	Fulton Ct	6	130	VCP	1	1985	75	57	$147	$19,055	$1,500	$6,000	$26,555	$20,182
30	6	Escuela Pkwy	6	660	VCP	2	1975	75	47	$147	$96,741	$3,000	$12,000	$111,741	$70,025
30	6	Singley Dr	6	830	VCP	3	1975	75	47	$147	$121,660	$4,500	$18,000	$144,160	$90,340
30	6	Tramway Pl	6	100	VCP	1	1975	75	47	$147	$14,658	$1,500	$6,000	$22,158	$13,886
30	6	Clauser Dr	6	500	VCP	2	1975	75	47	$147	$73,289	$3,000	$12,000	$88,289	$55,328
30	6	Aaron Park Dr	6	490	VCP	1	1980	75	52	$147	$71,823	$1,500	$6,000	$79,323	$54,997
30	6	Chad Dr	6	330	VCP	1	1985	75	57	$147	$48,371	$1,500	$6,000	$55,871	$42,462
30	1,2	Jacklin Cir	6	860	VCP	3	1985	75	57	$147	$126,057	$4,500	$18,000	$148,557	$112,903
30	1,2,3	Jacklin Rd	8	2,170	VCP	7	1985	75	57	$154	$334,078	$10,500	$42,000	$386,578	$293,799
30	1,2,5	N Milpitas Blvd	39	2,420	RCP	8	1975	25	-3	$389	$940,988	$12,000	$48,000	$1,000,988	$0
30	1,4	Hanson Ct	8	830	VCP	3	1975	75	47	$154	$127,781	$4,500	$18,000	$150,281	$94,176
30	2,3	Merz Ct	6	1,390	VCP	4	1975	75	47	$147	$203,743	$6,000	$24,000	$233,743	$146,479
30	2,3,5	Hamilton Ave	6	1,340	VCP	2	1985	75	57	$147	$196,414	$3,000	$12,000	$211,414	$160,675
30	2,5	N Milpitas Blvd	36	720	RCP	3	1975	25	-3	$453	$326,306	$4,500	$18,000	$348,806	$0
30	2,5	Coventry Cir	6	1,020	VCP	7	1985	75	57	$147	$149,510	$10,500	$42,000	$202,010	$153,527
30	3,6	Corinthia Dr	6	510	VCP	2	1975	75	47	$147	$74,755	$3,000	$12,000	$89,755	$56,246
30	4,5	Erie Cir	6	1,100	VCP	6	1985	75	57	$147	$161,236	$9,000	$36,000	$206,236	$156,739
30	4,5	Michigan Rd	6	400	VCP	3	1985	75	57	$147	$58,631	$4,500	$18,000	$81,131	$61,660
30	5,6	Tramway Dr	12	1,160	VCP	4	1975	75	47	$177	$205,738	$6,000	$24,000	$235,738	$147,729
30	5,6	Strickroth Dr	6	680	VCP	2	1985	75	57	$147	$99,673	$3,000	$12,000	$114,673	$87,151
31	1	Vasona St	6	100	VCP	1	1955	75	27	$147	$14,658	$1,500	$6,000	$22,158	$7,977
31	1	Erie Cir	6	170	VCP	1	1985	75	57	$147	$24,918	$1,500	$6,000	$32,418	$24,638
31	1	Jennifer Rd	6	160	VCP	1	1985	75	57	$147	$23,452	$1,500	$6,000	$30,952	$23,524
31	1	off Erie Cir	27	400	VCP	0	1985	75	57	$327	$130,808	$0	$0	$130,808	$99,414
31	2	N Milpitas Blvd	39	370	RCP	2	1975	25	-3	$389	$143,870	$3,000	$12,000	$158,870	$0
31	2	Klamath Rd	6	310	VCP	2	1985	75	57	$147	$45,439	$3,000	$12,000	$60,439	$45,934
31	2	Geneva Rd	6	220	VCP	0	1985	75	57	$147	$32,247	$0	$0	$32,247	$24,508
31	2	Folsom Cir	8	920	VCP	8	1985	75	57	$154	$141,637	$12,000	$48,000	$201,637	$153,244
31	2	Folsom Dr	8	150	VCP	0	1985	75	57	$154	$23,093	$0	$0	$23,093	$17,551
31	2	N Milpitas Blvd	24	90	VCP	0	1975	75	47	$296	$26,614	$0	$0	$26,614	$16,678
31	2	Superior Rd	6	80	VCP	1	1985	75	57	$147	$11,726	$1,500	$6,000	$19,226	$14,612
31	2	Superior Rd	6	220	VCP	1	1985	75	57	$147	$32,247	$1,500	$6,000	$39,747	$30,208
31	2	Perth Ct	6	90	VCP	1	1985	75	57	$147	$13,192	$1,500	$6,000	$20,692	$15,726
31	3	Folsom Pl	6	90	VCP	1	1985	75	57	$147	$13,192	$1,500	$6,000	$20,692	$15,726
31	3	Donahe Dr	6	1,160	VCP	4	1975	75	47	$147	$170,030	$6,000	$24,000	$200,030	$125,352
31	3	Donahe Pl	6	60	VCP	1	1975	75	47	$147	$8,795	$1,500	$6,000	$16,295	$10,211
31	3	Sark Ct	6	430	VCP	2	1985	75	57	$147	$63,029	$3,000	$12,000	$78,029	$59,302
31	3	Hamilton Ave	8	460	VCP	2	1985	75	57	$154	$70,818	$3,000	$12,000	$85,818	$65,222
31	3	Angus Dr	10	170	VCP	0	1985	75	57	$170	$28,920	$0	$0	$28,920	$21,979
31	4	Marylinn Dr	6	570	VCP	1	1955	75	27	$147	$83,549	$1,500	$6,000	$91,049	$32,778
31	4	Almaden Ave	6	420	VCP	1	1955	75	27	$147	$61,563	$1,500	$6,000	$69,063	$24,863

Schaaf & Wheeler Worksheet B - Sewer System Pipe Components and Estimated Replacement Costs

Enter Current SFENR Date (mm/yyyy):			02/2003						Enter Current Year			Enter Removal Unit Cost	Enter Install Unit Cost		
Enter Current SFENR Construction Cost Index			7821						2003			$1,500	$6,000		
A	B	C	D	E	F	G	H	I	J=I-(Year-H)	K	L=K*E	M	N	O=L+M+N	
S-Plat #	Section #	Street	Pipe Diameter (inches)	Pipe Length (FT)	Pipe Material	Man Holes	Year Pipe Installed	Pipe Life Expectancy (yr)	Pipe Life Left (yr)	Pipe Cost ($/LF) (see Worksheet C)	Total Pipe Cost ($)	Remove Manhole Cost ($)	Install Manhole Cost ($)	Total Cost Current SFENR ($)	Estimated Value Feb-2003 ($) SFENR=7821
31	5	Meadowland Dr	8	935	VCP	3	1995	75	67	$154	$143,946	$4,500	$18,000	$166,446	$148,692
31	5	Meadowland Dr	15	885	VCP	4	1995	75	67	$203	$180,002	$6,000	$24,000	$210,002	$187,602
31	6	Silverlake Ct	6	280	VCP	1	1995	75	67	$147	$41,042	$1,500	$6,000	$48,542	$43,364
31	6	Edgewater Dr	6	350	VCP	1	1995	75	67	$147	$51,302	$1,500	$6,000	$58,802	$52,530
31	6	Meadowland Dr	12	390	VCP	1	1995	75	67	$177	$69,170	$1,500	$6,000	$76,670	$68,492
31	6	N Milpitas Blvd	8	40	VCP	0	1975	75	47	$154	$6,158	$0	$0	$6,158	$3,859
31	6	N Milpitas Blvd	21	400	VCP	1	1975	75	47	$257	$102,809	$1,500	$6,000	$110,309	$69,127
31	6	N Milpitas Blvd	24	270	VCP	2	1975	75	47	$296	$79,843	$3,000	$12,000	$94,843	$59,435
31	6	Escuela Pkwy	8	160	VCP	1	1985	75	57	$154	$24,632	$1,500	$6,000	$32,132	$24,421
31	6	Paseo Refugio	6	120	VCP	0	1995	75	67	$147	$17,589	$0	$0	$17,589	$15,713
31	6	Loch Lomond Ct	8	310	VCP	0	1995	75	67	$154	$47,725	$0	$0	$47,725	$42,635
31	6	Paseo Refugio	8	620	VCP	1	1995	75	67	$154	$95,451	$1,500	$6,000	$102,951	$91,969
31	1,2	Erie Cir	6	810	VCP	5	1985	75	57	$147	$118,728	$7,500	$30,000	$156,228	$118,733
31	1,2	Ontario Rd	6	330	VCP	2	1985	75	57	$147	$48,371	$3,000	$12,000	$63,371	$48,162
31	1,2,3	off N Milpitas Blvd	30	2,270	RCP	7	1985	25	7	$367	$832,044	$10,500	$42,000	$884,544	$247,672
31	1,4	Berryessa St	6	1,700	VCP	3	1955	75	27	$147	$249,183	$4,500	$18,000	$271,683	$97,806
31	1,4	Calero St	6	970	VCP	2	1955	75	27	$147	$142,181	$3,000	$12,000	$157,181	$56,585
31	2,3	Hamilton Ave	6	1,140	VCP	3	1985	75	57	$147	$167,099	$4,500	$18,000	$189,599	$144,095
31	2,3,6	Folsom Cir	6	930	VCP	4	1985	75	57	$147	$136,318	$6,000	$24,000	$166,318	$126,401
31	2,3,6	N Milpitas Blvd	21	1,530	VCP	4	1975	75	47	$257	$393,246	$6,000	$24,000	$423,246	$265,234
31	2,5	Folsom Cir	6	690	VCP	3	1985	75	57	$147	$101,139	$4,500	$18,000	$123,639	$93,965
31	2,5,6	Oroville Rd	6	690	VCP	4	1985	75	57	$147	$101,139	$6,000	$24,000	$131,139	$99,665
31	3,6	Dundee Ave	8	870	VCP	2	1985	75	57	$154	$133,939	$3,000	$12,000	$148,939	$113,194
31	3,6	Escuela Pkwy	10	630	VCP	2	1985	75	57	$170	$107,173	$3,000	$12,000	$122,173	$92,851
32	1	Images Cir	6	740	PVC	2	1995	50	42	$147	$108,468	$3,000	$12,000	$123,468	$103,713
32	1	Gemstone Dr	6	220	PVC	1	1995	50	42	$147	$32,247	$1,500	$6,000	$39,747	$33,388
32	1	Twinkle Ct	6	140	PVC	1	1995	50	42	$147	$20,521	$1,500	$6,000	$28,021	$23,538
32	1	Shimmer Ct	6	70	PVC	1	1995	50	42	$147	$10,260	$1,500	$6,000	$17,760	$14,919
32	1	Diamond Wy	6	150	PVC	1	1995	50	42	$147	$21,987	$1,500	$6,000	$29,487	$24,769
32	1	Pond Ct	6	160	PVC	1	1995	50	42	$147	$23,452	$1,500	$6,000	$30,952	$26,000
32	1	Crystal Ct	6	150	PVC	1	1995	50	42	$147	$21,987	$1,500	$6,000	$29,487	$24,769
32	1	Gemstone Dr	8	310	PVC	4	1995	50	42	$154	$47,725	$6,000	$24,000	$77,725	$65,289
32	1	Images Cir	8	720	PVC	4	1995	50	42	$154	$110,846	$6,000	$24,000	$140,846	$118,311
32	1	Shimmer Ct	8	70	PVC	1	1995	50	42	$154	$10,777	$1,500	$6,000	$18,277	$15,352
32	1	Glistening Ct	8	140	PVC	0	1995	50	42	$154	$21,553	$0	$0	$21,553	$18,105
32	1	off Glistening Ct	27	40	RCP	0	1995	25	17	$327	$13,081	$0	$0	$13,081	$8,895
32	1	Marylinn Dr	6	140	VCP	2	1955	75	27	$147	$20,521	$3,000	$12,000	$35,521	$12,788
32	1	off Vasona St	6	430	VCP	3	1985	75	57	$147	$63,029	$4,500	$18,000	$85,529	$65,002
32	1	off Marylinn Dr	6	300	VCP	2	1985	75	57	$147	$43,973	$3,000	$12,000	$58,973	$44,820
32	3	off Milpitas Blvd	8	410	VCP	0	1985	75	57	$154	$63,121	$0	$0	$63,121	$47,972
32	3	Milpitas Blvd	18	860	VCP	2	1975	75	47	$236	$203,320	$3,000	$12,000	$218,320	$136,814
32	3	Milpitas Blvd	21	90	VCP	1	1975	75	47	$257	$23,132	$1,500	$6,000	$30,632	$19,196
32	4	N Main St	8	960	VCP	2	1955	75	27	$154	$147,795	$3,000	$12,000	$162,795	$58,606
32	4	N Main St	24	970	VCP	2	1955	75	27	$296	$286,843	$3,000	$12,000	$301,843	$108,664
32	4	Winsor St	6	1,130	VCP	3	1985	75	57	$147	$165,633	$4,500	$18,000	$188,133	$142,981
32	5	Fairmeadown Wy	8	785	VCP	4	1995	75	67	$154	$120,853	$6,000	$24,000	$150,853	$134,762

Schaaf & Wheeler Worksheet B - Sewer System Pipe Components and Estimated Replacement Costs

Enter Current SFENR Date (mm/yyyy):			02/2003						Enter Current Year			Enter Removal Unit Cost	Enter Install Unit Cost		
Enter Current SFENR Construction Cost Index			7821						2003			$1,500	$6,000		
A	B	C	D	E	F	G	H	I	J=I-(Year-H)	K	L=K*E	M	N	O=L+M+N	
S-Plat #	Section #	Street	Pipe Diameter (inches)	Pipe Length (FT)	Pipe Material	Man Holes	Year Pipe Installed	Pipe Life Expectancy (yr)	Pipe Life Left (yr)	Pipe Cost (S/LF) (see Worksheet C)	Total Pipe Cost ($)	Remove Manhole Cost ($)	Install Manhole Cost ($)	Total Cost Current SFENR ($)	Estimated Value Feb-2003 ($) SFENR=7821
32	5	Meadowhaven Wy	8	370	VCP	2	1995	75	67	$154	$56,963	$3,000	$12,000	$71,963	$64,287
32	5	Meadowland Dr	15	230	VCP	0	1995	75	67	$203	$46,780	$0	$0	$46,780	$41,790
32	6	Silverlake Ct	6	130	VCP	0	1995	75	67	$147	$19,055	$0	$0	$19,055	$17,023
32	6	Edgewater Dr	6	95	VCP	0	1995	75	67	$147	$13,925	$0	$0	$13,925	$12,440
32	6	off Milpitas Blvd	18	580	VCP	2	1975	75	47	$236	$137,123	$3,000	$12,000	$152,123	$95,330
32	6	off Milpitas Blvd	18	30	VCP	0	1975	75	47	$236	$7,093	$0	$0	$7,093	$4,445
32	6	Milpitas Blvd	8	100	VCP	0	1975	75	47	$154	$15,395	$0	$0	$15,395	$9,648
32	6	Milpitas Blvd	18	100	VCP	1	1975	75	47	$236	$23,642	$1,500	$6,000	$31,142	$19,516
32	1,4	Reflection Ln	6	230	PVC	4	1995	50	42	$147	$33,713	$6,000	$24,000	$63,713	$53,519
32	1,4	N Main St	8	860	VCP	2	1975	75	47	$154	$132,400	$3,000	$12,000	$147,400	$92,370
32	1,4	Abel St	18	1,060	VCP	1	1975	75	47	$236	$250,604	$1,500	$6,000	$258,104	$161,745
32	1,4	Weller Ln	30	700	VCP	6	1955	75	27	$367	$256,577	$9,000	$36,000	$301,577	$108,568
32	3,6	Milpitas Blvd	6	900	VCP	5	1975	75	47	$147	$131,920	$7,500	$30,000	$169,420	$106,170
32	3,6	Milpitas Blvd	15	730	VCP	1	1975	75	47	$203	$148,476	$1,500	$6,000	$155,976	$97,745
32	5,6	Silverlake Dr	15	710	VCP	6	1995	75	67	$203	$144,408	$9,000	$36,000	$189,408	$169,205
32	5,6	Railroad Ave	21	1,270	VCP	4	1975	75	47	$257	$326,420	$6,000	$24,000	$356,420	$223,357
33	1	off S Main St	6	500	VCP	1	1955	75	27	$147	$73,289	$1,500	$6,000	$80,789	$29,084
33	1	S Main St	24	100	VCP	1	1955	75	27	$296	$29,571	$1,500	$6,000	$37,071	$13,346
33	1	Spence Ave	6	40	VCP	1	1975	75	47	$147	$5,863	$1,500	$6,000	$13,363	$8,374
33	4	off Ethyl St	6	270	VCP	0	1975	75	47	$147	$39,576	$0	$0	$39,576	$24,801
33	5	Bothelo & Sinnott	8	1,360	VCP	4	1955	75	27	$154	$209,376	$6,000	$24,000	$239,376	$86,175
33	5	Sinnott Ln	12	400	VCP	0	1955	75	27	$177	$70,944	$0	$0	$70,944	$25,540
33	5	S Main St	18	370	VCP	0	1955	75	27	$236	$87,475	$0	$0	$87,475	$31,491
33	1,2	E Carlo St	21	340	VCP	1	1975	75	47	$257	$87,388	$1,500	$6,000	$94,888	$59,463
33	1,2,5	S Main St	21	1,560	VCP	5	1955	75	27	$257	$400,957	$7,500	$30,000	$438,457	$157,845
33	1,4	Serra Wy	8	770	VCP	2	1965	75	37	$154	$118,544	$3,000	$12,000	$133,544	$65,882
33	1,4	Abel St	18	1,040	VCP	5	1965	75	37	$236	$245,875	$7,500	$30,000	$283,375	$139,799
33	1,4,5	S Main St	8	2,040	VCP	7	1975	75	47	$154	$314,064	$10,500	$42,000	$366,564	$229,714
33	3,6	Topaz St	10	860	VCP	3	1985	75	57	$170	$146,299	$4,500	$18,000	$168,799	$128,287
34	1	Sylvia Ave	8	740	VCP	1	1955	75	27	$154	$113,925	$1,500	$6,000	$121,425	$43,713
34	1	Ethyl St	6	380	VCP	2	1975	75	47	$147	$55,700	$3,000	$12,000	$70,700	$44,305
34	1	off Ethyl St	6	90	VCP	0	1975	75	47	$147	$13,192	$0	$0	$13,192	$8,267
34	1	off Ethyl St	6	230	VCP	1	1975	75	47	$147	$33,713	$1,500	$6,000	$41,213	$25,827
34	4	off Abel St	30	950	RCP	2	1985	25	7	$367	$348,212	$3,000	$12,000	$363,212	$101,699
34	6	Curtis Ave	18	340	VCP	0	1955	75	27	$236	$80,382	$0	$0	$80,382	$28,938
34	1,2	Corning Ave	8	1,230	VCP	4	1955	75	27	$154	$189,362	$6,000	$24,000	$219,362	$78,970
34	1,4,5	Abel St	15	2,110	VCP	7	1965	75	37	$203	$429,157	$10,500	$42,000	$481,657	$237,618
34	2,4,5	off Abel St	24	550	RCP	2	1985	25	7	$296	$162,643	$3,000	$12,000	$177,643	$49,740
34	2,5	S Main St	8	1,620	VCP	4	1955	75	27	$154	$249,404	$6,000	$24,000	$279,404	$100,585
34	2,5	S Main St	18	2,040	VCP	7	1955	75	27	$236	$482,294	$10,500	$42,000	$534,794	$192,526
34	2,5	Hammond Wy	8	1,590	VCP	6	1965	75	37	$154	$244,785	$9,000	$36,000	$289,785	$142,961
35	2	Abel St	15	560	VCP	2	1975	75	47	$203	$113,900	$3,000	$12,000	$128,900	$80,777
35	4	off Great Mall Pkwy	15	260	VCP	0	1965	75	37	$203	$52,882	$0	$0	$52,882	$26,088
35	6	S Main St	12	120	VCP	0	1955	75	27	$177	$21,283	$0	$0	$21,283	$7,662
35	2,3	Curtis Ave	18	1,060	VCP	5	1985	75	57	$236	$250,604	$7,500	$30,000	$288,104	$218,959
35	2,5	Abel St	8	1,330	VCP	3	1975	75	47	$154	$204,757	$4,500	$18,000	$227,257	$142,415

