*In the opinion of Orrick, Herrington & Sutcliffe LLP, Los Angeles, California and Webster & Anderson, Oakland, California, Co-Special Counsel, based upon an analysis of existing laws, regulations, rulings and court decisions and assuming, among other matters, compliance with certain covenants, the interest portion of the Installment Payments paid by the City under the Installment Purchase Agreement and received by the Holders of Series 1998 Certificates is excluded from gross income for federal income tax purposes under Section 103 of the Internal Revenue Code of 1986, as amended, and is exempt from State of California personal income taxes In the further opinion of Co-Special Counsel, the interest portion of the Installment Payments received by such Holders of Series 1998 Certificates is not a specific preference item for purposes of the federal individual or corporate alternative minimum taxes, although Co-Special Counsel observe that such interest is included in adjusted current earnings when calculating corporate alternative minimum taxable income Co-Special Counsel express no opinion regarding any other tax consequences related to the ownership or disposition of, or receipt of the interest portion of the Installment Payments by the Holders of, Series 1998 Certificates See "TAX MATTERS"*

**NEW ISSUE — BOOK-ENTRY ONLY**

**Ratings: Moody's: Aaa**
**Standard & Poor's: AAA**
**(See "Ratings" herein)**

# $385,000,000
# CERTIFICATES OF UNDIVIDED INTEREST
## IN INSTALLMENT PAYMENTS PAYABLE FROM NET SYSTEM REVENUES OF THE WATER UTILITY FUND OF THE
# CITY OF SAN DIEGO, CALIFORNIA
## SERIES 1998

**Dated: August 1, 1998** **Due: August 1, as shown on the inside cover page**

Series 1998 Certificates are being executed and delivered as fully registered certificates and, when initially executed and delivered, will be registered in the name of Cede & Co., as nominee of The Depository Trust Company, New York, New York ("DTC"). Purchases of Series 1998 Certificates will be made in book-entry form only, in denominations of $5,000 or any integral multiple thereof, through brokers and dealers who are, or who act through, DTC Participants. Beneficial owners of Series 1998 Certificates will not receive physical certificates representing their interest in Series 1998 Certificates purchased so long as DTC or a successor securities depository acts as the securities depository with respect to Series 1998 Certificates. So long as DTC or its nominee is the registered owner of Series 1998 Certificates, reference herein to holders or registered owners shall mean Cede & Co., as aforesaid, and payments of principal of and premium, if any, and interest in respect of Series 1998 Certificates will be made directly to DTC by State Street Bank and Trust Company of California, N.A., as Trustee. Disbursement of such payments to DTC Participants is the responsibility of DTC and disbursement of such payments to the Beneficial Owners is the responsibility of DTC Participants. See "DESCRIPTION OF THE SERIES 1998 CERTIFICATES — Book-Entry-Only System."

Interest with respect to Series 1998 Certificates is payable on February 1 and August 1 of each year, commencing February 1, 1999.

Proceeds of Series 1998 Certificates are to be applied to (i) finance the costs of construction of replacements and improvements to the Water System of the City of San Diego (the "City"), (ii) fund a debt service reserve fund securing Series 1998 Certificates and (iii) pay certain costs of issuance of the Certificates.

Series 1998 Certificates are payable solely from Installment Payments to be made by the City to the San Diego Facilities and Equipment Leasing Corporation (the "Corporation") from Net System Revenues (as defined herein) pledged as security for Series 1998 Certificates and any Parity Obligations (as defined herein) pursuant to an Installment Purchase Agreement between the Corporation and the City. "SECURITY FOR THE SERIES 1998 CERTIFICATES."

The payment of principal of and interest with respect to Series 1998 Certificates when due will be guaranteed by a municipal bond insurance policy issued simultaneously with the delivery of Series 1998 Certificates by FGIC Insurance Company.

**Financial Guaranty Insurance Company**

FGIC is a registered service mark used by Financial Guaranty Company, a private company not affiliated with any U S Government agency

**The obligation of the City to make Installment Payments does not constitute an obligation of the City for which the City is obligated to levy or pledge any form of taxation or for which the City has levied or pledged any form of taxation. The obligation of the City to make Installment Payments does not create a legal or equitable pledge, charge, lien or encumbrance upon any of the City's property, or upon its income, receipts or revenues other than Net System Revenues.**

**Series 1998 Certificates are subject to optional and mandatory prepayment prior to maturity as described herein.**

**CERTIFICATE PAYMENT SCHEDULE**
**(See inside cover page)**

This cover page contains certain information for general reference only. It is not a summary of the issue. Investors are advised to read the entire Official Statement to obtain information essential to making an informed investment decision.

*Series 1998 Certificates will be offered when, as and if executed, delivered and received by the Underwriters, subject to the approval of validity by Orrick, Herrington & Sutcliffe LLP, Los Angeles, California and Webster & Anderson, Oakland, California, Co-Special Counsel, and to certain other conditions Certain legal matters in connection with Series 1998 Certificates will be passed upon by Nossaman, Guthner, Knox & Elliott, LLP, Irvine, California, Underwriters' Counsel, Casey Gwinn, Esq, City Attorney of the City of San Diego, Foley & Lardner, Counsel to the Corporation and Orrick, Herrington & Sutcliffe LLP, Los Angeles, California, Disclosure Counsel. It is expected that Series 1998 Certificates will be available for delivery through DTC in New York, New York on or about August 18, 1998*

**PaineWebber Incorporated**

**BancAmerica Robertson Stephens**

**George K. Baum & Company**

**Samuel A. Ramirez & Co., Inc.**

Dated: August 4, 1998

## CERTIFICATE PAYMENT SCHEDULE

$184,030,000 Serial Certificates

| Due August 1 | Principal Component | Interest Rate | Price or Yield | CUSIP No. | Due August 1 | Principal Component | Interest Rate | Price or Yield | CUSIP No. |
|---|---|---|---|---|---|---|---|---|---|
| 2001 | $ 6,780,000 | 4.000% | 3.90% | 797263AA8 | 2011 | $10,520,000 | 4.750% | 4.78% | 797263AL4 |
| 2002 | 7,055,000 | 4.000 | 3.95 | 797263AB6 | 2012 | 750,000 | 4.800 | 4.88 | 797263AM2 |
| 2003 | 7,345,000 | 4.000 | 4.05 | 797263AC4 | 2012 | 10,315,000 | 5.375 | 4.88 | 797263AT7 |
| 2004 | 7,645,000 | 4.000 | 4.10 | 797263AD2 | 2013 | 1,515,000 | 4.875 | 4.93 | 797263AN0 |
| 2005 | 7,965,000 | 4.200 | 4.20 | 797263AE0 | 2013 | 10,155,000 | 5.375 | 4.93 | 797263AP5 |
| 2006 | 8,305,000 | 4.250 | 4.30 | 797263AF7 | 2014 | 1,765,000 | 4.900 | 4.98 | 797263AU4 |
| 2007 | 8,675,000 | 4.400 | 100.00 | 797263AG5 | 2014 | 10,540,000 | 5.375 | 4.98 | 797263AV2 |
| 2008 | 9,065,000 | 4.400 | 4.45 | 797263AH3 | 2015 | 895,000 | 5.000 | 5.03 | 797263AW0 |
| 2009 | 2,605,000 | 4.500 | 4.58 | 797263AJ9 | 2015 | 12,085,000 | 5.375 | 5.03 | 797263AX8 |
| 2009 | 6,900,000 | 5.250 | 4.58 | 797263AR1 | 2016 | 13,670,000 | 5.000 | 5.08 | 797263AY6 |
| 2010 | 1,320,000 | 4.600 | 4.68 | 797263AK6 | 2017 | 14,370,000 | 5.000 | 5.10 | 797263AZ3 |
| 2010 | 8,685,000 | 5.375 | 4.68 | 797263AS9 | 2018 | 15,105,000 | 5.000 | 5.13 | 797263AQ3 |

$50,125,000 5.00% Term Certificates due August 1, 2021 Price @ 97.728 CUSIP No. 797263BA7
$47,930,000 5.20% Term Certificates due August 1, 2024 Price @ 100.041 CUSIP No. 797263BB5
$102,915,000 4.75% Term Certificates due August 1, 2028 Price @ 93.634 CUSIP No. 797263BC3
(Accrued interest to be added)

***No broker, dealer, salesperson or other person has been authorized by the City of San Diego, the San Diego Facilities and Equipment Leasing Corporation or the Underwriters to give any information or to make any representations other than those contained herein and, if given or made, such other information or representation must not be relied upon as having been authorized by the City of San Diego, the San Diego Facilities and Equipment Leasing Corporation or the Underwriters. Neither the delivery of this Official Statement nor any sale made hereunder shall, under any circumstances, create any implication that there has been no change in the affairs of the City of San Diego or the San Diego Facilities and Equipment Leasing Corporation. This Official Statement does not constitute an offer to sell or the solicitation of an offer to buy, nor shall there be any sale of Series 1998 Certificates by a person in any jurisdiction in which it is unlawful for such person to make such an offer, solicitation or sale.***

*This Official Statement is not to be construed as a contract with the purchasers of Series 1998 Certificates. Statements contained in this Official Statement which involve estimates, forecasts or matters of opinion, whether or not expressly so described herein, are intended solely as such and are not to be construed as representations of fact*

*The information set forth in this Official Statement has been obtained from official sources and other sources which are believed to be reliable, but it is not guaranteed as to accuracy or completeness, and is not to be construed as a representation by the Underwriters. This Official Statement is submitted in connection with the sale of Series 1998 Certificates referred to herein and may not be reproduced or used, in whole or in part, for any other purpose.*

*The summaries and references to the Trust Agreement, the Installment Purchase Agreement, the Continuing Disclosure Agreement, the City Charter and to other statutes and documents referred to herein do not purport to be comprehensive or definitive and are qualified in their entireties by reference to each such document and statute. This Official Statement including any amendment or supplement hereto is intended to be deposited with one or more depositories Series 1998 Certificates have not been registered under the Securities Act of 1933, as amended, in reliance upon an exemption from the registration requirements contained in such Act*

IN CONNECTION WITH THIS OFFERING OF SERIES 1998 CERTIFICATES, THE UNDERWRITERS MAY OVER-ALLOT OR EFFECT TRANSACTIONS THAT STABILIZE OR MAINTAIN THE MARKET PRICE OF SUCH CERTIFICATES AT A LEVEL ABOVE THAT WHICH MIGHT OTHERWISE PREVAIL IN THE OPEN MARKET. SUCH STABILIZING, IF COMMENCED, MAY BE DISCONTINUED AT ANY TIME

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## CITY OF SAN DIEGO

## CITY COUNCIL

Susan Golding, *Mayor*

Harry Mathis
Byron Wear
Christine Kehoe
George Stevens

Barbara Warden
Valerie Stallings
Judy McCarty
Juan Vargas

## CITY OFFICIALS

Michael T. Uberuaga
*City Manager*

Casey Gwinn
*City Attorney*

Ed Ryan
*City Auditor and Comptroller*

Patricia T. Frazier
*Deputy City Manager*
*Financial and Technical Services*

George Loveland
*Deputy City Manager*
*Public Works*

Conny M. Jamison
*City Treasurer*

Charles Abdelnour
*City Clerk*

## SAN DIEGO FACILITIES AND EQUIPMENT LEASING CORPORATION

## BOARD OF DIRECTORS

Michael T. Uberuaga, President

Casey Gwinn, Vice President

Ed Ryan, Treasurer

## CORPORATION COUNSEL

Foley & Lardner

---

## CO-SPECIAL COUNSEL

Orrick, Herrington & Sutcliffe LLP
*Los Angeles, California*

Webster & Anderson
*Oakland, California*

## DISCLOSURE COUNSEL

Orrick, Herrington & Sutcliffe LLP
*Los Angeles, California*

## TRUSTEE

State Street Bank and Trust Company of California, N.A.
*Los Angeles, California*

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## FINANCIAL ADVISORS

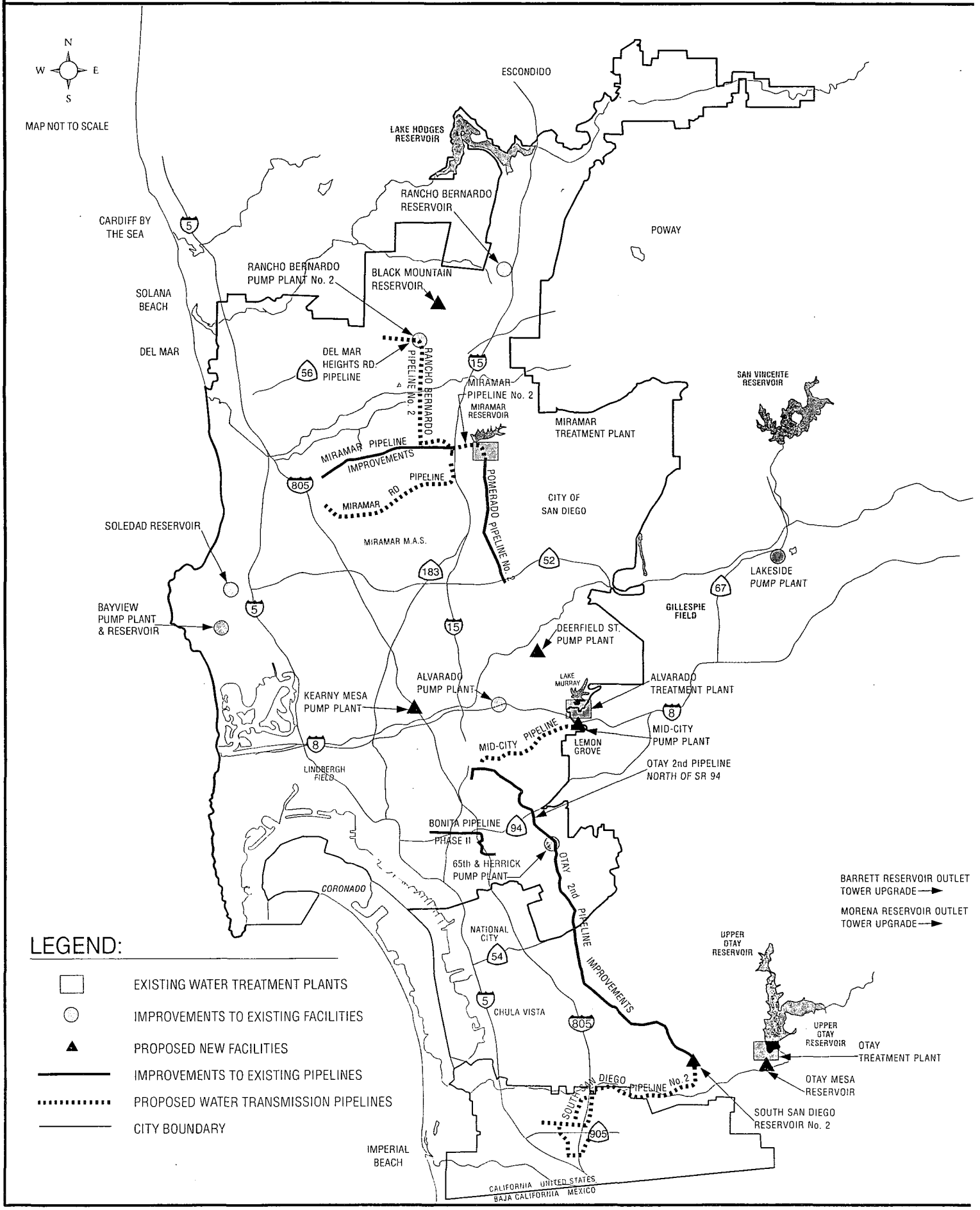
Paradigm
*Ross, California*

Renge Securities & Co., Inc.
*Los Angeles/San Francisco, California*

## FEASIBILITY ENGINEER

O'Brien & Gere Engineers, Inc.
*San Diego, California*

# CITY OF SAN DIEGO
# WATER DEPARTMENT
# CAPITAL IMPROVEMENTS PROGRAM



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## SUMMARY STATEMENT

**This Summary Statement is qualified in all respects by the more complete information contained elsewhere in this Official Statement, including the Appendices. This Official Statement should be read in its entirety, and no one subject discussed herein should be considered less important than any other by reason of its location in the text. Unless otherwise defined below, all capitalized terms used in this Summary Statement shall have the meanings ascribed thereto in Appendix A to this Official Statement.**

### City of San Diego

The City is the sixth largest city in the United States and the second largest city in the State of California. The City's population is approximately 1.2 million. See APPENDIX B – "CERTAIN INFORMATION REGARDING THE CITY OF SAN DIEGO AND AREA."

### The San Diego Water System

The Water System is owned and operated by the City and managed by the Water Department. The Water System consists primarily of three water treatment plants, nine surface reservoirs and over 2,890 miles of transmission and distribution lines. See "THE WATER SYSTEM."

The operations of the Water System are accounted for in an enterprise fund - the Water Utility Fund - which was established by amendment to the City Charter effective February 11, 1963. All Water System Revenues are deposited in the Water Utility Fund. The Installment Payments relating to Series 1998 Certificates are, and Installment Payments relating to any Parity Obligations will be, payable from Net System Revenues.

### The Corporation

The Corporation is a nonprofit public benefit corporation that was incorporated to acquire and lease and/or sell to the City real and personal property to be used in the municipal operations of the City. The Corporation has no taxing power.

### Purpose of Financing

Series 1998 Certificates are being executed and delivered to (i) finance the costs of construction of replacements and improvements to the Water System, (ii) fund a debt service reserve fund securing Series 1998 Certificates and (iii) pay certain costs of issuance of the Certificates. See "DESCRIPTION OF THE SERIES 1998 CERTIFICATES."

### Series 1998 Certificates

Series 1998 Certificates will be executed and delivered in the aggregate principal amount of $385,000,000. Series 1998 Certificates shall be in denominations of $5,000 and any integral multiple thereof. See "DESCRIPTION OF THE SERIES 1998 CERTIFICATES."

### Prepayment Provisions

Series 1998 Certificates are subject to optional prepayment with the prepayment premiums described herein, and Series 1998 Certificates designated as Term Certificates on the cover page hereof and herein, are subject to mandatory prepayment, all as more fully described herein. See "DESCRIPTION OF THE SERIES 1998 CERTIFICATES."

### Security for Series 1998 Certificates

Series 1998 Certificates are payable solely from Installment Payments made by the City to the Corporation under the Installment Purchase Agreement. Installment Payments are payable solely from Net System Revenues on deposit in the Water Utility Fund. Net System Revenues for any Fiscal Year are comprised of System Revenues less

Maintenance and Operation Costs of the Water System. Pursuant to the Installment Purchase Agreement, all Parity Obligations (including Series 1998 Certificates) are secured by a prior lien on and pledge of Net System Revenues without preference, priority or distinction.

The City has covenanted in the Installment Purchase Agreement not to discontinue or suspend any Installment Payments whether or not the Project or any part thereof is operating or operable or has been completed, or its use is suspended, interfered with, reduced, curtailed or terminated in whole or in part, and such Installment Payments shall not be subject to reduction whether by offset or otherwise and shall not be conditioned upon the performance or non-performance by any party of any agreement for any cause whatsoever.

The obligation of the City to make Installment Payments does not constitute an obligation of the City for which the City is obligated to levy or pledge any form of taxation or for which the City has levied or pledged any form of taxation. Neither the pledge made by the Corporation, nor the obligation of the City to make Installment Payments, creates a legal or equitable pledge, charge, lien or encumbrance upon any of the City's property, or upon its income, receipts or revenues other than Net System Revenues. The Corporation has no taxing power. See "SECURITY FOR THE SERIES 1998 CERTIFICATES."

**Insurance on the Series 1998 Certificates**

The payment of principal of and interest with respect to Series 1998 Certificates when due will be guaranteed by a municipal bond insurance policy to be issued by FGIC Insurance Company simultaneously with the delivery of Series 1998 Certificates. See "SECURITY FOR THE SERIES 1998 CERTIFICATES – Insurance on the 1998 Certificates" and APPENDIX H—"SPECIMEN MUNICIPAL BOND INSURANCE POLICY."

**Rate Covenant**

The City has covenanted in the Installment Purchase Agreement to fix, prescribe and collect rates and charges for the Water System which will be at least sufficient to pay all Obligations (other than Parity Obligations) and to yield during each Fiscal Year Adjusted Net System Revenues equal to 120% of the Adjusted Debt Service for such Fiscal Year. System Revenues may be increased or reduced by transfers in or out of the Rate Stabilization Fund or the Secondary Purchase Fund. See "SECURITY FOR THE SERIES 1998 CERTIFICATES" and "WATER SYSTEM FINANCIAL OPERATIONS."

**Reserve Fund**

A Reserve Fund has been established from the proceeds of Series 1998 Certificates in an amount equal to the Reserve Requirement. See "SECURITY FOR THE SERIES 1998 CERTIFICATES."

**Additional Parity Obligations**

The City may at any time issue or create other Obligations on a parity with Series 1998 Certificates; provided that, among other things, the City obtains or provides a certificate or certificates, prepared by the City or at the City's option by a Consultant, showing that: (i) the Net System Revenues as shown by the books of the City for any 12 consecutive month period within the 18 consecutive months ending immediately prior to the incurring of such additional other Parity Obligations shall have amounted to at least 1.20 times the Maximum Annual Debt Service on all Parity Obligations to be Outstanding immediately after the issuance of the proposed Parity Obligations; or (ii) the estimated Net System Revenues for the five Fiscal Years following the earlier of (a) the end of the period during which interest on those Parity Obligations is to be capitalized or, if no interest is to be capitalized, the Fiscal Year in which the Parity Obligations are issued, or (b) the date on which substantially all new facilities financed with such Parity Obligations are expected to commence operations, will be at least equal to 1.20 times the Maximum Annual Debt Service for all Parity Obligations which will be Outstanding immediately after the issuance of the proposed Parity Obligations. See "SECURITY FOR THE SERIES 1998 CERTIFICATES."

# OFFICIAL STATEMENT

**$385,000,000**

**CERTIFICATES OF UNDIVIDED INTEREST**
**(IN INSTALLMENT PAYMENTS PAYABLE FROM**
**NET SYSTEM REVENUES OF THE WATER UTILITY FUND**
**OF THE CITY OF SAN DIEGO, CALIFORNIA)**
**SERIES 1998**

## INTRODUCTION

This Official Statement, which includes the cover page and appendices hereto, is being furnished in connection with the offering of $385,000,000 aggregate principal amount of Certificates of Undivided Interest (In Installment Payments Payable from Net System Revenues of the Water Utility Fund of the City of San Diego, California) Series 1998 ("Series 1998 Certificates"). The Master Installment Purchase Agreement and the 1998-1 Supplement to the Master Installment Purchase Agreement, each dated as of August 1, 1998, each between San Diego Facilities and Equipment Leasing Corporation (the "Corporation") and the City of San Diego (the "City") (the Master Installment Purchase Agreement, together with the 1998-1 Supplement to the Master Installment Purchase Agreement and any other supplements thereto, are collectively referred to herein as the "Installment Purchase Agreement"), provides for the sale of certain components of the construction, replacement and improvement to the City's Water System (as defined below) (the "Project") to the City by the Corporation in consideration of the City's payment of Installment Payments to the Corporation in an amount equal to the principal and interest due with respect to Series 1998 Certificates. The Trust Agreement, dated as of August 1, 1998 (the "Trust Agreement"), among the City, the Corporation and State Street Bank and Trust Company of California, N.A., as trustee (the "Trustee") provides for the execution and delivery of Series 1998 Certificates. Capitalized terms not otherwise defined herein shall have the meaning given to such terms in APPENDIX A – "SUMMARY OF PRINCIPAL LEGAL DOCUMENTS."

Series 1998 Certificates are special, limited obligations of the Corporation payable solely from Installment Payments made by the City to the Corporation from Net System Revenues pursuant to the Installment Purchase Agreement. The Installment Payments are in an amount equal to the principal and interest due in respect of Series 1998 Certificates. Net System Revenues for any Fiscal Year are comprised of System Revenues less Maintenance and Operation Costs of the Water System. System Revenues consist primarily of moneys derived by the City from the ownership and operation of the Water System. System Revenues can be (i) increased by withdrawals from the Rate Stabilization Fund and the Secondary Purchase Fund and (ii) decreased by deposits into the Rate Stabilization Fund or by any deposits of current System Revenues into the Secondary Purchase Fund. Pursuant to the Installment Purchase Agreement, the City has granted a prior lien and pledge of Net System Revenues to secure Series 1998 Certificates and any Parity Obligations. Pursuant to the Trust Agreement, the Corporation has irrevocably pledged and transferred to the Trustee, for the benefit of the Holders, all of its right, title and interest in the right to receive Installment Payments under the Installment Purchase Agreement, which Installment Payments will be used for the payment of the interest and principal represented by Series 1998 Certificates and any Additional Obligations. See "SECURITY FOR THE SERIES 1998 CERTIFICATES." The payment of principal of and interest with respect to Series 1998 Certificates when due will be guaranteed by a municipal bond insurance policy to be issued by FGIC Insurance Company simultaneously with the delivery of Series 1998 Certificates. See "SECURITY FOR THE SERIES 1998 CERTIFICATES – Insurance on the Series 1998 Certificates" and APPENDIX A—"SPECIMEN MUNICIPAL BOND INSURANCE POLICY."

The Installment Purchase Agreement defines the Water System (the "Water System") to mean any and all facilities, properties, improvements and works at any time owned, controlled or operated by the City as part of the public utility system of the City for water purposes, for the development, obtaining, conservation, production, storage, treatment, transmission, furnishing and distribution of water and its other commodities or byproducts for public and private use (whether located within or without the City), and any related or incidental operations designated by the City as part of the Water System, including reclaimed and repurified water.

The Installment Purchase Agreement authorizes the Corporation to acquire certain components of the Project with the proceeds of Series 1998 Certificates and to sell such components of the Project to the City in consideration of the City's payment of Installment Payments to the Corporation. The Project consists of the construction of, improvements to, or replacement of components of the Water System.

**The obligation of the City to make Installment Payments does not constitute an obligation of the City for which the City is obligated to levy or pledge any form of taxation or for which the City has levied or pledged any form of taxation. Neither the pledge made by the Corporation, nor the obligation of the City to make Installment Payments, creates a legal or equitable pledge, charge, lien or encumbrance upon any of the City's property, or upon its income, receipts or revenues other than Net System Revenues. The Corporation has no taxing power.**

## DESCRIPTION OF THE SERIES 1998 CERTIFICATES

### *General Terms*

Series 1998 Certificates will be executed and delivered in the aggregate principal amounts, will evidence the right to receive interest at the rates per annum and will mature in the principal amounts in each year (subject to prior prepayment), as set forth on the cover page hereof. Series 1998 Certificates are executed and delivered only in fully registered form and, when executed and delivered, will be registered in the name of Cede & Co., as registered owner and nominee of The Depository Trust Company, New York, New York ("DTC"). DTC will act as securities depository for Series 1998 Certificates. Purchasers will not receive physical certificates representing their interest in Series 1998 Certificates purchased. See "Book-Entry-Only System" below.

The interest with respect to Series 1998 Certificates shall be payable on each Interest Payment Date by check sent by first class mail by the Trustee to the respective Owners of Series 1998 Certificates as of the Record Date for such Interest Payment Date at their addresses shown on the books required to be kept by the Trustee pursuant to the provisions of the Trust Agreement. Payments of defaulted interest with respect to any Series 1998 Certificate shall be paid by check to the Owner as of a special record date to be fixed by the Trustee, notice of which special record date shall be given to the Owner of 1998 Certificate not less than ten days prior thereto. The principal and premium, if any, represented by Series 1998 Certificates shall be payable upon presentation and surrender thereof on maturity or on prepayment prior thereto at the principal corporate trust office of the Trustee.