Schaaf & Wheeler Worksheet B - Sewer System Pipe Components and Estimated Replacement Costs

Enter Current SFENR Date (mm/yyyy):			02/2003						Enter Current Year			Enter Removal Unit Cost	Enter Install Unit Cost		
Enter Current SFENR Construction Cost Index			7821						2003			$1,500	$6,000		
A	B	C	D	E	F	G	H	I	J=I-(Year-H)	K	L=K*E	M	N	O=L+M+N	
S-Plat #	Section #	Street	Pipe Diameter (inches)	Pipe Length (FT)	Pipe Material	Man Holes	Year Pipe Installed	Pipe Life Expectancy (yr)	Pipe Life Left (yr)	Pipe Cost ($/LF) (see Worksheet C)	Total Pipe Cost ($)	Remove Manhole Cost ($)	Install Manhole Cost ($)	Total Cost Current SFENR ($)	Estimated Value Feb-2003 ($) SFENR=7821
35	2,5,6	S Main St	18	2,050	VCP	8	1955	75	27	$236	$484,658	$12,000	$48,000	$544,658	$196,077
35	3,6	off Escort and S Main	8	1,020	VCP	3	1965	75	37	$154	$157,032	$4,500	$18,000	$179,532	$88,569
35	4,5	Evening Star Ct	6	370	VCP	1	1975	75	47	$147	$54,234	$1,500	$6,000	$61,734	$38,687
36	1	off Capitol Ave	8	70	VCP	0	1965	75	37	$154	$10,777	$0	$0	$10,777	$5,317
36	1	off Capitol Ave	15	170	VCP	1	1965	75	37	$203	$34,577	$1,500	$6,000	$42,077	$20,758
36	1	off Capitol Ave	8	90	VCP	0	1965	75	37	$154	$13,856	$0	$0	$13,856	$6,836
36	1	off Capitol Ave	15	100	VCP	3	1965	75	37	$203	$20,339	$4,500	$18,000	$42,839	$21,134
36	1	Evening Star Ct	6	240	VCP	0	1975	75	47	$147	$35,179	$0	$0	$35,179	$22,045
36	2	Capitol Ave	6	310	VCP	1	1965	75	37	$147	$45,439	$1,500	$6,000	$52,939	$26,117
36	2	Moon Ct	6	200	VCP	0	1965	75	37	$147	$29,316	$0	$0	$29,316	$14,462
36	2	Sun Ct	6	120	VCP	0	1965	75	37	$147	$17,589	$0	$0	$17,589	$8,677
36	2	Polaris Ct	6	290	VCP	0	1965	75	37	$147	$42,508	$0	$0	$42,508	$20,970
36	2	Fallen Leaf Dr	8	600	VCP	2	1965	75	37	$154	$92,372	$3,000	$12,000	$107,372	$52,970
36	3	S Main St	8	1,790	VCP	4	1955	75	27	$154	$275,576	$6,000	$24,000	$305,576	$110,007
36	3	S Main St	12	240	VCP	0	1955	75	27	$177	$42,566	$0	$0	$42,566	$15,324
36	3	off S Main St	15	350	VCP	3	1985	75	57	$203	$71,187	$4,500	$18,000	$93,687	$71,202
36	3	Great Mall Pkwy	10	610	VCP	1	1975	75	47	$170	$103,770	$1,500	$6,000	$111,270	$69,729
36	4	Moonlight Wy	6	200	VCP	0	1965	75	37	$147	$29,316	$0	$0	$29,316	$14,462
36	4	Moonlight Cir	6	1,180	VCP	5	1965	75	37	$147	$172,962	$7,500	$30,000	$210,462	$103,828
36	4	Woodland Wy	8	190	VCP	2	1965	75	37	$154	$29,251	$3,000	$12,000	$44,251	$21,831
36	4	off Woodland Wy	8	730	VCP	3	1965	75	37	$154	$112,386	$4,500	$18,000	$134,886	$66,544
36	5	Greentree Cir	6	1,040	VCP	4	1975	75	47	$147	$152,441	$6,000	$24,000	$182,441	$114,330
36	5	N/A	6	400	VCP	0	1975	75	47	$147	$58,631	$0	$0	$58,631	$36,742
36	6	McCandless Dr	8	980	VCP	3	1985	75	57	$154	$150,874	$4,500	$18,000	$173,374	$131,764
36	1,2	Capitol Ave	10	1,230	VCP	6	1965	75	37	$170	$209,242	$9,000	$36,000	$254,242	$125,426
36	1,4	Stardust Wy	6	1,050	VCP	2	1965	75	37	$147	$153,907	$3,000	$12,000	$168,907	$83,327
36	1,4	Moonbeam Wy	6	940	VCP	2	1965	75	37	$147	$137,783	$3,000	$12,000	$152,783	$75,373
36	1,4	Sunrise Wy	8	1,120	VCP	3	1965	75	37	$154	$172,427	$4,500	$18,000	$194,927	$96,164
36	1,4	Stellar Wy	6	1,100	VCP	2	1975	75	47	$147	$161,236	$3,000	$12,000	$176,236	$110,441
36	2,5	Fallen Leaf Dr	6	1,100	VCP	4	1965	75	37	$147	$161,236	$6,000	$24,000	$191,236	$94,343
36	2,5	Woodland Ct	8	390	VCP	2	1965	75	37	$154	$60,042	$3,000	$12,000	$75,042	$37,021
36	2,5	Abel St	6	820	VCP	4	1975	75	47	$147	$120,194	$6,000	$24,000	$150,194	$94,122
36	3,5,6	Great Mall Pkwy	10	610	VCP	1	1975	75	47	$170	$103,770	$1,500	$6,000	$111,270	$69,729
36	3,6	McCandless Dr	10	300	VCP	1	1985	75	57	$170	$51,035	$1,500	$6,000	$58,535	$44,486
36	4,5	Woodland Wy	6	650	VCP	0	1965	75	37	$147	$95,276	$0	$0	$95,276	$47,003
36	4,5	Greentree Wy	6	1,240	VCP	2	1965	75	37	$147	$181,757	$3,000	$12,000	$196,757	$97,067
36	4,5	Evergreen Wy	6	780	VCP	1	1965	75	37	$147	$114,331	$1,500	$6,000	$121,831	$60,103
36	4,5	Lonetree Ct	6	650	VCP	1	1965	75	37	$147	$95,276	$1,500	$6,000	$102,776	$50,703
37	1	Fir Tree Ct	6	150	VCP	0	1965	75	37	$147	$21,987	$0	$0	$21,987	$10,847
37	1	Starlite Dr	8	340	VCP	2	1965	75	37	$154	$52,344	$3,000	$12,000	$67,344	$33,223
37	1	Timber Wy	8	240	VCP	0	1965	75	37	$154	$36,949	$0	$0	$36,949	$18,228
37	1	off Starlite Dr	8	280	VCP	1	1965	75	37	$154	$43,107	$1,500	$6,000	$50,607	$24,966
37	1	Live Oak Ct	6	60	VCP	0	1975	75	47	$147	$8,795	$0	$0	$8,795	$5,511
37	2	Cedar Wy	6	240	VCP	0	1965	75	37	$147	$35,179	$0	$0	$35,179	$17,355
37	2	Cedar Ct	6	180	VCP	0	1965	75	37	$147	$26,384	$0	$0	$26,384	$13,016
37	2	Cedar Wy	8	250	VCP	2	1965	75	37	$154	$38,488	$3,000	$12,000	$53,488	$26,388

Schaaf & Wheeler Worksheet B - Sewer System Pipe Components and Estimated Replacement Costs

Enter Current SFENR Date (mm/yyyy):			02/2003						Enter Current Year			Enter Removal Unit Cost	Enter Install Unit Cost		
Enter Current SFENR Construction Cost Index:			7821						2003			$1,500	$6,000		
A	B	C	D	E	F	G	H	I	J=I-(Year-H)	K	L=K*E	M	N	O=L+M+N	
S-Plat #	Section #	Street	Pipe Diameter (inches)	Pipe Length (FT)	Pipe Material	Man Holes	Year Pipe Installed	Pipe Life Expectancy (yr)	Pipe Life Left (yr)	Pipe Cost ($/LF) (see Worksheet C)	Total Pipe Cost ($)	Remove Manhole Cost ($)	Install Manhole Cost ($)	Total Cost Current SFENR ($)	Estimated Value Feb-2003 ($) SFENR=7821
37	4	Manzanita Ct	6	310	VCP	0	1965	75	37	$147	$45,439	$0	$0	$45,439	$22,417
37	4	Silvertip Ct	6	440	VCP	1	1965	75	37	$147	$64,494	$1,500	$6,000	$71,994	$35,517
37	4	Fallen Leaf Dr	6	210	VCP	1	1965	75	37	$147	$30,781	$1,500	$6,000	$38,281	$18,885
37	4	Camphor Ct	6	220	VCP	2	1965	75	37	$147	$32,247	$3,000	$12,000	$47,247	$23,309
37	4	Forest Ct	6	340	VCP	1	1965	75	37	$147	$49,837	$1,500	$6,000	$57,337	$28,286
37	4	Blue Spruce Ct	6	340	VCP	1	1965	75	37	$147	$49,837	$1,500	$6,000	$57,337	$28,286
37	4	Fallen Leaf Dr	8	250	VCP	1	1965	75	37	$154	$38,488	$1,500	$6,000	$45,988	$22,688
37	1,2	Greenwood Wy	8	1,230	VCP	4	1965	75	37	$154	$189,362	$6,000	$24,000	$219,362	$108,219
37	1,4	Starlite Dr	6	1,300	VCP	4	1965	75	37	$147	$190,551	$6,000	$24,000	$220,551	$108,805
37	1,4	Pinewood Wy	6	1,020	VCP	2	1965	75	37	$147	$149,510	$3,000	$12,000	$164,510	$81,158
37	1,4	Blue Spruce Wy	8	1,000	VCP	4	1965	75	37	$154	$153,953	$6,000	$24,000	$183,953	$90,750
37	2,4,5	Fallen Leaf Dr	6	1,780	VCP	1	1965	75	37	$147	$260,909	$1,500	$6,000	$268,409	$132,415
37	2,5	S Main St	8	1,650	VCP	6	1955	75	27	$154	$254,022	$9,000	$36,000	$299,022	$107,648
37	3,6	McCandless Dr	8	1,210	VCP	4	1985	75	57	$154	$186,283	$6,000	$24,000	$216,283	$164,375
37	4,5	Pinewood Ct	6	340	VCP	1	1965	75	37	$147	$49,837	$1,500	$6,000	$57,337	$28,286
37	5,6	Montague Expy	8	600	VCP	1	1965	75	37	$154	$92,372	$1,500	$6,000	$99,872	$49,270
39	4	Bolton Dr	6	420	VCP	2	1985	75	57	$147	$61,563	$3,000	$12,000	$76,563	$58,188
39	4	Churchill Dr	6	780	VCP	2	1985	75	57	$147	$114,331	$3,000	$12,000	$129,331	$98,291
39	4	Inverness Dr	6	280	VCP	1	1985	75	57	$147	$41,042	$1,500	$6,000	$48,542	$36,892
39	4	Wellington Dr	6	350	VCP	1	1985	75	57	$147	$51,302	$1,500	$6,000	$58,802	$44,690
39	4	Stratford Dr	6	220	VCP	0	1985	75	57	$147	$32,247	$0	$0	$32,247	$24,508
40	1	Stratford Dr	6	840	VCP	2	1985	75	57	$147	$123,125	$3,000	$12,000	$138,125	$104,975
40	1	Stirling Dr	6	330	VCP	1	1985	75	57	$147	$48,371	$1,500	$6,000	$55,871	$42,462
40	1	Hastings Dr	6	60	VCP	0	1985	75	57	$147	$8,795	$0	$0	$8,795	$6,684
40	1	Hastings Dr	6	280	VCP	2	1985	75	57	$147	$41,042	$3,000	$12,000	$56,042	$42,592
40	4	Park Victoria Dr	6	280	VCP	0	1985	75	57	$147	$41,042	$0	$0	$41,042	$31,192
40	4	Berkshire Pl	6	520	VCP	2	1985	75	57	$147	$76,221	$3,000	$12,000	$91,221	$69,328
40	4	Baron Pl	6	280	VCP	2	1985	75	57	$147	$41,042	$3,000	$12,000	$56,042	$42,592
40	4	Park Victoria Dr	8	570	VCP	2	1985	75	57	$154	$87,753	$3,000	$12,000	$102,753	$78,092
40	5	Wessex Pl	6	90	VCP	1	1985	75	57	$147	$13,192	$1,500	$6,000	$20,692	$15,726
40	1,4	London Dr	6	1,100	VCP	4	1985	75	57	$147	$161,236	$6,000	$24,000	$191,236	$145,339
40	1,4	Wellington Dr	6	1,170	VCP	2	1985	75	57	$147	$171,496	$3,000	$12,000	$186,496	$141,737
41	1	Route 680	8	370	VCP	0	1975	75	47	$154	$56,963	$0	$0	$56,963	$35,697
41	1	Route 680	18	320	VCP	1	Casing	75	-	$236	$75,654	$1,500	$6,000	$83,154	$0
41	1	Coehlo St	6	80	VCP	0	1965	75	37	$147	$11,726	$0	$0	$11,726	$5,785
41	1	Diel Dr	6	650	VCP	3	1965	75	37	$147	$95,276	$4,500	$18,000	$117,776	$58,103
41	1	Curtner Ct	6	180	VCP	1	1965	75	37	$147	$26,384	$1,500	$6,000	$33,884	$16,716
41	1	Curtner Dr	8	520	VCP	2	1965	75	37	$154	$80,056	$3,000	$12,000	$95,056	$46,894
41	1	N Park Victoria	8	290	VCP	3	1985	75	57	$154	$44,646	$4,500	$18,000	$67,146	$51,031
41	2	Cardiff Pl	6	450	VCP	1	1985	75	57	$147	$65,960	$1,500	$6,000	$73,460	$55,830
41	4	Columbus Dr	6	160	VCP	0	1965	75	37	$147	$23,452	$0	$0	$23,452	$11,570
41	4	Columbus Cir	6	200	VCP	1	1965	75	37	$147	$29,316	$1,500	$6,000	$36,816	$18,162
41	4	Manzano Ct	6	320	VCP	2	1975	75	47	$147	$46,905	$3,000	$12,000	$61,905	$38,794
41	4	Cirolero St	6	50	VCP	0	1975	75	47	$147	$7,329	$0	$0	$7,329	$4,593
41	5	Princess Pl	6	520	VCP	2	1985	75	57	$147	$76,221	$3,000	$12,000	$91,221	$69,328
41	5	off El Camino Higuera	6	270	VCP	0	1985	75	57	$147	$39,576	$0	$0	$39,576	$30,078