The Owner of $1,000,000 or more in aggregate principal amount evidenced by Series 1998 Certificates may request in writing that the Trustee pay the interest in respect of such Series 1998 Certificates by wire transfer to an account in the United States of America and the Trustee shall comply with such request for all Interest Payment Dates following the fifteenth day after receipt of such request.

Notwithstanding the foregoing, payment of interest with respect to any Series 1998 Certificate registered as of each Record Date in the name of Cede & Co. shall be made by wire transfer of same-day funds to the account of Cede & Co. on the Interest Payment Date for Series 1998 Certificates at the address indicated on the Record Date or special record date for Cede & Co. in the Certificate registration books required to be kept by the Trustee pursuant to the provisions of the Trust Agreement.

The principal in respect of Series 1998 Certificates shall be payable on their Principal Payment Date in each year and shall represent the sum of the portions of the Installment Payments designated as principal components coming due on the Principal Payment Date in each year. The interest in respect of Series 1998 Certificates shall be payable on each Interest Payment Date to their Principal Payment Date(s) or prepayment prior thereto, and shall represent the sum of the portions of the Installment Payments designated as interest components coming due on the Interest Payment Dates in each year. Interest with respect to Series 1998 Certificates shall be computed on the basis of a 360-day year of twelve 30-day months.

### *Series 1998 Certificates*

Series 1998 Certificates will be dated August 1, 1998. Each Series 1998 Certificate shall evidence the right to receive interest from the Interest Payment Date to which interest has been paid or duly provided for next

preceding its date of execution, unless such date of execution shall be (i) prior to the close of business on August 1, 1998, in which case such Series 1998 Certificate shall evidence the right to receive interest from August 1, 1998, (ii) subsequent to a Record Date but before the related Interest Payment Date, in which case such Series 1998 Certificate shall represent interest from such Interest Payment Date, or (iii) an Interest Payment Date to which interest has been paid in full or duly provided for, in which case such Series 1998 Certificate shall evidence the right to receive interest from such date of execution; provided, however, that if, as shown by the records of the Trustee, interest shall be in default, each Certificate shall represent interest from the last date to which interest has been paid in full or duly provided for or, if no interest has ever been paid or duly provided for, August 1, 1998. Beneficial ownership of Series 1998 Certificates may be purchased in denominations of $5,000 or any integral multiple thereof in book-entry form only. Interest represented by Series 1998 Certificates is payable on February 1 and August 1 of each year, commencing February 1, 1999.

*Optional Prepayment.* Series 1998 Certificates maturing on or before August 1, 2008, are not subject to optional prepayment prior to their respective stated maturities. Series 1998 Certificates maturing on or after August 1, 2009 shall be subject to prepayment prior to their respective stated maturities at the option of the City on or after August 1, 2008, as a whole or in part (in such maturities as are designated to the Trustee by the City no later than 45 days prior to the prepayment date or, if the City fails to designate such maturities, on a proportional basis among maturities and by lot within a maturity) on any date, from moneys deposited by the City in the Prepayment Fund at the following prepayment prices (expressed as percentages of the principal amount evidenced by Series 1998 Certificates called for prepayment), together with accrued interest evidenced thereby to the date fixed for prepayment:

| **Prepayment Period (Both Dates Inclusive)** | **Prepayment Price** |
|---|---|
| August 1, 2008 through July 31, 2009 | 101.0% |
| August 1, 2009 through July 31, 2010 | 100.5% |
| August 1, 2010 and thereafter | 100.0% |

Series 1998 Certificates maturing on August 1, 2028, shall be subject to optional prepayment prior to their stated maturity at the option of the City on August 1, 2008 and thereafter at a prepayment price of 100% of the principal amount evidenced by such Series 1998 Certificates called for prepayment, together with accrued interest evidenced thereby to the date fixed for prepayment.

*Mandatory Sinking Fund Prepayment.* Series 1998 Certificates maturing on August 1, 2021 ("Term Certificates") are subject to prepayment prior to their stated maturity, in part, by lot, from Mandatory Sinking Account Payments, on any August 1 on or after August 1, 2019 at the principal amount thereof and accrued interest represented thereby to the date fixed for prepayment, without premium, according to the following schedule:

| **Mandatory Sinking Account Payment Date (August 1)** | **Principal Amount Prepaid** |
|---|---|
| 2019 | $15,880,000 |
| 2020 | 16,695,000 |
| 2021* | 17,550,000 |

* Maturity

Series 1998 Certificates maturing on August 1, 2024 ("Term Certificates") are subject to prepayment prior to their stated maturity, in part, by lot, from Mandatory Sinking Account Payments, on any August 1 on or after August 1, 2022 at the principal amount thereof and accrued interest represented thereby to the date fixed for prepayment, without premium, according to the following schedule:

| Mandatory Sinking Account Payment Date (August 1) | Principal Amount Prepaid |
|---|---|
| 2022 | $18,470,000 |
| 2023 | 19,460,000 |
| 2024* | 10,000,000 |

* Maturity

Series 1998 Certificates maturing on August 1, 2028 ("Term Certificates") are subject to prepayment prior to their stated maturity, in part, by lot, from Mandatory Sinking Account Payments, on any August 1 on or after August 1, 2024 at the principal amount thereof and accrued interest represented thereby to the date fixed for prepayment, without premium, according to the following schedule:

| Mandatory Sinking Account Payment Date (August 1) | Principal Amount Prepaid |
|---|---|
| 2024 | $10,470,000 |
| 2025 | 21,490,000 |
| 2026 | 22,535,000 |
| 2027 | 23,635,000 |
| 2028* | 24,785,000 |

* Maturity

*Selection of Series 1998 Certificates for Prepayment.* Whenever less than all of the Outstanding Series 1998 Certificates are to be prepaid on any one date, other than from Mandatory Sinking Account Payments, the City shall select the maturity of Series 1998 Certificates or portions thereof to be prepaid, which may include portions of Term Certificates representing prepaid Installment Payments due immediately prior to the Mandatory Sinking Account Payments relating to such Term Certificates, and shall provide written notice to the Trustee at least 60 days prior to the prepayment date; provided, however, that if the remaining Installment Payments under the Installment Purchase Agreement will not be reasonably level after such prepayment, the City shall deliver to the Trustee an Opinion of Counsel that the Installment Purchase Agreement will continue to be a valid and binding obligation of the City after such prepayment. Such decision of the City shall be final and binding upon the Corporation, the Trustee and the Owners. Subject to the City's direction, the Trustee shall select specific Series 1998 Certificates for prepayment by lot. For purposes of such selection, any Certificate may be prepaid in part in Authorized Denominations.

*Notice of Prepayment.* When prepayment is authorized pursuant to the Trust Agreement, the Trustee shall give notice, at the expense of the City, of the prepayment of Series 1998 Certificates (i) at least 30 but not more than 60 days prior to the prepayment date to the respective Owners of Series 1998 Certificates designated for prepayment by first class mail, postage prepaid, at their addresses appearing on the registration books of the Trustee as of the close of business on the day before such notice of prepayment is given and (ii) at least two days before notice of prepayment is given to the Owners to the information services and securities depositories described in the Trust Agreement by (a) registered or certified mail, postage prepaid, (b) confirmed facsimile transmission or (c) overnight delivery service. The notice of prepayment shall include the information required by the Trust Agreement. See APPENDIX A – "SUMMARY OF PRINCIPAL LEGAL DOCUMENTS.

*Partial Prepayment of Series 1998 Certificates.* Upon surrender of any Series 1998 Certificate prepaid in part only, the Trustee shall execute and deliver to the Owner thereof a new Series 1998 Certificate or Series 1998 Certificates evidencing the right to receive the remaining unpaid principal amount in respect of Series 1998 Certificate surrendered.

*Effect of Prepayment.* If notice of prepayment has been duly given as provided in the Trust Agreement and moneys for the payment of the prepayment price of Series 1998 Certificates to be prepaid are held by the Trustee, then on the prepayment date designated in such notice Series 1998 Certificates so called for prepayment shall become payable at the prepayment price specified in such notice; and from and after the date so designated interest in respect of Series 1998 Certificates so called for prepayment shall cease to accrue, such Series 1998 Certificates shall cease to be entitled to any benefit or security hereunder and the Owners of such Series 1998 Certificates shall have no rights in respect thereof except to receive payment of the prepayment price represented thereby. The Trustee shall, upon surrender for payment of any Series 1998 Certificates to be prepaid, pay such Series 1998 Certificates at the prepayment price thereof.

***Book-Entry-Only System***

The information contained in the following paragraphs of this subsection "Book-Entry-Only System" has been extracted from a schedule prepared by DTC entitled "SAMPLE OFFICIAL STATEMENT LANGUAGE DESCRIBING BOOK-ENTRY-ONLY ISSUANCE." The Corporation and the City make no representation as to the completeness or the accuracy of such information or as to the absence of material adverse changes in such information subsequent to the date hereof.

1. DTC will act as securities depository for all Series 1998 Certificates. Series 1998 Certificates will be executed and delivered as fully registered securities in the name of Cede & Co. (DTC's partnership nominee). One fully registered Series 1998 Certificates certificate will be executed and delivered for each maturity of Series 1998 Certificates, each in the aggregate principal amount of such maturity, and will be deposited with DTC. If, however, the aggregate principal amount of any maturity exceeds $150 million, one certificate will be issued with respect to each $150 million of principal amount and an additional certificate will be executed and delivered with respect to any remaining principal amount of such issue.

2. DTC is a limited-purpose trust company organized under the New York Banking Law, a "banking organization" within the meaning of the New York Banking Law, a member of the Federal Reserve System, a "clearing corporation" within the meaning of the New York Uniform Commercial Code, and a "clearing agency" registered pursuant to the provisions of Section 17A of the Securities Exchange Act of 1934. DTC holds securities that its participants ("Participants") deposit with DTC. DTC also facilitates the settlement among Participants of securities transactions, such as transfers and pledges, in deposited securities through electronic computerized book-entry changes in Participants' accounts, thereby eliminating the need for physical movement of securities certificates. Direct Participants include securities brokers and dealers, banks, trust companies, clearing corporations, and certain other organizations. DTC is owned by a number of its Direct Participants and by the New York Stock Exchange, Inc., the American Stock Exchange, Inc., and the National Association of Securities Dealers, Inc. Access to the DTC system is also available to others such as securities brokers and dealers, banks, and trust companies that clear through or maintain a custodial relationship with a Direct Participant, either directly or indirectly ("Indirect Participants"). The rules applicable to DTC and its Participants are on file with the Securities and Exchange Commission.

3. Purchases of Series 1998 Certificates under the DTC system must be made by or through Direct Participants, which will receive a credit for Series 1998 Certificates on DTC's records. The ownership interest of each actual purchaser of each Series 1998 Certificates ("Beneficial Owner") is in turn to be recorded on the Direct and Indirect Participants' records. Beneficial Owners will not receive written confirmation from DTC of their purchase, but Beneficial Owners are expected to receive written confirmation providing details of the transaction, as well as periodic statements of their holdings, from the Direct or Indirect Participant through which the Beneficial Owner entered into the transaction. Transfers of ownership interests in Series 1998 Certificates are to be accomplished by entries made on the books of Participants acting on behalf of Beneficial Owners. Beneficial Owners will not receive certificates representing their ownership interest in Series 1998 Certificates, except in the event that use of the book-entry system for Series 1998 Certificates is discontinued.

4. To facilitate subsequent transfers, all Series 1998 Certificates deposited by Participants with DTC are registered in the name of DTC's partnership nominee, Cede & Co. The deposit of Series 1998 Certificates with DTC and their registration in name of Cede & Co., effects no change in beneficial ownership. DTC has no knowledge of the actual Beneficial Owners of Series 1998 Certificates; DTC's records reflect only the identity of the

Direct Participants to whose accounts such Series 1998 Certificates are credited, which may or may not be the Beneficial Owners. The Participants will remain responsible for keeping account of their holdings on behalf of their customers.

5. Conveyance of notices and other communications by DTC to Direct Participants, by Direct Participants to Indirect Participants, and by Direct Participants and Indirect Participants to Beneficial Owners will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time.

6. Prepayment notices shall be sent to Cede & Co. If less than all of Series 1998 Certificates are being prepaid, DTC's practice is to determine by lot the amount of the interest of each Direct Participant to be redeemed.

7. Neither DTC nor Cede & Co. will consent or vote with respect to Series 1998 Certificates. Under its usual procedures, DTC mails an Omnibus Proxy to the Corporation as soon as possible after the record date. The Omnibus Proxy assigns Cede & Co.'s consenting or voting rights to those Direct Participants to whose accounts Series 1998 Certificates are credited on the record date (identified in a listing attached to the Omnibus Proxy).

8. Principal and interest with respect to Series 1998 Certificates will be made to DTC. DTC's practice is to credit Direct Participants' accounts on payable date in accordance with their respective holdings shown on DTC's records unless DTC has reason to believe that it will not receive payment on payable date. Payments by Participants to Beneficial Owners will be governed by standing instructions and customary practices, as in the case with securities held for the accounts of customers in bearer form or registered in "street name," and will be the responsibility of such Participant and not of DTC, the Trustee, the Corporation or the City, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of principal and interest to DTC is the responsibility of the Corporation or the Trustee, disbursement of such payments to Direct Participants shall be the responsibility of DTC, and disbursement of such payments to the Beneficial Owners shall be the responsibility of Direct and Indirect Participants.

9. DTC may discontinue providing its services as securities depository with respect to Series 1998 Certificates at any time by giving reasonable notice to the City or the Trustee. Under such circumstances, in the event that a successor securities depository is not obtained, Series 1998 Certificates will be printed and delivered.

10. The City may decide to discontinue use of the system book-entry transfers through DTC (or a successor securities depository). In that event, Series 1998 Certificates will be printed and delivered.

11. The information in this section concerning DTC and DTC's book-entry system has been obtained from sources that the Corporation and the City believe to be reliable, but the Corporation and the City take no responsibility for the accuracy thereof.

NONE OF THE CORPORATION, THE CITY OR THE UNDERWRITERS WILL HAVE ANY RESPONSIBILITY OR OBLIGATION TO PARTICIPANTS, TO INDIRECT PARTICIPANTS OR TO ANY BENEFICIAL OWNER WITH RESPECT TO: (I) THE ACCURACY OF ANY RECORDS MAINTAINED BY DTC, ANY PARTICIPANT, OR ANY INDIRECT PARTICIPANT; (II) THE PAYMENT BY DTC OR ANY PARTICIPANT OR INDIRECT PARTICIPANT OF ANY AMOUNT WITH RESPECT TO THE PRINCIPAL OF, OR PREMIUM, IF ANY, OR INTEREST WITH RESPECT TO, SERIES 1998 CERTIFICATES; (III) ANY NOTICE WHICH IS PERMITTED OR REQUIRED TO BE GIVEN TO OWNERS; (IV) ANY CONSENT GIVEN BY DTC OR OTHER ACTION TAKEN BY DTC AS OWNER; OR (V) THE SELECTION BY DTC OR ANY PARTICIPANT OR INDIRECT PARTICIPANT OF ANY BENEFICIAL OWNERS TO RECEIVE PAYMENT IN THE EVENT OF A PARTIAL PREPAYMENT OF SERIES 1998 CERTIFICATES.

***Purpose of Financing***

The proceeds of Series 1998 Certificates will be used for Water System capital replacements and improvements. (See "WATER SYSTEM CAPITAL IMPROVEMENT PROGRAM."). Capital replacements and improvement costs include costs of design, engineering, legal and administrative services, acquisition of rights-of-

way, land acquisition, construction, materials and equipment. In addition to funding certain Water System capital improvements, the remaining proceeds of Series 1998 Certificates will be used to fund a debt service reserve fund securing Series 1998 Certificates and to pay certain costs of issuance of the Certificates.

***Application of Series 1998 Certificates Proceeds***

The proceeds of Series 1998 Certificates (excluding accrued interest which will be deposited in the Interest Fund) are to be applied as follows:

| | |
|---|---|
| Principal Amount | $385,000,000.00 |
| Less Original Issue Discount | (5,868,719.05) |
| Total Available Funds | $379,131,280.95 |
| Deposit to Acquisition Fund[1] | $350,427,097.80 |
| Deposit to Reserve Fund | 25,374,436.26 |
| Costs of Issuance[2] | 3,329,746.89 |
| Total Amount Applied | $379,131,280.95 |

(1) To be held and applied to pay Water System capital improvements, including $105,730,000 to be reimbursed to the Water Utility Fund for expenditures previously made for capital improvements, including certain design costs for the Project.

(2) Including the underwriters' discount and premium for the Bond Insurance Policy (see "UNDERWRITING").

*Debt Service Requirements*

The following table shows the total debt service requirements from Net System Revenues with respect to Series 1998 Certificates.

*Table 1*
**TOTAL DEBT SERVICE REQUIREMENTS**

| Year Ending June 30 | Principal | Interest | Total Debt Service |
|---|---|---|---|
| 1999 | -- | $ 9,364,768.13 | $ 9,364,768.13 |
| 2000 | -- | 18,729,536.26 | 18,729,536.26 |
| 2001 | -- | 18,729,536.26 | 18,729,536.26 |
| 2002 | $ 6,780,000 | 18,593,936.26 | 25,373,936.26 |
| 2003 | 7,055,000 | 18,317,236.26 | 25,372,236.26 |
| 2004 | 7,345,000 | 18,029,236.26 | 25,374,236.26 |
| 2005 | 7,645,000 | 17,729,436.26 | 25,374,436.26 |
| 2006 | 7,965,000 | 17,409,271.26 | 25,374,271.26 |
| 2007 | 8,305,000 | 17,065,525.01 | 25,370,525.01 |
| 2008 | 8,675,000 | 16,698,193.76 | 25,373,193.76 |
| 2009 | 9,065,000 | 16,307,913.76 | 25,372,913.76 |
| 2010 | 9,505,000 | 15,868,746.26 | 25,373,746.26 |
| 2011 | 10,005,000 | 15,365,239.38 | 25,370,239.38 |
| 2012 | 10,520,000 | 14,851,620.00 | 25,371,620.00 |
| 2013 | 11,065,000 | 14,306,554.38 | 25,371,554.38 |
| 2014 | 11,670,000 | 13,701,495.01 | 25,371,495.01 |
| 2015 | 12,305,000 | 13,065,146.26 | 25,370,146.26 |
| 2016 | 12,980,000 | 12,391,481.88 | 25,371,481.88 |
| 2017 | 13,670,000 | 11,702,572.50 | 25,372,572.50 |
| 2018 | 14,370,000 | 11,001,572.50 | 25,371,572.50 |
| 2019 | 15,105,000 | 10,264,697.50 | 25,369,697.50 |
| 2020 | 15,880,000 | 9,490,072.50 | 25,370,072.50 |
| 2021 | 16,695,000 | 8,675,697.50 | 25,370,697.50 |
| 2022 | 17,550,000 | 7,819,572.50 | 25,369,572.50 |
| 2023 | 18,470,000 | 6,900,602.50 | 25,370,602.50 |
| 2024 | 19,460,000 | 5,914,422.50 | 25,374,422.50 |
| 2025 | 20,470,000 | 4,899,800.00 | 25,369,800.00 |
| 2026 | 21,490,000 | 3,880,750.00 | 25,370,750.00 |
| 2027 | 22,535,000 | 2,835,156.25 | 25,370,156.25 |
| 2028 | 23,635,000 | 1,738,618.75 | 25,373,618.75 |
| 2029 | 24,785,000 | 588,643.75 | 25,373,643.75 |
| TOTAL | $385,000,000 | $372,237,051.40 | $757,237,051.40 |

## SECURITY FOR THE SERIES 1998 CERTIFICATES

*Source of Payment*

Series 1998 Certificates are payable solely from Installment Payments to be made from Net System Revenues pursuant to the Installment Purchase Agreement. All Parity Obligations, including the Installment Payment Obligations, rights in which are evidenced by Series 1998 Certificates, shall be secured by a prior lien on and pledge of Net System Revenues, and within such lien priority, Parity Obligations shall be of equal rank without preference, priority or distinction of any Parity Obligations over any other Parity Obligations. Such lien and pledge

shall constitute a first lien on Net System Revenues; provided, however, that out of Net System Revenues there may be apportioned such sums for such purposes as are expressly permitted by the Installment Purchase Agreement.

*The Water Utility Fund*

The City accounts for its water operations through an enterprise fund known as the Water Utility Fund. The Water Utility Fund was established by amendment to the City Charter effective February 11, 1963 and is held separate and apart from other funds of the City. The Water Utility Fund is invested in the City Pool. See "INVESTMENT OF FUNDS" for more information on the City Pool.

The City has agreed and covenanted under the Installment Purchase Agreement that all System Revenues will be received by the City in trust and deposited in the Water Utility Fund. All moneys in the Water Utility Fund shall be used to pay: (i) all Maintenance and Operation Costs of the Water System; (ii) to the Trustee, as assignee of the Corporation, for deposit in the Payment Fund for Parity Obligations, including Reserve Fund Obligations, the amounts specified in any Issuing Instrument, as payments due on account of Parity Obligations, other than payments due as Parity Obligations by the City under a Qualified Swap Agreement; and (iii) to the counterparty specified in any Qualified Swap Agreement, the amounts or payments due under such Qualified Swap Agreement as Parity Obligations. After such payments have been made, any remaining System Revenues shall be used to make up any deficiency in the Reserve Fund and Reserve Accounts for Parity Obligations and, subject to certain conditions, then may be used to pay for capital expenditures for the Water System or any other Water System purposes, including the payment of Subordinated Obligations, if any.

*Net System Revenues*

"Net System Revenues" for any Fiscal Year consist of System Revenues less Maintenance and Operation Costs of the Water System. "System Revenues" are defined in the Installment Purchase Agreement to mean all income, rents, rates, fees, charges and other moneys derived from the ownership or operation of the Water System, including, without limiting the generality of the foregoing, (i) all income, rents, rates, fees charges (including standby and capacity charges), or other moneys derived by the City from the water services or facilities and commodities or byproducts, including hydro-electric power, sold, furnished or supplied through the facilities of or in the conduct or operation of the business of the Water System, and including, without limitation, investment earnings on the operating reserves to the extent that the use of such earnings is limited to the Water System by or pursuant to law, and earnings on any Reserve Fund for Obligations but only to the extent that such earnings may be utilized under the Issuing Instrument for the payment of debt service for such Obligations; (ii) the proceeds derived by the City directly or indirectly from the lease of a part of the Water System; (iii) any amount received from the levy or collection of taxes which are solely available and are earmarked for the support of the operation of the Water System; (iv) amounts received under contracts or agreements with governmental or private entities and designated for capital costs for the Water System; and (v) grants for maintenance and operations received from the United States of America or from the State of California; provided, however, that System Revenues shall not include: (a) in all cases, customers' deposits or any other deposits or advances subject to refund until such deposits or advances have become the property of the City; and (b) the proceeds of borrowings. Certain components of the System Revenues, such as capacity charges and certain grants, are not available to pay for Maintenance and Operation Costs of the Water System, but could be available, in part, to pay Installment Payments. Notwithstanding the foregoing, there shall be deducted from System Revenues any amounts transferred into the Rate Stabilization Fund and any amounts transferred from current System Revenues to the Secondary Purchase Fund, and there shall be added to System Revenues any amounts transferred out of the Rate Stabilization Fund or the Secondary Purchase Fund to pay Maintenance and Operation Costs of the Water System. See "Rate Stabilization Fund and Secondary Purchase Fund" below.

"Maintenance and Operations Costs of the Water System" are defined in the Installment Purchase Agreement to mean: (i) the reasonable and necessary costs spent or incurred by the City for maintaining and operating the Water System, calculated in accordance with generally accepted accounting principles, including (among other things) the costs of the purchase, delivery or storage of water, the reasonable expenses of maintenance and repair and other expenses necessary to maintain and preserve the Water System in good repair and working order, and including administrative costs of the City attributable to the Water System, including the Project and the Installment Purchase Agreement, salaries and wages of employees, payments to employees retirement systems (to

the extent paid from System Revenues), overhead, taxes (if any), fees of auditors, accountants, attorneys or engineers and insurance premiums, and including all other reasonable and necessary costs of the City or charges required to be paid by it to comply with the terms of the Obligations, including the Installment Purchase Agreement, including any amounts required to be deposited in the Rebate Fund pursuant to the Tax Certificate, and fees and expenses payable to any Credit Provider (Credit Provider Reimbursement Obligation), and (ii) a Qualified Take or Pay Obligation, but excluding in all cases (a) depreciation, replacement and obsolescence charges or reserves therefor, (b) amortization of intangibles or other bookkeeping entries of a similar nature, (c) costs of capital additions, replacements, betterments, extensions or improvements to the Water System which under generally accepted accounting principles are chargeable to a capital account or to a reserve for depreciation, (d) charges for the payment of principal and interest on any general obligation issued for Water System purposes, (e) charges for the payment of principal and interest on any debt service on account of any obligation on a parity with or subordinate to the Installment Payments, and (f) all payments made pursuant to any Qualified Swap Agreement. Qualified Take or Pay Obligation means the obligation of the City to make use of any facility, property or services, or some portion of the capacity thereof, or to pay therefor from System Revenues, or both, whether or not such facilities, properties or services are ever made available to the City for use, and there is provided to the City a certificate of the City or of an Independent Engineer to the effect that the incurrence of such obligation will not adversely affect the ability of the City to comply with the rate covenant contained in the Installment Purchase Agreement. Currently there are no outstanding Take or Pay Obligations.

***Obligation of City Under Installment Purchase Agreement***

Pursuant to the Installment Purchase Agreement, the City commits, absolutely and unconditionally, to make Installment Payments to the Corporation solely from Net System Revenues until such time as the Purchase Price shall have been paid in full (or provision for the payment thereof has been made pursuant to the Installment Purchase Agreement). The City will not discontinue or suspend any Installment Payments whether or not the Project or any part thereof is operating or operable or has been completed, or its use is suspended, interfered with, reduced, curtailed or terminated in whole or in part, and such Installment Payments shall not be subject to reduction whether by offset or otherwise and shall not be conditioned upon the performance or nonperformance by any party of any agreement for any cause whatsoever.

***Rate Covenant; Impact of Proposition 218***

The City has covenanted in the Installment Purchase Agreement to fix, prescribe and collect rates and charges for the Water System which will be at least sufficient to pay all Obligations (other than Parity Obligations) and to yield during each Fiscal Year Adjusted Net System Revenues equal to 120% of the Adjusted Debt Service for such Fiscal Year. "Adjusted Net System Revenues" is defined in the Installment Purchase Agreement to mean Net System Revenues less earnings on the Reserve Fund. "Adjusted Debt Service" is defined in the Installment Purchase Agreement to mean Debt Service less earnings on the Reserve Fund. (Net System Revenues (and thus Adjusted Net System Revenues) may be increased or reduced by transfers in or out of the Rate Stabilization Fund or the Secondary Purchase Fund. See "Net System Revenues" above.) The City may make adjustments from time to time in such rates and charges and may make such classification thereof as it deems necessary, but shall not reduce the rates and charges then in effect unless the Adjusted Net System Revenues from such reduced rates and charges will at all times be sufficient to meet the requirements of the Installment Purchase Agreement. However, for information on the possible limitation on the City's ability to comply with the rate covenant as a consequence of Proposition 218, see "WATER SYSTEM FINANCIAL OPERATIONS."

***Rate Stabilization Fund and Secondary Purchase Fund***

The City has established as funds within the Water Utility Fund, a Rate Stabilization Fund and a Secondary Purchase Fund. From time to time, the City may deposit into the Rate Stabilization Fund, from current System Revenues, such amounts as the City shall determine and the amount of available current System Revenues shall be reduced by the amount so transferred. Amounts may be transferred from the Rate Stabilization Fund solely and exclusively to pay Maintenance and Operation Costs of the Water System, and any amounts so transferred shall be deemed System Revenues when so transferred. All interest or other earnings upon amounts in the Rate Stabilization Fund may be withdrawn therefrom and accounted for as System Revenues. In addition, from time to time the City may deposit in the Secondary Purchase Fund, from any lawful source, which may or may not consist of current

System Revenues, such amounts as the City shall determine, and the amount of available System Revenues shall be reduced by the amount so transferred to the extent that amounts so transferred consist of current System Revenues. Amounts may be transferred from the Secondary Purchase Fund solely and exclusively to pay Maintenance and Operations Costs of the Water System, and any amounts so transferred shall be deemed System Revenues when so transferred. All interest or other earnings upon amounts in the Secondary Purchase Fund may be withdrawn therefrom and accounted for as System Revenues. For information on the possible limitation on the City's ability to set rates and charges at levels which would permit the City to make deposits into the Rate Stabilization Fund or the Secondary Purchase Fund as a consequence of Proposition 218, see "WATER SYSTEM FINANCIAL OPERATIONS." See also Table 11 under the caption "FINANCIAL PROJECTIONS - Projected Operating Results" for currently anticipated deposits into and withdrawals from the Rate Stabilization Fund incident to the currently contemplated Water System Capital Improvement Program.

***Pledge Under the Trust Agreement***

Pursuant to the Trust Agreement, the City and the Corporation have irrevocably pledged and transferred to the Trustee, for the benefit of the Owners, all of their right, title and interest in and to amounts on deposit in the funds and accounts established under the Trust Agreement (other than amounts on deposit in the Rebate Fund or the Costs of Issuance Fund) to the payments of principal and interest in respect of Series 1998 Certificates and any Additional Obligations. In addition, the Corporation has irrevocably pledged and transferred to the Trustee, for the benefit of the Holders, (i) all of the Corporation's rights, title and interest in the right to receive Installment Payments from the City under the Installment Purchase Agreement, (ii) all of the Corporation's rights upon the occurrence of an event of default under the Trust Agreement, and (iii) all of the Corporation's rights upon the occurrence of an event of default under the Installment Purchase Agreement.

The Trustee has established and will maintain special trust funds called the Payment Fund, the Interest Fund, the Principal Fund, the Prepayment Fund and the Reserve Fund. Pursuant to the Installment Purchase Agreement, the City will pay the Installment Payments out of the Water Utility Fund to the Trustee for deposit into the Payment Fund so that the principal and interest due in respect of Series 1998 Certificates and the Outstanding Obligations shall be paid no later than the third Business Day preceding the day on which such payment is due. See APPENDIX A – "SUMMARY OF PRINCIPAL LEGAL DOCUMENTS."

***Insurance on the Series 1998 Certificates***

The following information has been furnished by FGIC Insurance Company for use in this Official Statement. Reference is made to Appendix H for a specimen of the Policy.

Concurrently with the issuance of the Series 1998 Certificates, Financial Guaranty Insurance Company, doing business in California as FGIC Insurance Company ("Financial Guaranty") will issue its Municipal Bond New Issue Insurance Policy for the Series 1998 Certificates (the "Policy"). The Policy unconditionally guarantees the payment of that portion of the principal of and interest with respect to the Series 1998 Certificates which has become due for payment, but shall be unpaid by reason of nonpayment by the issuer of the Series 1998 Certificates (the "Issuer"). Financial Guaranty will make such payments to State Street Bank and Trust Company, N.A., or its successor as its agent (the "Fiscal Agent"), on the later of the date on which such principal and interest is due or on the business day next following the day on which Financial Guaranty shall have received telephonic or telegraphic notice, subsequently confirmed in writing, or written notice by registered or certified mail, from an owner of Series 1998 Certificates or the Trustee of the nonpayment of such amount by the Issuer. The Fiscal Agent will disburse such amount due on any Series 1998 Certificate to its owner upon receipt by the Fiscal Agent of evidence satisfactory to the Fiscal Agent of the owner's right to receive payment of the principal and interest due for payment and evidence, including any appropriate instruments of assignment, that all of such owner's rights to payment of such principal and interest shall be vested in Financial Guaranty. The term "nonpayment" in respect of a Series 1998 Certificate includes any payment of principal or interest made to an owner of a Series 1998 Certificate which has been recovered from such owner pursuant to the United States Bankruptcy Code by a trustee in bankruptcy in accordance with a final, nonappealable order of a court having competent jurisdiction.

The Policy is non-cancellable and the premium will be fully paid at the time of delivery of the Series 1998 Certificates. The Policy covers failure to pay principal of the Series 1998 Certificates on their respective stated

maturity dates or dates on which the same shall have been duly called for mandatory sinking fund redemption, and not on any other date on which the Series 1998 Certificates may have been otherwise called for redemption, accelerated or advanced in maturity, and covers the failure to pay an installment of interest on the stated date for its payment.

This Official Statement contains a section regarding the ratings assigned to the Series 1998 Certificates and reference should be made to such section for a discussion of such ratings and the basis for their assignment to the Series 1998 Certificates. Reference should be made to the description of the Issuer for a discussion of the ratings, if any, assigned to such entity's outstanding parity debt that is not secured by credit enhancement.

The Policy is not covered by the Property/Casualty Insurance Security Fund specified in Article 76 of the New York Insurance Law.

Financial Guaranty is a wholly-owned subsidiary of FGIC Corporation (the "Corporation"), a Delaware holding company. The Corporation is a subsidiary of General Electric Capital Corporation ("GE Capital"). Neither the Corporation nor GE Capital is obligated to pay the debts of or the claims against Financial Guaranty. Financial Guaranty is a monoline financial guaranty insurer domiciled in the State of New York and subject to regulation by the State of New York Insurance Department. As of March 31, 1998, the total capital and surplus of Financial Guaranty was $1,267,900,134. Financial Guaranty prepares financial statements on the basis of both statutory accounting principles and generally accepted accounting principles. Copies of such financial statements may be obtained by writing to Financial Guaranty at 115 Broadway, New York, New York 10006, Attention: Communications Department (telephone number: 212-312-3000) or to the New York State Insurance Department at 25 Beaver Street, New York, New York 10004-2319, Attention: Financial Condition Property/Casualty Bureau (telephone number: 212-480-5187).

***Reserve Fund***

A portion of the proceeds of Series 1998 Certificates will be deposited in the Reserve Fund in an amount equal to the Reserve Requirement. The Reserve Requirement is defined to be, as of any date of calculation, the least of (i) maximum prospective annual Installment Payments with respect to Outstanding Series 1998 Certificates and Additional Obligations to be made by the City under the Installment Purchase Agreement in any Fiscal Year, (ii) 10% of the proceeds of Series 1998 Certificates and any Additional Obligations or (iii) 125% of the average annual Installment Payments to be made with respect to Outstanding Series 1998 Certificates and any Additional Obligations.

At the option of the City, one or more Reserve Fund Credit Facilities may be substituted for the funds held by the Trustee in the Reserve Fund such that the amount available to be drawn under such Reserve Fund Credit Facilities together with funds remaining in the Reserve Fund satisfies the Reserve Requirement. If the City exercises its option to substitute a Reserve Fund Credit Facility for all or a portion of the moneys held by the Trustee in the Reserve Fund, then such moneys, on or after the date that the Reserve Fund Credit Facility becomes effective, at the option of the City, shall be transferred (i) to the Payment Fund and on each applicable Principal Payment Date a pro rata portion thereof shall be transferred to the Principal Fund and used to pay a portion of the principal with respect to Series 1998 Certificates due on such Principal Payment Date, or (ii) to the City for any other lawful purpose, provided that there is delivered to the Trustee an opinion of nationally recognized Bond Counsel to the effect that the expenditures contemplated by the City will not have an adverse effect upon the exclusion of the interest portion of Installment Payments from gross income for federal income taxes under Section 103 of the Internal Revenue Code of 1986 (the "Code") or any successor law. In the event any Reserve Fund Credit Facility is scheduled to terminate prior to the final maturity date of Series 1998 Certificates and any Additional Obligations and such Reserve Fund Credit Facility is not extended, renewed or replaced with another Reserve Fund Credit Facility or with cash or Permitted Investments in the amount of such Reserve Fund Credit Facility, the Trustee shall draw on or make a claim under such Reserve Fund Credit Facility ten days prior to the date of such expiration in an amount equal to the lesser of (i) the maximum amount available thereunder or (ii) the Reserve Requirement, in either case for deposit into the Reserve Fund.

*Parity Obligations*

The City may not create Obligations the payments of which are senior or prior in right to the payment by the City of Parity Obligations. The City may at any time issue or create other Parity Obligations payable from Net System Revenues on a parity with Series 1998 Certificates; provided, among other things, the City obtains or provides a certificate or certificates, prepared by the City or at the City's option by a Consultant, showing: (i) the Net System Revenues as shown by the books of the City for any 12 consecutive month period within the 18 consecutive months ending immediately prior to the incurring of such additional other Parity Obligations shall have amounted to at least 1.20 times the Maximum Annual Debt Service on all Parity Obligations to be Outstanding immediately after the issuance of the proposed Parity Obligations; or (ii) the estimated Net System Revenues for the five Fiscal Years following the earlier of (a) the end of the period during which interest on those Parity Obligations is to be capitalized or, if no interest is to be capitalized, the Fiscal Year in which the Parity Obligations are issued, or (b) the date on which substantially all new facilities financed with such Parity Obligations are expected to commence operations, will be at least equal to 1.20 times the Maximum Annual Debt Service for all Parity Obligations which will be Outstanding immediately after the issuance of the proposed Parity Obligations.

The certificate or certificates described in clause (ii) above shall not be required if, among other things, the Parity Obligations being issued are for the purpose of (a) issuing Series 1998 Certificates or (b) refunding (1) then Outstanding Parity Obligations if at the time of the issuance of such Parity Obligations a certificate of an Authorized City Representative shall be delivered showing that Debt Service in each Fiscal Year on all Parity Obligations Outstanding after the issuance of the refunding Parity Obligations will not exceed Debt Service in each corresponding Fiscal Year on all Parity Obligations Outstanding prior to the issuance of such Parity Obligations; or (2) then Outstanding Balloon Indebtedness, Tender Indebtedness or Variable Rate Indebtedness, but only to the extent that the principal amount of such indebtedness has been put, tendered to or otherwise purchased by a standby purchase or other liquidity facility relating to such indebtedness. For additional information relating to the terms and conditions for the issuance of the Parity Obligations, see APPENDIX A – "SUMMARY OF PRINCIPAL LEGAL DOCUMENTS."

*Subordinated Obligations*

The City may issue or incur Subordinated Obligations which are payable from Net System Revenues on a basis subordinate to the payment by the City of the Installment Payments and any Parity Obligations so long as no Event of Default has occurred and is continuing under the Installment Purchase Agreement and no event of default or termination event attributable to an act or failure to act by the City under any Qualified Swap Agreement or Credit Support Instrument has occurred and is continuing.

## THE CORPORATION

The Corporation is a nonprofit public benefit corporation. The purpose of the Corporation is to acquire and lease and/or sell to the City real and personal property to be used in the operations of the City and its departments. The Corporation has no taxing power.

## THE WATER SYSTEM

*Service Area*

The Water System services the City of San Diego and certain surrounding areas. The City has a population of approximately 1.2 million and its geographic area covers approximately 330 square miles. See APPENDIX B – "CERTAIN INFORMATION REGARDING THE CITY OF SAN DIEGO AND AREA" for general information on the City. Of the Water System's more than 250,000 service connections, approximately 92% are for residential customers with the balance for commercial, industrial and other users. The map which follows the Table of Contents of this Official Statement shows the boundaries of the service area of the Water System.

In addition to providing water within its service area, the City sells and conveys potable water on a wholesale basis to the California-American Water Company ("Cal-American"), the City of Del Mar ("Del Mar")

and the Santa Fe and San Dieguito Irrigation Districts (the "Districts"). The City has been providing water to Cal-American, which in turn provides water to the Cities of Coronado and Imperial Beach as well as a portion of the City, since 1912 under an agreement that it assumed from the prior owner of certain Water System facilities that it purchased. Under this agreement and subsequent amendments, the City was obligated to furnish water to Cal-American to supply all of the demands of Cal-American to its customers. This agreement expired on December 31, 1997 and a new agreement between the parties is being negotiated. For the Fiscal Year ended June 30, 1997, the City sold approximately 5% of its total water deliveries to Cal-American and such sales represented approximately 3% of the revenues from total sales of water.

The City also contracts with the City of Del Mar to treat raw water which Del Mar purchases from San Diego County Water Authority ("CWA"). For the Fiscal Year ended June 30, 1997, revenues from the treatment of Del Mar water represented less than 1% of total water sales revenues. The City's contracts with the Districts provide for the delivery of raw water from Lake Hodges Reservoir. For the Fiscal Year ended June 30, 1997, these water sales represented less than 1% of total deliveries and such sales represented approximately 0.5% of the revenues from total sales of water. The City is currently negotiating a new agreement with Otay Water District ("OWD") to provide up to 10 million gallons per day ("MGD") for treated water from the City. Under the agreement, Otay will have the right to expand its capacity rights from 10MGD to 20MGD, subject to paying a proportional share of the cost necessary to expand any of the City water treatments plants to provide the additional 10MGD capacity to Otay.

***History***

The City purchased the Water System in 1901 from the privately owned San Diego Water & Telephone Company. Since then, continual expansion of the Water System has been required to meet the demands of the growing population of the City. To meet the demand, the City purchased a number of reservoirs between 1913 and 1935 to supplement local water supplies. Despite low annual local precipitation for the area (less than 10 inches per year), these reservoirs supplied the City's growing demands until 1940.

Since 1947, the City and other local retail water distributors have imported water from the Colorado River. The need to import water emerged with the increased demand generated by the presence of the United States Navy before and up to World War II, and the population boom thereafter. As a result, the City and other local retail water distributors formed CWA in 1944 for the purpose of purchasing Colorado River water from the Metropolitan Water District of Southern California ("MWD") and conveying it to local distributors within San Diego County. See "WATER SUPPLY."

***Governance and Management***

The City Manager, who is appointed by the City Council, has the authority to supervise departments within the City, including the Water Department of the City (the "Water Department"), and to appoint directors of these departments who are charged with the operations of such departments. The Water Department Manager, who reports to the City Manager, is responsible for the operations of the Water Department. The City Council retains the authority to approve the Water Department's budget, to set rates and charges of the Water System, and to approve the execution of certain contracts. For information on how the City sets the rates and charges of the Water System, see "WATER SYSTEM FINANCIAL OPERATIONS – Establishment, Calculation and Collection of Water Service Charges."

The Water Department of the City has managed the Water System since July 1, 1996. Before such time, the Water System and the City's wastewater system were managed by the City of San Diego Water Utilities Department. For the Fiscal Year ended June 30, 1997, the Water Department employed approximately 735 full-time employees and had a budget of $181.5 million. The functions and responsibilities of the Water Department are divided into three divisions. The organization chart of the Water Department set forth in the Engineer's Statement of Feasibility; APPENDIX D – ENGINEER'S STATEMENT OF FEASIBILITY, describes the major functions of each division.

*Overview of System Facilities*

The Water System consists primarily of three water treatment plants, nine surface reservoirs and approximately 2,890 miles of transmission and distribution lines.

*Water Treatment Plants.* The Water Department maintains and operates three existing water treatment plants with a combined total rated capacity of 300 MGD (920 acre-feet). The Miramar Water Treatment Plant, with a rated capacity of 140 MGD, generally serves the entire geographical area north of the San Diego River (north San Diego); the Alvarado Water Treatment Plant, with a rated capacity of 120 MGD, generally serves the geographical area from National City to the San Diego River (central San Diego); and the Otay Water Treatment Plant, with a rated capacity of 40 MGD, generally serves the geographical area bordering Mexico (south San Diego) and parts of the southeastern portion of central San Diego.

*Reservoirs.* The Water Department maintains and operates nine local surface raw water storage reservoirs, eight of which are directly connected to water treatment operations. The Lower Otay, Barrett and Morena Reservoirs (137,700 acre-feet total capacity) service the Otay Water Treatment Plant in south San Diego; the El Capitan, San Vicente, Sutherland and Lake Murray Reservoirs (237,500 acre-feet total capacity) service the Alvarado Water Treatment Plant in central San Diego; and the Miramar Reservoir (7,200 acre-feet total capacity) services the Miramar Water Treatment Plant in north San Diego. Lake Hodges Reservoir (33,600 acre-feet total capacity) presently remains unconnected to water treatment operations, although about 30% of its storage capacity is sold annually to neighboring water agencies. It is a policy of the City Council that there be maintained in City water storage facilities water for approximately 7 months of restricted levels of usage to be used in the event of substantial disruption or interruption of service.

*Delivery System.* The Water System involves approximately 2,890 miles of pipelines, including transmission lines up to 72 inches in diameter and distribution lines as small as 4 inches in diameter. Transmission lines are pipelines with larger diameters that convey raw water to the water treatment plants and convey treated water from the water treatment plants to the storage facilities. Distribution lines are pipelines with smaller diameters that directly service the retail users connected to a meter. In addition, the Water System has 45 water pump plants that deliver treated water from the water treatment plants to over 250,000 metered service connections in over 90 different pressure zones. The Water Department also maintains several emergency connections to and from neighboring water agencies, including the Santa Fe Irrigation District (Miramar Water Treatment Plant), the Poway Municipal Water District (Miramar Water Treatment Plant), the Cal-American (Alvarado and Otay Water Treatment Plants), the Sweetwater Authority (Otay Water Treatment Plant), and OWD (Otay Water Treatment Plant).

*Treated Water Storage Facilities.* To satisfy System demands, the Water Department maintains and currently operates 29 treated water storage facilities with capacities varying from less than 1 million gallons to 35 million gallons.

## WATER SUPPLY

*General*

The Water System currently receives its water supply from two sources: (1) local runoff and (2) water imported by the CWA. Historically, an average of approximately 10% of the water supply for the Water System comes from local rain runoff. This runoff source is dependent upon rainfall and is seasonal and variable in nature. The balance of the Water System water supply currently comes from City purchases from CWA. In turn, CWA currently imports approximately 90% of its water supply from MWD.

For the Fiscal Year ended June 30, 1997, the City's average daily water use was approximately 204 MGD, with peak day demands as high as 285 MGD; on a typical day, the Miramar Water Treatment Plant supplies about 50% of total water demand for the Water System, followed by the Alvarado Water Treatment Plant at 40% and the Otay Water Treatment Plant at 10%. During that year, the Water Department purchased approximately 52.6 billion gallons of water from the CWA at a cost of $71 million. Currently, the City pays CWA $429 per acre-foot for untreated water and $511 per acre-foot for treated water. CWA may increase these rates by one to two percent in

January 1999. During the ten Fiscal Years ended June 30 1997, approximately 15% of the water purchased by the City from CWA was treated water and the balance was untreated water. For the five Fiscal Years ended June 30, 1999, the average annual percentage of treated water purchased from CWA was approximately 23% of total water purchases.

The City is the largest purchaser of water from CWA. For the Fiscal Year ended June 30, 1997, the City's water purchases from CWA represented approximately 39% of CWA's total water deliveries and approximately 68% of the water produced by the City was purchased from CWA, with the balance coming from rain runoff collected in the City's raw water reservoirs. (Availability of runoff water was higher in that Fiscal Year due to higher than normal rainfalls.)

For more detailed information concerning the water supply of the MWD, CWA and the State Water Project, see APPENDIX E – "INFORMATION CONCERNING THE WATER SUPPLY OF THE SAN DIEGO COUNTY WATER AUTHORITY." **The information contained in APPENDIX E was obtained from an Official Statement dated December 19, 1997 of CWA or other sources believed to be accurate, but has not been independently verified by the City.**

***Future Supply for the Water System***

*Strategic Plan for Water Supply.* The City's projected water demands and recommended future supplies are developed through the Strategic Plan for Water Supply approved by the City Council in August 1997 (the "Strategic Plan"). See "WATER SYSTEM CAPITAL IMPROVEMENT PROGRAM" for information on the development of the Strategic Plan. The Strategic Plan estimates water demand through 2015.

*Conservation and Reclamation.* The City's water conservation goal is to reduce its dependency upon imported water. In order to accomplish this goal, the City has sought to increase public awareness of the need for water conservation and encourage conservation practices. The City estimates that for the Fiscal Year ended June 30, 1997, its conservation efforts resulted in water usage having been approximately 6% less than otherwise would have been the case. This does not include reductions from state and City mandates for the installation of lower usage fixtures in newly constructed buildings and in certain remodeled facilities.

The City's North City Water Reclamation Plant, part of the City's Wastewater System, opened in September 1997, making reclaimed water available to 200 potential irrigation customers located along eight main distribution lines running through the northern part of the City. The ninth and final distribution line is presently under construction. These distribution lines are part of the Water System. Currently, landscape irrigation is the single largest purpose for the reclaimed water, but reclaimed water is also used for some industrial processes, cooling towers, soil compaction, dust suppression and to irrigate commercial nurseries and crops.

In 1996, the City Council approved an incentive program to reimburse potable water customers for 100% of the cost to retrofit their water system components so as to use reclaimed water. The reclaimed water incentive program is managed by the Water Department. As of March 31, 1998, program staff had negotiated agreements for reclaimed water use on 75 sites.

## WATER SYSTEM REGULATORY REQUIREMENTS

***Federal Requirements***

The Water System is subject to regulations imposed by the federal Safe Drinking Water Act, as amended (the "Act"), which is administered by the Environmental Protection Agency ("EPA"). In 1986, the United States Congress passed amendments to the Act, wherein 83 potential contaminants of potable water were to be regulated by no later than 1989, with 25 new contaminants to be added, prioritized and regulated every three years thereafter. The Water Department currently complies with all regulations of the Act. In order to comply with the standards of the Act, the Water Department changes and enhances its treatment and distribution strategies as necessary.

The Act establishes standards for controlling trihalomethanes ("THM's"), other disinfection by-products, and maximum contaminant levels. From these standards rules are established, including the disinfection by-product rule, the information collection rule, the fluoride rule, the surface water treatment ("SWT") rule, the enhanced surface water treatment ("ESWT") rule, the arsenic rule, the sulfate rule, the lead and copper rule, the radionuclides rule, and the total coliform rule. The rules establish criteria against which measured concentrations of substances and contaminants are compared.

Disinfection by-products, like chloroform and chlorinated source waters that contain naturally occurring bromide, are all categorized under THM's. The emphasis of the Act is to discontinue the historical practice of disinfecting effluent from water treatment plants with chlorine and use alternative disinfectants. Water stored in open reservoirs is susceptible to contamination and bacterial infestation. The SWT rule defines treatment and disinfection requirements for surface water use, and regulates the levels of the various contaminants. Further regulations will be forthcoming in the ESWT rule, scheduled for full implementation in June 2000.

***State Regulations***

As an operator of a water system, the City is responsible for complying with various state requirements, including: operational requirements; design and construction standards for reservoirs, distribution systems and pipelines; requirements for control of cryptosporidium and other water safety issues; and training and other requirements for water treatment operators. Failure to meet these standards may subject the City to civil or criminal sanctions. The Water Department is currently in compliance with all applicable state regulations.

***Compliance Order by the California Department of Health Services***

During 1993, the State of California, Department of Health Services ("DHS") conducted a routine sanitary survey of the Water System. In a January 25, 1994 letter, DHS notified the City that certain deficiencies in the Water System were found during the survey. The deficiencies primarily related to the future reliability of various components of the Water System. As a result, the City and DHS entered into a compliance agreement (No. 04-14-94CO-004) pursuant to which the City agreed to correct the deficiencies noted during the survey. The City also agreed to undertake the required rehabilitation and replacements by the deadlines established in the compliance agreement.

The City was unable to meet certain deadlines contained in the compliance agreement because the City had not secured adequate funding for the projects. DHS notified the City in a letter dated January 22, 1997, that the City was out of compliance with the compliance agreement and DHS issued a compliance order (No. 04-14-96CO-022) (the "Compliance Order") to the City. The Compliance Order described the projects that have not been completed and set deadlines for obtaining funding and the completion of these projects. In addition, the Compliance Order required that the City submit a quarterly progress report on the status of each project in the Compliance Order. Furthermore, the Compliance Order provided that if the City is unable to complete the projects by the deadlines listed in the Compliance Order, DHS may extend the time for performance if the City demonstrates that it has used its best efforts to comply with the schedules and other requirements of the Compliance Order. Lastly, the Compliance Order provided that if the City fails to perform any of the tasks by the time described in the Compliance Order or by the time as subsequently extended by DHS, the City would have failed to have complied with the Compliance Order; under applicable law, the City could therefore be subject to additional judicial action, including civil penalties of between $5,000 and $25,000 (maximum) per day for each separate violation.

In January and April, 1998, DHS amended the Compliance Order acknowledging the ongoing engineering review of the projects within Capital Improvement Program (the "CIP") described below and the resulting re-evaluations and re-prioritizations of certain of the projects and their original schedules. Although DHS approved the City's request to change the schedules for most of the projects in the CIP, DHS added the construction of two new reservoirs to the Compliance Order. These reservoirs are included in the CIP.

## WATER SYSTEM CAPITAL IMPROVEMENT PROGRAM

***Background***

In May 1996, the Mayor and the City Council directed the formation of a citizen task force (the "Public Advisory Group") to develop a long-term plan for addressing the current and future infrastructure needs of the Water System. The Mayor invited 30 community members to join the Public Advisory Group and participate in the creation of the Strategic Plan. For the next year, the Public Advisory Group attended eleven strategic planning workshops and toured the Water System. In May 1997, the Public Advisory Group approved the Strategic Plan, that concluded, among other things, that the City must make significant capital improvements to the Water System to ensure that the City has a cost-effective, safe, reliable water supply. In addition, the Strategic Plan for Water Supply identified the projects that they felt should be included in the CIP. In August 1997, the City Council approved the CIP as contained in the Strategic Plan for Water Supply and implemented water base fee rate adjustments for the then current Fiscal Year and the next two succeeding Fiscal Years which were intended to increase water sales revenue in each of such years by 6% over the prior year.

***Project Management for the CIP***

In June, 1997 the Water Department hired Parsons Infrastructure and Technology Group, Inc. ("Parsons") as Engineer Program Manager to provide services to support the implementation of the CIP. Parsons began developing a Program Management Plan ("PMP") to define and direct the implementation of the CIP. The PMP is the primary document used by the Feasibility Engineer in its evaluation of the viability of the CIP. See "FEASIBILITY ENGINEER" and APPENDIX D – "ENGINEER'S STATEMENT OF FEASIBILITY."

Parsons is providing traditional program management services including project controls (cost estimating and scheduling), design reviews and permit coordination. Parsons is establishing design and construction standards and specifications for water projects to ensure consistency of systems, materials and equipment throughout the program, thereby reducing future operation and maintenance costs.