Schaaf & Wheeler Worksheet B - Sewer System Pipe Components and Estimated Replacement Costs

Enter Current SFENR Date (mm/yyyy):			02/2003											
Enter Current SFENR Construction Cost Index			7821					Enter Current Year: 2003			Enter Removal Unit Cost: $1,500	Enter Install Unit Cost: $6,000		
A	B	C	D	E	F	G	H	I	J=I-(Year-H)	K	L=K*E	M	N	O=L+M+N	
S-Plat #	Section #	Street	Pipe Diameter (inches)	Pipe Length (FT)	Pipe Material	Man Holes	Year Pipe Installed	Pipe Life Expectancy (yr)	Pipe Life Left (yr)	Pipe Cost ($/LF) (see Worksheet C)	Total Pipe Cost ($)	Remove Manhole Cost ($)	Install Manhole Cost ($)	Total Cost Current SFENR ($)	Estimated Value Feb-2003 ($) SFENR=7821
41	5	Hampton Ct	6	150	VCP	2	1985	75	57	$147	$21,987	$3,000	$12,000	$36,987	$28,110
41	5	N Park Victoria	6	330	VCP	1	1985	75	57	$147	$48,371	$1,500	$6,000	$55,871	$42,462
41	5	N Park Victoria	8	120	VCP	1	1985	75	57	$154	$18,474	$1,500	$6,000	$25,974	$19,741
41	6	off El Camino Higuera	6	110	VCP	1	1985	75	57	$147	$16,124	$1,500	$6,000	$23,624	$17,954
41	1,2	Wessex Pl	6	740	VCP	1	1985	75	57	$147	$108,468	$1,500	$6,000	$115,968	$88,135
41	1,2	Canterbury Pl	6	390	VCP	1	1985	75	57	$147	$57,165	$1,500	$6,000	$64,665	$49,146
41	1,2,5	N Park Victoria	6	1,230	VCP	4	1985	75	57	$147	$180,291	$6,000	$24,000	$210,291	$159,821
41	2,5	Ann Pl	6	480	VCP	1	1985	75	57	$147	$70,357	$1,500	$6,000	$77,857	$59,172
41	4,5	Hillview Dr	6	880	VCP	4	1965	75	37	$147	$128,989	$6,000	$24,000	$158,989	$78,434
41	4,5	Founders Ln	6	480	VCP	2	1965	75	37	$147	$70,357	$3,000	$12,000	$85,357	$42,110
41	5,6	El Camino Higuera	6	650	VCP	3	1985	75	57	$147	$95,276	$4,500	$18,000	$117,776	$89,510
41	5,6	Carson Wy	6	390	VCP	1	1985	75	57	$147	$57,165	$1,500	$6,000	$64,665	$49,146
42	1	Madalen Dr	6	740	VCP	2	1965	75	37	$147	$108,468	$3,000	$12,000	$123,468	$60,911
42	1	Columbus Dr	6	760	VCP	2	1965	75	37	$147	$111,399	$3,000	$12,000	$126,399	$62,357
42	1	Russell Ln	6	150	VCP	0	1965	75	37	$147	$21,987	$0	$0	$21,987	$10,847
42	1	Cirolero St	6	780	VCP	2	1975	75	47	$147	$114,331	$3,000	$12,000	$129,331	$81,047
42	1	Escuela Pkwy	6	380	VCP	2	1975	75	47	$147	$55,700	$3,000	$12,000	$70,700	$44,305
42	1	off Escuela Pkwy	6	330	VCP	0	1975	75	47	$147	$48,371	$0	$0	$48,371	$30,312
42	2	Hillview Dr	6	630	VCP	1	1965	75	37	$147	$92,344	$1,500	$6,000	$99,844	$49,256
42	2	Nieves Ct	6	290	VCP	1	1965	75	37	$147	$42,508	$1,500	$6,000	$50,008	$24,670
42	3	El Camino Higuera	6	410	VCP	1	1975	75	47	$147	$60,097	$1,500	$6,000	$67,597	$42,361
42	3	Zamora Ct	6	210	VCP	1	1985	75	57	$147	$30,781	$1,500	$6,000	$38,281	$29,094
42	3	Berg Ct	6	210	VCP	1	1985	75	57	$147	$30,781	$1,500	$6,000	$38,281	$29,094
42	3	N Park Victoria	8	690	VCP	3	1985	75	57	$154	$106,228	$4,500	$18,000	$128,728	$97,833
42	3	Creed St	8	260	VCP	1	1985	75	57	$154	$40,028	$1,500	$6,000	$47,528	$36,121
42	4	Columbus Dr	6	600	VCP	2	1975	75	47	$147	$87,947	$3,000	$12,000	$102,947	$64,513
42	4	Columbus Dr	8	230	VCP	2	1975	75	47	$154	$35,409	$3,000	$12,000	$50,409	$31,590
42	4	Gordon St	6	290	VCP	1	1985	75	57	$147	$42,508	$1,500	$6,000	$50,008	$38,006
42	4	Grayson Wy	6	1,460	VCP	6	1985	75	57	$147	$214,004	$9,000	$36,000	$259,004	$196,843
42	4	Constigan Cir	6	940	VCP	8	1985	75	57	$147	$137,783	$12,000	$48,000	$197,783	$150,315
42	4	Altamont Dr	6	220	VCP	0	1985	75	57	$147	$32,247	$0	$0	$32,247	$24,508
42	4	Glen Ct	6	10	VCP	1	1985	75	57	$147	$1,466	$1,500	$6,000	$8,966	$6,814
42	5	La Palma Pl	6	390	PVC	2	1995	50	42	$147	$57,165	$3,000	$12,000	$72,165	$60,619
42	5	Kevenaire Dr	6	620	VCP	1	1985	75	57	$147	$90,878	$1,500	$6,000	$98,378	$74,768
42	5	Hillview Dr	6	50	VCP	1	1995	75	67	$147	$7,329	$1,500	$6,000	$14,829	$13,247
42	5	Hillview Dr	18	210	VCP	3	1995	75	67	$236	$49,648	$4,500	$18,000	$72,148	$64,452
42	6	off Fox Hollow Ct	6	190	VCP	1	1985	75	57	$147	$27,850	$1,500	$6,000	$35,350	$26,866
42	6	off Nicklaus Ave	8	180	VCP	1	1985	75	57	$154	$27,712	$1,500	$6,000	$35,212	$26,761
42	6	Bialock St	8	230	VCP	0	1985	75	57	$154	$35,409	$0	$0	$35,409	$26,911
42	6	off N Park Victoria	8	170	VCP	0	1985	75	57	$154	$26,172	$0	$0	$26,172	$19,891
42	1,2	Nieves St	6	700	VCP	2	1965	75	37	$147	$102,605	$3,000	$12,000	$117,605	$58,018
42	1,2	Russell Ln	8	1,160	VCP	4	1965	75	37	$154	$178,585	$6,000	$24,000	$208,585	$102,902
42	1,2	Kizer St	6	860	VCP	1	1975	75	47	$147	$126,057	$1,500	$6,000	$133,557	$83,696
42	2,3	N Park Victoria	8	610	VCP	2	1975	75	47	$154	$93,911	$3,000	$12,000	$108,911	$68,251
42	2,5	Hillview Dr	8	1,180	VCP	3	1965	75	37	$154	$181,665	$4,500	$18,000	$204,165	$100,721
42	2,5,6	Horcajo Cir	6	910	VCP	3	1985	75	57	$147	$133,386	$4,500	$18,000	$155,886	$118,473

Schaaf & Wheeler Worksheet B - Sewer System Pipe Components and Estimated Replacement Costs

Enter Current SFENR Date (mm/yyyy)			02/2003					Enter Current Year			Enter Removal Unit Cost	Enter Install Unit Cost		
Enter Current SFENR Construction Cost Index			7821					2003			$1,500	$6,000		
A	B	C	D	E	F	G	H	I	J=I-(Year-H)	K	L=K*E	M	N	O=L+M+N	
S-Plat #	Section #	Street	Pipe Diameter (inches)	Pipe Length (FT)	Pipe Material	Man Holes	Year Pipe Installed	Pipe Life Expectancy (yr)	Pipe Life Left (yr)	Pipe Cost (S/LF) (see Worksheet C)	Total Pipe Cost ($)	Remove Manhole Cost ($)	Install Manhole Cost ($)	Total Cost Current SFENR ($)	Estimated Value Feb-2003 ($) SFENR=7821
42	3,6	Nicklaus Ave	8	1,070	VCP	3	1985	75	57	$154	$164,730	$4,500	$18,000	$187,230	$142,295
42	3,6	Rankin Dr	8	520	VCP	1	1985	75	57	$154	$80,056	$1,500	$6,000	$87,556	$66,542
42	4,5	Rivera St	6	800	VCP	1	1975	75	47	$147	$117,262	$1,500	$6,000	$124,762	$78,184
42	4,5	Heflin St	6	680	VCP	1	1975	75	47	$147	$99,673	$1,500	$6,000	$107,173	$67,162
42	4,5	Horcajo St	8	840	VCP	2	1975	75	47	$154	$129,321	$3,000	$12,000	$144,321	$90,441
42	5,6	off Hillview Dr	12	1,020	VCP	5	1975	75	47	$177	$180,907	$7,500	$30,000	$218,407	$136,868
43	1	Martil Wy	6	660	VCP	3	1975	75	47	$147	$96,741	$4,500	$18,000	$119,241	$74,725
43	1	Tirol Ct	6	80	VCP	1	1975	75	47	$147	$11,726	$1,500	$6,000	$19,226	$12,048
43	1	Kevenaire Dr	6	770	VCP	3	1985	75	57	$147	$112,865	$4,500	$18,000	$135,365	$102,877
43	1	off Jacklin Rd	6	140	VCP	1	1985	75	57	$147	$20,521	$1,500	$6,000	$28,021	$21,296
43	1	Gordon St	6	100	VCP	0	1985	75	57	$147	$14,658	$0	$0	$14,658	$11,140
43	1	Campbell St	6	140	VCP	0	1985	75	57	$147	$20,521	$0	$0	$20,521	$15,596
43	1	Glen Ct	6	140	VCP	1	1985	75	57	$147	$20,521	$1,500	$6,000	$28,021	$21,296
43	2	La Palma Pl	6	330	PVC	3	1995	50	42	$147	$48,371	$4,500	$18,000	$70,871	$59,531
43	2	off La Palma Pl	6	130	PVC	1	1995	50	42	$147	$19,055	$1,500	$6,000	$26,555	$22,306
43	2	Heather Ct	6	210	VCP	0	1985	75	57	$147	$30,781	$0	$0	$30,781	$23,394
43	2	Jacklin Rd	6	310	VCP	1	1985	75	57	$147	$45,439	$1,500	$6,000	$52,939	$40,234
43	2	De Anza Ct	6	200	VCP	1	1985	75	57	$147	$29,316	$1,500	$6,000	$36,816	$27,980
43	2	Alisal Ct	6	150	VCP	1	1985	75	57	$147	$21,987	$1,500	$6,000	$29,487	$22,410
43	2	De Vaile Ct	6	220	VCP	1	1985	75	57	$147	$32,247	$1,500	$6,000	$39,747	$30,208
43	2	Hillview Dr	6	170	VCP	0	1985	75	57	$147	$24,918	$0	$0	$24,918	$18,938
43	2	Jacklin Rd	8	100	VCP	1	1985	75	57	$154	$15,395	$1,500	$6,000	$22,895	$17,400
43	2	Hillview Dr	18	910	VCP	7	1995	75	67	$236	$215,141	$10,500	$42,000	$267,641	$239,093
43	3	off Hillview Dr	6	200	VCP	1	1975	75	47	$147	$29,316	$1,500	$6,000	$36,816	$23,071
43	3	off Hillview Dr	8	960	VCP	5	1975	75	47	$154	$147,795	$7,500	$30,000	$185,295	$116,118
43	3	Calle Oriete	6	90	VCP	1	1975	75	47	$147	$13,192	$1,500	$6,000	$20,692	$12,967
43	3	Calle Oriete	6	40	VCP	0	1975	75	47	$147	$5,863	$0	$0	$5,863	$3,674
43	3	Jacklin Rd	8	240	VCP	0	1975	75	47	$154	$36,949	$0	$0	$36,949	$23,155
43	3	off Calle Oriete	8	150	VCP	1	1975	75	47	$154	$23,093	$1,500	$6,000	$30,593	$19,172
43	3	off Calle Oriete	8	130	VCP	1	1975	75	47	$154	$20,014	$1,500	$6,000	$27,514	$17,242
43	3	Traughber St	8	220	VCP	0	1995	75	67	$154	$33,870	$0	$0	$33,870	$30,257
43	4	Wyoma Pl	6	100	VCP	1	1975	75	47	$147	$14,658	$1,500	$6,000	$22,158	$13,886
43	4	Escuela Pkwy	8	900	VCP	3	1975	75	47	$154	$138,558	$4,500	$18,000	$161,058	$100,929
43	4	Tramway Dr	12	170	VCP	1	1975	75	47	$177	$30,151	$1,500	$6,000	$37,651	$23,595
43	5	off Folsom Dr	24	90	RCP	0	1975	25	-3	$296	$26,614	$0	$0	$26,614	$0
43	5	Mercado Ct	6	130	VCP	1	1975	75	47	$147	$19,055	$1,500	$6,000	$26,555	$16,641
43	5	Calle Del Prado	6	280	VCP	1	1985	75	57	$147	$41,042	$1,500	$6,000	$48,542	$36,892
43	5	off Tramway Dr	12	700	VCP	1	1985	75	57	$177	$124,152	$1,500	$6,000	$131,652	$100,055
43	6	Wool Dr	24	460	RCP	1	1995	25	17	$296	$136,029	$1,500	$6,000	$143,529	$97,600
43	6	off Wool Dr	24	490	RCP	2	1995	25	17	$296	$144,900	$3,000	$12,000	$159,900	$108,732
43	6	Hillview Dr	6	460	VCP	0	1985	75	57	$147	$67,426	$0	$0	$67,426	$51,244
43	6	Decoto Ct	6	130	VCP	1	1985	75	57	$147	$19,055	$1,500	$6,000	$26,555	$20,182
43	6	Del Rio Ct	6	250	VCP	2	1985	75	57	$147	$36,644	$3,000	$12,000	$51,644	$39,250
43	6	off Wool Dr	6	170	VCP	0	1995	75	67	$147	$24,918	$0	$0	$24,918	$22,260
43	6	Wool Dr	6	470	VCP	1	1995	75	67	$147	$68,892	$1,500	$6,000	$76,392	$68,243
43	1,2	Corinthia Dr	6	1,200	VCP	4	1975	75	47	$147	$175,894	$6,000	$24,000	$205,894	$129,027

Schaaf & Wheeler Worksheet B - Sewer System Pipe Components and Estimated Replacement Costs