In December 1997, the City Council also approved the creation and funding of a new division within the Water Department to oversee implementation of the CIP. This division, called the CIP Program Management Division, is led by the CIP Program Manager, an executive management position reporting directly to the Water Department Manager, who is responsible for all aspects of the CIP. The CIP Program Manager is the primary, full time manager and director of the CIP. A Deputy CIP Program Manager (Chief Engineer) with experience managing design and construction of complex capital projects will oversee the technical aspects of the CIP. The Administration Section of this division is responsible for overall program administration, including legal, financial, contract administration, community relations, accounting, environmental and other permitting.

The CIP Program Management Division is also staffed by four Project Managers (each a "PM") who are City employees at the Senior Civil Engineer level. Each PM is knowledgeable about the Water System and operations and City policies and procedures. The PMs are responsible for assisting the CIP Program Manager in accomplishing the overall objectives of the CIP. One PM team is assigned to planning and project development, another PM team is assigned to water treatment plants and two PM teams are assigned projects by geographic Water System service area. Each PM is responsible for pipelines, reservoirs and pump plant projects in his/her area of responsibility. Each PM has direct management responsibility and authority over the design and construction management of his/her assigned projects. The PMs have approval authority on project budgets and schedules, change orders and amendments in both the design and construction phases, and any schedule changes that affect the critical path of their projects.

A unique component of the CIP management is the Water Operations Liaison group, which consists of experienced operations personnel. The group is responsible for project design review to ensure that an operations perspective is reflected in each project.

*Description of the Projects*

The CIP is presently composed of projects that can be classified into one of seven categories as they relate to the Water System. The categories are:

- Water Treatment Plants
- Pipelines
  - (1) Transmission Lines
  - (2) Distribution Lines
- Pump Plants
- Treated Water Storage Facilities
- Operations Center
- Reclaimed Water Lines
- Miscellaneous

The map which follows the Table of Contents of this Official Statement shows the location of the CIP projects. Brief descriptions of the projects in each of the categories are provided below.

*Water Treatment Plants.* These projects relate to the Alvarado Water Treatment Plant, the Miramar Water Treatment Plant and the Otay Water Treatment Plant. The Alvarado Water Treatment Plant was designed and constructed in 1951 for an initial capacity rating of 66 MGD. Several hydraulic improvements to the Alvarado Water Treatment Plant were constructed in the mid-1970's to increase the plant's hydraulic capacity to the current 120 MGD. The CIP will expand the Alvarado Water Treatment Plant's capacity to 150 MGD to meet the projected water demand through 2015. The Miramar Water Treatment Plant was constructed in 1962 and has an existing capacity of 140 MGD. The CIP will expand the Miramar Water Treatment Plant's capacity to 180 MGD to meet projected water demand through 2015. The Otay Water Treatment Plant was constructed in 1940 and has an existing capacity of 40 MGD; its capacity was last increased by 160% in July, 1990. The CIP also contemplates the rehabilitation of the three water treatment plants to comply with the standards of the Act.

*Pipelines.* The CIP contains pipeline projects relating to distribution lines and transmission lines of the Water System. The Water System contains approximately 200 miles of its original 650 miles of cast iron distribution lines that are past their anticipated 40 to 50-year service life. The CIP includes the installation of new distribution lines to replace existing aged pipe. In addition, the CIP includes multiple transmission lines projects consisting of the rehabilitation of existing transmission lines and construction of new transmission lines.

*Pump Plants.* There are eleven pump plant projects in the CIP. Four are new plants and the balance of the projects are to upgrade and expand existing pump plants.

*Treated Water Storage Facilities.* The CIP contains the following projects related to treated water storage facilities which will involve an increase in capacity of approximately 10%: (1) The Soledad Reservoir project involves the rehabilitation of a 1.5 million gallon covered concrete reservoir built in 1958. (2) The Bayview Reservoir project involves the removal of the existing structure and the construction of a new 10 million gallon covered concrete reservoir. (3) The Otay Mesa Reservoir project involves the construction of a 5.4 million gallon storage facility for future use. The City plans to enter into a participation agreement with a developer in connection with this project under which the developer will be responsible for 50% of the cost of the project. (4) The South San Diego Reservoir No. 2 project involves the construction of a new 12.7 million gallon reservoir that will provide operational storage for the Otay Water Treatment Plant. (5) The Black Mountain Reservoir project involves the construction of a 25 million gallon reservoir to provide storage for future development. The City plans to also enter into a participation agreement with a developer for this project under which the developer will be responsible for 40% of the cost of the project. (6) The CIP involves the rehabilitation of the 10.1 million gallon Rancho Bernardo Reservoir. (7) The CIP will provide eight existing potable water storage facilities of one million gallon capacity or more with a water recirculation system that is designed to exchange the entire volume of a reservoir with new water from an adjacent water main once every ten days. (8) The CIP also includes the upgrade and improvement of 21 treated water storage facilities.

*Operations Center.* A new Water Department Operations Center is planned as part of the CIP. The facility will be located on a City-owned site of 20 acres and will include an operations yard and a multi-story, 750,000-square foot building with capacity for 800 Water Department employees. It is possible that the Department may recommend the acquisition of an alternative site of approximately 23 acres for approximately $16 million which would be paid from the Water Utility Fund.

*Reclaimed Water Lines.* This project consists of the installation of approximately 45 miles of reclaimed water distribution lines in the northerly section of the City, a pump station, a 9 million gallon storage tank and the retrofitting of irrigation systems for water users to accept reclaimed water.

*Miscellaneous.* The miscellaneous projects include a raw water quality system; a centralized electronic monitoring and telemetry control system for water transmission and distribution infrastructures; road improvements; air valve adjustments; a dams and appurtenances modification study; corrosion control of existing facilities; and Capital Improvement Program Management Services.

***Project Schedule and Costs***

The current cost estimate of the entire remaining CIP is approximately $767 million (excluding financing costs). Table 2 shows categories of projects with budgeted costs contained in the CIP for the period of July 1, 1998 through June 30, 2006. Final CIP project costs will be refined as the CIP progresses. Approximately 80% of the costs of the CIP will be funded with the proceeds of Series 1998 Certificates and future financings and approximately 20% of the costs of the CIP will be paid on a pay-as-you-go-basis. See "FINANCIAL PROJECTIONS." It is currently estimated that the CIP will be completed during the Fiscal Year ending June 30, 2007.

*Table 2*
**WATER SYSTEM CAPITAL IMPROVEMENT PROGRAM BUDGET**
**Fiscal Years Ending June 30, 1999 through June 30, 2006**

| Category | | Total Budget[1][2] |
|---|---|---|
| Water Treatment Plants | | $232,069,859 |
| Pipeline: | | |
| Transmission Lines | 133,554,981 | |
| Distribution Lines | 98,902,567 | |
| Total | | 232,457,548 |
| Pump Plants | | 47,483,765 |
| Treated Water Storage Facilities | | 45,833,079 |
| Operations Center | | 27,436,134 |
| Reclaimed Water Lines | | 18,473,668 |
| Miscellaneous | | 61,094,091 |
| Pooled Contingency[3] | | 102,172,551 |
| TOTAL | | $767,020,695 |

(1) The amounts in this column do not reflect any costs incurred on CIP projects prior to June 30, 1998. Approximately $105,800,000 in proceeds from the sale of Series 1998 Certificates will be used to reimburse the Water Utility Fund for such costs.
(2) The dollar amounts in this column give effect to assumed rates of inflation during the period covered.
(3) Pooled contingencies are contingency amounts identified for each project in order to protect against certain uncertainties in the scope, schedule and cost of such projects. These contingencies have been identified for the CIP and are adjusted as the definition and level of detail for each project progresses. Rather than carry this contingency amount in each project budget, all of the project contingencies are aggregated into a single pool of contingencies.

***Environmental Compliance***

The projects contained in the CIP are generally subject to the California Environmental Quality Act ("CEQA"), as amended (Division 13 of the California Public Resources Code). Under CEQA, a project which may have a significant effect on the environment and which is to be carried out or approved by a public agency must comply with a comprehensive environmental review process, including the preparation of an Environmental Impact Report ("EIR"). An EIR reflects not only an independent technical analysis of the project's potential impacts, but also the comments of other agencies with some form of jurisdiction over the project and the comments of interested members of the public. Contents of an EIR include a detailed statement of the project's significant environmental effects; any such effects which cannot be avoided if the project is implemented; mitigation measures proposed to minimize such effects; alternatives to the proposed project; any significant irreversible environmental changes which would result from the project; the project's growth-inducing impacts; and a brief statement setting forth the agency's reasons for determining that certain effects are not significant and hence do not require discussion in an EIR. If the agency determines that the project itself will not have a significant effect on the environment, it may adopt a written statement (called a negative declaration) to that effect and need not prepare an EIR. Once an agency approves or determines to carry out a project, either following an EIR process or after adopting a negative declaration, it must file a notice of such determination. Any action or proceeding challenging the agency's determination must be brought within 30 days following the filing of such notice.

As part of its regular planning and budgetary process, all projects are evaluated under the City's environmental impact review procedures, developed in compliance with State law and regulations. Separate environmental documents for each of the CIP projects either have been or will be prepared in accordance with State law and regulations.

Some small CIP projects will be located within the coastal zone and must receive Coastal Development Permits (CDP). The CDP will be issued by the City; the California Coastal Commission has appeal authority over local CDP decisions. The CIP projects are not expected to adversely impact beach access or cause significant impacts to coastal resources.

Several of the CIP projects will require permits for work in stream channels. Environmental documentation will be prepared for both the Army Corps of Engineers and the California Department of Fish and Game. Certain projects may also impinge upon coastal sage scrub, habitat for the California gnatcatcher, a threatened species. A multi-species conservation program has been developed for the City and part of San Diego County and the City will follow that plan in developing mitigation for impacts to sensitive habitat. Additional documentation will be prepared to comply with federal and state regulations for pollution control, dam safety and risk management.

Since much of the CIP involves replacement, upgrading or increasing capacity of existing facilities, the City does not believe that environmental considerations will adversely affect the completion of the CIP within contemplated budget or the current timetable.

***Contract Disputes***

From time to time, the City is engaged in disputes with the contractors and subcontractors working on the CIP. Currently, there are a number of pending contract disputes with vendors or contractors that claim an aggregate amount of approximately $1.9 million.

## WATER SYSTEM FINANCIAL OPERATIONS

The City's primary deposits to the Water Utility Fund are derived from water service charges to City residents and commercial enterprises, capacity charges on new, additional or larger connections to the Water System within the City, and interest income on fund balances.

***Establishment, Calculation and Collection of Water Service Charges***

Water service charges to City utility customers are collected on a municipal water bill, which includes sewer charges as well. Bills are rendered on a bi-monthly basis for single family dwellings and on a monthly basis for industrial, commercial and large multi-family dwellings. Collections are enforced by discontinuance of water service if necessary.

The Water Department has available to it personnel and resources to analyze rates and charges necessary to support the Water System. They are responsible for collecting and collating revenue and expenditure data from key administrative, engineering, financial and budgetary elements within the City departments, then evaluating the adequacy of revenues and recommending rate adjustments to correspond with expected changes in maintenance and operations costs and the timing and magnitude of capital expenditures. This process, conducted semiannually for management purposes and as required to facilitate planned financings and rate adjustments, involves an extensive technical review by senior staff with oversight from a senior management executive committee comprised of the City Manager, the City Auditor and Comptroller, the Deputy City Managers, the Water Department Manager, the Metropolitan Wastewater Department Director, and a Deputy City Attorney. After final review by the City Manager, the recommendation is presented to the City Council for consideration, incorporating near-term financing and water rate considerations as specific recommendations.

Water service charges are based on metered water use and consist of two components; the base fee (or meter charge) and the commodity charge. The City's Municipal Code delegates to the City Manager the authority to

adjust water rates to compensate proportionally for any increase in the costs of water and energy purchased by the City. The City Manager has exercised this authority by increasing the commodity charge component of the water service charges from time to time to adjust for the costs of water purchased by the City from CWA. See Table 5. For the Fiscal Year ending June 30, 1999, single-family residential customers are paying a fixed base fee of $6.70 per month plus $1.25 per hundred cubic feet ("HCF") for the first 7 HCF of water used per month; $1.60 per HCF for the next 7 HCF of water used per month; and $1.77 per HCF for any water used per month above 15 HCF (748 gallons equal 1 HCF). Commercial and industrial customers pay a monthly base fee which is related to the size of their meter plus $1.47 per HCF of water used. For information on the history of Water System rates, see "City Council Actions Relating to Water Service Charge Changes" below.

The historical sources of water service revenues of the Water Utility Fund for each of the five Fiscal Years ended June 30, 1997 are set forth in Table 3 below. Table 4 sets forth the historical number of connections to the Water System for each of the five Fiscal Years ended June 30, 1997.

***Table 3***
**HISTORICAL SOURCES OF WATER SERVICE REVENUES[1]**
**(In Thousands of Dollars)**
***Fiscal Years Ended June 30, 1993 to 1997***
**(Unaudited)**

| Sources | 1993 | 1994 | 1995 | 1996 | 1997 |
|---|---|---|---|---|---|
| **Retail[2]** | | | | | |
| Single Family Domestic | $40,654 | $44,664 | $47,510 | $51,508 | $54,954 |
| Other Domestic | 27,103 | 29,123 | 31,151 | 32,848 | 34,620 |
| Commercial | 37,820 | 41,398 | 42,535 | 47,961 | 50,952 |
| Industrial | 4,465 | 4,702 | 4,875 | 5,471 | 5,544 |
| Outside City | 85 | 81 | 69 | 87 | 90 |
| **Wholesale to Other Retailers[3]** | | | | | |
| Other Utilities [4] | 4,008 | 4,092 | 4,248 | 4,366 | 4,674 |
| Irrigation Districts | 441 | 473 | 474 | 989 | 474 |
| TOTAL | $114,576 | $124,533 | $130,862 | $143,230 | $151,308 |

(1) Does not include capacity charges or other operating revenues which are included in calculating Net System Revenues.
(2) For the Fiscal Year ended June 30, 1997, the ten largest retail customers of the Water System produced approximately 11% of the total Water Utility Fund revenues. The top two retail customers of the Water System, the U.S. Navy and the City, produced 3.38% and 3.44%, respectively, of total Water Utility Fund revenues. The remaining eight of the top ten retail customers of the Water System each produced less than 1% of total Water Utility Fund revenues.
(3) See "THE WATER SYSTEM – Service Area."
(4) Primarily Cal-American.

*Table 4*
**HISTORICAL NUMBER OF RETAIL CONNECTIONS TO WATER SYSTEM**
***as of the end of each of the Fiscal Years Ended June 30, 1993 to 1997***
**(Unaudited)**

| Sources | 1993 | 1994 | 1995 | 1996 | 1997 |
|---|---|---|---|---|---|
| **Retail** | | | | | |
| Single Family Domestic | 195,154 | 198,385 | 197,874 | 200,758 | 203,163 |
| Other Domestic | 29,072 | 28,452 | 28,790 | 29,112 | 29,261 |
| Commercial | 18,735 | 18,290 | 18,681 | 18,861 | 19,136 |
| Industrial | 655 | 620 | 626 | 611 | 592 |
| Outside City | 69 | 61 | 61 | 66 | 61 |
| **TOTAL** | **243,685** | **245,808** | **246,032** | **249,408** | **252,213** |

***City Council Actions Relating to Water Service Charge Changes***

For ten years prior to August 1997, water rates were regularly increased to reflect increases in the costs of water purchased from CWA. However, the City chose not to adopt water rate increases for the purpose of funding capital projects. In August 1997, the City Council adopted City Manager recommended modified water base fee rate adjustments for the then current Fiscal Year and the next two succeeding Fiscal Years which were intended to increase revenues from retail sales in each of such years by 6% over the prior year.

The financial projections for the CIP reflect the base fee rate-increase action taken by the City Council in August, 1997 and assume additional rate increases which the City Council has not yet approved. See "FINANCIAL PROJECTIONS." In addition, the City is required to fix rates for the Water System such that charges for water services will be at least equal to pay all outstanding Obligations (other than Parity Obligations) and to provide Adjusted Net System Revenues equal to 120% of Adjusted Debt Service for the year. See "SECURITY FOR THE SERIES 1998 CERTIFICATES - Rate Covenant; Impact of Proposition 218." However, for information on the possible limitations on the City's ability to comply with the rate covenant, see "WATER SYSTEM FINANCIAL OPERATIONS – Impact of Proposition 218 on Water Service Rates and Charges."

Set forth below as Table 5 is a five-year rate history for water service charges.

*Table 5*

**SIX-YEAR WATER SERVICE CHARGE HISTORY FOR SINGLE FAMILY RESIDENTIAL UNITS AND OTHER DOMESTIC, COMMERCIAL & INDUSTRIAL**

| Effective Date | Single Family Domestic | Other Domestic, Commercial & Industrial[1] |
|---|---|---|
| July 1, 1992 | Base fee: $3.12<br>Commodity charge[2]:<br>0-10 HCF/Mo. $1.169/HCF;<br>11+ HCF/Mo. $1.306/HCF | Base fee: ($3.12-$1,338.65)<br>Commodity charge[2]: $1.225 per HCF |
| July 1, 1993 | Base fee: $3.12<br>Commodity charge[2]:<br>0-10 HCF/Mo. $1.285/HCF;<br>11+ HCF/Mo. $1.422/HCF | Base fee: ($3.12-$1,338.65)<br>Commodity charge[2]: $1.341 per HCF |
| July 1, 1994 | Base fee: $3.12<br>Commodity charge[2]:<br>0-10 HCF/Mo. $1.293/HCF;<br>11+ HCF/Mo. $1.43/HCF | Base fee: ($3.12-$1,338.65)<br>Commodity charge[2]: $1.349 per HCF |
| July 1, 1995 | Base fee: $3.12<br>Commodity charge[2]:<br>0-10 HCF/Mo. $1.379/HCF;<br>11+ HCF/Mo. $1.516/HCF | Base fee: ($3.12-$1,338.65)<br>Commodity charge[2]: $1.435 per HCF |
| January 1, 1997 | Base fee: $3.12<br>Commodity charge[2]:<br>0-10 HCF/Mo. $1.414/HCF;<br>11+ HCF/Mo. $1.551/HCF | Base fee: ($3.12-$1,338.65)<br>Commodity charge[2]: $1.47 per HCF |
| August 12, 1997 | Base fee: $4.77<br>Commodity charge:<br>0-7 HCF/Mo. $1.25/HCF;<br>7-14 HCF/Mo. $1.60/HCF;<br>15+ HCF/Mo. $1.77/HCF | Base fee: ($4.77-$2,048.13)<br>Commodity charge: $1.47 per HCF |
| July 1, 1998 | Base Fee: $6.70<br>0-7 HCF/Mo. $1.25/HCF;<br>7-14 HCF/Mo. $1.60/HCF;<br>15+ HCF/Mo. $1.77/HCF | Base fee: ($6.70-$2,875.58)<br>Commodity charge: $1.47 per HCF |

(1) The base fee is dependent on the meter size.
(2) The increases in commodity charges from July 1, 1992 through January 1, 1997 were implemented by the City Manager to compensate for the increase in the cost of water purchased from CWA.

***Accounts Receivable***

Billing is done primarily on a bi-monthly basis. Typically, the City seeks to collect unpaid bills by (i) issuing an initial shut-off notice as early as 30 days after a bill is issued, (ii) issuing a final shut-off notice as early as 45 days after a bill is issued, and (iii) shutting off the customer's water service as early as 50 days after a bill is

issued. This procedure results in almost all past due bills being paid. If necessary, the City establishes time payments for customers who are unable to pay a past due amount. If an account is closed with an amount due which remains unpaid, that account is referred to the City Treasurer for collection activities. An allowance is taken each Fiscal Year for accounts receivable which are not expected to be paid. During the five Fiscal Years ended June 30, 1997, this amount ranged from a low of $942,300 for the Fiscal Year ended June 30, 1996, to a high of $1,147,431 for the Fiscal Year ended June 30, 1995.

Table 6 sets forth information related to accounts receivable and number of shut-offs.

***Table 6***
**WATER CUSTOMER ACCOUNTS RECEIVABLE**
**AND SHUT-OFFS BY FISCAL YEAR**
**(In Thousands of Dollars)**
***For each of Fiscal Years Ended June 30, 1993 to 1997***
**(Unaudited)**

| | 1993 | 1994 | 1995 | 1996 | 1997 |
|---|---|---|---|---|---|
| Water Sales Revenue | $114,576 | $124,533 | $130,862 | $143,230 | $151,308 |
| Accounts Receivable[1] | $ 11,232 | $ 12,042 | $ 10,845 | $ 14,874 | $ 16,971 |
| Accounts Receivable [1] Over 120 Days | $ 779 | $ 1,059 | $ 1,225 | $ 1,129 | $ 1,275 |
| No. Of Shut-Offs | 17,152 | 16,738 | 14,983 | 14,917 | 18,069 |

(1) As of June 30.

In the Fiscal Year ended June 30, 1996 the Water Department increased its accounts receivables collection efforts and as a consequence accounts receivable over 120 days as a percentage of water sales revenue were reduced for the Fiscal Year ending June 30, 1997.

***Collection and Calculation of Capacity Charges***

A capacity charge is a one-time fee for new, additional or larger connections to the Water System within the City. The charge is imposed when a building permit is obtained and is based upon the number of "equivalent dwelling units" ("EDUs") to be created by the project for which the building permit is obtained. Capacity charges are not treated as operating income for financial reporting purposes but are considered System Revenues and are deposited in the Water Utility Fund. Pursuant to California law, capacity charges are applied only to capital expansion, bonds, contracts, or other indebtedness of the Water System related to expansion. In August 1996 the City Council reduced capacity charges by approximately 38% retroactive to April 1996. Because capacity charges are primarily collected on new construction within the City, revenues obtained from such charges vary based upon construction activity. Historical capacity charge revenues and EDUs are shown in Table 7 below. Capacity charges are shown in Table 8.

*Table 7*
**WATER UTILITY FUND**
**HISTORICAL CAPACITY CHARGE REVENUES**

| Fiscal Year Ended June 30 | New Equivalent Dwelling Units [1] | Capacity Charge Revenues |
|---|---|---|
| 1990 | 14,801 | $11,592,117 |
| 1991 | 3,793 | 7,088,146 |
| 1992 | 2,517 | 6,939,348 |
| 1993 | 2,693 | 8,289,715 |
| 1994 | 2,835 | 10,302,246 |
| 1995 | 2,200 | 7,296,458 |
| 1996 | 4,362 | 14,236,826[2] |
| 1997 | 4,664 | 8,308,454[2] |

(1) Unaudited
(2) Reflects reduction in capacity charges retroactive to April, 1996.

*Table 8*
**RECENT RATE HISTORY**
**FOR WATER CAPACITY CHARGES**

| Effective Date | Water Capacity Charges *(Per Unit)* | % Increase (Decrease) |
|---|---|---|
| July 1, 1992 | $2,763[1] | 18% |
| July 1, 1993 | 3,281[1] | 18 |
| January 1, 1994 | 3,380 | 3 |
| July 1, 1994 | 4,012 | 18 |
| July 1, 1995 | 4,012 | 0 |
| April 1, 1996 | 2,500 | (38) |

(1) Subject to simple interest of 6% from July 1 to and including that date upon which the charge is paid.

In response to a request by the City Manager that capacity charges be reduced in order to stimulate economic development and affordable housing, the City Council approved in June 1996, retroactive to April 22, 1996, a 38% reduction of these charges. If Proposition 218 is determined to apply to water capacity charges and other water fees and charges, these and other fees and charges of the Water System may need to be revised in order to satisfy the requirements of Proposition 218. See "Impact of Proposition 218 on Water Service Rates and Charges" below.

***Impact of Proposition 218 on Water Service Rates and Charges***

On November 5, 1996, the voters of the State approved Proposition 218, the so-called "Right to Vote on Taxes Act." Proposition 218 added Articles XIIIC and XIIID to the State Constitution, which contain a number of provisions affecting the ability of local governments to levy and collect both existing and future taxes, assessments, fees and charges.

Article XIIID conditions the imposition or increase of any "fee" or "charge" upon there being no written majority protest after a required public hearing and, for fees and charges other than for sewer, water or refuse collection services, voter approval. Article XIIID defines "fee" or "charge" to mean levies (other than *ad valorem* or special taxes or assessments) imposed by a local government upon a parcel or upon a person as an incident of the ownership or tenancy of real property, including a user fee or charge for a "property-related service." It is not clear whether Article XIIID applies to the City's water service fees and charges, which are the ultimate source of revenues pledged to debt service on Series 1998 Certificates and the Outstanding Obligations. The City's water charges have two components, a base fee based on meter size and a commodity charge based on the volume of water consumed. In July 1997, the Attorney General of the State of California issued an opinion to the effect that Article XIIID does not apply to water fees or charges which are based on the volume of consumption. There can be no assurance that the Attorney General's interpretation will be upheld by the courts, or if it was, would apply to the base fee charged by the City.

In addition, by July 1, 1997, under Article XIIID, all property-related fees and charges, including those which have been in existence since prior to the passage of Proposition 218 in November 1996, must meet the following substantive standards:

(1) Revenues derived from the fee or charge cannot exceed the funds required to provide the property-related service.

(2) Revenues derived from the fee or charge must not be used for any purpose other than that for which the fee or charge was imposed.

(3) The amount of a fee or charge imposed upon any parcel or person as an incident of property ownership must not exceed the proportional cost of the service attributable to the parcel.

(4) No fee or charge may be imposed for a service unless that service is actually used by, or immediately available to, the owner of the property in question. Fees or charges based on potential or future use of a service are not permitted. Standby charges, whether characterized as charges or assessments, must be classified as assessments and cannot be imposed without compliance with Section 4 of Article XIIID (relating to assessments).

(5) No fee or charge may be imposed for general governmental services including, but not limited to, police, fire, ambulance or library services where the service is available to the public at large in substantially the same manner as it is to property owners.

Without conceding that its water charges are subject to Article XIIID, based on the action taken by the City Council on August, 1997, relating to water charges, the City believes that its rates comply with the foregoing standards. It is unclear whether under the foregoing standards rates and charges may be established at levels which would permit deposits to a Rate Stabilization Fund or maintenance of uncommitted cash reserves. See assumption 4 under "FINANCIAL PROJECTIONS - Projected Operating Results." One of the requirements of Article XIIID is that before a property related fee or charge may be imposed or increased, a public hearing upon the proposed fee or charge must be held and mailed notice sent to the record owner of each identified parcel of land upon which the fee or charge is proposed for imposition. In the public hearing if written protests of the proposed fee or charge are presented by a majority of the owners of affected identified parcel(s), an agency may not impose the fee or charge. CWA, which supplies water to the City, from time to time raises its fees or charges which it charges the City for water, or passes on to the City rate or charge increases imposed by CWA's distributor, MWD. Based upon a long standing municipal ordinance, historically, the City Manager has adjusted the commodity charge component of the City water charges to reflect the increases charged to the City by CWA. Due to the uncertainty of the meaning of certain terms in Articles XIIIC and XIIID, the City is evaluating whether there is a need to comply with the noticing procedures of Article XIIID prior to passing through to its water customers future CWA charges and increases, and the manner of implementing such noticing procedures.

Article XIIIC removes limitations on the initiative power in matters of local taxes, assessments, fees and charges. Consequently, the voters of the City could, by future initiative, repeal, reduce or prohibit the future

imposition or increase of any local tax, assessment, fee or charge. "Assessment," "fee" and "charge" are not defined in Article XIIIC and it is unclear whether the definitions of such terms contained in Article XIIID (which are generally property-related as described above) are so limited under Article XIIIC. No assurance can be given that the voters of the City will not, in the future, approve initiatives which repeal, reduce or prohibit the future imposition or increase of assessments, fees or charges, including the City's water service fees and charges, which are the source of Net System Revenues pledged to the payment of debt service on Series 1998 Certificates and the Outstanding Obligations.

In addition to the foregoing, the City's general financial condition may be affected by other provisions of Article XIIIC and Article XIIID, including (i) provisions of Article XIIIC (a) requiring taxes for general governmental purposes to be approved by a majority vote and taxes for specific purposes, even if deposited into the general fund, to be approved by a two-thirds vote, (b) requiring any general purpose tax which the City imposed, extended or increased, without voter approval, after December 31, 1994 to be approved by majority vote by November 5, 1998, (c) subjecting all taxes, assessments, fees and charges to reduction or repeal at any time through the initiative process (as mentioned above), and (ii) provisions of Article XIIID that could reduce the ability of the City to fund certain services or programs that it may be required or choose to fund from its general fund, such as provisions (1) adding requirements making it generally more difficult to levy and maintain "assessments," defined to mean a levy or charge upon real property for a particular and distinct benefit to the property over and above general benefits conveyed to property located in the district or to the public at large, (2) requiring any imposition or increase of property related fees or charges other than for sewer, water and refuse collection services or fees for electrical or gas service (which are not treated as property related for purposes of Article XIIID) to be approved by a "majority of the property owners" subject to the fee or charge or, at the option of the local government, two-thirds vote of the electorate residing in the affected area.

The interpretation and application of Proposition 218 will ultimately be determined by the courts or through implementing legislation with respect to a number of the matters discussed above, and it is not possible at this time to predict with certainly the outcome of such determination or the nature or scope of any such legislation.

***Effect of Proposition 218 and of Possible General Limitations on Enforcement Remedies***

The ability of the City to comply with its covenants under the Installment Purchase Agreement and to generate Net System Revenues sufficient to pay Installment Payments thereunder, and ultimately the payment of the principal of and interest represented by Series 1998 Certificates and the Outstanding Obligations, may be adversely affected by actions and events outside of the control of the City and may be adversely affected by actions taken (or not taken) under Article XIIIC or Article XIIID by voters, property owners, taxpayers or payers of assessments, fees and charges. Furthermore, any remedies available to the owners of Series 1998 Certificates and the Outstanding Obligations upon the occurrence of an event of default under the Trust Agreement are in many respects dependent upon judicial actions which are often subject to discretion and delay and could prove both expensive and time consuming to obtain. In addition to the possible limitations on the ability of the City to comply with its covenants under the Installment Purchase Agreement, the ability of the Corporation to comply with its obligations under the Trust Agreement, the rights and obligations under Series 1998 Certificates, the Outstanding Obligations, the Trust Agreement and the Installment Purchase Agreement may be subject to bankruptcy, insolvency, reorganization, arrangement, fraudulent conveyance, moratorium and other laws relating to or affecting creditors' rights, to the application of equitable principles, to the exercise of judicial discretion in appropriate cases and to limitations on legal remedies against cities in the State of California.

Based on the foregoing, in the event the City fails to comply with its covenants under the Installment Purchase Agreement, including its covenants to generate sufficient Net System Revenues, as a consequence of the application of Article XIIIC and Article XIIID, or to pay Installment Payments thereunder, and thus ultimately effect the payment of principal or interest in respect of Series 1998 Certificates and Outstanding Obligations, there can be no assurance that available remedies will be adequate to fully protect the interests of the holders of Series 1998 Certificates and the Outstanding Obligations.

*Year 2000 Computer Software Modifications*

The Water Department's computer programs for billings, collections, water usage by customers, accounts payable, new meter installations and staff communications are not programmed to process data beyond December 31, 1999. In August 1997 the staff of the Water Department undertook to identify which computer programs would have to be modified to extend beyond December 31, 1999, and entered into a contract with an outside vendor for these services. The budget for this project is approximately $928,000 for modifications; no hardware modifications are expected. It is expected that the modifications for billings, collections and accounts payable functions will be completed by June 1999 and for the balance by October 1999. Substantial delays in completing these modifications could have an adverse effect on billings, collections, new meter installations, and a variety of other operations, financial and administrative functions, and thus on Net System Revenues available for Installment Payments.

*Historical Revenues and Adjusted Debt Service Coverage*

Table 9 contains the Statement of Income for Fiscal Years ended June 30, 1993 through 1997, and Table 10 contains the calculation of Adjusted Debt Service Coverage for such years. See also APPENDIX F - AUDITED FINANCIAL STATEMENTS OF THE WATER UTILITY FOR THE YEARS ENDED JUNE 30, 1997, AND JUNE 30, 1996.

*Table 9*
**WATER SYSTEM STATEMENT OF INCOME**
***Fiscal Years Ended June 30, 1993 to 1997***

| | 1993 | 1994 | 1995 | 1996 | 1997 |
|---|---|---|---|---|---|
| **OPERATING REVENUES** | | | | | |
| Sales of Water: | | | | | |
| Inside City: | | | | | |
| Domestic | $67,756,540 | $73,786,242 | $78,660,864 | $84,356,638 | $89,573,749 |
| Commercial and Industrial | 42,284,827 | 45,099,999 | 47,409,682 | 53,432,936 | 56,495,724 |
| Outside City: | | | | | |
| Domestic, Commercial and Industrial | 85,096 | 80,638 | 69,152 | 86,654 | 90,301 |
| Other Utilities | 4,008,398 | 4,092,235 | 4,248,260 | 4,365,577 | 4,673,806 |
| Irrigation Districts | 441,072 | 473,439 | 474,467 | 988,692 | 474,266 |
| Total Sales of Water | 114,575,933 | 124,532,553 | 130,862,425 | 143,230,497 | 151,307,846 |
| Other Operating Revenues | 5,552,981 | 6,953,823 | 6,682,263 | 11,262,203 | 17,458,254 |
| **TOTAL OPERATING REVENUES** | 120,128,914 | 131,486,376 | 137,544,688 | 154,492,700 | 168,766,100 |
| **OPERATING EXPENSES** | 119,756,155 | 131,872,143 | 145,251,500 | 162,099,832 | 162,369,257 |
| **OPERATING INCOME (LOSS)** | 372,759 | (385,767) | (7,706,812) | (7,607,132) | 6,396,843 |
| **NONOPERATING REVENUES (EXPENSES):** | | | | | |
| Interest Income | 8,773,050 | 7,663,975 | 9,334,023 | 8,636,255 | 9,926,997 |
| Interest Expense | 0 | 0 | 0 | 0 | (16,826) |
| Reverse Repurchase – Interest Expense | (417,526) | (493,755) | (1,497,916) | (590,311) | 0 |
| Other | (395,946) | 1,650,850 | (395,899) | (4,798,100) | (6,069,578) |
| **TOTAL NONOPERATING REVENUES (EXPENSE)** | 7,959,578 | 8,821,070 | 7,440,208 | 12,844,044 | 3,840,593 |
| Operating Transfers In | 500,000 | 500,000 | 643,318 | 556,090 | 83,991 |
| Operating Transfers Out | 0 | 0 | 0 | (100,000) | (1,678,628) |
| **NET INCOME** | $8,832,337 | $8,935,303 | $376,714 | $5,693,002 | $8,642,799 |

*Table 10*
**CALCULATION OF DEBT SERVICE COVERAGE**
***Fiscal Years Ended June 30, 1993 to 1997***
**(Unaudited)**

| | 1993 | 1994 | 1995 | 1996 | 1997 |
|---|---|---|---|---|---|
| **NET INCOME** | $8,832,337 | $8,935,303 | $376,714 | $5,693,002 | $8,642,799 |
| **ADJUSTMENTS** | | | | | |
| Depreciation and Amortization | 7,731,501 | 9,212,932 | 8,672,950 | 9,935,886 | 12,759,173 |
| (Gain) Loss on Sale/Retirement of Fixed Assets | 735,417 | (1,620,706) | (20,441) | (4,740,006) | 6,799,839 |
| (Interest Earnings on Reserve Fund) | -- | -- | -- | -- | -- |
| Capital Grant Receipts | 12,940 | 3,378,774 | 297,060 | 715,680 | 147,287 |
| Water System Capacity Charge Revenue | 8,289,715 | 10,302,246 | 7,296,458 | 14,236,826 | 8,308,454 |
| **ADJUSTED NET SYSTEM REVENUE** | $25,601,910 | $30,208,549 | $16,622,741 | $25,841,388 | $36,657,552 |
| **ADJUSTED DEBT SERVICE COVERAGE** | | | | | |
| Adjusted Debt Service | $0 | $0 | $0 | $0 | $0 |
| Principal and Interest Due in Fiscal Year | $0 | $0 | $0 | $0 | $0 |
| (Interest Earnings on Reserve Fund) | $0 | $0 | $0 | $0 | $0 |
| Coverage | -- | -- | -- | -- | -- |

***Management's Discussion and Analysis***

The following discussion relates to certain items shown in Table 9.

*Operating Revenues.* Water sales revenue from customers increased consistently from 1993 to 1997 due to increased water consumption and an increase in pass through rates by the CWA.

Other operating revenues increased in 1996 due to increases in both facility rent income and operating grant income. Revenues increased in 1997 due to a refund of $6.5 million from the MWD.

*Operating Expenses.* Operating expenses increased from 1993 to 1996 primarily due to the increased cost of water purchases and continual repair of the water distribution system. Operating expenses leveled out in 1997 as general and administrative expenses decreased. In each of the last four Fiscal Years, the City has imposed right-of-way charges, payable to the General Fund, on the Water System for use of City streets for water main lines. The City's right-of-way charges for the Fiscal Years ended June 30, 1994, 1995, 1996 and 1997 were $5.0 million, $5.6 million, $7.2 million and $6.7 million, respectively. Charges in Fiscal Year ended June 30, 1998 are budgeted at $6.2 million.

The City is required to fix rates for the Water System such that charges for water will be at least equal to pay all outstanding Obligations (other than Parity Obligations) and provide Adjusted Net System Revenues equal to 120% of Adjusted Debt Service for the year.

*Interest Income.* Interest income decreased in 1994 due to declining interest rates. Interest income increased in 1995 due to higher yields resulting from longer term investments. While higher yields continued in 1996, interest income decreased due to a decline in cash balances in pooled cash. Interest income increased in 1997 due to a higher investment yield.

*Interest Expense.* Interest expense in 1997 is due to the Water System's leasing of water meters. This was the first year that water meters were leased and this expense will increase as more meters are added.

*Reverse Repurchase - Interest Expense.* Interest expense on reverse repurchase transactions increased in 1993 to 1995 primarily due to an increase in long term investments, resulting in increased reverse repurchase activity. Interest expense decreased in 1996 and was eliminated in 1997 as the City did not use reverse repurchase agreements that year.

*Other.* Other non-operating revenues increased in 1996 from the sale of land owned by the Water System. In 1997, there were losses of $1.5 million experienced on the retirement of meters, $2.0 million from the abandonment of the Agronomic Study and the Water Facilities Study capital projects, and $3.3 million from the retirement of mains and laterals.

*Operating Transfer Out.* In 1996, $100,000 was transferred to the City-wide Automation Program and in 1997, $1,250,000 was transferred to the Special Engineering and Capital Improvement Fund, which manages a portion of the Water and Wastewater Capital Improvement Programs.

*Net Income.* Net income for Fiscal Years 1993, 1994, 1995, 1996 and 1997 was $8.8, $8.9, $0.4, $5.7 and $8.6 million, respectively. In 1995, the cost of water purchases and accrued claims increased causing net income to decrease. While water purchases increased again in 1996, this was offset by a reduction in accrued claims and the sale of land by the Water Department.

## FINANCIAL PROJECTIONS

Set forth below in Table 11 are the projected estimated cash receipts and operating expenditures for the nine Fiscal Years ending June 30, 2006. Table 11 incorporates the assumptions described below, including assumed inflation and interest rates, rate increases and the amount of indebtedness to be issued during the projection period. For purposes of complying with the Continuing Disclosure Agreement, the actual results for any future year specified in Table 11 will be published in tabular form, comparable to Table 11. The City has chosen to analyze prospective rate covenant coverage on the basis of projected cash receipts and operating expenses when paid. Accordingly, the method of calculating Adjusted Net System Revenue for Table 11 differs from the method of calculating Adjusted Net Revenue Available for Debt Service for Table 10.

*Table 11*

**FINANCIAL PROJECTIONS[1]**

**(In Thousands of Dollars)**

***Fiscal Years Ending June 30, 1998 to 2006***

| | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|---|---|---|---|---|---|---|---|---|---|
| **Operating Receipts** | | | | | | | | | |
| Water Sales (2) | $159,974 | $176,713 | $195,504 | $207,718 | $223,577 | $236,128 | $249,010 | $258,140 | $269,509 |
| Other Services | 9,250 | 8,495 | 8,656 | 8,821 | 8,988 | 9,159 | 9,333 | 9,511 | 9,691 |
| Rentals | 2,427 | 2,402 | 2,448 | 2,494 | 2,542 | 2,590 | 2,640 | 2,689 | 2,740 |
| Other Revenue | 2,859 | 2,077 | 2,078 | 2,117 | 2,157 | 2,198 | 2,240 | 2,283 | 2,326 |
| Total Operating Receipts | 174,510 | 189,687 | 208,686 | 221,150 | 237,264 | 250,075 | 263,223 | 272,623 | 284,266 |
| **Operating Expenditures** | | | | | | | | | |
| Water Purchases | 84,351 | 96,018 | 94,418 | 95,412 | 100,906 | 102,158 | 107,430 | 108,682 | 113,011 |
| Operations and Maintenance | 84,934 | 88,051 | 90,419 | 92,921 | 97,499 | 101,154 | 105,020 | 108,857 | 112,778 |
| Total Operating Expenditures | 169,285 | 184,069 | 184,837 | 188,333 | 198,405 | 203,312 | 212,450 | 217,539 | 225,789 |
| Operating Income | 5,225 | 5,618 | 23,849 | 32,817 | 38,859 | 46,763 | 50,773 | 55,084 | 58,477 |
| **Other Income** | | | | | | | | | |
| Interest Earnings (1) | 6,500 | 14,981 | 17,021 | 11,954 | 14,316 | 12,768 | 11,645 | 10,905 | 11,085 |
| Capacity Charges | 13,000 | 10,000 | 8,070 | 8,942 | 9,315 | 9,515 | 8,804 | 9,051 | 9,232 |
| Other Income | 2,715 | (902) | (1,105) | (1,103) | (1,483) | (1,927) | (2,147) | (2,405) | (2,436) |
| Total Other Income | 22,215 | 24,079 | 23,986 | 19,793 | 22,148 | 20,356 | 18,302 | 17,551 | 17,881 |
| Net Income | $27,440 | $29,697 | $47,835 | $52,610 | $61,007 | $67,119 | $69,075 | $72,635 | $76,358 |
| Transfers to Rate Stabilization Fund | 0 | ($15,000) | ($18,000) | $12,000 | ($10,000) | $26,000 | $1,000 | $2,000 | $2,500 |
| Adjusted Net System Revenue (3) | $27,440 | $14,197 | $29,835 | $64,610 | $51,007 | $93,119 | $70,075 | $74,635 | $78,858 |
| Adjusted Debt Service (3) (4) | 0 | $8,473 | $17,869 | $17,869 | $30,116 | $35,625 | $42,021 | $45,246 | $47,563 |
| Debt Service Coverage Ratio (4) | N/A | 1.68 | 1.67 | 3.62 | 1.69 | 2.61 | 1.67 | 1.65 | 1.66 |

(1) Prepared on a cash basis.
(2) Includes service charges and reclaimed water sales.
(3) As defined in the Master Installment Purchase Agreement
(4) Adjusted Debt Service is projected to peak at $48.3 million in the Fiscal Year Ending June 30, 2007.

*Projected Operating Results Assumptions*

Table 11 provides the estimated operating revenues and expense of the Water System for the Fiscal Years ending June 30, 1998 through June 30, 2006. The following are the principal assumptions used in the preparation of these financial projections:

1. The Water System will continue to be owned and operated by the City and the facilities contained in the Program will be constructed and come into operation as currently planned by the City.

2. The City will maintain a 45-day operating reserve. In addition, the City will maintain a secondary purchase reserve, available for maintenance and operations expenses, equal to 10% of the annual anticipated water purchases.

3. Maintenance and operations expenditures (in thousands) for the Fiscal Years ending June 30, 1998 through June 30, 2006 will be as follows:

| 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|---|---|---|---|---|---|---|---|---|
| $169,285 | $184,069 | $184,837 | $188,333 | $198,405 | $203,312 | $212,450 | $217,539 | $225,789 |

Inflation rates were applied to maintenance and operation estimates as follows: 3.0% for the Fiscal Years ending June 30, 1998 through June 30, 2001, and 4.0% per year for each Fiscal Year thereafter. During the Fiscal Year ended June 30, 1997, the Water Department revised its business practices for routine work performed on the Water System and eliminated more than 30 positions. These actions resulted in the reduction of the Water Department's operating budget for the Fiscal Year ending June 30, 1998, by $8.1 million.

4. For the Fiscal Years ending June 30, 1999 through June 30, 2006, growth projections of single family residential accounts are based upon the percentage increase in population growth projected by the San Diego Association of Governments. Rate increases imposed by the City are assumed to increase water sales revenue by: (i) 6% in Fiscal Years ending June 30, 1999, through June 30, 2000; (ii) 4.0% in Fiscal Years ending June 30, 2001, June 30, 2002 and June 30, 2003; and (iii) 2.10% in Fiscal Years ending June 30, 2004, June 30, 2005 and June 30, 2006. It is unclear whether under Proposition 218 the City can make deposits to the Rate Stabilization Fund. If it were determined that Proposition 218 prevented the City from setting rates and charges sufficient to make deposits projected on Table 11 without making any alterations to the other financing assumptions, the rate increases of 4.0% in each of the Fiscal Years ending June 30, 2001, 2002 and 2003, would have to be changed to increases in each of such Fiscal Years of 3.75%, and the increases of 2.1% in each of the Fiscal Years ending June 30, 2004, 2005, and 2006, would have to be changed to increases of 4% in the Fiscal Year ending June 30, 2004, 3.25% in the Fiscal Year ending June 30, 2005, and 2.0% in the Fiscal Year ending June 30, 2006.

No increases in capacity charge rates are assumed. New system hook-ups (measured in EDUs) are projected based on the average of the last five years, increased by the projected population percentage increase. These projections are summarized below:

| | *For the Fiscal Years Ending June 30, Projected* | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
| Single- Family Monthly Service Charge (14 HCF)[a] | $24.72 | $27.39 | $29.90 | $31.21 | $33.19 | $34.51 | $36.89 | $36.63 | $37.88 |
| Single- Family Residential Accounts | 203,439 | 205,420 | 209,130 | 212,177 | 215,224 | 218,271 | 221,318 | 224,365 | 226,969 |
| Total Water Sales[c] Revenues (000) | $159,520 | $176,228 | $190,036 | $200,141 | $215,090 | $226,845 | $238,855 | $247,244 | $258,278 |
| Capacity Charges (Per EDU)[b] | $2,500 | $2,500 | $2,500 | $2,500 | $2,500 | $2,500 | $2,500 | $2,500 | $2,500 |
| Annual Increase in EDUs | 6,507 | 5,005 | 4,035 | 4,471 | 4,657 | 4,758 | 4,402 | 4,526 | 4,616 |
| Total Capacity Charge Revenue (000) | $13,000 | $10,000 | $8,070 | $8,942 | $9,315 | $9,515 | $8,804 | $9,052 | $9,232 |

(a) Assumes these water rates are also adjusted to reflect for any changes in the costs of water purchased by the City.

(b) Reflects the maximum amount that may be charged. Charges could be reduced to $1,500 for certain business enterprises, affordable housing units and new residential housing in City-approved redevelopment areas.

(c) Reflects water sales only. Does not include reclaimed water sales or service charges.

5. The City will fund the capital costs of the CIP from a combination of proceeds of financing and System Revenues as set forth in Table 11.

6. The average annual interest rate to finance the Program will be 5.15% for Fiscal Year ending June 30, 1999, and 5.75% for each of the subsequent Fiscal Years through June 30, 2006, and the related obligations will be amortized over 30 years from the respective times of issuance.

7. The amount of obligations (in thousands) that will be created in each of the Fiscal Years ending June 30, 1998 through June 30, 2006 to fund the CIP will be as follows:

| Fiscal Year Ending June 30, | Principal Amount |
|---|---|
| 1999 | $372,850 |
| 2000 | - 0 - |
| 2001 | - 0 - |
| 2002 | $207,280 |
| 2003 | - 0 - |
| 2004 | $120,885 |
| 2005 | - 0 - |
| 2006 | $17,925 |

8. The average annual interest rate on invested funds will be will be 5.15% in Fiscal Years ending June 30, 1999, 2000, and 2001, and 5.5% thereafter.

## PENSION PLAN

All Water Department employees along with all other City employees and employees of the San Diego Unified Port District, participate in the City Employees' Retirement System ("CERS"). As a multiple-employer public employee retirement system, CERS acts as a common investment and administrative agent for both the City and the San Diego Unified Port District. CERS provides retirement benefits to all of its members through a variety of benefit plans.

The CERS plans are structured as defined benefit plans in which benefits are based on salary, length of service and age. Water Department employees and other City employees are required to contribute a percentage of their annual salary to CERS. State legislation requires the City to contribute to CERS at rates determined by actuarial valuations.

The City's last actuarial valuation dated June 30, 1997 (which the CERS Board of Administration has not formally approved as to the assumptions or calculations made therein) stated the funding ratio (Valuation of Assets available for Benefits to Total Actuarial Accrued Liability) of the CERS fund to be 94.2%. The CERS fund has an Unfunded Actuarial Accrued Liability (UAAL) of $105.6 million as of June 30, 1997. The UAAL is the difference between total actuarial accrued liabilities of $1.822 billion and assets allocated to funding of $1.717 billion. The UAAL is amortized over a 30-year period which started July 1, 1991, with each year's amortization payment reflected as a portion of the percentage of payroll representing the employer's contribution rate. As of June 30, 1997 there were 24 years remaining in the amortization period.

## LABOR RELATIONS

Approximately 97% of Water Department employees are represented by either the Municipal Employees Association ("MEA") or the American Federation of State and County Municipal Employees ("Local 127"). In general, the MEA represents all technical, professional, and supervisory staff and administrative support personnel. Local 127 represents maintenance workers, laborers, skilled trades positions and equipment operators.

Under the current agreements, MEA represented employees and Local 127 represented employees received a 3% pay increase effective December 30, 1995, a 3% increase effective December 28, 1996 and a 4% increase effective December 27, 1997. The current agreements expire on June 30, 1998. New agreements with both groups of employees have been reached providing for a 2% pay increase effective December 26, 1998, a 4% increase in December, 1999, and a 2% increase in July, 2000.

## INSURANCE

The Water Department is self-insured for workers' compensation and long-term disability and for public liability claims exposure up to $1 million per occurrence. For liability between $1 million and $24 million, the Water Department is covered by the City which purchases insurance from commercial insurers in layers for its public liability exposure.

Table 12 reflects the accrued estimated liabilities and expenditures for liability claims of the Water System for Fiscal Years 1993 through 1998:

*Table 12*
**LIABILITY CLAIMS ACCRUED ESTIMATED LIABILITIES AND EXPENDITURES**
***Fiscal Years Ending June 30, 1993 to 1998***
**(Unaudited)**

| Fiscal Year | Accrued Estimated Liabilities | Expenditure |
|---|---|---|
| 1993 | $ 466,758 | $1,147,196 |
| 1994 | $2,265,324 | $ 837,337 |
| 1995 | $5,349,333 | $1,437,278 |
| 1996 | $ 855,416 | $1,837,193 |
| 1997 | $6,450,211 | $ 829,515 |
| 1998 | -- | -- |

The City maintains commercial property insurance on all City-owned buildings of an insurable nature, and currently carries property and extended loss insurance coverage of $200 million per occurrence with a $25,000 deductible on all City buildings, with earthquake insurance coverage of up to $100 million on all bond-funded buildings. Depending on availability and affordability of such earthquake insurance, the City may elect not to purchase such coverage in the future. The City does not maintain any casualty insurance on the pipelines of the Water System as such insurance is not commercially available.

Insurance for the projects contemplated in the CIP is provided by the City through an Owner Controlled Insurance Program. This program will provide liability insurance coverage in the amount of $100 million through layers of "A" rated insurers. It will also provide workers' compensation, covering injuries to all City and contractor workers, and builders risk property insurance covering the work and materials on the Water Department construction sites.

## INVESTMENT OF FUNDS

The Treasurer of the City, in accordance with the Charter of the City, is responsible for investing the unexpended cash in the Treasurer's pooled operating investment fund (the "City Pool"). Responsibility for the daily investment of funds in the City Pool is delegated to the City's Investment Officer. The City is the only participant in the City Pool. The investment objectives of the City Pool are preservation of capital, liquidity and return. The Water Utility Fund is invested in the City Pool.

### *Oversight and Reporting Requirements*

The City Treasurer provides an investment report on a monthly basis to the City Manager, the City Auditor and Comptroller and the City Council and annually presents a statement of investment policy (the "Investment Guidelines") to the City Manager, the City Council and the City Manager's Investment Advisory Committee. The Investment Advisory Committee was established in March 1990 and is comprised of the City Auditor and Comptroller, a Deputy City Manager and three investment professionals from the private sector. The Committee is charged with oversight responsibility to review on an on-going basis the Investment Guidelines and practices of the City Treasurer and recommend changes. Investments in the City Pool are audited by an independent firm of certified public accountants as part of the overall audit of the City's financial statements.

The City's investment section utilizes outside services to provide investment portfolio valuations and accounting and reporting services. The service provides monthly portfolio valuation, investment performance statistics and other statistical security reports which are distributed to the City Treasurer accounting section and the City Auditor and Comptroller's office for review and reconciliation. The City Treasurer accounting section prepares

a series of monthly reports, which includes portfolio market valuation, and distributes these to the Mayor, City Council, City Manager and other officials.

***Authorized Investments***

Investments in the City Pool are governed by State law and further restricted by the City's Investment Guidelines. The Investment Guidelines have been written with safety of principal being the foremost objective. Permitted investments include U.S. Treasury securities, U.S. Agency securities, corporate medium term notes, money market instruments and the Local Agency Investment Fund (California State Pool). Reverse repurchase agreements ("reverse repos") are restricted to 20% of the base value of the portfolio and are governed by various maturity restrictions as well. A reverse repo is a transaction in which the City Pool sells securities to and concurrently agrees to buy them back at a later date for a price which includes an interest component for the City Pool's use of the money. However, reverse repos have been used in the past. See "Nonoperating Revenue (Expenses)" in Table 9. The main operating funds of the City are currently being managed in two separate portfolios. In its management of the "Liquidity" portfolio, comprising about 50% of total funds, the City invests in a variety of debt securities with maturities ranging from one day to one year; it measures its performance against the Merrill Lynch 3 to 6 month U.S. Treasury Bill Index. The remaining 50% of funds are managed in a separate "Core" portfolio which is invested in a variety of debt securities ranging from one day to five years; it measures its performance against the Merrill Lynch 1 to 3 U.S. Treasury Index. Safety of principal and liquidity are the paramount considerations in the management of both portfolios.