Enter Current SFENR Date (mm/yyyy)			02/2003					Enter Current Year			Enter Removal Unit Cost	Enter Install Unit Cost		
Enter Current SFENR Construction Cost Index			7821					2003			$1,500	$6,000		
A	B	C	D	E	F	G	H	I	J=I-(Year-H)	K	L=K*E	M	N	O=L+M+N	
S-Plat #	Section #	Street	Pipe Diameter (inches)	Pipe Length (FT)	Pipe Material	Man Holes	Year Pipe Installed	Pipe Life Expectancy (yr)	Pipe Life Left (yr)	Pipe Cost ($/LF) (see Worksheet C)	Total Pipe Cost ($)	Remove Manhole Cost ($)	Install Manhole Cost ($)	Total Cost Current SFENR ($)	**Estimated Value Feb-2003 ($) SFENR=7821**
43	1,2,4	Clauser Dr	6	1,230	VCP	3	1975	75	47	$147	$180,291	$4,500	$18,000	$202,791	$127,082
43	1,2,4	Parvin Dr	6	1,110	VCP	3	1975	75	47	$147	$162,702	$4,500	$18,000	$185,202	$116,060
43	1,4	Escuela Pkwy	6	230	VCP	0	1975	75	47	$147	$33,713	$0	$0	$33,713	$21,127
43	2,3	Jacklin Rd	15	900	VCP	4	1975	75	47	$203	$183,053	$6,000	$24,000	$213,053	$133,513
43	2,3,5	off Hillview Dr	12	270	VCP	1	1985	75	57	$177	$47,887	$1,500	$6,000	$55,387	$42,094
43	2,3,6	Hillview Dr	12	1,510	VCP	6	1985	75	57	$177	$267,813	$9,000	$36,000	$312,813	$237,738
43	2,5	Santa Rita Dr	6	880	VCP	5	1975	75	47	$147	$128,989	$7,500	$30,000	$166,489	$104,333
43	2,5	Via Baja Dr	6	290	VCP	0	1975	75	47	$147	$42,508	$0	$0	$42,508	$26,638
43	2,5	off Jacklin Rd	8	980	VCP	4	1985	75	57	$154	$150,874	$6,000	$24,000	$180,874	$137,464
43	3,6	Wool Dr	8	650	VCP	4	1995	75	67	$154	$100,069	$6,000	$24,000	$130,069	$116,195
43	4,5	off Escuela Pkwy	30	1,500	RCP	3	1965	25	-13	$367	$549,809	$4,500	$18,000	$572,309	$0
43	4,5	Tramway Dr	6	1,380	VCP	6	1975	75	47	$147	$202,278	$9,000	$36,000	$247,278	$154,961
43	4,5	Singley Dr	6	1,410	VCP	4	1975	75	47	$147	$206,675	$6,000	$24,000	$236,675	$148,316
43	4,5	Flume Ct	6	420	VCP	2	1975	75	47	$147	$61,563	$3,000	$12,000	$76,563	$47,979
43	4,5	Los Pinos Ave	6	610	VCP	2	1985	75	57	$147	$89,413	$3,000	$12,000	$104,413	$79,354
43	5,6	Tramway Dr	30	670	RCP	3	1985	25	7	$367	$245,581	$4,500	$18,000	$268,081	$75,063
43	5,6	Tramway Dr	6	380	VCP	1	1985	75	57	$147	$55,700	$1,500	$6,000	$63,200	$48,032
43	5,6	Tassara Dr	6	860	VCP	3	1985	75	57	$147	$126,057	$4,500	$18,000	$148,557	$112,903
44	1	Escuela Pl	6	100	VCP	1	1975	75	47	$147	$14,658	$1,500	$6,000	$22,158	$13,886
44	1	Donahe Dr	6	50	VCP	0	1975	75	47	$147	$7,329	$0	$0	$7,329	$4,593
44	1	Escuela Pkwy	8	470	VCP	2	1975	75	47	$154	$72,358	$3,000	$12,000	$87,358	$54,744
44	1	Los Pinos Ave	6	640	VCP	1	1985	75	57	$147	$93,810	$1,500	$6,000	$101,310	$76,996
44	1	N/A	6	80	VCP	1	1985	75	57	$147	$11,726	$1,500	$6,000	$19,226	$14,612
44	1	Dundee Ave	8	860	VCP	3	1985	75	57	$154	$132,400	$4,500	$18,000	$154,900	$117,724
44	1	Glasgow Ct	8	480	VCP	1	1985	75	57	$154	$73,897	$1,500	$6,000	$81,397	$61,862
44	1	Angus Dr	10	20	VCP	1	1985	75	57	$170	$3,402	$1,500	$6,000	$10,902	$8,286
44	1	Shelley Ct	6	660	VCP	1	1995	75	67	$147	$96,741	$1,500	$6,000	$104,241	$93,122
44	2	Santa Rita Dr	6	530	VCP	2	1985	75	57	$147	$77,686	$3,000	$12,000	$92,686	$70,442
44	2	Aberdeen Ct	6	200	VCP	1	1985	75	57	$147	$29,316	$1,500	$6,000	$36,816	$27,980
44	2	Loch Lomond Ct	6	280	VCP	0	1995	75	67	$147	$41,042	$0	$0	$41,042	$36,664
44	2	Clyde Ct	6	490	VCP	2	1995	75	67	$147	$71,823	$3,000	$12,000	$86,823	$77,562
44	2	Paseo Refugio	6	780	VCP	2	1995	75	67	$147	$114,331	$3,000	$12,000	$129,331	$115,536
44	2	Loch Lomond Ct	8	80	VCP	1	1995	75	67	$154	$12,316	$1,500	$6,000	$19,816	$17,703
44	3	Wool Dr	24	240	RCP	0	1995	25	17	$296	$70,972	$0	$0	$70,972	$48,261
44	3	Wool Dr	6	110	VCP	0	1995	75	67	$147	$16,124	$0	$0	$16,124	$14,404
44	5	Terra Bella Dr	8	270	VCP	4	1985	75	57	$154	$41,567	$6,000	$24,000	$71,567	$54,391
44	5	Anacapa Ct	8	300	VCP	2	1985	75	57	$154	$46,186	$3,000	$12,000	$61,186	$46,501
44	6	Hillview Dr	6	1,130	VCP	4	1985	75	57	$147	$165,633	$6,000	$24,000	$195,633	$148,681
44	1,2	Aberdeen Wy	6	920	VCP	4	1985	75	57	$147	$134,852	$6,000	$24,000	$164,852	$125,287
44	1,2	Shetland Ct	6	720	VCP	1	1985	75	57	$147	$105,536	$1,500	$6,000	$113,036	$85,907
44	1,2	Angus Dr	8	1,050	VCP	2	1985	75	57	$154	$161,651	$3,000	$12,000	$176,651	$134,254
44	1,2,5	Troon Ct	6	580	VCP	1	1995	75	67	$147	$85,015	$1,500	$6,000	$92,515	$82,647
44	2,3	Los Positos Dr	6	920	VCP	1	1975	75	47	$147	$134,852	$1,500	$6,000	$142,352	$89,207
44	2,3	Alcosta Dr	6	1,000	VCP	1	1975	75	47	$147	$146,578	$1,500	$6,000	$154,078	$96,556
44	2,3	Las Lomas Dr	6	1,050	VCP	2	1975	75	47	$147	$153,907	$3,000	$12,000	$168,907	$105,848
44	2,3	Canada Dr	6	820	VCP	1	1985	75	57	$147	$120,194	$1,500	$6,000	$127,694	$97,047

Schaaf & Wheeler Worksheet B - Sewer System Pipe Components and Estimated Replacement Costs

Enter Current SFENR Date (mm/yyyy):			02/2003						Enter Current Year			Enter Removal Unit Cost	Enter Install Unit Cost		
Enter Current SFENR Construction Cost Index			7821						2003			$1,500	$6,000		
A	B	C	D	E	F	G	H	I	J=I-(Year-H)	K	L=K*E	M	N	O=L+M+N	
S-Plat #	Section #	Street	Pipe Diameter (inches)	Pipe Length (FT)	Pipe Material	Man Holes	Year Pipe Installed	Pipe Life Expectancy (yr)	Pipe Life Left (yr)	Pipe Cost ($/LF) (see Worksheet C)	Total Pipe Cost ($)	Remove Manhole Cost ($)	Install Manhole Cost ($)	Total Cost Current SFENR ($)	Estimated Value Feb-2003 ($) SFENR=7821
44	2,5	Santa Rita Dr	6	340	VCP	2	1985	75	57	$147	$49,837	$3,000	$12,000	$64,837	$49,276
44	2,5	off Canada Dr	6	1,450	VCP	5	1985	75	57	$147	$212,538	$7,500	$30,000	$250,038	$190,029
44	4,5	Pancheco Dr	6	1,180	VCP	2	1975	75	47	$147	$172,962	$3,000	$12,000	$187,962	$117,790
44	4,5	Valencia Dr	6	1,130	VCP	3	1985	75	57	$147	$165,633	$4,500	$18,000	$188,133	$142,981
44	4,5	off Santa Rita Dr	8	530	VCP	2	1985	75	57	$154	$81,595	$3,000	$12,000	$96,595	$73,412
44	5,6	Terra Bella Dr	6	590	VCP	1	1985	75	57	$147	$86,481	$1,500	$6,000	$93,981	$71,426
44	5,6	Hillview Dr	8	130	VCP	1	1985	75	57	$154	$20,014	$1,500	$6,000	$27,514	$20,911
45	1	off Milpitas Blvd	8	1,430	VCP	8	1985	75	57	$154	$220,153	$12,000	$48,000	$280,153	$212,916
45	2	Hillview Dr	8	290	VCP	2	1985	75	57	$154	$44,646	$3,000	$12,000	$59,646	$45,331
45	2	Anacapa Ct	8	190	VCP	0	1985	75	57	$154	$29,251	$0	$0	$29,251	$22,231
45	3	Hillview Ct	6	140	VCP	0	1985	75	57	$147	$20,521	$0	$0	$20,521	$15,596
45	4	off E Calaveras Blvd	6	130	VCP	1	1975	75	47	$147	$19,055	$1,500	$6,000	$26,555	$16,641
45	4	E Calaveras Blvd	8	80	VCP	0	1975	75	47	$154	$12,316	$0	$0	$12,316	$7,718
45	4	off E Calaveras Blvd	8	380	VCP	2	1985	75	57	$154	$58,502	$3,000	$12,000	$73,502	$55,862
45	4	Los Coches St	8	130	VCP	1	1975	75	47	$154	$20,014	$1,500	$6,000	$27,514	$17,242
45	4	S Milpitas Blvd	18	330	VCP	0	1975	75	47	$236	$78,018	$0	$0	$78,018	$48,891
45	6	Los Coches St	8	700	VCP	2	1975	75	47	$154	$107,767	$3,000	$12,000	$122,767	$76,934
45	2,3	Hillview Ct	8	440	VCP	2	1985	75	57	$154	$67,739	$3,000	$12,000	$82,739	$62,882
45	2,3,5	E Calaveras Blvd	15	1,720	VCP	7	1975	75	47	$203	$349,834	$10,500	$42,000	$402,334	$252,130
45	2,5	Hillview Dr	8	380	VCP	1	1985	75	57	$154	$58,502	$1,500	$6,000	$66,002	$50,162
45	2,5,6	off E Calaveras Blvd	15	1,040	VCP	3	1975	75	47	$203	$211,528	$4,500	$18,000	$234,028	$146,657
45	4,5	E Calaveras Blvd	18	1,440	VCP	6	1975	75	47	$236	$340,443	$9,000	$36,000	$385,443	$241,544
45	4,5	Los Coches St	8	1,040	VCP	3	1975	75	47	$154	$160,111	$4,500	$18,000	$182,611	$114,436
46	1	Turquoise St	10	270	VCP	1	1985	75	57	$170	$45,931	$1,500	$6,000	$53,431	$40,608
46	1	Turquoise St	10	280	VCP	1	1985	75	57	$170	$47,632	$1,500	$6,000	$55,132	$41,901
46	1	Topaz St	10	620	VCP	3	1985	75	57	$170	$105,471	$4,500	$18,000	$127,971	$97,258
46	1	Los Coches St	8	370	VCP	0	1975	75	47	$154	$56,963	$0	$0	$56,963	$35,697
46	1	off S Milpitas Blvd	8	880	VCP	1	1975	75	47	$154	$135,479	$1,500	$6,000	$142,979	$89,600
46	1	Los Coches St	12	420	VCP	2	1975	75	47	$177	$74,491	$3,000	$12,000	$89,491	$56,081
46	1	S Milpitas Blvd	18	940	VCP	4	1975	75	47	$236	$222,233	$6,000	$24,000	$252,233	$158,066
46	2	off S Milpitas Blvd	8	920	VCP	1	1975	75	47	$154	$141,637	$1,500	$6,000	$149,137	$93,459
46	6	off Vista Wy	8	740	VCP	1	1975	75	47	$154	$113,925	$1,500	$6,000	$121,425	$76,093
46	6	Piedmont Cr	8	420	VCP	1	1975	75	47	$154	$64,660	$1,500	$6,000	$72,160	$45,220
46	6	Hillview Dr	6	170	VCP	1	1985	75	57	$147	$24,918	$1,500	$6,000	$32,418	$24,638
46	1,4,5	S Milpitas Blvd	12	1,400	VCP	4	1975	75	47	$177	$248,304	$6,000	$24,000	$278,304	$174,404
46	3,6	off Piedmont Cr	15	2,040	VCP	7	1975	75	47	$203	$414,920	$10,500	$42,000	$467,420	$292,916
46	5,6	Hillview Dr	8	1,690	VCP	2	1985	75	57	$154	$260,181	$3,000	$12,000	$275,181	$209,137
47	2	S Milpitas Blvd	12	650	VCP	4	1975	75	47	$177	$115,284	$6,000	$24,000	$145,284	$91,045
47	3	Yosemite Dr	8	220	VCP	0	1965	75	37	$154	$33,870	$0	$0	$33,870	$16,709
47	3	Hillview Dr	6	410	VCP	3	1985	75	57	$147	$60,097	$4,500	$18,000	$82,597	$62,774
47	4	Curtis Ave	16	50	CIP	1	1955	25	-23	$214	$10,685	$1,500	$6,000	$18,185	$0
47	4	Curtis Ave	15	620	VCP	2	1955	75	27	$203	$126,103	$3,000	$12,000	$141,103	$50,797
47	4	N/A	15	450	VCP	1	1955	75	27	$203	$91,526	$1,500	$6,000	$99,026	$35,650
47	4	Curtis Ave	18	40	VCP	1	1955	75	27	$236	$9,457	$1,500	$6,000	$16,957	$6,104
47	5	Gibraltar Dr	8	240	VCP	0	1985	75	57	$154	$36,949	$0	$0	$36,949	$28,081
47	5	Gibraltar Dr	12	470	VCP	2	1985	75	57	$177	$83,359	$3,000	$12,000	$98,359	$74,753

Schaaf & Wheeler Worksheet B - Sewer System Pipe Components and Estimated Replacement Costs