The City Pool does not engage in securities lending transactions.

***Pool Liquidity and Other Characteristics***

The City Pool (including both the "Liquidity" and the "Core" portfolios) is highly liquid. As of March 31, 1998, approximately 19% of the pool investments mature within 60 days, 22% within 91 days and 41.6% within 183 days (on a cumulative basis). As of March 31, 1998, the pool had a weighted average maturity of 1.16 years (422 days) and its weighted yield was 5.97%. For purposes of calculating weighted average maturity, the City Treasurer treats investments in the State-wide Local Agency Investment Fund (California State Pool) as maturing within one day. The Liquidity portfolio has a duration of .33 years as of March 31, 1998 and the Core portfolio has a duration of 1.62 years as of March 31, 1998. Duration is a measure of the price volatility of the portfolio and reflects an estimate of the projected increase or decrease in the value of the portfolio based upon a decrease or increase in interest rates. Accordingly, the Liquidity portfolio should decrease in market value by .33% for every 1% increase in market interest rates while the Core portfolio should decrease in market value by 1.62% for every 1% increase in market interest rates. The City Pool composition is designed with a goal of having sufficient liquid funds are available to meet disbursement requirements. In general, composition and value of investments under management in the City Pool will vary from time to time depending on cash flow needs of the City, maturity or sale of investments, purchase of new securities and fluctuations in interest rates.

*Table 13*
**CITY OF SAN DIEGO POOLED INVESTMENT FUND[1]**
***At March 31, 1998***
**(Unaudited)**

| | Book Value | Market Value | Percent Of Total[1] |
|---|---|---|---|
| U.S. Treasury Bills and Notes | $420,411,403 | $422,192,500 | 41.94% |
| Federal Agency Securities | 356,213,545 | 356,623,374 | 35.53 |
| Medium Term Notes (Corporate)[2] | 58,418,183 | 58,141,925 | 5.83 |
| Money Market Instruments[3] | 157,107,399 | 157,234,868 | 15.67 |
| Local Agency Investment Fund | 10,305,628 | 10,305,628 | 1.03 |
| Net Assets | $1,002,456,158 | $1,004,498,295 | 100.00% |

(1) Based on Book Value.
(2) These notes consist of both fixed and floating securities. The notes with floating interest rates are reset at intervals ranging from one day to three months.
(3) These securities consist of commercial paper, negotiable certificates of deposit, term and overnight repurchase agreements, banker's acceptances, bank notes and thrift notes.

Source: City of San Diego, Investments Division

***Derivatives***

As of March 31, 1998, and since October 14, 1997, the City Pool has no assets invested in structured notes or derivatives. The City Treasurer defines a derivative as a financial instrument whose value is derived from an underlying asset, price, index or rate, e.g. options, futures or interest rate swaps. A structured note is an investment instrument that can contain within its structure various combinations of derivatives such as imbedded calls and interest rate swaps that will offer returns to an investor within a defined set of parameters and interest rate scenarios, e.g. step-ups, multiple-indexed notes, inverse floaters or leveraged constant maturity notes. The City Treasurer does not define fixed rate notes, debentures with call features or single index non-leveraged floating rate notes, e.g. monthly LIBOR plus or minus a spread, as structured notes. The City Treasurer limits structured notes eligible for purchase to those investments, which at the time of purchase, have no risk of principal loss if held to maturity and offer an estimated return at the time of purchase that exceeds the return on a comparable fixed term investment in the judgment of the City's Investment Officer. The City Treasurer does not permit the purchase of securities that have a negative amortization of principal. In addition, recently enacted California law prohibits the purchase of inverse floaters, range notes or interest only strips that are derived from pools of mortgages.

***Reverse Repurchase Agreements***

Although the City from time to time utilizes reverse repos, as of March 31, 1998, there were none in the City Pool, and there have not been any since September 1996. However, reverse repos have been used in the past. See "Nonoperating Revenue (Expenses)" in Table 9. The Investment Guidelines require that all proceeds of a reverse repo be reinvested in securities whose maturity date or coupon reset date match the maturity on the reverse. The Investment Guidelines limit the use of reverse repurchase agreements to 20% of the base value of the City Pool. The City's reverse repo program is monitored daily and reported monthly, as described above under "Oversight and Reporting Requirements."

## TAX MATTERS

In the opinion of Orrick, Herrington & Sutcliffe LLP and Webster & Anderson, Co-Special Counsel, based upon an analysis of existing laws, regulations, rulings, and court decisions, and assuming, among other matters, compliance with certain covenants, the interest portion of the Installment Payments paid by the City under the Installment Purchase Agreement and received by the Holders of Series 1998 Certificates is excluded from gross income for federal income tax purposes under Section 103 of the Internal Revenue Code of 1986 (the "Code") and is

exempt from State of California personal income taxes. Co-Special Counsel are of the further opinion that the interest portion of the Installment Payments received by the Holders of Series 1998 Certificates is not a specific preference item for purposes of the federal individual or corporate alternative minimum taxes, although Co-Special Counsel observe that such interest is included in adjusted current earnings when calculating corporate alternative minimum taxable income. A complete copy of the proposed form of opinion of Co-Special Counsel is set forth in APPENDIX G.

To the extent the issue price of any maturity of Series 1998 Certificates is less than the amount to be paid at maturity of such Series 1998 Certificates (excluding amounts stated to be interest and payable at least annually over the term of such Series 1998 Certificates), the difference constitutes "original issue discount," the accrual of which, to the extent properly allocable to each owner thereof, is treated as the interest portion of the Installment Payments received by the Holders of Series 1998 Certificates which is excluded from gross income for federal income tax purposes and is exempt from State of California personal income taxes. For this purpose, the issue price of a particular maturity of Series 1998 Certificates is the first price at which a substantial amount of such maturity of Series 1998 Certificates is sold to the public (excluding bond houses, brokers, or similar persons or organizations acting in the capacity of underwriters, placement agents or wholesalers). The original issue discount with respect to any maturity of Series 1998 Certificates accrues daily over the term to maturity of such Series 1998 Certificates on the basis of a constant interest rate compounded semiannually (with straight-line interpolations between compounding dates). The accruing original issue discount is added to the adjusted basis of such Series 1998 Certificates to determine taxable gain or loss upon disposition (including sale, prepayment, or payment on maturity) of such Series 1998 Certificates. Owners of Series 1998 Certificates should consult their own tax advisors with respect to the tax consequences of ownership of Series 1998 Certificates with original issue discount, including the treatment of purchasers who do not purchase such Series 1998 Certificates in the original offering to the public at the first price at which a substantial amount of such Series 1998 Certificates is sold to the public.

The Code imposes various restrictions, conditions and requirements relating to the exclusion from gross income for federal income tax purposes of interest on obligations such as the Installment Payments. The City and the Corporation have covenanted to comply with certain restrictions designed to insure that the interest portion of the Installment Payments received by the Holders of Series 1998 Certificates will not be included in federal gross income. Failure to comply with these covenants may result in interest with respect to Series 1998 Certificates being included in gross income for federal income tax purposes, possibly from the date of issuance of Series 1998 Certificates. The opinion of Co-Special Counsel assumes compliance with these covenants. Co-Special Counsel have not undertaken to determine (or to inform any person) whether any actions taken (or not taken) or events occurring (or not occurring) after the date of issuance of Series 1998 Certificates may adversely affect the value of, or the tax status of interest with respect to, Series 1998 Certificates. Further, no assurance can be given that pending or future legislation or amendments to the Code, if enacted into law, or any proposed legislation or amendments to the Code will not adversely affect the value of, or the tax status of interest with respect to, Series 1998 Certificates. Prospective Holders are urged to consult their own tax advisors with respect to proposals to restructure the federal income tax.

Certain requirements and procedures contained or referred to in the Trust Agreement, the Installment Purchase Agreement, the Tax Certificate and other relevant documents may be changed and certain actions (including, without limitation, defeasance of Series 1998 Certificates) may be taken or omitted under the circumstances and subject to the terms and conditions set forth in such documents. Co-Special Counsel express no opinion as to any Series 1998 Certificate or the interest portion of the Installment Payments received by the Holders of Series 1998 Certificates if any such change occurs or action is taken upon the advice or approval of Co-Special Counsel other than Orrick, Herrington & Sutcliffe LLP and Webster & Anderson.

Although Co-Special Counsel is of the opinion that the interest portion of the Installment Payments received by the Holders of Series 1998 Certificates is excluded from gross income for federal income tax purposes and is exempt from State of California personal income taxes, the ownership or disposition of, or the accrual or receipt of the interest portion of the Installment Payments may affect an owner's federal or state tax liability. The nature and extent of these other tax consequences will depend upon the particular tax status of the Holder or the Holder's other items of income or deduction. Co-Special Counsel express no opinion regarding any such other tax consequences.

## FEASIBILITY ENGINEER

O'Brien and Gere Engineers, Inc. (the "Consulting Engineer") has prepared a report dated June 1998, attached hereto as APPENDIX D (the "Engineer's Statement of Feasibility"). The Engineer's Statement of Feasibility should be read in its entirety for an understanding of the Consulting Engineer's conclusions concerning the Water System.

## INDEPENDENT ACCOUNTANTS

The financial statements of the Water Utility Fund for the Fiscal Years ended June 30, 1997 and 1996, attached hereto as APPENDIX F to this Official Statement have been audited by Calderon, Jaham & Osborn, independent Auditors (the "Auditor"), as set forth in their report, dated November 7, 1997. The City has not requested, nor has the Auditor given, the Auditor's consent to the inclusion in APPENDIX F of its report on such financial statements. The Auditor's review in connection with audited financial statements included in Appendix A included events only as of, and for periods ended, June 30, 1997, and no review or investigation with respect to subsequent events has been undertaken in connection with such financial statements by the Auditor. The Auditor has not audited any financial statements of the City as of any date or for any period subsequent to June 30, 1997.

## RATINGS

Moody's Investors Service and Standard & Poor's Ratings Group have assigned ratings of "Aaa" and "AAA," respectively, to Series 1998 Certificates based upon the issuance of the Policy by Financial Guaranty. Such ratings reflect only the views of such organizations and any desired explanation of the significance of such ratings should be obtained from the rating agency furnishing the same, at the following addresses: Moody's Investors Service, Inc., 99 Church Street, New York, New York 10007; and Standard & Poor's Ratings Group, 25 Broadway, New York, New York 10004. Such ratings are not a recommendation to buy, sell or hold Series 1998 Certificates. Generally, a rating agency bases its rating on the information and materials furnished to it and on investigations, studies and assumptions of its own. There is no assurance that such ratings will continue for any given period of time or that such ratings will not be revised downward or withdrawn entirely by the rating agencies, if in the judgment of such rating agencies, circumstances warrant. Any such downward revision or withdrawal of such ratings may have an adverse effect on the market price or marketability of Series 1998 Certificates.

## FINANCIAL ADVISOR

Paradigm, Ross, California and Renge Securities & Co., Inc., Los Angeles and San Francisco, California have acted as financial advisors (the "Financial Advisors") to the City in connection with the delivery of Series 1998 Certificates. The Financial Advisors are not obligated to undertake, and have not undertaken to make, an independent verification or assume responsibility for the accuracy, completeness, or fairness of the information contained in this Official Statement.

## CERTAIN LEGAL MATTERS

Legal matters incident to the authorization and issuance of Series 1998 Certificates are subject to the approval of Orrick, Herrington & Sutcliffe LLP, Los Angeles, California and Webster & Anderson, Oakland, California, Co-Special Counsel. The form of opinion Co-Special Counsel proposes to render is attached as APPENDIX G. Co-Special Counsel undertake no responsibility for the accuracy, completeness or fairness of this Official Statement. Certain legal matters are subject to the approval of Nossaman, Gunthner, Knox & Elliot, LLP, Irvine, California, Underwriters' Counsel, Casey Gwinn, Esq., the City Attorney of the City of San Diego, Foley & Lardner, general counsel to the Corporation and Orrick, Herrington & Sutcliffe LLP, Los Angeles, California, Disclosure Counsel.

## LITIGATION

There is no litigation pending concerning the validity of Series 1998 Certificates, the corporate existence of the City or the Corporation, or the title of the officers to their respective offices.

## UNDERWRITING

Series 1998 Certificates are to be purchased by PaineWebber Incorporated, BancAmerica Robertson Stephens, George K. Baum & Company and Samuel A. Ramirez & Co., Inc., as Underwriters, at a price which includes an underwriters' discount of $2,038,050. The Underwriters are committed to purchase all Series 1998 Certificates if any are purchased. The Underwriters may offer and sell Series 1998 Certificates to certain dealers (including depositing Series 1998 Certificates into investment trusts) and others at prices lower than the offering prices stated on the inside cover of this Official Statement. After the initial public offering, the public offering prices of Series 1998 Certificates may be changed from time to time by the Underwriters.

## CONTINUING DISCLOSURE

The Corporation has determined that no financial or operating data concerning the Corporation is material to an evaluation of the offering of Series 1998 Certificates or to any decision to purchase, hold or sell Series 1998 Certificates and the Corporation will not provide any such information. The City has undertaken all responsibilities for any continuing disclosure to Holders as described below, and the Corporation shall have no liability to the Holders of Series 1998 Certificates or any other person with respect to Securities and Exchange Commission Rule 15c2-12 under the Securities Exchange Act of 1934.

The City has covenanted for the benefit of Holders and beneficial owners of Series 1998 Certificates to provide certain financial information and operating data relating to the City by not later than 270 days following the end of the City's Fiscal Year (which Fiscal Year currently ends June 30) (the "Annual Report"), commencing with an Annual Report for the Fiscal Year ending June 30, 1998, and to provide notices of the occurrence of certain enumerated events, if material. The Annual Report will be filed by the Trustee, as the initial dissemination agent (the "Dissemination Agent") on behalf of the City with each Nationally Recognized Municipal Securities Information Repository and the State Repository, if any. (The City will also cause the Trustee to file copies of the Official Statement with a Nationally Recognized Municipal Securities Information Repository). The notices of material events will be filed by the Dissemination Agent on behalf of the City with the Municipal Securities Rulemaking Board, each Nationally Recognized Municipal Securities Information Repository and the State Repository, if any. The specific nature of the information to be contained in the Annual Report or the notices of material events is summarized below under the caption "APPENDIX C - FORM OF CONTINUING DISCLOSURE AGREEMENT." These covenants have been made in order to assist the Underwriters in complying with Rule 15c2-12(b)(5). The City has never failed to comply in all material respects with any previous undertakings with regard to said Rule to provide annual reports or notices of material events.

## AVAILABILITY OF DOCUMENTS

Copies of the Official Statement, the Trust Agreement, the Installment Purchase Agreement, the City Charter, the Water Utility Fund audited financial statements and additional information relating to the City and Series 1998 Certificates will be available, upon written request, from the office of the City Clerk, City Administration Building, 202 C Street, MS 2A, San Diego, California 92101.

## MISCELLANEOUS

The purpose of this Official Statement is to supply information to prospective buyers of Series 1998 Certificates. References are made herein to certain documents and reports that are brief summaries thereof that do not purport to be complete or definitive, and reference is made to such documents and reports for full and complete statement of the contents thereof.

Any statements in this Official Statement involving matters of opinion, whether or not expressly so stated, are intended as such and not as representations of fact. This Official Statement is not to be construed as a contract or agreement between the City or the Corporation and the purchasers or holders of any Series 1998 Certificates. The preparation and distribution of this Official Statement have been authorized by the City and the Corporation.

CITY OF SAN DIEGO

By: /s/ Michael T. Uberuaga
City Manager

SAN DIEGO FACILITIES AND EQUIPMENT LEASING CORPORATION

By: /s/ Michael T. Uberuaga
President

# APPENDIX A

# SUMMARY OF PRINCIPAL LEGAL DOCUMENTS

## APPENDIX A

## SUMMARY OF PRINCIPAL LEGAL DOCUMENTS

**The following is a summary of certain definitions and provisions set forth in the Trust Agreement, the Master Installment Purchase Agreement and the 1998-1 Supplement to the Master Installment Purchase Agreement. These summaries do not purport to be comprehensive, and reference should be made to such documents for a full and complete statement of such definitions and provisions. Prior to delivery of the Series 1998 Certificates, copies of these documents are available from the City, and after delivery of the Series 1998 Certificates, from the Trustee.**

### TRUST AGREEMENT

The Trust Agreement sets forth certain terms of the Certificates, the nature and extent of the security for the Certificates, various rights of the Owners of the Bonds, rights, duties and immunities of the Trustee and the rights and obligations of the Authority. Certain provisions of the Trust Agreement are summarized below. Other provisions are summarized in this Official Statement under the captions "DESCRIPTION OF THE SERIES 1998 CERTIFICATES" and the "SECURITY FOR THE SERIES 1998 CERTIFICATES." This summary does not purport to be complete or definitive and is qualified in its entirety by reference to the full terms of the Trust Agreement.

**Selected Definitions**

**"Acquisition Costs"** means all costs of acquiring, constructing, installing or improving the Project, including but not limited to:

(a) all costs which the Corporation or the City shall be required to pay to a manufacturer, vendor or contractor or any other person under the terms of any contract or contracts for the acquisition, construction, installation or improvement of the Project;

(b) obligations of the Corporation or the City incurred for labor and materials in connection with the acquisition, construction, installation or improvement of the Project, including reimbursement to the Corporation or the City for all actual out-of-pocket expenses, advances and payments made in connection with the Project prior to or after delivery of the Certificates or any Additional Obligations;

(c) the costs of performance or other bonds and any and all types of insurance that may be necessary or appropriate to have in effect during the course of acquisition, construction, installation or improvement of the Project; and

(d) all costs of engineering and architectural services, including the actual out-of-pocket costs of the Corporation and the City for test borings, surveys, estimates, plans and specifications and preliminary investigations therefor, development fees and sales commissions, and for supervising acquisition, construction, installation and improvement, as well as for the performance of all other duties required by or consequent to the proper acquisition, construction, installation or improvement of the Project.

**"Additional Obligations"** means the certificates of undivided interest, certificates of participation, or bonds that are authorized by a Supplemental Trust Agreement and are executed or authenticated and delivered by the Trustee under and pursuant to the provisions of the Trust Agreement.

**"Auditor and Comptroller"** means the Auditor and Comptroller of the City.

**"Authorized Denominations"** means $5,000 or any integral multiple thereof.

**"Beneficial Owner"** shall have the meaning set forth in the Continuing Disclosure Agreement.

**"Bond Insurance Policy"** means the municipal bond new issue insurance policy issued by the Bond Insurer that guarantees payment of principal of and interest with respect to the Certificates.

**"Bond Insurer"** means Financial Guaranty Insurance Company, a New York stock insurance company, or any successor thereto.

**"Bondholder"** means the person other than the City, who at the time of nonpayment of a Certificate is entitled under the terms of such Certificate to payment thereof.

**"Business Day"** means a day other than (i) Saturday or Sunday or (ii) a day on which banking institutions in Los Angeles, California, New York, New York, or the city or cities in which the principal corporate trust office of the Trustee are closed or (iii) a day on which the New York Stock Exchange is closed. If the date for making any payment or the last date for performance of any act or the exercising of any right, as provided in the Trust Agreement, shall not be a Business Day, such payment may be made or act performed or right exercised on the next succeeding Business Day, with the same force and effect as if done on the nominal date provided in the Trust Agreement, and, unless otherwise specifically provided in the Trust Agreement, no interest shall accrue for the period from and after such nominal date.

**"Certificate of Completion"** means a Certificate of the City filed with the Trustee, stating that the Components of the Project being financed with the proceeds of the Certificates or any Additional Obligations have been acquired, constructed, installed and improved and that all Acquisition Costs have been paid or provided for.

**"Certificate of the City"** means an instrument in writing signed by the City Manager, Financial Management Director or City Attorney of the City, or by any other officer of the City duly authorized by the City Council for that purpose.

**"Certificates"** means the $385,000,000 Certificates of Undivided Interest (In Installment Payments Payable From Net System Revenues of the Water Utility Fund of the City of San Diego, California) Series 1998, executed and delivered by the Trustee pursuant to the Trust Agreement.

**"Certificate Purchase Contract"** means that certain Purchase Contract, dated the date of sale of the Certificates to the Purchaser, among the Purchaser, the City and the Corporation relating to the Certificates.

**"Charter"** means the Charter of the City as it now exists or may hereafter be amended, and any new or successor Charter.

**"City"** means the City of San Diego, a municipal corporation duly organized and existing under the Charter and the Constitution and laws of the State of California.

**"Closing Date"** means August 18, 1998.

**"Code"** means the Internal Revenue Code of 1986, as amended, and the regulations promulgated thereunder.

**"Continuing Disclosure Agreement"** means that certain Continuing Disclosure Agreement, dated the date of execution and delivery of the Certificates, between the City and the Dissemination Agent, as originally executed and as it may be amended from time to time in accordance with the terms thereof.

**"Corporation"** means the San Diego Facilities and Equipment Leasing Corporation, a nonprofit public benefit corporation organized and existing under the laws of the State of California.

**"Costs of Issuance"** means all the costs of executing and delivering the Certificates and any Additional Obligations, including, but not limited to, all printing and document preparation expenses in connection with the Trust Agreement, the Installment Purchase Agreement, the Certificates, and the preliminary official statement and

final official statement pertaining to the Certificates; rating agency fees; CUSIP Service Bureau charges; fees incurred in connection with a Municipal Bond Insurance Policy, if any; feasibility study fees; market study fees; legal fees and expenses of counsel with respect to the purchase of the Project; any computer and other expenses incurred in connection with the Certificates; the fees and expenses of the Trustee including initial fees and expenses of its counsel; and any and all other fees and expenses incurred in connection with the execution of the Certificates and any Additional Obligations, to the extent such fees and expenses are approved by the City.

**"Credit Provider"** means any Insurer, bank or other financial institution or organization which is performing in all material respects its obligations under any Credit Support Instrument for some or all of the Certificates and any Additional Obligations.

**"Credit Support Instrument"** means a Municipal Bond Insurance Policy, a letter of credit, a stand-by purchase agreement, revolving credit agreement or other credit arrangement pursuant to which a Credit Provider provides credit or liquidity support with respect to the payment of interest, principal or the purchase price of the Certificates or any Additional Obligations.

**"Defeasance Securities"** means any of the following:

(a) Treasury Certificates, Notes and Bonds (including State and Local Government Series—"SLGS");

(b) direct obligations of the U.S. Treasury which have been stripped by the U.S. Treasury itself, CATS, TIGRS and similar securities;

(c) the interest component of Resolution Funding Corp. strips which have been stripped by request to the Federal Reserve Bank of New York, in book entry form;

(d) pre-refunded municipal bonds rated "Aaa" by Moody's and "AAA" by S&P;

(e) Obligations issued or fully guaranteed by the following agencies which are backed by the full faith and credit of the United States:

1. U.S. Export-Import Bank - Direct obligations or fully guaranteed certificates of beneficial ownership

2. Farmers Home Administration - Certificates of beneficial ownership

3. Federal Financing Bank

4. General Services Administration - Participation certificates

5. U.S. Maritime Administration - Guaranteed Title XI financing

6. U.S. Department of Housing and Urban Development (HUD) - Project Notes, New Communities Debentures - U.S. government guaranteed debentures, U.S. Public Housing Notes and Bonds - U.S. government guaranteed public housing notes and bonds

**"Dissemination Agent"** means State Street Bank and Trust Company of California, N.A., a national banking association under the laws of the United States of America, or any successor thereto as may be provided for in the Continuing Disclosure Agreement.

**"DTC"** means The Depository Trust Company, New York, New York, a limited-purpose trust company organized under the laws of the State of New York, and its successors as securities depository for the Certificates including any such successor appointed pursuant to the Trust Agreement.

**"Financial Newspaper"** means The Wall Street Journal or The Bond Buyer or, if neither such newspaper is being regularly published, any other newspaper or journal publishing financial news and selected by the City that is printed in the English language, is customarily published on each Business Day and is circulated in Los Angeles, California and New York, New York.

**"Installment Payments"** means the installment payments scheduled to be paid by the City under and pursuant to the Installment Purchase Agreement and any supplement thereto.

**"Installment Purchase Agreement"** means the Master Installment Purchase Agreement, dated as of August 1, 1998, entered into between the Corporation, as seller, and the City, as purchaser, as originally executed and as it may from time to time be amended or supplemented pursuant to the provisions of the Trust Agreement and thereof.

**"Insurer"** means a municipal bond insurer providing a Municipal Bond Insurance Policy with respect to any Additional Obligations.

**"Interest Payment Date"** means, with respect to the Certificates, February 1, 1999 and each August 1 and February 1 thereafter until the Certificates are paid or deemed paid in full, and with respect to Additional Obligations, means such dates as are designated in the Supplemental Trust Agreement providing for the issuance thereof.

**"Mandatory Sinking Account Payment"** means the principal amount of Certificates or any Additional Obligations required to be paid on each Mandatory Sinking Account Payment Date pursuant to the terms of the Trust Agreement or of a Supplemental Trust Agreement.

**"Mandatory Sinking Account Payment Date"**, if applicable, means August 1 of each year as set forth in the Trust Agreement or in a Supplemental Trust Agreement.

**"Moody's"** means Moody's Investors Service, Inc., a Delaware corporation, and its successors, and if such corporation shall no longer perform the functions of a securities rating agency, "Moody's" shall be deemed to refer to any other nationally recognized securities rating agency designated by the City.

**"Municipal Bond Insurance Policy"** means a municipal bond insurance policy issued by an Insurer insuring the payment when due of the principal and interest with respect to any Additional Obligations as provided therein.

**"Opinion of Counsel"** means a written opinion of counsel of recognized national standing in the field of law relating to municipal bonds, appointed and paid by the City.

**"Outstanding"** when used as of any particular time with reference to Certificates and Additional Obligations, means all Certificates and Additional Obligations except:

(a) Certificates and Additional Obligations previously canceled by the Trustee or delivered to the Trustee for cancellation;

(b) Certificates and Additional Obligations owned or held by or for the account of the City (but excluding Certificates and Additional Obligations held in any pension or retirement fund of the City);

(c) Certificates and Additional Obligations paid or deemed to have been paid pursuant to the provisions described under the caption "Defeasance" below; and

(d) Certificates and Additional Obligations in lieu of or in substitution for which other mutilated, lost, destroyed or stolen Certificates or Additional Obligations shall have been executed and delivered by the Trustee pursuant to the Trust Agreement.

**"Owner"** means any person who shall be the registered owner of any Outstanding Certificate or Additional Obligations as indicated in the registration books of the Trustee.

**"Permitted Investments"** means any of the following to the extent then permitted by applicable law:

(a) Direct obligations of, or obligations the principal of and interest on which are unconditionally guaranteed by, the United States of America, including obligations issued or held in book entry form on the books of the Department of the Treasury of the United States and including a receipt, certificate or any other evidence of an ownership interest in an aforementioned obligation, or in specified portions thereof (which may consist of specified portions of interest thereon);

(b) (1) Obligations issued by the Federal Farm Credit Bank, Federal Home Loan Bank Board, Federal Home Loan Mortgage Corporation, Student Loan Marketing Association or the Tennessee Valley Authority, or (2) obligations, participations or other instruments of or issued by, or fully guaranteed as to interest and principal by, the Federal National Mortgage Association (excluding stripped mortgage backed securities which are valued at greater than par on the unpaid principal), or (3) guaranteed portions of Small Business Administration notes, or (4) obligations, participations or other instruments of or issued by a federal agency or a United States of America government-sponsored enterprise; provided, however, that prior to investing in investments described in clause (4) hereof, the City shall have provided to the Trustee evidence that such investment is then rated not lower than A by Moody's and S&P;

(c) Obligations of any state, territory or commonwealth of the United States of America or any political subdivision thereof or any agency or department of the foregoing; provided, that at the time of their purchase such obligations are rated not lower than A by Moody's and S&P;

(d) Bonds, notes, debentures or other evidences of indebtedness issued or guaranteed by any corporation which are, at the time of purchase, rated by Moody's and S&P in their respective highest short-term rating categories, or, if the term of such indebtedness is longer than three years, rated not lower than A by Moody's and S&P;

(e) Taxable commercial paper or tax-exempt commercial paper rated in their respective highest rating categories by Moody's and S&P;

(f) Variable rate obligations required to be redeemed or purchased by the obligor or its agent or designee upon demand of the holder thereof secured as to such redemption or purchase requirement by a liquidity agreement with a corporation and as to the payment of interest and principal either upon maturity or redemption (other than upon demand by the holder thereof) thereof by an unconditional credit facility of a corporation; provided, that the variable rate obligations themselves are rated in their respective highest rating categories for its short-term rating, if any, and not lower than A for its long-term rating, if any, by Moody's and S&P, and that the corporations providing the liquidity agreement and credit facility have, at the date of acquisition of the variable rate obligation by the Trustee, an outstanding issue of unsecured, uninsured and unguaranteed debt obligations rated not lower than A by Moody's and S&P;

(g) Deposits accounts or certificates of deposit, whether negotiable or non-negotiable, issued by a state or national bank (including the Trustee) or a state or federal savings and loan association, provided that such certificates of deposit or deposit accounts shall be either (1) continuously and fully insured by the Federal Deposit Insurance Corporation or (2) have maturities of not more than 365 calendar days (including certificates of deposit) and are issued by any state or national bank or a state or federal savings and loan association, the short-term obligations of which are rated in the highest short term letter and numerical rating category by Moody's and S&P;

(h) Bills of exchange or time drafts drawn on and accepted by a commercial bank, otherwise known as bankers acceptances, which bank has short-term obligations outstanding which are rated by Moody's and S&P in their respective highest short-term rating categories, and which bankers acceptances mature not later than 270 days from the date of purchase;

(i) Any repurchase agreement with any bank or trust company organized under the laws of any state of the United States or any national banking association (including the Trustee) having a minimum permanent capital of one hundred million dollars ($100,000,000) and with short-term debt rated by Moody's and S&P in their respective three highest short-term rating categories or any government bond dealer reporting to, trading with, and recognized as a primary dealer by, the Federal Reserve Bank of New York, which agreement is secured by any one or more of the securities and obligations described in clauses (a) or (b) above, which shall have a market value (exclusive of accrued interest and valued at least monthly) at least equal to the principal amount of such investment and shall be lodged with the Treasurer or Trustee or other fiduciary on behalf of the City, by the bank, trust company, national banking association or bond dealer executing such repurchase agreement, and the entity executing each such repurchase agreement required to be so secured shall furnish the Treasurer or Trustee, as applicable, with an undertaking satisfactory to it that the aggregate market value of all such obligations securing each such repurchase agreement (as valued at least monthly) will be an amount equal to 102% of the principal amount of such repurchase agreement, inclusive of accrued interest, and the Treasurer and the Trustee shall be entitled to rely on each such undertaking;

(j) Any cash sweep or similar account arrangement of or available to the Trustee, the investments of which are limited to investments described in clauses (a), (b) and (c) of this definition, or repurchase agreements secured by any one or more obligations described in clauses (a) or (b) above, and any money market fund, the entire investments of which are limited to investments described in clauses (a), (b) and (c) of this definition, or repurchase agreements secured by any one or more obligations described in clauses (a) or (b) above, and which money market fund is rated in their respective highest rating categories by Moody's and S&P;

(k) Any guaranteed investment contract approved in writing by the Insurer with a financial institution or insurance company which has at the date of execution thereof an outstanding issue of unsecured, uninsured and unguaranteed debt obligations or a claims paying ability rated not lower than Aa/AA by Moody's and S&P;

(l) Certificates, notes, warrants, bonds or other evidence of indebtedness of the State or of any political subdivision or public agency thereof which are rated in the highest short-term rating category or within one of the three highest long-term rating categories of Moody's and S&P (excluding securities that do not have a fixed par value and/or whose terms do not promise a fixed dollar amount at maturity or call date);

(m) For amounts less than $10,000, interest-bearing demand or time deposits (including certificates of deposit) in a nationally or state-chartered bank, or a state or federal savings and loan association in the State, fully insured by the Federal Deposit Insurance Corporation, including the Trustee or any affiliate thereof;

(n) Investments in taxable money market funds or portfolios restricted to obligations maturing in one year or less and which funds or portfolios are rated in either of the two highest rating categories by Moody's or S&P, or have or are portfolios guaranteed as to payment of principal and interest by the full faith and credit of the United States of America;

(o) Any obligations which are then legal investments for moneys of the Authority under the laws of the State; provided, that if such investments are not required to be collateralized or insured such investments shall be issued by entities the debt securities of which are rated in one of the two highest short-term or long-term rating categories by Moody's and S&P; provided further, that any repurchase agreements must be fully secured by collateral security described in clauses (a) and (b) of this definition, which collateral (1) is held by the Trustee or a third party agent during the term of such repurchase agreement and in which collateral the Trustee has a perfected first security interest, (2) has a market value determined at least every thirty days at least equal to 103% of the amount so invested and (3) may be liquidated within seven days if the market value of such collateral is at any time less than the amount so invested;

(p) Investments in the Local Agency Investment Fund created pursuant to Section 16429.1 of the California Government Code;

(q) Shares of beneficial interest in diversified management companies investing exclusively in securities and obligations described in clauses (a) through (j), (l), (n) and (o) of this definition and which companies are rated in their respective highest rating categories by Moody's and S&P or have an investment advisor registered with the Commission with not less than five years' experience investing in such securities and obligations and with assets under management in excess of five hundred million dollars ($500,000,000);

(r) For amounts held in the Acquisition Fund only, any interest rate swap agreement with a counterparty which has at the date of execution thereof an unsecured, uninsured and nonguaranteed long-term obligation rated not lower than A by Moody's and S&P; provided, that such counterparty may satisfy such rating requirements by providing an insurance policy for its obligations under any such swap agreement from an insurer whose unsecured ratings are in the rating categories required above, or alternatively by providing an unconditional, irrevocable, unsecured, uninsured and nonguaranteed guaranty of any other entity, including an affiliated entity, whose unsecured ratings are in the rating categories required above;

(s) Any other obligations which are approved in writing by Moody's (if Moody's is then rating the Certificates or any Additional Obligations), S&P (if S&P is then rating the Certificates or any Additional Obligations) and the Insurer; and

Any Swap entered into in connection with the issuance or incurrence by the City of variable rate indebtedness secured with the Certificates by a parity lien on Net System Revenues shall meet the following guidelines and, for purposes of calculating "Debt Service" and establishing compliance with financial covenants under the Trust Agreement shall be treated as follows:

(i) The Swap provider must be rated at least A-/A3 or better by S&P and Moody's (the "Initial Rating Requirement").

(ii) Assuming satisfaction of the Initial Rating Requirement, and thereafter as long as the long term indebtedness of the Swap provider or the claims paying ability of the Swap provider does not fall below Baa2 or BBB by either S&P or Moody" (the "Minimum Rating Requirement"), all interest rate assumptions for purposes of establishing or demonstrating compliance with a financial covenant (e.g. rate covenant, reserve requirement, additional bonds test, asset transfer test, etc.) may be based upon the synthetic fixed interest rate under the Swap.

Failure to maintain a Swap provider holding the Minimum Rating Requirement or, if the City elects, failure to replace any such Swap provider by another Swap provider which holds the Initial Rating Requirement within ten business days, will have the effect that compliance with any required rate covenant for the preceding Fiscal Year will be based on the actual interest paid on the Variable Rate Indebtedness during such Fiscal Year without regard to the Swap.

**"Principal Payment"** means the principal amount evidenced by the Certificates and any Additional Obligations required to be paid on each Principal Payment Date.

**"Principal Payment Date"** means, with respect to the Certificates August 1 of each year, commencing August 1, 2001, and with respect to any Additional Obligations, means such dates as are designated in the Supplemental Trust Agreement providing for the issuance thereof.

**"Project"** means the acquisition, construction, installation and improvements to the City's Water System, as more specifically described in Exhibit A to the Installment Purchase Agreement.

**"Purchaser"** means PaineWebber Incorporated, as representative of the underwriters and purchasers of the Certificates pursuant to the Certificate Purchase Contract.

**"Rating Agencies"** means Moody's or S&P, or in the event that Moody's or S&P no longer maintain a rating on the Certificates and any Additional Obligations, any other nationally recognized bond rating agency then maintaining a rating on the Certificates and any Additional Obligations.

**"Rebate Requirement"** means the Rebate Requirement as defined in the Tax Certificate.

**"Record Date"** means the close of business on the fifteenth day of the month preceding the month in which any Interest Payment Date occurs, whether or not such day is a Business Day.

**"Representation Letter"** means the Blanket Letter of Representations from the City to DTC, or any successor securities depository for the Certificates or any Additional Obligations.

**"Reserve Fund Credit Facility"** means a letter of credit, line of credit, surety bond, insurance policy or similar facility deposited in the Reserve Fund in lieu of or in partial substitution for cash or securities on deposit therein.

**"Reserve Requirement"** means, as of any date of calculation, an amount initially equal to $25,374,436.26 but in no event less than the lesser of (i) maximum prospective annual Installment Payments with respect to Outstanding Certificates and Additional Obligations to be made by the City under the Installment Purchase Agreement in any Fiscal Year or (ii) 10% of the proceeds of the Certificates and any Additional Obligations, or (iii) 125% of the average annual Installment Payments to be made with respect to Outstanding Certificates and Additional Obligations, in accordance with the Tax Certificate.

**"S&P"** means Standard & Poor's, a division of the McGraw-Hill Companies, a New York Corporation, and its successors, and if such corporation shall for any reason no longer perform the functions of a securities rating agency, "S&P" shall be deemed to refer to any other nationally recognized securities rating agency designated by the City.

**"Supplemental Trust Agreement"** means an agreement amending or supplementing the terms of the Trust Agreement entered into pursuant to the terms of the Trust Agreement.

**"Tax Certificate"** means that tax certificate and agreement executed by the City at the time of execution and delivery of the Certificates relating to the requirements of Section 148 of the Code, as such certificate may be amended or supplemented.

**"Term Certificates"** or **"Term Additional Obligations"** means any Certificates or Additional Obligations which are subject to prepayment prior to their stated maturity dates from Mandatory Sinking Account Payments.

**"Treasurer"** means the Treasurer of the City.

**"Trust Agreement"** means the Trust Agreement by and among the Trustee, the City and the Corporation, dated as of August 1, 1998, as originally executed and as it may from time to time be amended or supplemented in accordance with the Trust Agreement.

**"Trustee"** means State Street Bank and Trust Company of California, N.A., a national banking association under the laws of the United States of America, having a Principal Corporate Trust Office located at Los Angeles, California, or any other bank or trust company which may at any time be substituted in its place as provided in the Trust Agreement.

**"Written Request of the City"** means an instrument in writing signed by the City Manager or the Financial and Technical Services Business Center Deputy City Manager of the City or any other official of the applicable administrative departments of the City duly authorized by the City Council for that purpose.

**General**

In consideration of the acceptance of the Certificates by the Owners, the Trust Agreement will be deemed to be and will constitute a contract between the Trustee and the Owners to secure the full and final payment of the interest and principal, and premium, if any, represented by the Certificates and any Additional Obligations which may be executed and delivered under the Trust Agreement, subject to each of the agreements, conditions, covenants and terms contained in the Trust Agreement; and all agreements, conditions, covenants and terms contained in the Trust Agreement required to be observed or performed by or on behalf of the Trustee will be for the equal and proportionate benefit, protection and security of all Owners without distinction, preference or priority as to security or otherwise of any Certificates and any Additional Obligations over any other Certificates or any Additional Obligations by reason of the number or date thereof or the time of execution or delivery thereof or for any cause whatsoever, except as expressly provided in the Trust Agreement or therein.

**Additional Obligations**

***Execution and Delivery of Additional Obligations.*** (a) In addition to the Certificates, the City, the Corporation and the Trustee may, by execution of a Supplemental Trust Agreement without the consent of the Owners, provide for the execution and delivery of Additional Obligations representing additional Installment Payments (which Additional Obligations shall not use the number "1998" in the title thereof). The Trustee may execute and deliver to or upon the Written Request of the City such Additional Obligations, in such principal amount as shall reflect the additional principal components and interest components of the Installment Payments, and the proceeds of such Additional Obligations may be applied to any lawful purposes of the City, but such Additional Obligations may only be executed and delivered upon compliance by the City with the provisions of the Trust Agreement and subject to the following specific conditions, which are made conditions precedent to the execution and delivery of any such Additional Obligations:

(1) neither the City nor the Corporation shall be in default under the Trust Agreement or any Supplemental Trust Agreement or under the Installment Purchase Agreement or any supplemental thereto;

(2) said Supplemental Trust Agreement shall (A) state the purpose for which such Additional Obligations are being issued; provided, however that such Additional Obligations shall be applied solely for the purpose of (i) financing or refinancing additional improvements to the Project, including payment of all costs incidental to or connected with such financing or refinancing, and/or (ii) refunding any Certificates or Additional Obligations then Outstanding, and (B) provide that from such proceeds or other sources an amount shall be deposited in the Reserve Fund so that following such deposit there shall be on deposit in the Reserve Fund an amount at least equal to the Reserve Requirement;

(3) the City shall have satisfied the requirements set forth in the Installment Purchase Agreement;

(4) the Additional Obligations shall be payable as to principal only on a Principal Payment Date of each year in which principal components are due and may bear interest that is fixed or adjustable from time to time, and shall be payable as to interest only on an Interest Payment Date of each year commencing with the first Interest Payment Date occurring after their date of execution and delivery;

(5) the aggregate principal amount of Certificates and Additional Obligations executed or authenticated and delivered and at any time Outstanding under the Trust Agreement or under any Supplemental Trust Agreement shall not exceed any limit imposed by law, by the Trust Agreement or by any Supplemental Trust Agreement;

(6) the Installment Purchase Agreement shall have been amended, to the extent necessary, so as to increase the Installment Payments payable by the City thereunder by an aggregate amount at least sufficient to pay the principal and interest of the Certificates and such Additional Obligations as the same are due; and

(7) said Supplemental Trust Agreement shall provide such other provisions as are necessary and not inconsistent with the Trust Agreement.

(b) Any Additional Obligations shall be on a parity with the Certificates and each Owner thereof shall have the same rights upon an Event of Default as the Owner of any other Certificates executed and delivered under the Trust Agreement, except as otherwise provided in the Supplemental Trust Agreement under which Additional Obligations are executed and delivered. Additional Obligations shall be deemed payable from Installment Payments which are on a parity with the Installment Payments from which the Certificates are paid.

**Funds and Accounts**

***Establishment of Funds and Accounts.*** The City will establish and maintain the Acquisition Fund to be held by the Treasurer and disbursed by the Auditor and Comptroller in accordance with the Trust Agreement. The Trust Agreement establishes the Payment Fund, the Interest Fund, the Principal Fund, the Prepayment Fund, the Reserve Fund and the Costs of Issuance Fund. Each of the funds and accounts established in the Trust Agreement will be maintained by the Trustee separate and apart from all other funds and moneys held by the Trustee, and will be expended solely as provided in the Trust Agreement.

***Use of Moneys in Acquisition Fund.***

(a) The Treasurer will hold the moneys in the Acquisition Fund and will invest such amounts solely in Permitted Investments, and the Auditor and Comptroller will disburse such moneys therefrom to pay Acquisition Costs. Such disbursements will be made from time to time upon receipt of a Written Request of the City containing information set forth in the Trust Agreement.

(b) If, after payment by the Auditor and Comptroller of all Written Requests of the City theretofore tendered to the Auditor and Comptroller under the provisions of the Trust Agreement and delivery to the Treasurer, the Auditor and Comptroller and the Trustee of a Certificate of Completion, there shall remain any balance of money in the Acquisition Fund, all money so remaining will be transferred to the Trustee, together with a Certificate of the City that such amount represents the balance of the funds in the Acquisition Fund, and deposited, first to the Reserve Fund to the extent necessary to make the amount on deposit therein equal to the Reserve Requirement, and thereafter to the Interest Fund and the Principal Fund as directed by the City.

***Reserve Fund.***

(a) Moneys in the Reserve Fund shall be in the amount of the Reserve Requirement and will be used and withdrawn by the Trustee solely for the purposes set forth below.

(1) If, on any Interest Payment Date (or on any earlier date as specified in a Reserve Fund Credit Facility or Reserve Fund investment), the amount on deposit in the Interest Fund is insufficient to pay the interest due with respect to the Certificates and any Additional Obligations on such Interest Payment Date, the Trustee will transfer from the Reserve Fund and deposit in the Interest Fund an amount sufficient to make up such deficiency.

(2) If, on any Principal Payment Date or any Mandatory Sinking Account Payment Date (or on any earlier date as specified in a Reserve Fund Credit Facility or Reserve Fund investment), the amount on deposit in the Principal Fund is insufficient to pay the principal due with respect to the Certificates and any Additional Obligations on such Principal Payment Date or Mandatory Sinking Account Payment Date, the Trustee will transfer from the Reserve Fund and deposit in the Principal Fund an amount sufficient to make up such deficiency.

(3) Any moneys on deposit in the Reserve Fund in excess of the Reserve Requirement on the final maturity date of the Certificates or any Additional Obligations shall be withdrawn and transferred by the Trustee to be applied for the final payment on the Certificates and any Additional Obligations;

provided, however, that in no event shall such transfer cause the amount on deposit in the Reserve Fund to be less than the Reserve Requirement after such transfer is made.

(b) In the event of any withdrawal or transfer from the Reserve Fund, the Trustee shall, within 5 calendar days thereafter, provide written notice to the City and the Insurer of the amount and the date of such transfer. If at any time the balance in the Reserve Fund shall be reduced below the Reserve Requirement, the first of Installment Payments thereafter payable by the City under the Installment Purchase Agreement and not needed to pay the interest and principal components of Installment Payments payable by the City, as provided in the Installment Purchase Agreement, to the Owners on the next Interest Payment Date, Principal Payment Date or Mandatory Sinking Account Payment Date shall be used to increase the balance in the Reserve Fund to the Reserve Requirement. If after the payment of principal and interest on any Interest Payment Date the balance in the Reserve Fund shall be in excess of the Reserve Requirement, the Trustee shall transfer such excess first to the Principal Fund or, if requested by the City, to the Water Utility Fund of the City for any lawful purpose, provided such request is accompanied by an Opinion of Counsel to the effect that the intended use of such excess amount shall not have a material adverse effect on the exclusion of interest components of the Certificates from federal income taxes. At the termination of the Installment Purchase Agreement in accordance with its terms, any balance remaining in the Reserve Fund shall be released and may be transferred to the City's Water Department, or otherwise used by the City for any other lawful purposes, as the City may direct. Investments in the Reserve Fund shall mature, or be subject to tender, redemption or withdrawal at the option of the holder thereof, not later than ten years from the date of investment.

(c) At the option of the City, one or more Reserve Fund Credit Facilities may be substituted for the funds held by the Trustee in the Reserve Fund such that the amount available to be drawn under such Reserve Fund Credit Facilities together with funds remaining in the Reserve Fund satisfies the Reserve Requirement.

(d) If the City exercises its option to substitute a Reserve Fund Credit Facility for all or a portion of the moneys held by the Trustee in the Reserve Fund, then such moneys, on or after the date that the Reserve Fund Credit Facility becomes effective, at the option of the City, shall be transferred (1) to the Payment Fund and on each applicable Principal Payment Date a pro rata portion thereof shall be transferred to the Principal Fund and used to pay a portion of the principal with respect to the Certificates due on such Principal Payment Date, or (2) to the Water Utility Fund of the City for any other lawful purpose; provided that there is delivered to the Trustee an Opinion of Counsel to the effect that the expenditures contemplated by the City will not have an adverse effect upon the exclusion of the interest portion of the Installment Payments from gross income for federal income tax purposes under Section 103 of the Code or any successor law. In the event any Reserve Fund Credit Facility is scheduled to terminate prior to the final maturity date of the Certificates and any Additional Obligations and such Reserve Fund Credit Facility is not extended, renewed or replaced with another Reserve Fund Credit Facility or with cash or Permitted Investments in the amount of such Reserve Fund Credit Facility, the Trustee shall draw on or make a claim under such Reserve Fund Credit Facility ten days prior to the date of such expiration in an amount equal to the lesser of (A) the maximum amount available thereunder or (B) the Reserve Requirement, in either case for deposit into the Reserve Fund.

(e) In the event a Reserve Fund Credit Facility is substituted for all or a portion of the moneys held by the Trustee in the Reserve Fund pursuant to the terms of the Trust Agreement, then, notwithstanding any other provision of the Trust Agreement, (1) the Trustee shall draw upon the Reserve Fund Credit Facility for amounts which the terms of the Trust Agreement require to be transferred from the Reserve Fund; provided, however, that the Trustee shall first draw upon any cash or Permitted Investments on deposit in the Reserve Fund prior to drawing upon any Reserve Fund Credit Facility, and thereafter shall draw upon all such Reserve Fund Credit Facilities on a pro rata basis, and (2) amounts required by the terms of the Trust Agreement to be deposited or transferred to the Reserve Fund shall (A) in the event the Reserve Fund Credit Facility has been drawn upon, be paid to the provider of such Reserve Fund Credit Facility if the City has an outstanding reimbursement obligation to such provider resulting from such draw, which payment shall result in an increase in the amount then available under the Reserve Fund Credit Facility equal to such payment or (B) otherwise be transferred or deposited pursuant to the terms of the Trust Agreement as if no deposit or transfer to the Reserve Fund were required.

(f) To the extent that the Reserve Fund is comprised of both funds on deposits and a Credit Facility, withdrawals from the Reserve Fund shall be made pro-rata between funds on deposit and the Credit Facility. To the extent that the Reserve Fund is replenished by the City, the amount so replenished shall be credited to funds on deposit in the Reserve Fund and any Credit Facility, pro-rata based upon the amount paid out of the Reserve Fund directly from funds on deposit in the Reserve Fund and the amount paid out of the Reserve Fund from funds drawn from the Credit Facility. To the extent that funds are credited to the Credit Facility, the Trustee shall pay the same to the provider of Credit Facility in lieu of retaining the funds in the Reserve Fund, conditioned upon reinstatement of the Credit Facility for the amount so paid.

(g) In the event the provider of a Credit Facility makes payments to the Trustee as part of the Reserve Requirement, the provider shall become subrogated to the rights of the recipients of such payments, but such right of subrogation shall be subordinate to the rights of the provider of any policy of municipal bond insurance which as been drawn upon for payment of principal or interest on Bonds.

(h) The City shall be permitted to make use of a Reserve Fund Credit Facility pursuant to the Trust Agreement at any time.

(i) For purposes of this section describing the Reserve Fund, the term "substitution" shall include such initial funding of the Reserve Requirement by means of a Reserve Fund Credit Facility instead of by deposit of moneys, and shall not be read to mean that the City must first make an initial cash deposit in the Reserve Fund before invoking the provisions of the Trust Agreement described in this section and satisfying the Reserve Requirement by securing and implementing a Reserve Fund Credit Facility.

**Open Market Purchase**

The City reserves the right and option to purchase any or all of the Certificates and any Additional Obligations in the open market at any time at any price acceptable to the City, plus accrued interest to the date of purchase. The principal amount of any Term Certificates or Term Additional Obligations so purchased shall be credited at the par amount thereof against the next succeeding Mandatory Sinking Account Payment which occurs within 12 months of the purchase by the City of any Certificates or Additional Obligations. The City shall give written notice to the Trustee of its intent to make such a purchase any Term Certificates or Term Additional Obligations not less than 70 days prior to the next succeeding Mandatory Sinking Account Payment Date.

**Installment Payments**

***Pledge of Installment Payments and Other Rights; Payment Fund.*** (a) Subject to the provisions the Trust Agreement, the City and the Corporation irrevocably pledge and transfer to the Trustee, for the benefit of the Owners, all of their right, title and interest in and to all amounts on deposit from time to time in the funds and accounts established under the Trust Agreement (except the Rebate Fund and the Costs of Issuance Fund), which shall be used for the punctual payment of the interest and principal in respect of by the Certificates and any Additional Obligations. In addition, the Corporation irrevocably pledges and transfers to the Trustee, for the benefit of the Owners, (1) all of its right, title and interest in the right to receive Installment Payments under the Installment Purchase Agreement, which Installment Payments shall be used for the punctual payment of the interest and principal represented by the Certificates and any Additional Obligations, and the Installment Payments shall not be used for any other purpose while any of the Certificates or Additional Obligations remain Outstanding, (2) all of its rights upon the occurrence of an Event of Default under the Trust Agreement, and (3) all of its rights pursuant to the Installment Purchase Agreement upon the occurrence of an event of default thereunder. The Corporation shall not have any right, title or interest, in or to the Installment Payments. These pledges shall constitute a first and exclusive lien on the funds established under the Trust Agreement and the Installment Payments in accordance with the terms of the Trust Agreement subject in all events to the power of the City to cause the execution and delivery of Additional Obligations pursuant to the Trust Agreement which shall be on a parity with the Certificates and any Additional Obligations Outstanding.

(b) All Installment Payments shall be paid directly by the City to the Trustee, and if received by the Corporation at any time shall be deposited by the Corporation with the Trustee within one Business Day after the receipt thereof. All Installment Payments, if any, shall be deposited by the Trustee in the Payment Fund and all amounts on deposit therein shall be held in trust by the Trustee until all required Installment Payments are paid in full pursuant to the Installment Purchase Agreement or until such date as the Certificates and any Additional Obligations are no longer Outstanding; provided, however, and notwithstanding the foregoing, if the Trustee receives an Installment Payment amount in excess of the amount necessary to pay the amount due and owing on the next Interest Payment Date, Principal Payment Date or Mandatory Sinking Account Payment Date, as the case may be, after giving effect to the funds then on deposit in the Payment Fund not needed for any other purpose under the Trust Agreement, and if the amount then in the Reserve Fund is at least equal to the Reserve Requirement and there exists no Event of Default under the Trust Agreement, then amounts in the Payment Fund not needed to make such payments may be utilized by the Trustee, as directed in writing by the City, to make any regular periodic payment due to a provider of a Reserve Fund Credit Facility or a Reserve Fund investment which provides for such payments.

***Deposit of Installment Payments.*** Except as otherwise provided in the provision of the Trust Agreement described in this section, the Trustee shall deposit the amounts in the Payment Fund at the time and in the priority and manner provided below in the following respective funds, each of which the Trustee agrees to maintain until all required Installment Payments are paid in full pursuant to the Installment Purchase Agreement or until such date as the Certificates and any Additional Obligations are no longer Outstanding, and the moneys in each of such funds shall be disbursed only for the purposes and uses described below.

Interest Fund. The Trustee, on each Interest Payment Date, shall deposit in the Interest Fund a sufficient amount of money such that the aggregate of amounts therein equal the portion of the Installment Payments designated as the interest component coming due on such Interest Payment Date. Moneys in the Interest Fund shall be used and withdrawn by the Trustee for the purpose of paying the interest represented by the Certificates and any Additional Obligations when due and payable.