Enter Current SFENR Date (mm/yyyy):			02/2003						Enter Current Year			Enter Removal Unit Cost	Enter Install Unit Cost		
Enter Current SFENR Construction Cost Index			7821						2003			$1,500	$6,000		
A	B	C	D	E	F	G	H	I	J=I-(Year-H)	K	L=K*E	M	N	O=L+M+N	
S-Plat #	Section #	Street	Pipe Diameter (inches)	Pipe Length (FT)	Pipe Material	Man Holes	Year Pipe Installed	Pipe Life Expectancy (yr)	Pipe Life Left (yr)	Pipe Cost (S/LF) (see Worksheet C)	Total Pipe Cost ($)	Remove Manhole Cost ($)	Install Manhole Cost ($)	Total Cost Current SFENR ($)	Estimated Value Feb-2003 ($) SFENR=7821
47	5	S Milpitas Blvd	8	1,140	VCP	3	1975	75	47	$154	$175,506	$4,500	$18,000	$198,006	$124,084
47	6	off Yosemite Dr	12	510	VCP	1	1975	75	47	$177	$90,454	$1,500	$6,000	$97,954	$61,384
47	1,2	off S Milpitas Blvd	6	430	VCP	3	Private	75	#VALUE!	$147	$63,029	$4,500	$18,000	$85,529	$0
47	1,2	off S Milpitas Blvd	12	930	VCP	2	1985	75	57	$177	$164,945	$3,000	$12,000	$179,945	$136,758
47	1,4	Gibraltar Ct	8	370	VCP	1	1995	75	67	$154	$56,963	$1,500	$6,000	$64,463	$57,587
47	2,3,5	Yosemite Dr	8	900	VCP	2	1975	75	47	$154	$138,558	$3,000	$12,000	$153,558	$96,229
47	2,5	S Milpitas Blvd	10	470	VCP	1	1975	75	47	$170	$79,954	$1,500	$6,000	$87,454	$54,805
47	3,6	off Yosemite Dr	15	1,170	VCP	4	1975	75	47	$203	$237,969	$6,000	$24,000	$267,969	$167,927
47	4,5	off Gibraltar Dr	12	470	VCP	1	1985	75	57	$177	$83,359	$1,500	$6,000	$90,859	$69,053
48	3	S Milpitas Blvd	8	1,130	VCP	2	1975	75	47	$154	$173,967	$3,000	$12,000	$188,967	$118,419
48	1,2,5	off Piper Dr	15	2,170	VCP	5	1955	75	27	$203	$441,361	$7,500	$30,000	$478,861	$172,390
48	2,5,6	Gibraltar Dr	8	2,000	VCP	5	1985	75	57	$154	$307,906	$7,500	$30,000	$345,406	$262,509
49	1	Fairlane Dr	8	200	VCP	1	1975	75	47	$154	$30,791	$1,500	$6,000	$38,291	$23,995
49	4	Mustang Dr	8	920	VCP	3	1985	75	57	$154	$141,637	$4,500	$18,000	$164,137	$124,744
49	5	Capitol Ave	8	700	VCP	3	1975	75	47	$154	$107,767	$4,500	$18,000	$130,267	$81,634
49	5	Montague Expy	10	470	VCP	2	1985	75	57	$170	$79,954	$3,000	$12,000	$94,954	$72,165
49	6	Montague Expy	10	820	VCP	2	1965	75	37	$170	$139,494	$3,000	$12,000	$154,494	$76,217
49	6	off Montague Expy	8	790	VCP	2	1995	75	67	$154	$121,623	$3,000	$12,000	$136,623	$122,050
49	1,4	Great Mall Pkwy	8	460	VCP	1	1975	75	47	$154	$70,818	$1,500	$6,000	$78,318	$49,080
49	1,4	Mustang Dr	8	190	VCP	1	1985	75	57	$154	$29,251	$1,500	$6,000	$36,751	$27,931
49	1,4,5	Great Mall Pkwy	10	1,690	VCP	6	1975	75	47	$170	$287,495	$9,000	$36,000	$332,495	$208,363
49	2,3,6	Piper Ave	15	1,390	VCP	4	1955	75	27	$203	$282,715	$6,000	$24,000	$312,715	$112,577
49	2,5	Falcon Dr	8	280	DIP	3	1995	30	22	$154	$43,107	$4,500	$18,000	$65,607	$48,112
49	2,5	off Great Mall Pkwy	8	690	VCP	2	1995	75	67	$154	$106,228	$3,000	$12,000	$121,228	$108,297
50	1	Houret Dr	8	150	VCP	2	1975	75	47	$154	$23,093	$3,000	$12,000	$38,093	$23,872
50	1	Montague Expy	8	190	VCP	0	1975	75	47	$154	$29,251	$0	$0	$29,251	$18,331
50	1	Mustang Dr	8	310	VCP	1	1985	75	57	$154	$47,725	$1,500	$6,000	$55,225	$41,971
50	2	Montague Expy	8	350	VCP	3	1975	75	47	$154	$53,884	$4,500	$18,000	$76,384	$47,867
50	2	Montague Expy	10	410	VCP	1	1975	75	47	$170	$69,747	$1,500	$6,000	$77,247	$48,408
50	3	off Capitol Ave	6	490	VCP	0	1995	75	67	$147	$71,823	$0	$0	$71,823	$64,162
50	3	off Capitol Ave	8	710	VCP	4	1995	75	67	$154	$109,307	$6,000	$24,000	$139,307	$124,447
50	6	off Tarob Ct	6	260	VCP	0	1975	75	47	$147	$38,110	$0	$0	$38,110	$23,882
50	6	off Tarob Ct	8	340	VCP	1	1975	75	47	$154	$52,344	$1,500	$6,000	$59,844	$37,502
50	1,2	Sango Ct	8	610	VCP	3	1975	75	47	$154	$93,911	$4,500	$18,000	$116,411	$72,951
50	1,4	Houret Ct	8	200	VCP	1	1975	75	47	$154	$30,791	$1,500	$6,000	$38,291	$23,995
50	2,3	Capitol Ave	8	350	VCP	1	1965	75	37	$154	$53,884	$1,500	$6,000	$61,384	$30,283
50	2,3	off Sango Ct	8	620	VCP	1	1975	75	47	$154	$95,451	$1,500	$6,000	$102,951	$64,516
50	2,5	off Sango Ct	8	320	VCP	1	1975	75	47	$154	$49,265	$1,500	$6,000	$56,765	$35,573
50	3,6	Tarob Ct	8	560	VCP	4	1975	75	47	$154	$86,214	$6,000	$24,000	$116,214	$72,827
50	5,6	Capitol Ave	8	340	VCP	1	1965	75	37	$154	$52,344	$1,500	$6,000	$59,844	$29,523
50	5,6	N/A	8	430	VCP	3	1975	75	47	$154	$66,200	$4,500	$18,000	$88,700	$55,585
52	6	Pebble Beach Ct	6	680	VCP	4	1985	75	57	$147	$99,673	$6,000	$24,000	$129,673	$98,551
53	3	off Country Club Dr	6	890	VCP	1	1985	75	57	$147	$130,454	$1,500	$6,000	$137,954	$104,845
53	3,5,6	Country Club Dr	6	2,890	VCP	11	1985	75	57	$147	$423,610	$16,500	$66,000	$506,110	$384,644
54	1	off Country Club Dr	6	290	VCP	3	1985	75	57	$147	$42,508	$4,500	$18,000	$65,008	$49,406
54	4	Jacklin Rd	6	90	VCP	1	1975	75	47	$147	$13,192	$1,500	$6,000	$20,692	$12,967

2.55

Schaaf & Wheeler Worksheet B - Sewer System Pipe Components and Estimated Replacement Costs

Enter Current SFENR Date (mm/yyyy):			02/2003						Enter Current Year			Enter Removal Unit Cost	Enter Install Unit Cost		
Enter Current SFENR Construction Cost Index			7821						2003			$1,500	$6,000		
A	B	C	D	E	F	G	H	I	J=I-(Year-H)	K	L=K*E	M	N	O=L+M+N	
S-Plat #	Section #	Street	Pipe Diameter (inches)	Pipe Length (FT)	Pipe Material	Man Holes	Year Pipe Installed	Pipe Life Expectancy (yr)	Pipe Life Left (yr)	Pipe Cost (S/LF) (see Worksheet C)	Total Pipe Cost ($)	Remove Manhole Cost ($)	Install Manhole Cost ($)	Total Cost Current SFENR ($)	**Estimated Value Feb-2003 ($) SFENR=7821**
54	4	Jacklin Rd	8	330	VCP	2	1975	75	47	$154	$50,804	$3,000	$12,000	$65,804	$41,237
54	4	off Country Club Dr	6	220	VCP	2	1985	75	57	$147	$32,247	$3,000	$12,000	$47,247	$35,908
54	4	Fox Hollow Ct	6	550	VCP	4	1985	75	57	$147	$80,618	$6,000	$24,000	$110,618	$84,070
54	4	St Josephs Ct	6	90	VCP	1	1985	75	57	$147	$13,192	$1,500	$6,000	$20,692	$15,726
54	4	off N Park Victoria	8	390	VCP	2	1985	75	57	$154	$60,042	$3,000	$12,000	$75,042	$57,032
54	4	N Park Victoria	12	510	VCP	6	1985	75	57	$177	$90,454	$9,000	$36,000	$135,454	$102,945
54	4	N Park Victoria	6	200	VCP	1	1995	75	67	$147	$29,316	$1,500	$6,000	$36,816	$32,889
54	4	Country Club Dr	8	200	VCP	3	1995	75	67	$154	$30,791	$4,500	$18,000	$53,291	$47,606
54	4	N Park Victoria	8	80	VCP	0	1995	75	67	$154	$12,316	$0	$0	$12,316	$11,003
54	6	off Calaveras Ridge	6	140	VCP	0	1985	75	57	$147	$20,521	$0	$0	$20,521	$15,596
54	6	off Calaveras Ridge	6	140	VCP	1	1985	75	57	$147	$20,521	$1,500	$6,000	$28,021	$21,296
54	1,2,4	Country Club Dr	6	1,480	VCP	5	1985	75	57	$147	$216,935	$7,500	$30,000	$254,435	$193,371
54	1,4	Cervantes Ct	6	410	VCP	1	1985	75	57	$147	$60,097	$1,500	$6,000	$67,597	$51,374
54	1,4,5	off Country Club Dr	10	700	VCP	8	1985	75	57	$170	$119,081	$12,000	$48,000	$179,081	$136,101
54	4,5	Evans Rd	10	690	VCP	2	1965	75	37	$170	$117,380	$3,000	$12,000	$132,380	$65,307
54	4,5	Daniel Ct	6	120	VCP	1	1975	75	47	$147	$17,589	$1,500	$6,000	$25,089	$15,723
54	5,6	N/A	6	1,880	VCP	9	1985	75	57	$147	$275,567	$13,500	$54,000	$343,067	$260,731
54	5,6	off Calaveras Ridge	6	810	VCP	4	1985	75	57	$147	$118,728	$6,000	$24,000	$148,728	$113,033
55	1	Calle Oriete	8	80	VCP	1	1965	75	37	$154	$12,316	$1,500	$6,000	$19,816	$9,776
55	1	Daniel Ct	6	960	VCP	8	1975	75	47	$147	$140,715	$12,000	$48,000	$200,715	$125,781
55	1	N Park Victoria	6	130	VCP	0	1975	75	47	$147	$19,055	$0	$0	$19,055	$11,941
55	1	Jacklin Rd	8	170	VCP	0	1975	75	47	$154	$26,172	$0	$0	$26,172	$16,401
55	1	off Calle Oriete	8	300	VCP	1	1975	75	47	$154	$46,186	$1,500	$6,000	$53,686	$33,643
55	1	Traughber St	8	710	VCP	2	1995	75	67	$154	$109,307	$3,000	$12,000	$124,307	$111,047
55	3	Old Evans Rd	6	200	VCP	2	1975	75	47	$147	$29,316	$3,000	$12,000	$44,316	$27,771
55	3	Stemel Ct	6	240	VCP	1	1975	75	47	$147	$35,179	$1,500	$6,000	$42,679	$26,745
55	3	Bayview Park Dr	6	50	VCP	0	1985	75	57	$147	$7,329	$0	$0	$7,329	$5,570
55	4	off Printy Ave	6	110	VCP	1	1965	75	37	$147	$16,124	$1,500	$6,000	$23,624	$11,654
55	4	Printy Ave	6	890	VCP	2	1975	75	47	$147	$130,454	$3,000	$12,000	$145,454	$91,151
55	4	Torres Ave	6	650	VCP	1	1975	75	47	$147	$95,276	$1,500	$6,000	$102,776	$64,406
55	4	Admire Ct	6	190	VCP	1	1975	75	47	$147	$27,850	$1,500	$6,000	$35,350	$22,153
55	4	Cestaric Dr	6	690	VCP	1	1975	75	47	$147	$101,139	$1,500	$6,000	$108,639	$68,080
55	5	Kennedy Dr	12	150	VCP	1	1965	75	37	$177	$26,604	$1,500	$6,000	$34,104	$16,825
55	5	Fanyon Ave	6	220	VCP	0	1965	75	37	$147	$32,247	$0	$0	$32,247	$15,909
55	5	Prada Dr	6	770	VCP	2	1975	75	47	$147	$112,865	$3,000	$12,000	$127,865	$80,129
55	5	Prada Ct	6	520	VCP	2	1975	75	47	$147	$76,221	$3,000	$12,000	$91,221	$57,165
55	6	Lynn Ave	6	470	VCP	1	1965	75	37	$147	$68,892	$1,500	$6,000	$76,392	$37,687
55	6	Quail Dr	6	710	VCP	3	1975	75	47	$147	$104,070	$4,500	$18,000	$126,570	$79,317
55	6	Simas Dr	6	590	VCP	2	1975	75	47	$147	$86,481	$3,000	$12,000	$101,481	$63,595
55	6	Ramos Ct	6	210	VCP	1	1975	75	47	$147	$30,781	$1,500	$6,000	$38,281	$23,990
55	1,2	Calle Oriete	6	1,370	VCP	4	1965	75	37	$147	$200,812	$6,000	$24,000	$230,812	$113,867
55	1,2	Traughber St	6	750	VCP	3	1995	75	67	$147	$109,933	$4,500	$18,000	$132,433	$118,307
55	1,4	N Park Victoria	6	1,330	VCP	4	1975	75	47	$147	$194,949	$6,000	$24,000	$224,949	$140,968
55	1,4	Burdett Wy	6	740	VCP	2	1975	75	47	$147	$108,468	$3,000	$12,000	$123,468	$77,373
55	2,3	off Evans Rd	6	1,370	VCP	7	1975	75	47	$147	$200,812	$10,500	$42,000	$253,312	$158,742
55	2,5	Prada Dr	6	690	VCP	1	1975	75	47	$147	$101,139	$1,500	$6,000	$108,639	$68,080

Schaaf & Wheeler Worksheet B - Sewer System Pipe Components and Estimated Replacement Costs

Enter Current SFENR Date (mm/yyyy):		02/2003						Enter Current Year			Enter Removal Unit Cost	Enter Install Unit Cost		
Enter Current SFENR Construction Cost Index		7821						2003			$1,500	$6,000		
A	B	C	D	E	F	G	H	I	J=I-(Year-H)	K	L=K*E	M	N	O=L+M+N	
S-Plat #	Section #	Street	Pipe Diameter (inches)	Pipe Length (FT)	Pipe Material	Man Holes	Year Pipe Installed	Pipe Life Expectancy (yr)	Pipe Life Left (yr)	Pipe Cost (S/LF) (see Worksheet C)	Total Pipe Cost ($)	Remove Manhole Cost ($)	Install Manhole Cost ($)	Total Cost Current SFENR ($)	Estimated Value Feb-2003 ($) SFENR=7821
55	2,5	Santos Ct	6	580	VCP	2	1975	75	47	$147	$85,015	$3,000	$12,000	$100,015	$62,676
55	3,5,6	Sternel Wy	6	1,570	VCP	6	1975	75	47	$147	$230,127	$9,000	$36,000	$275,127	$172,413
55	3,6	Serra Dr	6	590	VCP	1	1975	75	47	$147	$86,481	$1,500	$6,000	$93,981	$58,895
55	4,5	Guerrero Ct	6	240	VCP	1	1975	75	47	$147	$35,179	$1,500	$6,000	$42,679	$26,745
55	5,6	Kennedy Dr	10	1,840	VCP	5	1965	75	37	$170	$313,012	$7,500	$30,000	$350,512	$172,919
56	1	Wool Dr	6	1,070	VCP	5	1965	75	37	$147	$156,838	$7,500	$30,000	$194,338	$95,874
56	1	Wool Dr	24	50	VCP	1	1965	75	37	$296	$14,786	$1,500	$6,000	$22,286	$10,994
56	1	Park View Dr	6	820	VCP	2	1965	75	37	$147	$120,194	$3,000	$12,000	$135,194	$66,696
56	1	Park Glen Ct	6	340	VCP	1	1965	75	37	$147	$49,837	$1,500	$6,000	$57,337	$28,286
56	1	Park Willow Ct	6	350	VCP	1	1965	75	37	$147	$51,302	$1,500	$6,000	$58,802	$29,009
56	1	Printy Ave	6	200	VCP	0	1975	75	47	$147	$29,316	$0	$0	$29,316	$18,371
56	1	Cestaric Dr	6	120	VCP	0	1975	75	47	$147	$17,589	$0	$0	$17,589	$11,023
56	2	N Park Victoria	6	770	VCP	1	1965	75	37	$147	$112,865	$1,500	$6,000	$120,365	$59,380
56	3	Ellis Ave	6	620	VCP	1	1965	75	37	$147	$90,878	$1,500	$6,000	$98,378	$48,533
56	3	Lynn Ave	6	280	VCP	0	1965	75	37	$147	$41,042	$0	$0	$41,042	$20,247
56	3	Dennis Ave	10	840	VCP	2	1965	75	37	$170	$142,897	$3,000	$12,000	$157,897	$77,896
56	4	Ayer Ln	21	790	VCP	3	1965	75	37	$257	$203,049	$4,500	$18,000	$225,549	$111,271
56	4	Park Brook Ct	6	360	VCP	1	1965	75	37	$147	$52,768	$1,500	$6,000	$60,268	$29,732
56	4	Park Oak Ct	6	350	VCP	1	1965	75	37	$147	$51,302	$1,500	$6,000	$58,802	$29,009
56	4	Park Hill Dr	8	330	VCP	2	1965	75	37	$154	$50,804	$3,000	$12,000	$65,804	$32,464
56	5	N Park Victoria	6	200	VCP	0	1965	75	37	$147	$29,316	$0	$0	$29,316	$14,462
56	6	Calaveras Blvd	8	110	VCP	0	1955	75	27	$154	$16,935	$0	$0	$16,935	$6,097
56	6	Adams Ave	6	630	VCP	1	1965	75	37	$147	$92,344	$1,500	$6,000	$99,844	$49,256
56	6	Braly Ave	6	420	VCP	1	1965	75	37	$147	$61,563	$1,500	$6,000	$69,063	$34,071
56	6	Carl Ave	6	480	VCP	1	1965	75	37	$147	$70,357	$1,500	$6,000	$77,857	$38,410
56	6	off Fanyon Ave	12	370	VCP	1	1965	75	37	$177	$65,623	$1,500	$6,000	$73,123	$36,074
56	1,2	Kennedy Dr	12	1,070	VCP	5	1965	75	37	$177	$189,775	$7,500	$30,000	$227,275	$112,122
56	1,2,5	N Park Victoria	8	1,280	VCP	4	1965	75	37	$154	$197,060	$6,000	$24,000	$227,060	$112,016
56	1,4	Park Hill Dr	6	1,350	VCP	4	1965	75	37	$147	$197,880	$6,000	$24,000	$227,880	$112,421
56	1,4	Moretti Ln	6	900	VCP	3	1985	75	57	$147	$131,920	$4,500	$18,000	$154,420	$117,359
56	1,4	Moretti Ln	21	230	VCP	3	1985	75	57	$257	$59,115	$4,500	$18,000	$81,615	$62,028
56	2,3	Fanyon Ave	6	780	VCP	2	1965	75	37	$147	$114,331	$3,000	$12,000	$129,331	$63,803
56	3,6	N Gadsen Ave	6	1,110	VCP	3	1965	75	37	$147	$162,702	$4,500	$18,000	$185,202	$91,366
56	3,6	Fanyon Ave	12	1,000	VCP	4	1965	75	37	$177	$177,360	$6,000	$24,000	$207,360	$102,298
56	4,5	Park Heights Dr	6	930	VCP	1	1965	75	37	$147	$136,318	$1,500	$6,000	$143,818	$70,950
56	4,5	Park Grove	8	620	VCP	1	1965	75	37	$154	$95,451	$1,500	$6,000	$102,951	$50,789
57	1	off Ayer St	6	150	VCP	1	1965	75	37	$147	$21,987	$1,500	$6,000	$29,487	$14,547
57	1	off E Calaveras Blvd	8	460	VCP	2	1965	75	37	$154	$70,818	$3,000	$12,000	$85,818	$42,337
57	1	Ayer St	8	140	VCP	1	1965	75	37	$154	$21,553	$1,500	$6,000	$29,053	$14,333
57	1	Ayer St	8	220	VCP	2	1965	75	37	$154	$33,870	$3,000	$12,000	$48,870	$24,109
57	1	E Calaveras Blvd	15	650	VCP	1	1955	75	27	$203	$132,205	$1,500	$6,000	$139,705	$50,294
57	1	Park Hill Dr	8	80	VCP	0	1965	75	37	$154	$12,316	$0	$0	$12,316	$6,076
57	1	Dempsey Rd	8	300	VCP	1	1985	75	57	$154	$46,186	$1,500	$6,000	$53,686	$40,801
57	2	Calaveras Ct	6	270	VCP	1	1955	75	27	$147	$39,576	$1,500	$6,000	$47,076	$16,947
57	2	S Park Victoria	6	370	VCP	1	1965	75	37	$147	$54,234	$1,500	$6,000	$61,734	$30,455
57	2	S Park Victoria	8	630	VCP	2	1965	75	37	$154	$96,990	$3,000	$12,000	$111,990	$55,249

Schaaf & Wheeler Worksheet B - Sewer System Pipe Components and Estimated Replacement Costs

Enter Current SFENR Date (mm/yyyy):			02/2003						Enter Current Year			Enter Removal Unit Cost	Enter Install Unit Cost		
Enter Current SFENR Construction Cost Index			7821						2003			$1,500	$6,000		
A	B	C	D	E	F	G	H	I	J=I-(Year-H)	K	L=K*E	M	N	O=L+M+N	
S-Plat #	Section #	Street	Pipe Diameter (inches)	Pipe Length (FT)	Pipe Material	Man Holes	Year Pipe Installed	Pipe Life Expectancy (yr)	Pipe Life Left (yr)	Pipe Cost (S/LF) (see Worksheet C)	Total Pipe Cost ($)	Remove Manhole Cost ($)	Install Manhole Cost ($)	Total Cost Current SFENR ($)	Estimated Value Feb-2003 ($) SFENR=7821
57	3	off E Calaveras Blvd	8	240	VCP	2	1965	75	37	$154	$36,949	$3,000	$12,000	$51,949	$25,628
57	3	Solar Ct	6	300	VCP	2	1955	75	27	$147	$43,973	$3,000	$12,000	$58,973	$21,230
57	3	Gadsen Dr	6	300	VCP	2	1955	75	27	$147	$43,973	$3,000	$12,000	$58,973	$21,230
57	3	Albany Ct	6	50	VCP	0	1955	75	27	$147	$7,329	$0	$0	$7,329	$2,638
57	3	Jupiter Ct	6	310	VCP	1	1955	75	27	$147	$45,439	$1,500	$6,000	$52,939	$19,058
57	3	Jupiter Ct	6	130	VCP	0	1955	75	27	$147	$19,055	$0	$0	$19,055	$6,860
57	3	Gadsen Dr	8	1,030	VCP	1	1955	75	27	$154	$158,572	$1,500	$6,000	$166,072	$59,786
57	3	E Calaveras Blvd	8	730	VCP	3	1955	75	27	$154	$112,386	$4,500	$18,000	$134,886	$48,559
57	5	off S Park Victoria	8	310	VCP	1	1955	75	27	$154	$47,725	$1,500	$6,000	$55,225	$19,881
57	5	S Park Victoria	6	60	VCP	1	1965	75	37	$147	$8,795	$1,500	$6,000	$16,295	$8,039
57	5	Shirley Dr	6	220	VCP	2	1965	75	37	$147	$32,247	$3,000	$12,000	$47,247	$23,309
57	5	S Park Victoria	8	860	VCP	2	1965	75	37	$154	$132,400	$3,000	$12,000	$147,400	$72,717
57	5	Canton Dr	8	270	VCP	2	1965	75	37	$154	$41,567	$3,000	$12,000	$56,567	$27,907
57	6	Mercury Ct	6	400	VCP	2	1955	75	27	$147	$58,631	$3,000	$12,000	$73,631	$26,507
57	6	Saturn Ct	6	400	VCP	2	1955	75	27	$147	$58,631	$3,000	$12,000	$73,631	$26,507
57	6	Ashland Dr	6	580	VCP	2	1955	75	27	$147	$85,015	$3,000	$12,000	$100,015	$36,005
57	1,2,3	E Calaveras Blvd	12	1,890	VCP	8	1955	75	27	$177	$335,210	$12,000	$48,000	$395,210	$142,276
57	1,4,5	Dempsey Rd	12	1,400	VCP	7	1955	75	27	$177	$248,304	$10,500	$42,000	$300,804	$108,289
57	1,4,5	Dempsey Rd	21	940	VCP	8	1955	75	27	$257	$241,602	$12,000	$48,000	$301,602	$108,577
57	3,4,5	Canton Dr	6	630	VCP	1	1965	75	37	$147	$92,344	$1,500	$6,000	$99,844	$49,256
57	3,6	Canton Dr	8	670	VCP	3	1955	75	27	$154	$103,149	$4,500	$18,000	$125,649	$45,233
57	3,6	Carnegie Dr	10	1,870	VCP	5	1955	75	27	$170	$318,115	$7,500	$30,000	$355,615	$128,022
57	3,6	Perry St	6	1,080	VCP	3	1965	75	37	$147	$158,304	$4,500	$18,000	$180,804	$89,197
57	4,5	Selwyn Dr	6	1,120	VCP	3	1955	75	27	$147	$164,167	$4,500	$18,000	$186,667	$67,200
57	5,6	Rodrigues St	6	1,100	VCP	3	1965	75	37	$147	$161,236	$4,500	$18,000	$183,736	$90,643
58	1	N/A	6	110	VCP	1	1985	75	57	$147	$16,124	$1,500	$6,000	$23,624	$17,954
58	2	Shirley Dr	6	120	VCP	0	1965	75	37	$147	$17,589	$0	$0	$17,589	$8,677
58	2	Shirley Dr	6	300	VCP	0	1965	75	37	$147	$43,973	$0	$0	$43,973	$21,694
58	2	S Park Victoria	6	140	VCP	1	1965	75	37	$147	$20,521	$1,500	$6,000	$28,021	$13,824
58	2	Perry St	6	260	VCP	1	1965	75	37	$147	$38,110	$1,500	$6,000	$45,610	$22,501
58	2	S Park Victoria	8	70	VCP	1	1965	75	37	$154	$10,777	$1,500	$6,000	$18,277	$9,017
58	3	Freeland Dr	6	160	VCP	0	1955	75	27	$147	$23,452	$0	$0	$23,452	$8,443
58	3	Carnegie Dr	8	650	VCP	1	1955	75	27	$154	$100,069	$1,500	$6,000	$107,569	$38,725
58	3	Carnegie Dr	10	140	VCP	1	1955	75	27	$170	$23,816	$1,500	$6,000	$31,316	$11,274
58	3	Edsel Dr	8	290	VCP	1	1995	75	67	$154	$44,646	$1,500	$6,000	$52,146	$46,584
58	4	Wrigley Wy	8	250	VCP	1	1985	75	57	$154	$38,488	$1,500	$6,000	$45,988	$34,951
58	4	Vista Wy	8	1,020	VCP	3	1985	75	57	$154	$157,032	$4,500	$18,000	$179,532	$136,444
58	5	Dempsey Rd	10	120	VCP	0	1955	75	27	$170	$20,414	$0	$0	$20,414	$7,349
58	5	Dempsey Rd	12	170	RCP	1	1955	25	-23	$177	$30,151	$1,500	$6,000	$37,651	$0
58	5	Yosemite Dr	8	120	VCP	1	1965	75	37	$154	$18,474	$1,500	$6,000	$25,974	$12,814
58	6	Glacier Dr	6	590	VCP	1	1965	75	37	$147	$86,481	$1,500	$6,000	$93,981	$46,364
58	6	Acadia Ave	6	1,180	VCP	3	1965	75	37	$147	$172,962	$4,500	$18,000	$195,462	$96,428
58	6	Bryce Ct	6	330	VCP	1	1965	75	37	$147	$48,371	$1,500	$6,000	$55,871	$27,563
58	6	Zion Ct	6	150	VCP	1	1965	75	37	$147	$21,987	$1,500	$6,000	$29,487	$14,547
58	6	S Park Victoria	8	440	VCP	1	1965	75	37	$154	$67,739	$1,500	$6,000	$75,239	$37,118
58	6	Yosemite Dr	12	820	VCP	3	1965	75	37	$177	$145,435	$4,500	$18,000	$167,935	$82,848

Schaaf & Wheeler Worksheet B - Sewer System Pipe Components and Estimated Replacement Costs

Enter Current SFENR Date (mm/yyyy):			02/2003					Enter Current Year			Enter Removal Unit Cost	Enter Install Unit Cost		
Enter Current SFENR Construction Cost Index			7821					2003			$1,500	$6,000		
A	B	C	D	E	F	G	H	I	J=I-(Year-H)	K	L=K*E	M	N	O=L+M+N	
S-Plat #	Section #	Street	Pipe Diameter (inches)	Pipe Length (FT)	Pipe Material	Man Holes	Year Pipe Installed	Pipe Life Expectancy (yr)	Pipe Life Left (yr)	Pipe Cost ($/LF) (see Worksheet C)	Total Pipe Cost ($)	Remove Manhole Cost ($)	Install Manhole Cost ($)	Total Cost Current SFENR ($)	Estimated Value Feb-2003 ($) SFENR=7821
58	6	S Park Victoria	12	790	VCP	2	1965	75	37	$177	$140,114	$3,000	$12,000	$155,114	$76,523
58	1,4	off Wrigley Wy	8	1,020	VCP	4	1985	75	57	$154	$157,032	$6,000	$24,000	$187,032	$142,144
58	2,3	Edsel Dr	6	1,400	VCP	4	1965	75	37	$147	$205,209	$6,000	$24,000	$235,209	$116,037
58	2,3,6	S Park Victoria	6	850	VCP	2	1965	75	37	$147	$124,591	$3,000	$12,000	$139,591	$68,865
58	2,5	Dempsey Rd	21	1,970	VCP	13	1955	75	27	$257	$506,337	$19,500	$78,000	$603,837	$217,381
58	3,6	Carnegie Dr	6	130	VCP	1	1955	75	27	$147	$19,055	$1,500	$6,000	$26,555	$9,560
58	5,6	Yosemite Dr	18	720	VCP	2	1965	75	37	$236	$170,221	$3,000	$12,000	$185,221	$91,376
58	5,6	off Acadia Ave	6	320	VCP	0	1975	75	47	$147	$46,905	$0	$0	$46,905	$29,394
59	1	Yosemite Dr	8	1,360	VCP	4	1965	75	37	$154	$209,376	$6,000	$24,000	$239,376	$118,092
59	1	off Yosemite Dr	8	240	VCP	1	1965	75	37	$154	$36,949	$1,500	$6,000	$44,449	$21,928
59	2	off Dempsey Rd	6	200	VCP	1	1985	75	57	$147	$29,316	$1,500	$6,000	$36,816	$27,980
59	3	S Park Victoria	12	760	VCP	2	1965	75	37	$177	$134,794	$3,000	$12,000	$149,794	$73,898
59	3	Platt Ave	6	770	VCP	2	1975	75	47	$147	$112,865	$3,000	$12,000	$127,865	$80,129
59	3	Acadia Ave	6	1,150	VCP	7	1975	75	47	$147	$168,565	$10,500	$42,000	$221,065	$138,534
59	3	Glacier Dr	6	490	VCP	1	1975	75	47	$147	$71,823	$1,500	$6,000	$79,323	$49,709
59	3	Lassen Ave	6	920	VCP	1	1975	75	47	$147	$134,852	$1,500	$6,000	$142,352	$89,207
59	3	Olympic Dr	6	950	VCP	1	1975	75	47	$147	$139,249	$1,500	$6,000	$146,749	$91,963
59	3	Pheland Ct	6	170	VCP	1	1975	75	47	$147	$24,918	$1,500	$6,000	$32,418	$20,315
59	3	Platt Ct	6	160	VCP	1	1975	75	47	$147	$23,452	$1,500	$6,000	$30,952	$19,397
59	4	off Ames Ave	12	300	VCP	0	1955	75	27	$177	$53,208	$0	$0	$53,208	$19,155
59	5	Ames Ave	8	330	VCP	2	1975	75	47	$154	$50,804	$3,000	$12,000	$65,804	$41,237
59	6	Mt Shasta Ave	6	910	VCP	0	1975	75	47	$147	$133,386	$0	$0	$133,386	$83,589
59	6	Jungfrau Ct	6	830	VCP	2	1975	75	47	$147	$121,660	$3,000	$12,000	$136,660	$85,640
59	6	Matterhorn Ct	6	690	VCP	2	1975	75	47	$147	$101,139	$3,000	$12,000	$116,139	$72,780
59	6	Big Bear Ct	6	640	VCP	2	1975	75	47	$147	$93,810	$3,000	$12,000	$108,810	$68,188
59	2,3	off Dempsey Rd	6	200	VCP	1	1985	75	57	$147	$29,316	$1,500	$6,000	$36,816	$27,980
59	2,3	Creighton Ct	6	190	VCP	1	1985	75	57	$147	$27,850	$1,500	$6,000	$35,350	$26,866
59	2,5	Dempsey Rd	10	1,140	VCP	7	1955	75	27	$170	$193,931	$10,500	$42,000	$246,431	$88,715
59	4,5	Ames Ave	12	1,130	VCP	4	1955	75	27	$177	$200,417	$6,000	$24,000	$230,417	$82,950
59	5,6	Dempsey Rd	8	900	VCP	2	1955	75	27	$154	$138,558	$3,000	$12,000	$153,558	$55,281
59	5,6	Richter Ct	6	90	VCP	1	1985	75	57	$147	$13,192	$1,500	$6,000	$20,692	$15,726
60	6	Big Bear Ct	6	130	VCP	1	1975	75	47	$147	$19,055	$1,500	$6,000	$26,555	$16,641
60	6	Matterhorn Ct	6	70	VCP	1	1975	75	47	$147	$10,260	$1,500	$6,000	$17,760	$11,130
60	6	Chewpon Ave	6	900	VCP	3	1985	75	57	$147	$131,920	$4,500	$18,000	$154,420	$117,359
60	6	Hay Ct	6	260	VCP	0	1985	75	57	$147	$38,110	$0	$0	$38,110	$28,964
60	1,2	S Milpitas Blvd	8	630	VCP	2	1975	75	47	$154	$96,990	$3,000	$12,000	$111,990	$70,181
60	3,6	Dempsey Rd	8	1,960	VCP	5	1985	75	57	$154	$301,748	$7,500	$30,000	$339,248	$257,828
61	1	Montague Expy	10	780	VCP	4	1985	75	57	$170	$132,690	$6,000	$24,000	$162,690	$123,644
61	2	Pecten Ct	8	520	VCP	2	1985	75	57	$154	$80,056	$3,000	$12,000	$95,056	$72,242
61	4	Gladding Ct	8	530	VCP	3	1985	75	57	$154	$81,595	$4,500	$18,000	$104,095	$79,112
61	4	off Gladding Ct	8	550	VCP	1	1985	75	57	$154	$84,674	$1,500	$6,000	$92,174	$70,052
61	1,2	Montague Expy	8	730	VCP	5	1985	75	57	$154	$112,386	$7,500	$30,000	$149,886	$113,913
61	2,5	Watson Ct	8	1,040	VCP	4	1975	75	47	$154	$160,111	$6,000	$24,000	$190,111	$119,136
62	1	off Capitol Ave	8	200	VCP	1	1995	75	67	$154	$30,791	$1,500	$6,000	$38,291	$34,206
64	4	Calaveras Ridge Dr	6	410	VCP	2	1985	75	57	$147	$60,097	$3,000	$12,000	$75,097	$57,074
65	1	Quince Ln	6	940	VCP	3	1985	75	57	$147	$137,783	$4,500	$18,000	$160,283	$121,815

Schaaf & Wheeler Worksheet B - Sewer System Pipe Components and Estimated Replacement Costs

Enter Current SFENR Date (mm/yyyy):			02/2003						Enter Current Year			Enter Removal Unit Cost	Enter Install Unit Cost		
Enter Current SFENR Construction Cost Index			7821						2003			$1,500	$6,000		
A	B	C	D	E	F	G	H	I	J=I-(Year-H)	K	L=K*E	M	N	O=L+M+N	
S-Plat #	Section #	Street	Pipe Diameter (inches)	Pipe Length (FT)	Pipe Material	Man Holes	Year Pipe Installed	Pipe Life Expectancy (yr)	Pipe Life Left (yr)	Pipe Cost ($/LF) (see Worksheet C)	Total Pipe Cost ($)	Remove Manhole Cost ($)	Install Manhole Cost ($)	Total Cost Current SFENR ($)	Estimated Value Feb-2003 ($) SFENR=7821
65	1	Evans Rd	6	350	VCP	1	1985	75	57	$147	$51,302	$1,500	$6,000	$58,802	$44,690
65	1	off Evans Rd	6	170	VCP	3	1985	75	57	$147	$24,918	$4,500	$18,000	$47,418	$36,038
65	4	Kennedy Dr	8	740	VCP	3	1975	75	47	$154	$113,925	$4,500	$18,000	$136,425	$85,493
65	4	Kennedy Dr	10	130	VCP	1	1975	75	47	$170	$22,115	$1,500	$6,000	$29,615	$18,559
65	4	Fair Hill Dr	6	770	VCP	2	1975	75	47	$147	$112,865	$3,000	$12,000	$127,865	$80,129
65	4	Spring Valley Ln	6	400	VCP	1	1975	75	47	$147	$58,631	$1,500	$6,000	$66,131	$41,442
65	4	N Temple Dr	8	740	VCP	1	1975	75	47	$154	$113,925	$1,500	$6,000	$121,425	$76,093
65	4	Alexander Dr	6	540	VCP	3	1985	75	57	$147	$79,152	$4,500	$18,000	$101,652	$77,256
65	1,4	Old Evans Rd	6	300	VCP	1	1985	75	57	$147	$43,973	$1,500	$6,000	$51,473	$39,120
65	1,4	Bayview Park Dr	6	880	VCP	5	1985	75	57	$147	$128,989	$7,500	$30,000	$166,489	$126,531
66	1	Carl Ave	6	200	VCP	0	1965	75	37	$147	$29,316	$0	$0	$29,316	$14,462
66	1	Dennis Ave	10	150	VCP	0	1965	75	37	$170	$25,517	$0	$0	$25,517	$12,589
66	1	N Temple Dr	10	180	VCP	2	1965	75	37	$170	$30,621	$3,000	$12,000	$45,621	$22,506
66	1	Dennis Ave	12	290	VCP	2	1965	75	37	$177	$51,434	$3,000	$12,000	$66,434	$32,774
66	1	N Temple Dr	12	150	VCP	1	1965	75	37	$177	$26,604	$1,500	$6,000	$34,104	$16,825
66	1	N Temple Dr	6	275	VCP	0	1975	75	47	$147	$40,309	$0	$0	$40,309	$25,260
66	1	View Dr	6	650	VCP	1	1975	75	47	$147	$95,276	$1,500	$6,000	$102,776	$64,406
66	1	Dennis Ave	6	430	VCP	1	1975	75	47	$147	$63,029	$1,500	$6,000	$70,529	$44,198
66	1	N Temple Dr	8	330	VCP	2	1975	75	47	$154	$50,804	$3,000	$12,000	$65,804	$41,237
66	4	Jupiter	8	510	VCP	2	1955	75	27	$154	$78,516	$3,000	$12,000	$93,516	$33,666
66	4	Adams Ave	6	720	VCP	4	1965	75	37	$147	$105,536	$6,000	$24,000	$135,536	$66,864
66	4	Braly Ave	6	290	VCP	0	1965	75	37	$147	$42,508	$0	$0	$42,508	$20,970
66	4	off Adams Ave	6	270	VCP	0	1965	75	37	$147	$39,576	$0	$0	$39,576	$19,524
66	5	Armand Dr	6	950	VCP	4	1965	75	37	$147	$139,249	$6,000	$24,000	$169,249	$83,496
66	5	Burley Dr	6	220	VCP	0	1965	75	37	$147	$32,247	$0	$0	$32,247	$15,909
66	1,2	Spring Valley Ln	6	700	VCP	2	1975	75	47	$147	$102,605	$3,000	$12,000	$117,605	$73,699
66	1,2	Golden Hills Dr	8	715	VCP	2	1975	75	47	$154	$110,076	$3,000	$12,000	$125,076	$78,381
66	1,2,4	off Strawberry Ln	6	670	VCP	2	1975	75	47	$147	$98,207	$3,000	$12,000	$113,207	$70,943
66	1,4	Lynn Ave	6	1,280	VCP	4	1965	75	37	$147	$187,620	$6,000	$24,000	$217,620	$107,359
66	1,4	N Temple Dr	6	520	VCP	3	1965	75	37	$147	$76,221	$4,500	$18,000	$98,721	$48,702
66	4,5	Strawberry Ln	6	900	VCP	6	1975	75	47	$147	$131,920	$9,000	$36,000	$176,920	$110,870
66	4,5,6	Calaveras Blvd	10	2,220	VCP	6	1985	75	57	$170	$377,656	$9,000	$36,000	$422,656	$321,218
66	5,6	Piedmont Rd	8	760	VCP	2	1995	75	67	$154	$117,004	$3,000	$12,000	$132,004	$117,924
67	1	Jupiter Dr	6	85	VCP	0	1955	75	27	$147	$12,459	$0	$0	$12,459	$4,485
67	1	Albany Ct	6	230	VCP	1	1955	75	27	$147	$33,713	$1,500	$6,000	$41,213	$14,837
67	1	Gadsen Dr	6	220	VCP	1	1955	75	27	$147	$32,247	$1,500	$6,000	$39,747	$14,309
67	1	Lawton Dr	6	690	VCP	1	1955	75	27	$147	$101,139	$1,500	$6,000	$108,639	$39,110
67	1	Beacon Dr	6	710	VCP	1	1955	75	27	$147	$104,070	$1,500	$6,000	$111,570	$40,165
67	1	Jupiter Wy	8	200	VCP	0	1955	75	27	$154	$30,791	$0	$0	$30,791	$11,085
67	1	Jupiter Dr	8	460	VCP	3	1955	75	27	$154	$70,818	$4,500	$18,000	$93,318	$33,595
67	1	Temple Dr	8	200	VCP	0	1965	75	37	$154	$30,791	$0	$0	$30,791	$15,190
67	2	Ellwell Dr	6	660	VCP	1	1965	75	37	$147	$96,741	$1,500	$6,000	$104,241	$51,426
67	2	Findley	6	660	VCP	1	1965	75	37	$147	$96,741	$1,500	$6,000	$104,241	$51,426
67	3	Sepulveda Ave	6	740	VCP	2	1975	75	47	$147	$108,468	$3,000	$12,000	$123,468	$77,373
67	3	Frank Ct	6	370	VCP	2	1975	75	47	$147	$54,234	$3,000	$12,000	$69,234	$43,387
67	3	Sepulveda Ct	6	180	VCP	1	1975	75	47	$147	$26,384	$1,500	$6,000	$33,884	$21,234

Schaaf & Wheeler Worksheet B - Sewer System Pipe Components and Estimated Replacement Costs

Enter Current SFENR Date (mm/yyyy):			02/2003						Enter Current Year			Enter Removal Unit Cost	Enter Install Unit Cost		
Enter Current SFENR Construction Cost Index			7821						2003			$1,500	$6,000		
A	B	C	D	E	F	G	H	I	J=I-(Year-H)	K	L=K*E	M	N	O=L+M+N	
S-Plat #	Section #	Street	Pipe Diameter (inches)	Pipe Length (FT)	Pipe Material	Man Holes	Year Pipe Installed	Pipe Life Expectancy (yr)	Pipe Life Left (yr)	Pipe Cost ($/LF) (see Worksheet C)	Total Pipe Cost ($)	Remove Manhole Cost ($)	Install Manhole Cost ($)	Total Cost Current SFENR ($)	**Estimated Value Feb-2003 ($) SFENR=7821**
67	3	Uridias Ranch Rd	6	610	VCP	2	1985	75	57	$147	$89,413	$3,000	$12,000	$104,413	$79,354
67	3	Aguilar Ct	6	120	VCP	1	1985	75	57	$147	$17,589	$1,500	$6,000	$25,089	$19,068
67	3	Piedmont Rd	8	850	VCP	3	1985	75	57	$154	$130,860	$4,500	$18,000	$153,360	$116,554
67	4	Ashland Dr	6	420	VCP	1	1955	75	27	$147	$61,563	$1,500	$6,000	$69,063	$24,863
67	4	Monmouth Dr	6	590	VCP	2	1955	75	27	$147	$86,481	$3,000	$12,000	$101,481	$36,533
67	4	Roswell Dr	8	950	VCP	3	1955	75	27	$154	$146,255	$4,500	$18,000	$168,755	$60,752
67	5	Girard Dr	6	670	VCP	1	1965	75	37	$147	$98,207	$1,500	$6,000	$105,707	$52,149
67	5	Dalton Dr	6	670	VCP	1	1965	75	37	$147	$98,207	$1,500	$6,000	$105,707	$52,149
67	5	Stulman	6	505	VCP	1	1965	75	37	$147	$74,022	$1,500	$6,000	$81,522	$40,217
67	5	Temple Dr	8	345	VCP	1	1965	75	37	$154	$53,114	$1,500	$6,000	$60,614	$29,903
67	6	Edsel Dr	6	300	VCP	2	1965	75	37	$147	$43,973	$3,000	$12,000	$58,973	$29,094
67	6	La Baree	6	570	VCP	1	1965	75	37	$147	$83,549	$1,500	$6,000	$91,049	$44,918
67	6	Louise	8	150	VCP	1	1965	75	37	$147	$21,987	$1,500	$6,000	$29,487	$14,547
67	6	Patricia	6	210	VCP	1	1965	75	37	$147	$30,781	$1,500	$6,000	$38,281	$18,885
67	6	Pedro Ave	6	520	VCP	1	1975	75	47	$147	$76,221	$1,500	$6,000	$83,721	$52,465
67	6	Lacey Dr	6	450	VCP	1	1975	75	47	$147	$65,960	$1,500	$6,000	$73,460	$46,035
67	6	Ferriera Ct	6	310	VCP	1	1975	75	47	$147	$45,439	$1,500	$6,000	$52,939	$33,175
67	1,2	Burley Dr	6	1,210	VCP	5	1955	75	27	$147	$177,359	$7,500	$30,000	$214,859	$77,349
67	1,2,4	Canton Dr	8	1,410	VCP	4	1955	75	27	$154	$217,074	$6,000	$24,000	$247,074	$88,947
67	1,2,5	Temple Dr	6	1,520	VCP	3	1965	75	37	$147	$222,799	$4,500	$18,000	$245,299	$121,014
67	1,4	Roswell Ct	6	340	VCP	2	1955	75	27	$147	$49,837	$3,000	$12,000	$64,837	$23,341
67	2,3	Canton Dr	6	920	VCP	2	1965	75	37	$147	$134,852	$3,000	$12,000	$149,852	$73,927
67	2,3,6	La Cross Dr	6	1,450	VCP	6	1965	75	37	$147	$212,538	$9,000	$36,000	$257,538	$127,052
67	2,5	Bixby Dr	6	2,070	VCP	7	1965	75	37	$147	$303,416	$10,500	$42,000	$355,916	$175,585
67	3,6	Falcato Dr	6	2,040	VCP	9	1975	75	47	$147	$299,019	$13,500	$54,000	$366,519	$229,685
67	4,5	Wylie Dr	8	1,060	VCP	2	1965	75	37	$154	$163,190	$3,000	$12,000	$178,190	$87,907
67	5,6	Wylie Dr	6	1,010	VCP	4	1965	75	37	$147	$148,044	$6,000	$24,000	$178,044	$87,835
68	1	Monmouth Dr	6	330	VCP	1	1955	75	27	$147	$48,371	$1,500	$6,000	$55,871	$20,113
68	1	Roswell Ct	6	40	VCP	1	1955	75	27	$147	$5,863	$1,500	$6,000	$13,363	$4,811
68	1	Roswell Dr	8	670	VCP	2	1955	75	27	$154	$103,149	$3,000	$12,000	$118,149	$42,533
68	1	Holly Wy	6	300	VCP	1	1965	75	37	$147	$43,973	$1,500	$6,000	$51,473	$25,394
68	1	Yosemite Dr	12	890	VCP	3	1965	75	37	$177	$157,850	$4,500	$18,000	$180,350	$88,973
68	1	Mars Ct	6	140	VCP	1	1995	75	67	$147	$20,521	$1,500	$6,000	$28,021	$25,032
68	1	Edsel Dr	8	700	VCP	5	1995	75	67	$154	$107,767	$7,500	$30,000	$145,267	$129,772
68	2	Lomer Wy	6	270	VCP	1	1965	75	37	$147	$39,576	$1,500	$6,000	$47,076	$23,224
68	2	Bixby	6	250	VCP	0	1965	75	37	$147	$36,644	$0	$0	$36,644	$18,078
68	2	Stulman	6	180	VCP	0	1965	75	37	$147	$26,384	$0	$0	$26,384	$13,016
68	2	Temple	8	320	VCP	0	1965	75	37	$154	$49,265	$0	$0	$49,265	$24,304
68	4	Acadia Ave	6	335	VCP	3	1965	75	37	$147	$49,104	$4,500	$18,000	$71,604	$35,324
68	4	Glacier Dr	6	420	VCP	1	1965	75	37	$147	$61,563	$1,500	$6,000	$69,063	$34,071
68	4	Lassen Ave	6	590	VCP	2	1965	75	37	$147	$86,481	$3,000	$12,000	$101,481	$50,064
68	4	Olympic Dr	6	350	VCP	1	1965	75	37	$147	$51,302	$1,500	$6,000	$58,802	$29,009
68	4	Platt Ave	6	10	VCP	1	1965	75	37	$147	$1,466	$1,500	$6,000	$8,966	$4,423
68	5	off Everglades Dr	6	500	VCP	2	1965	75	37	$147	$73,289	$3,000	$12,000	$88,289	$43,556
68	5	Grand Teton Dr	6	970	VCP	1	1965	75	37	$147	$142,181	$1,500	$6,000	$149,681	$73,842
68	1,2	Yosemite Dr	8	1,000	VCP	1	1965	75	37	$154	$153,953	$1,500	$6,000	$161,453	$79,650

Schaaf & Wheeler Worksheet B - Sewer System Pipe Components and Estimated Replacement Costs

Enter Current SFENR Date (mm/yyyy):			02/2003											
Enter Current SFENR Construction Cost Index			7821					Enter Current Year			Enter Removal Unit Cost	Enter Install Unit Cost		
								2003			$1,500	$6,000		
A	B	C	D	E	F	G	H	I	J=I-(Year-H)	K	L=K*E	M	N	O=L+M+N	
S-Plat #	Section #	Street	Pipe Diameter (inches)	Pipe Length (FT)	Pipe Material	Man Holes	Year Pipe Installed	Pipe Life Expectancy (yr)	Pipe Life Left (yr)	Pipe Cost ($/LF) (see Worksheet C)	Total Pipe Cost ($)	Remove Manhole Cost ($)	Install Manhole Cost ($)	Total Cost Current SFENR ($)	Estimated Value Feb-2003 ($) SFENR=7821
68	1,2,3	Edsel Dr	6	2,050	VCP	7	1965	75	37	$147	$300,485	$10,500	$42,000	$352,985	$174,139
68	1,4,5	off Yosemite Dr	12	740	VCP	3	1965	75	37	$177	$131,246	$4,500	$18,000	$153,746	$75,848
68	2,3	Yosemite Dr	6	1,230	VCP	4	1965	75	37	$147	$180,291	$6,000	$24,000	$210,291	$103,744
68	2,3,4,5	Shenandoah Ave	6	2,160	VCP	3	1965	75	37	$147	$316,608	$4,500	$18,000	$339,108	$167,293
68	2,5,6	Sequoia Dr	6	1,460	VCP	6	1965	75	37	$147	$214,004	$9,000	$36,000	$259,004	$127,775
68	3,5,6	Big Bend Dr	6	2,030	VCP	3	1965	75	37	$147	$297,553	$4,500	$18,000	$320,053	$157,893
68	5,6	Everglades Dr	6	1,955	VCP	3	1965	75	37	$147	$286,560	$4,500	$18,000	$309,060	$152,470
68	5,6	Mt Rainier Ave	6	995	VCP	1	1965	75	37	$147	$145,845	$1,500	$6,000	$153,345	$75,650
68	5,6	Crater Lake Ave	10	2,010	VCP	4	1965	75	37	$170	$341,932	$6,000	$24,000	$371,932	$183,486
69	1	Platt Ave	6	920	VCP	2	1965	75	37	$147	$134,852	$3,000	$12,000	$149,852	$73,927
69	1	Olympic Dr	6	410	VCP	1	1965	75	37	$147	$60,097	$1,500	$6,000	$67,597	$33,348
69	1	Saratoga Dr	6	960	VCP	2	1965	75	37	$147	$140,715	$3,000	$12,000	$155,715	$76,819
69	1	S Park Victoria	12	550	VCP	2	1965	75	37	$177	$97,548	$3,000	$12,000	$112,548	$55,524
69	2	Grand Teton Dr	6	1,090	VCP	2	1965	75	37	$147	$159,770	$3,000	$12,000	$174,770	$86,220
69	3	Sequoia Dr	6	240	VCP	1	1965	75	37	$147	$35,179	$1,500	$6,000	$42,679	$21,055
69	3	Skyline Dr	6	480	SSP	1	1985	75	57	$147	$70,357	$1,500	$6,000	$77,857	$59,172
69	3	Galindo Ct	6	660	SSP	3	1985	75	57	$147	$96,741	$4,500	$18,000	$119,241	$90,624
69	3	Westridge Dr	6	280	SSP	1	1985	75	57	$147	$41,042	$1,500	$6,000	$48,542	$36,892
69	3	Westridge Dr	6	30	SSP	1	1985	75	57	$147	$4,397	$1,500	$6,000	$11,897	$9,042
69	3	Westridge Dr	8	370	SSP	1	1985	75	57	$154	$56,963	$1,500	$6,000	$64,463	$48,992
69	4	Courtland Ave	6	940	VCP	3	1975	75	47	$147	$137,783	$4,500	$18,000	$160,283	$100,444
69	4	Mt Shasta Ave	6	70	VCP	0	1975	75	47	$147	$10,260	$0	$0	$10,260	$6,430
69	5	Clear Lake Ct	6	230	VCP	2	1975	75	47	$147	$33,713	$3,000	$12,000	$48,713	$30,527
69	6	Yellowstone Ave	6	950	VCP	2	1965	75	37	$147	$139,249	$3,000	$12,000	$154,249	$76,096
69	6	Rocky Mountain Ave	6	860	VCP	2	1965	75	37	$147	$126,057	$3,000	$12,000	$141,057	$69,588
69	6	Fieldcrest Dr	6	85	SSP	0	1985	75	57	$147	$12,459	$0	$0	$12,459	$9,469
69	1,2	Yellowstone Ave	10	3,120	VCP	10	1965	75	37	$170	$530,760	$15,000	$60,000	$605,760	$298,841
69	1,2,4	Mt Diablo Ave	6	960	VCP	2	1965	75	37	$147	$140,715	$3,000	$12,000	$155,715	$76,819
69	1,4	S Park Victoria	8	1,140	VCP	4	1965	75	37	$154	$175,506	$6,000	$24,000	$205,506	$101,383
69	3,6	Eagle Ridge Wy	10	590	SSP	3	1985	75	57	$170	$100,368	$4,500	$18,000	$122,868	$93,380
69	4,5	Mt Shasta Ave	6	1,270	VCP	3	1965	75	37	$147	$186,154	$4,500	$18,000	$208,654	$102,936
69	4,5	Portola Dr	6	955	VCP	2	1965	75	37	$147	$139,982	$3,000	$12,000	$154,982	$76,458
69	4,5	Sonoma Dr	6	955	VCP	2	1965	75	37	$147	$139,982	$3,000	$12,000	$154,982	$76,458
69	5,6	Tahoe Dr	6	1,215	VCP	2	1965	75	37	$147	$178,092	$3,000	$12,000	$193,092	$95,259
70	1	S Park Victoria	8	1,030	VCP	3	1965	75	37	$154	$158,572	$4,500	$18,000	$181,072	$89,329
70	1	Courtland Ave	6	290	VCP	2	1975	75	47	$147	$42,508	$3,000	$12,000	$57,508	$36,038
70	1	Chewpon Ave	6	220	VCP	1	1985	75	57	$147	$32,247	$1,500	$6,000	$39,747	$30,208
70	1	Bee Ct	6	240	VCP	0	1985	75	57	$147	$35,179	$0	$0	$35,179	$26,736
70	2	Clear Lake Ct	6	290	VCP	2	1975	75	47	$147	$42,508	$3,000	$12,000	$57,508	$36,038
70	2	Clear Lake Ave	6	890	VCP	4	1975	75	47	$147	$130,454	$6,000	$24,000	$160,454	$100,551
70	2	Sassone Ct	6	210	VCP	1	1985	75	57	$147	$30,781	$1,500	$6,000	$38,281	$29,094
70	3	Landess Ave	6	650	VCP	3	1975	75	47	$147	$95,276	$4,500	$18,000	$117,776	$73,806
70	3	Highland Ct	6	660	VCP	3	1975	75	47	$147	$96,741	$4,500	$18,000	$119,241	$74,725
70	4	S Park Victoria	6	450	VCP	1	1965	75	37	$147	$65,960	$1,500	$6,000	$73,460	$36,240
70	4	Dempsey Rd	8	80	VCP	1	1985	75	57	$154	$12,316	$1,500	$6,000	$19,816	$15,060
70	1,2	Clear Lake Ave	6	1,370	VCP	4	1965	75	37	$147	$200,812	$6,000	$24,000	$230,812	$113,867

Schaaf & Wheeler Worksheet B - Sewer System Pipe Components and Estimated Replacement Costs

Enter Current SFENR Date (mm/yyyy)			02/2003					Enter Current Year			Enter Removal Unit Cost	Enter Install Unit Cost		
Enter Current SFENR Construction Cost Index			7821					2003			$1,500	$6,000		
A	B	C	D	E	F	G	H	I	J=I-(Year-H)	K	L=K*E	M	N	O=L+M+N	
S-Plat #	Section #	Street	Pipe Diameter (inches)	Pipe Length (FT)	Pipe Material	Man Holes	Year Pipe Installed	Pipe Life Expectancy (yr)	Pipe Life Left (yr)	Pipe Cost ($/LF) (see Worksheet C)	Total Pipe Cost ($)	Remove Manhole Cost ($)	Install Manhole Cost ($)	Total Cost Current SFENR ($)	Estimated Value Feb-2003 ($) SFENR=7821
70	1,2	Big Basin Dr	6	800	VCP	3	1975	75	47	$147	$117,262	$4,500	$18,000	$139,762	$87,584
70	2,3	Butano Dr	6	1,350	VCP	3	1965	75	37	$147	$197,880	$4,500	$18,000	$220,380	$108,721
75	4	Dolores & Mattos	6	1,220	VCP	3	1975	75	47	$147	$178,825	$4,500	$18,000	$201,325	$126,164
75	1,2	Pedro & Sepulveda	6	540	VCP	3	1975	75	47	$147	$79,152	$4,500	$18,000	$101,652	$63,702
75	4,5	Edsel Dr	6	1,020	VCP	3	1975	75	47	$147	$149,510	$4,500	$18,000	$172,010	$107,793
75	4,5	Lacey Dr	6	1,430	VCP	5	1975	75	47	$147	$209,607	$7,500	$30,000	$247,107	$154,853
75	4,5	Yosemite Dr	6	520	VCP	2	1975	75	47	$147	$76,221	$3,000	$12,000	$91,221	$57,165
76	1	Carlsbad St	6	700	VCP	2	1975	75	47	$147	$102,605	$3,000	$12,000	$117,605	$73,699
76	1	Yosemite Dr	6	790	VCP	2	1975	75	47	$147	$115,797	$3,000	$12,000	$130,797	$81,966
76	1	off Petersburg & Bliss	6	480	VCP	3	1975	75	47	$147	$70,357	$4,500	$18,000	$92,857	$58,191
76	1	off Carlsbad St	6	130	VCP	0	1975	75	47	$147	$19,055	$0	$0	$19,055	$11,941
76	1	off Mesa Verde Dr	10	510	VCP	2	1975	75	47	$170	$86,759	$3,000	$12,000	$101,759	$63,769
76	4	Grand Teton Dr	6	300	VCP	2	1965	75	37	$147	$43,973	$3,000	$12,000	$58,973	$29,094
76	4	Skyline Dr	6	500	SSP	2	1985	75	57	$147	$73,289	$3,000	$12,000	$88,289	$67,100
76	4	Glenview Ct	6	190	SSP	1	1985	75	57	$147	$27,850	$1,500	$6,000	$35,350	$26,866
76	5	Lauryn Ridge Ct	6	270	SSP	1	1985	75	57	$147	$39,576	$1,500	$6,000	$47,076	$35,778
76	1,2	Petersburg Dr	6	900	VCP	2	1975	75	47	$147	$131,920	$3,000	$12,000	$146,920	$92,070
76	1,2	Bliss Ave	6	890	VCP	2	1975	75	47	$147	$130,454	$3,000	$12,000	$145,454	$91,151
76	1,2	Mesa Verde Dr	8	970	VCP	2	1975	75	47	$154	$149,334	$3,000	$12,000	$164,334	$102,983
76	1,2,4	Shiloh Ave	6	1,060	VCP	3	1975	75	47	$147	$155,373	$4,500	$18,000	$177,873	$111,467
76	1,4	off Seacliff Dr	6	440	VCP	2	1975	75	47	$147	$64,494	$3,000	$12,000	$79,494	$49,816
76	4,5	Seacliff Dr	6	1,050	VCP	3	1975	75	47	$147	$153,907	$4,500	$18,000	$176,407	$110,548
76	4,5	Glenview Dr	6	1,370	SSP	5	1985	75	57	$147	$200,812	$7,500	$30,000	$238,312	$181,117
76	4,5	Skyline & Kristin Ridge	6	1,330	SSP	3	1985	75	57	$147	$194,949	$4,500	$18,000	$217,449	$165,261
77	1	Whitcomb Ct	6	650	SSP	2	1985	75	57	$147	$95,276	$3,000	$12,000	$110,276	$83,810
77	1	Skyline Dr	6	100	SSP	0	1985	75	57	$147	$14,658	$0	$0	$14,658	$11,140
77	1	Westridge Dr	6	185	SSP	2	1985	75	57	$147	$27,117	$3,000	$12,000	$42,117	$32,009
77	1	Incline Ct	6	460	SSP	3	1985	75	57	$147	$67,426	$4,500	$18,000	$89,926	$68,344
77	1	Crescent Ter	8	100	SSP	1	1985	75	57	$154	$15,395	$1,500	$6,000	$22,895	$17,400
77	2	Ridgemont Dr	6	500	SSP	3	1985	75	57	$147	$73,289	$4,500	$18,000	$95,789	$72,800
77	4	Fieldcrest Dr	6	220	SSP	1	1985	75	57	$147	$32,247	$1,500	$6,000	$39,747	$30,208
77	4	Blueridge Dr	6	760	SSP	2	1985	75	57	$147	$111,399	$3,000	$12,000	$126,399	$96,063
77	4	Eagle Ridge Wy	6	415	SSP	3	1985	75	57	$147	$60,830	$4,500	$18,000	$83,330	$63,331
77	4	Blueridge Dr	8	120	SSP	1	1985	75	57	$154	$18,474	$1,500	$6,000	$25,974	$19,741
77	5	Moulton & Dubois	6	980	SSP	4	1985	75	57	$147	$143,646	$6,000	$24,000	$173,646	$131,971
77	5	Cresthaven St	6	500	SSP	2	1985	75	57	$147	$73,289	$3,000	$12,000	$88,289	$67,100
77	5	Ridgemont Dr	6	250	SSP	1	1985	75	57	$147	$36,644	$1,500	$6,000	$44,144	$33,550
77	6	Greenrock Rd	6	700	SSP	3	1985	75	57	$147	$102,605	$4,500	$18,000	$125,105	$95,079
77	6	Greenrock Rd	6	210	SSP	1	1985	75	57	$147	$30,781	$1,500	$6,000	$38,281	$29,094
77	1,2	Pinard St	6	1,760	SSP	8	1985	75	57	$147	$257,977	$12,000	$48,000	$317,977	$241,663
77	1,2	Lynwood Ter	6	860	SSP	3	1985	75	57	$147	$126,057	$4,500	$18,000	$148,557	$112,903
77	1,2	Farmcrest St	6	970	SSP	3	1985	75	57	$147	$142,181	$4,500	$18,000	$164,681	$125,157
77	1,4	Crescent Ter	6	450	SSP	0	1985	75	57	$147	$65,960	$0	$0	$65,960	$50,130
77	1,4	Fieldcrest Dr	6	650	SSP	3	1985	75	57	$147	$95,276	$4,500	$18,000	$117,776	$89,510
77	2,5	Cascade & Ridgemont	6	600	SSP	2	1985	75	57	$147	$87,947	$3,000	$12,000	$102,947	$78,240
77	4,5	off Blueridge & Cascade	6	400	SSP	2	1985	75	57	$147	$58,631	$3,000	$12,000	$73,631	$55,960

Schaaf & Wheeler Worksheet B - Sewer System Pipe Components and Estimated Replacement Costs

Enter Current SFENR Date (mm/yyyy)			02/2003						Enter Current Year			Enter Removal Unit Cost	Enter Install Unit Cost		
Enter Current SFENR Construction Cost Index			7821						2003			$1,500	$6,000		
A	B	C	D	E	F	G	H	I	J=I-(Year-H)	K	L=K*E	M	N	O=L+M+N	
S-Plat #	Section #	Street	Pipe Diameter (inches)	Pipe Length (FT)	Pipe Material	Man Holes	Year Pipe Installed	Pipe Life Expectancy (yr)	Pipe Life Left (yr)	Pipe Cost ($/LF) (see Worksheet C)	Total Pipe Cost ($)	Remove Manhole Cost ($)	Install Manhole Cost ($)	Total Cost Current SFENR ($)	**Estimated Value Feb-2003 ($) SFENR=7821**
78	1	Yellowstone Ave	6	440	VCP	1	1965	75	37	$147	$64,494	$1,500	$6,000	$71,994	$35,517
78	1	Landess Ave	6	1,070	VCP	1	1975	75	47	$147	$156,838	$1,500	$6,000	$164,338	$102,985
87	4	Pebble Beach Ct	6	230	VCP	1	1985	75	57	$147	$33,713	$1,500	$6,000	$41,213	$31,322
87	4	off Pebble Beach Ct	6	190	VCP	0	1985	75	57	$147	$27,850	$0	$0	$27,850	$21,166
87	4,5	Pebble Beach Ct	6	820	VCP	4	1985	75	57	$147	$120,194	$6,000	$24,000	$150,194	$114,147
87	4,5	off Pebble Beach Ct	6	620	VCP	2	1985	75	57	$147	$90,878	$3,000	$12,000	$105,878	$80,468
88	1	Country Club Dr	6	1,030	VCP	4	1985	75	57	$147	$150,975	$6,000	$24,000	$180,975	$137,541
88	1	off Country Club & Pinehurst	6	850	VCP	6	1985	75	57	$147	$124,591	$9,000	$36,000	$169,591	$128,889
88	2	off Augusta Ct	6	1,180	VCP	11	1985	75	57	$147	$172,962	$16,500	$66,000	$255,462	$194,151
88	1,2,4	Tularcitos	6	2,220	VCP	9	1985	75	57	$147	$325,403	$13,500	$54,000	$392,903	$298,606
88	1,2,4	St Andrews Ct	6	650	VCP	4	1985	75	57	$147	$95,276	$6,000	$24,000	$125,276	$95,210
TOTAL				**749,019**		**2554**				**$208,357**	**$129,536,953**	**$3,831,000**	**$15,324,000**	**$148,691,953**	**$84,789,970**

Schaaf & Wheeler Worksheet D - Sewer Lift Stations

Input Cell
Output Cell

Enter Current Year = 2003

Table 1 - Cost Analysis

A	B	C	D	E	F		
Pumping Station[a]	Pump Type or Components[a]	Horse Power (HP)[a]	Number of Pumps or Components[a]	Unit Cost[a][b][c] SFENR=6846 or 7410	**Total Cost per Station ($) Aug 2001 SFENR=7410**	**Total Cost per Station ($) Feb 2003 SFENR=7821**	**Pump Station Value (with 50% depreciation)**
Field	36" HDPE Force Main (a)	-	13,100 LF	$7,200,000	**$13,416,000**	**$14,160,126**	**$7,080,063**
	36" Steel Force Main	-	13,100 LF	$474			
Main Lift	Pump Building	-	1	$240,000	**$3,228,000**	**$3,407,043**	**$1,703,521**
	Pumps 1,3,4,5	250	4	$1,950			
	Dry Well	-	1	$182,000			
	Wet Well	-	1	$182,000			
	Generator Building	-	1	$120,000			
	1000 kW DSL Generator	-	1	$50,000			
	4 Variable Freq Drives	250	4	$42,000			
	Grinder Vault	-	1	$50,000			
	Grinder	-	1	$40,000			
Venus Way	540 gpm, non-clog pump	5	2	$1,950	**$415,000**	**$438,018**	**$219,009**
	Wet Well	-	1	$182,000			
	Dry Pitt	-	1	$182,000			
TOTAL				$8,474,374	**$17,059,000**	**$18,005,187**	**$9,002,594**

[a]Source: City of Milpitas Utility System Inventory

[b]Cost for pump ($/horsepower) is an average cost taken from the City of Milpitas 1999 Concept Level Cost Estimate, received from the City 10/12/2002

[c]Cost for 36" Steel Force Main in $/LF source: Saylor 2002 Current Construction Costs Union Total - 02.5310 041 Steel Pipe, Mortar Lined, Cement Coated, with Trench plus Traffic and Pavement.