Principal Fund. The Trustee, on each Principal Payment Date and Mandatory Sinking Account Payment Date, shall deposit in the Principal Fund a sufficient amount of money such that the aggregate of amounts therein equal the portion of the Installment Payments designated as the principal component coming due on such Principal Payment Date or Mandatory Sinking Account Payment Date. Moneys in the Principal Fund shall be used and withdrawn by the Trustee for the purpose of paying the principal represented by the Certificates and any Additional Obligations when due and payable at maturity or upon earlier prepayment from Mandatory Sinking Account Payments.

Prepayment Fund. The Trustee, on the prepayment date specified in the Written Request of the City filed with the Trustee at the time that any prepaid Installment Payment is paid to the Trustee pursuant to the Installment Purchase Agreement, shall deposit in the Prepayment Fund that amount of moneys representing the portion of the Installment Payments designated as prepaid Installment Payments. Moneys in the Prepayment Fund shall be used and withdrawn by the Trustee for the purpose of paying the principal, premium, if any, and interest represented by the Certificates and any Additional Obligations to be prepaid.

***Investments.*** (a) Any moneys held by the Trustee in the funds and accounts established under the Trust Agreement shall be invested by the Trustee upon the Written Request of the City only in Permitted Investments; provided that amounts invested in the Reserve Fund shall not be invested in Permitted Investments set forth in clause (p) of the definition thereof. In the absence of such direction, moneys shall be invested by the Trustee solely in Permitted Investments set forth in clause (j) of the definition thereof. The Trustee shall not be liable or responsible for any loss suffered in connection with any such investment made by it under the terms of and in accordance with the provision of the Trust Agreement described in this section.

(b) The Trustee may sell or present for redemption any obligations so purchased whenever it shall be necessary in order to provide moneys to meet any payment of the funds so invested, and the Trustee shall not be liable or responsible for any losses resulting from any such investment sold or presented for redemption.

(c) Prior to the completion of the Project, any interest, income or profits from the deposits or investments of all funds and accounts (except the Rebate Fund) shall be transferred (semi-annually, on or before each Interest Payment Date), to the Acquisition Fund, except that in accordance with the provisions related to the Reserve Fund, interest, income and profits from the deposits or investments of the Reserve Fund shall be deposited in the Principal Fund so long as amounts on deposit in the Reserve Fund are at least equal to the Reserve Requirement. After completion of the Project, any interest or profits on such investments in all funds and accounts (except the Rebate Account) shall be deposited first in the Reserve Fund to the extent that the amount on deposit therein is less than the Reserve Requirement, then in the Principal Fund, or, if requested by the City, to the Water Utility Fund of the City for any lawful purpose provided such request is accompanied by an Opinion of Counsel to the effect that the intended use of such excess amount shall not have a material adverse effect on the exclusion of interest components of the Certificates from federal income taxes.

(d) For purposes of determining the amount on deposit in any fund or account under the Trust Agreement, including the Reserve Fund, all investments shall be valued annually on each June 30, commencing June 30, 1999 at the amortized cost thereof (exclusive of accrued but unpaid interest, but inclusive of commissions).

**Selected Covenants**

***Observance of Laws and Regulations.*** The Trustee, the City and the Corporation will faithfully comply with, keep, observe and perform all valid and lawful obligations or regulations now or hereafter imposed on them by contract, or prescribed by any law of the United States of America or of the State of California, or by any officer, board or commission having jurisdiction or control, as a condition of the continued enjoyment of each and every franchise, right or privilege now owned or hereafter acquired by them, including their right to exist and carry on their respective businesses, to the end that such franchises, rights and privileges shall be maintained and preserved and shall not become abandoned, forfeited or in any manner impaired.

So long as any Certificates or Additional Obligations are Outstanding, neither the City nor the Corporation will create or suffer to be created any pledge of or lien on the Installment Payments other than as provided or permitted under the Trust Agreement.

***Accounting Records and Statements.*** The Trustee will keep proper accounting records in which complete and correct entries shall be made of all transactions made by it relating to the receipt, deposit and disbursement of the Installment Payments, and such accounting records shall be available for inspection by the City or the Corporation at reasonable hours, under reasonable conditions and with reasonable notice. The Trustee will, upon written request, make copies of the foregoing available to any Owner of at least 5% in aggregate principal amount of Outstanding Certificates and Additional Obligations or his agent duly authorized in writing. The Trustee shall deliver a monthly accounting to the City; provided however, that the Trustee shall not be obligated to report as to any fund or account that (a) has a balance of zero and (b) has not had any activity since the last reporting date.

***Rebate Fund; Tax Covenants.***

(a) In addition to the other funds and accounts created pursuant to the Trust Agreement, the City shall establish and maintain a fund separate from any other fund or account established and maintained under the Trust Agreement designated the "City of San Diego Water System Improvement Project Rebate Fund" (the "Rebate Fund"). There shall be deposited in the Rebate Fund such amounts as are required to be deposited therein pursuant to the Tax Certificate. All money at any time deposited in the Rebate Fund shall be held by the City in trust, to the extent required to satisfy the Rebate Requirement, for payment to the United States of America. Notwithstanding defeasance of the Certificates and the Additional Obligations pursuant to the Trust Agreement or anything to the contrary contained in the Trust Agreement, all amounts required to be deposited into or on deposit in the Rebate Fund shall be governed exclusively by the provisions of the Trust Agreement described in this section and by the

Tax Certificate. The Trustee shall have no duty or obligation to monitor the compliance by the City with the requirements of the Tax Certificate.

(b) Any funds remaining in the Rebate Fund after payment in full of all of the Certificates and any Additional Obligations and after payment of any amounts described in this section, shall be withdrawn by the City to be used for any lawful purpose.

***Continuing Disclosure.*** The City covenants and agrees that it will comply with and carry out all of the provisions of the Continuing Disclosure Agreement. Notwithstanding any other provision of the Trust Agreement, failure of the City or the Dissemination Agent to comply with the Continuing Disclosure Agreement shall not be considered an Event of Default; however, the Trustee may (and shall, at the request of the Purchaser or the Owners of at least 25% aggregate principal amount of Outstanding Certificates after providing the Trustee security and indemnification satisfactory to it against the costs, expenses and liabilities to be incurred therein or thereby) or any Owner or Beneficial Owner may take such actions as may be necessary and appropriate, including seeking mandate or specific performance by court order, to cause the City or the Dissemination Agent, as the case may be, to comply with its obligations described in this section.

**Default and Limitations of Liability**

***Events of Default.*** The following represented by events shall be Events of Default:

(a) default in the due and punctual payment of the principal represented by or premium on, if any, any Certificate or Additional Obligation when and as the same shall become due and payable, whether at maturity as therein expressed, by proceedings for prepayment, by declaration or otherwise;

(b) default in the due and punctual payment of any installment of interest represented by any Certificate or Additional Obligation when and as such interest installment shall become due and payable;

(c) default by the City in the observance of any of the covenants, agreements or conditions on its part in the Trust Agreement contained, if such default shall have continued for a period of 60 calendar days after written notice thereof, specifying such default and requiring the same to be remedied, shall have been given to the City and the Corporation by the Trustee, or, subject to the provision in the Trust Agreement relating to the right of Insurer to give prior consent in certain instances, to the City, the Corporation and the Trustee by the Owners of not less than 25% in aggregate principal amount of the Certificates and Additional Obligations at the time Outstanding; provided, however, that if such default can be remedied but not within such 60-day period and if the City has taken all action reasonably possible to remedy such default within such 60-day period, such default shall not become an Event of Default for so long as the City shall diligently proceed to remedy the same in accordance with and subject to any directions or limitations of time reasonably established by the Trustee;

(d) an event of default shall have occurred and be continuing under the Installment Purchase Agreement; or

(e) in determining whether a payment default has occurred or whether a payment on the Certificates has been made under the Trust Agreement, no effect shall be given to payments made under the Bond Insurance Policy.

***Action on Default.*** In each and every such case during the continuance of an Event of Default the Trustee may, and upon the written request of the Owners of not less than 25% in aggregate principal amount of the Certificates and Additional Obligations then Outstanding shall, upon the prior written consent of the Bond Insurer (so long as it is not in default under the Bond Insurance Policy) by notice in writing to the City and the Corporation, declare the principal represented by all Certificates and Additional Obligations then Outstanding and the interest accrued with respect thereto to be due and payable immediately, and upon any such declaration the same shall become due and payable, anything contained in the Trust Agreement or in the Certificates or any Additional Obligations to the contrary notwithstanding. This subsection is subject to the condition that if at any time after the

entire principal represented by the unpaid Certificates and Additional Obligations and the accrued interest with respect thereto shall have been so declared due and payable and before any judgment or decree for the payment of the moneys due shall have been obtained or entered, the City shall deposit with the Trustee a sum sufficient to pay the unpaid principal represented by the Certificates and any Additional Obligations due prior to such declaration and the accrued interest with respect thereto, with interest on such overdue installments at the rate or rates applicable thereto in accordance with their terms, and the reasonable fees and expenses of the Trustee, and any and all other defaults known to the Trustee (other than in the payment the entire principal represented by the unpaid Certificates and Additional Obligations and the accrued interest with respect thereto due and payable solely by reason of such declaration) shall have been made good or cured to the satisfaction of the Trustee or provision deemed by the Trustee to be adequate shall have been made therefor, then and in every such case the Trustee, by written notice to the City and the Corporation, may rescind and annul such declaration and its consequences; but no such rescission and annulment shall extend to or shall affect any subsequent default or shall impair or exhaust any right or power consequent thereon. The Trustee shall provide the Bond Insurer immediate notice of any default in the due and punctual payment of the principal or interest represented by or premium on, if any, any Certificate. The Bond Insurer shall be provided notice of any other default known to the Trustee within 30 days of the Trustee's, the City's or the Corporation's knowledge thereof.

***Other Remedies of the Trustee.*** The Trustee shall have the right:

(a) by mandamus or other action or proceeding or suit at law or in equity to enforce its rights against the City, the Corporation or any director, officer or employee thereof, and to compel the City or the Corporation or any such director, officer or employee to perform or carry out its or his or her duties under law and the agreements and covenants required to be performed by it or him or her contained in the Trust Agreement;

(b) by suit in equity to enjoin any acts or things which are unlawful or violate the rights of the Trustee; or

(c) by suit in equity upon the happening of any default under the Trust Agreement to require the City and the Corporation to account as the trustee of an express trust.

***Non-Waiver.*** (a) A waiver of any default or breach of duty or contract by the Trustee shall not affect any subsequent default or breach of duty or contract or impair any rights or remedies on any such subsequent default or breach of duty or contract. No delay or omission by the Trustee to exercise any right or remedy accruing upon any default or breach of duty or contract shall impair any such right or remedy or shall be construed to be a waiver of any such default or breach of duty or contract or an acquiescence therein, and every right or remedy conferred upon the Trustee by law or by the provisions described under the caption "Default and Limitation of Liability" may be enforced and exercised from time to time and as often the Trustee shall deem expedient.

(b) If any action, proceeding or suit to enforce any right or to exercise any remedy is abandoned or determined adversely to the Trustee or any Owner or Owners, then subject to any adverse determination, the Trustee or such Owner or Owners and the City and the Corporation shall be restored to their former positions, rights and remedies as if such action, proceeding or suit had not been brought or taken.

***Remedies Not Exclusive.*** No remedy in the Trust Agreement conferred upon or reserved to the Trustee is intended to be exclusive of any other remedy, and each such remedy shall be cumulative and shall be in addition to every other remedy given under the Trust Agreement or now or hereafter existing at law or in equity or by statute or otherwise and may be exercised without exhausting and without regard to any other remedy conferred by any law. The assertion or employment of any right or remedy under the Trust Agreement, or otherwise, shall not prevent the concurrent assertion or employment of any other appropriate right or remedy.

***No Liability by the Corporation to the Owners.*** Except as expressly provided in the Trust Agreement, the Corporation shall have no obligation or liability to the Owners with respect to the payment when due of the Installment Payments by the City, or with respect to the performance by the City of the other agreements and covenants required to be performed by it contained in the Installment Purchase Agreement or in the Trust

Agreement, or with respect to the performance by the Trustee of any right or obligation required to be performed by it contained in the Trust Agreement.

***No Liability by the City to the Owners.*** Except for the payment when due of the Installment Payments and the performance of the other agreements and covenants required to be performed by it contained in the Installment Purchase Agreement or in the Trust Agreement, the City shall not have any obligation or liability to the Owners with respect to the Trust Agreement or the preparation, execution, delivery or transfer of the Certificates or Additional Obligations or the disbursement of the Installment Payments by the Trustee to the Owners, or with respect to the performance by the Trustee of any right or obligation required to be performed by it contained in the Trust Agreement.

***No Liability by the Trustee to the Owners.*** Except as expressly provided in the Trust Agreement, the Trustee shall not have any obligation or liability to the Owners with respect to the payment when due of the Installment Payments by the City, or with respect to the performance by the City or the Corporation of the other agreements and covenants required to be performed by them, respectively contained in the Installment Purchase Agreement or in the Trust Agreement.

***Application of Amounts After Default.*** Notwithstanding anything to the contrary contained in the Trust Agreement, after a default by the City, all funds and accounts held by the Trustee and Installment Payments received by the Trustee after a default by the City pursuant to the Installment Purchase Agreement, and all damages or other payments received by the Trustee for the enforcement of any rights and powers of the Trustee under the Installment Purchase Agreement, and, so long as the Bond Insurance Policy is in full force and effect and the Bond Insurer is not in default thereunder, all amounts on deposit with the Treasurer in the Acquisition Fund, shall be deposited into the Payment Fund (including by the Treasurer transferring all money in the Acquisition Fund to the Trustee, together with a Certificate of the City that such amount represents the balance of the funds in the Acquisition Fund) and as soon as practicable thereafter applied:

(a) to the payment of all amounts due the Trustee under the Trust Agreement related to the compensation of the Trustee; and

(b) to the payment of all amounts then due as interest with respect to the Certificates and any Additional Obligations, and thereafter to the payment of all amounts due as principal with respect to the Certificates and any Additional Obligations, in respect of which or for the benefit of which, money has been collected (other than Certificates and any Additional Obligations which have matured or otherwise become payable prior to such Event of Default and money for the payment of which is held by the Trustee), ratably without preference or priority of any kind, according to the amounts due and payable with respect to such Certificates and Additional Obligations.

***Limitation on Suits.*** No Owner of any Certificate or Additional Obligation shall have any right to institute any proceeding, judicial or otherwise, with respect to the Trust Agreement, or for the appointment of a receiver or trustee, or for any other remedy under the Trust Agreement, unless such Owner has previously given written notice to the Trustee of a continuing Event of Default; the Owners of not less than 25% in principal amount of the Outstanding Certificates and Additional Obligations shall have made written request to the Trustee to institute proceedings in respect of such Event of Default in its own name as Trustee under the Trust Agreement; such Owner or Owners have afforded to the Trustee indemnity reasonably satisfactory to the Trustee against the costs, expenses and liabilities to be incurred in compliance with such request; the Trustee for 60 calendar days after its receipt of such notice, request and offer of indemnity has failed to institute any such proceedings; and no direction inconsistent with such written request has been given to the Trustee during such 60-day period by the Owners of a majority in principal amount of the Outstanding Certificates and Additional Obligations, and the consent of the Insurer has been obtained it being understood and intended that no one or more Owners of Certificates and Additional Obligations shall have any right in any manner whatever by virtue of, or by availing of, any provision of the Trust Agreement to affect, disturb or prejudice the rights of any other Owner of Certificates or Additional Obligations, or to obtain or seek to obtain priority or preference over any other Owner or to enforce any right under the Trust Agreement, except in the manner provided in the Trust Agreement and for the equal and ratable benefit of all the Owners of Certificates and Additional Obligations. Nothing in the Trust Agreement contained shall,

however, affect or impair the right of any Owner to enforce the payment of the principal component of or the prepayment price of and the interest component of the Installment Payments represented by any Certificate or Additional Obligation at and after the maturity or earlier prepayment.

***Bond Insurer as Party In Interest.*** The Bond Insurer is included as a party in interest under the Trust Agreement, and as a party entitled to (i) give notice to the City, the Trustee, or any applicable receiver of the occurrence of an Event of Default with respect to the Certificates but shall not have any right to institute any proceeding, judicial or otherwise, with respect to the Trust Agreement, or for the appointment of a receiver or trustee, or for any other remedy under the Trust Agreement, and (ii) request the Trustee or such receiver to intervene in judicial proceedings that affect the Certificates or the security therefor. For all purposes of the Trust Agreement, except the giving of notice of default to Owners of Certificates, the Bond Insurer shall be deemed to be the sole holder of the Certificates it has insured for so long as it has not failed to comply with its payment obligations under the Bond Insurance Policy.

**The Trustee**

***Employment of the Trustee.*** Pursuant to the Trust Agreement, the Trustee accepts the rights and obligations of the Trustee provided therein. In case an Event of Default has occurred and is continuing, the Trustee shall exercise such of the rights and powers vested by it by the Trust Agreement and use the same degree of care and skill in its exercise as a prudent person would exercise or use under the circumstances in the conduct of his own affairs.

***Duties, Removal and Resignation of the Trustee.*** (a) The City and the Corporation may, by an instrument in writing, remove the Trustee initially a party to the Trust Agreement and any successor thereto unless an Event of Default shall have occurred and then be continuing, and shall remove the Trustee initially a party to the Trust Agreement and any successor thereto if at any time requested to do so by an instrument or concurrent instruments in writing signed by the Owners of a majority in aggregate principal amount represented by the Certificates and Additional Obligations at the time Outstanding (or their attorneys duly authorized in writing) or the Insurer and shall appoint a successor Trustee, with the prior written approval of the Insurer, but any such successor Trustee shall be a bank with trust powers or trust company doing business and having a principal corporate trust office in California or New York, having (or if such bank or trust company is a member of a bank holding company system, its bank holding company has) a combined capital (exclusive of borrowed capital) and surplus of at least fifty million dollars ($50,000,000) and subject to supervision or examination by federal or state authorities. If such bank or trust company publishes a report of condition at least annually, pursuant to law or to the requirements of any supervising or examining authority above referred to, then for the purposes of this section the combined capital and surplus of such bank or trust company shall be deemed to be its combined capital and surplus as set forth in its most recent report of condition so published.

(b) The Trustee may at any time resign by giving written notice of such resignation to the City and the Corporation. Upon receiving such notice of resignation, the City and the Corporation shall promptly appoint a successor Trustee by an instrument in writing; provided, however, that in the event the City and the Corporation do not appoint a successor Trustee within 30 days following receipt of such notice of resignation, the resigning Trustee may, at the expense of the City, petition the appropriate court having jurisdiction to appoint a successor Trustee. Any resignation or removal of a Trustee and appointment of a successor Trustee shall become effective only upon acceptance of appointment by the successor Trustee.

**Amendment of or Supplement to Trust Agreement**

***Amendment or Supplement.*** (a) The Trust Agreement and the rights and obligations of the City, the Corporation, the Owners and the Trustee under the Trust Agreement may be amended or supplemented at any time by an amendment of the Trust Agreement or supplement to the Trust Agreement which shall become binding when the written consents of the Owners of a majority in aggregate principal amount of the Certificates and Additional Obligations then Outstanding, exclusive of Certificates and Additional Obligations disqualified because they are being owned or held for the account of the City (but not including Certificates and Additional Obligations held in

any pension or retirement fund of the City), are filed with the Trustee. No such amendment or supplement shall (1) extend the Principal Payment Date of any Certificate or Additional Obligation or reduce the rate of interest represented thereby or extend the time of payment of such interest or reduce the amount of principal represented thereby or reduce the amount of any Mandatory Sinking Account Payment without the prior written consent of the Owner of each Certificate and Additional Obligation so affected, or (2) reduce the percentage of Owners whose consent is required for the execution of any amendment of the Trust Agreement or supplement to the Trust Agreement without the prior written consent of the Owners of all Certificates or Additional Obligations then Outstanding, or (3) modify any of the rights or obligations of the Trustee without its prior written consent thereto, or (4) amend the provision described in this section without the prior written consent of the Owners of all Certificates or Additional Obligations then Outstanding.

(b) The Trust Agreement and the rights and obligations of the City, the Corporation, the Owners and the Trustee under the Trust Agreement may also be amended or supplemented at any time by an amendment of the Trust Agreement or supplement to the Trust Agreement, which shall become binding upon execution, but without the written consents of any Owners, but only to the extent permitted by law and after receipt of an unqualified approving Opinion of Counsel and only for any one or more of the following purposes:

(1) to add to the agreements, conditions, covenants and terms required to be observed or performed in the Trust Agreement by the City or the Corporation, or to surrender any right or power reserved in the Trust Agreement to or conferred in the Trust Agreement on the City or the Corporation, and which in either case shall not materially adversely affect the interests of the Owners; or

(2) to make such provisions for the purpose of curing any ambiguity or of correcting, curing or supplementing any defective provision contained in the Trust Agreement or in regard to questions arising under the Trust Agreement which the City or the Corporation may deem desirable or necessary and not inconsistent with the Trust Agreement, and which shall not materially adversely affect the interests of the Owners; or

(3) to provide for the execution and delivery of Additional Obligations in accordance with the Trust Agreement; or

(4) for any other reason, provided such amendment or supplement does not materially adversely affect the interests of the Owners, provided further that the City, the Corporation and the Trustee may rely in entering into any such amendment or supplement upon an Opinion of Counsel stating that the requirements of this subsection (4) have been met with respect to such amendment or supplement.

(c) Any amendment or supplement to the Trust Agreement or the Installment Purchase Agreement (other than amendments or supplements executed and delivered in connection with the issuance of additional Obligations pursuant to the Installment Purchase Agreement) shall be subject to the prior written consent of the Bond Insurer, which consent shall not be unreasonably withheld, and notice to the Rating Agencies, together with a copy of any proposed amendment or supplement, at least 15 days in advance of the execution of any such amendment or supplement. The Bond Insurer shall be provided with a full transcript of all proceedings relating to the execution of any such amendment or supplement.

***Disqualified Certificates.*** Certificates and Additional Obligations owned or held by or for the account of the City (but excluding Certificates and Additional Obligations held in any pension or retirement fund of the City) shall not be deemed Outstanding for the purpose of any consent or other action or any calculation of Outstanding Certificates and Additional Obligations under the provisions described under the caption "Amendment of or Supplement to Trust Agreement", and shall not be entitled to consent to or take any other action provided in the same, and the Trustee may adopt appropriate regulations to require each Owner, before his consent provided for in the Trust Agreement shall be deemed effective, to reveal if the Certificates and Additional Obligations as to which such consent is given are disqualified as provided in this section.

***Endorsement or Replacement of Certificates After Amendment or Supplement.*** After the effective date of any action taken as hereinabove described under the caption "Amendment of or Supplement to Trust Agreement", the Trustee may determine that the Certificates and Additional Obligations may bear a notation by endorsement in form approved by the Trustee as to such action, and in that case upon demand of the Owner of any Outstanding Certificate or Additional Obligation and presentation of such Certificate or Additional Obligation for such purpose at the Principal Corporate Trust Office of the Trustee a suitable notation as to such action shall be made on such Certificate or Additional Obligation. If the Trustee shall receive an Opinion of Counsel advising that new Certificates or Additional Obligations modified to conform to such action are necessary, modified Certificates or Additional Obligations shall be prepared, and in that case upon demand of the Owner of any Outstanding Certificates or Additional Obligations such new Certificates or Additional Obligations shall be exchanged at the Principal Corporate Trust Office of the Trustee, without cost to each Owner for Certificates or Additional Obligations then Outstanding upon surrender of such Outstanding Certificates or Additional Obligations.

***Amendment by Mutual Consent.*** The provisions described in the Trust Agreement under the caption "Amendment of or Supplement to Trust Agreement" shall not prevent any Owner from accepting any amendment as to the particular Certificates or Additional Obligations owned by him, provided that due notation thereof is made on such Certificates or Additional Obligations.

**Defeasance**

***Discharge of Certificates and Trust Agreement.*** (a) If the Trustee shall pay or cause to be paid or there shall otherwise be paid to the Owners of all Outstanding Certificates and Additional Obligations the interest and principal represented thereby at the times and in the manner stipulated in the Trust Agreement and therein, then such Owners shall cease to be entitled to the pledge of and lien on the Installment Payments as provided in the Trust Agreement, and all agreements and covenants of the City, the Corporation and the Trustee to such Owners under the Trust Agreement shall thereupon cease, terminate and become void and shall be discharged and satisfied.

(b) Any Outstanding Certificates or Additional Obligations shall, prior to the maturity or redemption date thereof, be deemed to have been paid within the meaning and with the effect described in this section if: (1) in case said Certificates or Additional Obligations are to be prepaid on any date prior to their maturity, the City shall have given to the Trustee in form satisfactory to the Trustee irrevocable instructions to mail notice of prepayment of such Certificates or Additional Obligations on said prepayment date; (2) there shall have been deposited with the Trustee either moneys in an amount which shall be sufficient, or Defeasance Securities which are not callable or subject to prepayment prior to their respective maturity dates, the principal of and the interest on which when due, and without any reinvestment thereof, will provide moneys which, together with the moneys, if any, deposited with or held by the Trustee at the same time, shall be sufficient (as verified by a report of an independent certified public accountant or other independent financial consultant), to pay when due the principal or prepayment price (if applicable) of, and interest due and to become due on, said Certificates or Additional Obligations on and prior to the prepayment date or maturity date thereof, as the case may be; and (3) in the event any of said Certificates or Additional Obligations are not to be prepaid within the next succeeding 60 days, the City shall have given the Trustee in form satisfactory to the Trustee irrevocable instructions to mail, as soon as practicable a notice to the Owners of such Certificates or Additional Obligations and to the securities depositories and information services specified in the Trust Agreement that the deposit required by (2) above has been made with the Trustee and that said Certificates or Additional Obligations are deemed to have been paid in accordance this section and stating such maturity or prepayment dates upon which moneys are to be available for the payment of the principal or prepayment price (if applicable) of said Certificates or Additional Obligations. Neither the securities nor moneys deposited with the Trustee pursuant to this section nor principal or interest payments on any such securities shall be withdrawn or used for any purpose other than, and shall be held in trust for, the payment of the principal or prepayment price (if applicable), and interest represented by said Certificates or Additional Obligations; provided that Defeasance Securities deposited with the Trustee pursuant to this section may be sold upon the written request of the City and the proceeds concurrently reinvested in other Defeasance Securities which satisfy the conditions of (2) above provided that the Trustee receives an Opinion of Counsel to the effect that such sale and reinvestment does not adversely affect the exclusion of interest represented by the Certificates and Additional Obligations from federal income taxes, and provided further that any cash received from such principal or interest payments on such

obligations deposited with the Trustee, if not then needed for such purpose, shall, to the extent practicable, and at the direction of the City, be reinvested in Defeasance Securities maturing at times and in amounts, together with the other moneys and payments with respect to securities then held by the Trustee pursuant to this section, sufficient to pay when due the principal or prepayment price (if applicable) represented by, and interest to become due with respect to, said Certificates or Additional Obligations on and prior to such prepayment date or maturity date thereof, as the case may be, and interest earned from such reinvestments shall, upon receipt by the Trustee of a Written Request of the City, be paid over to the City, as received by the Trustee, free and clear of any trust, lien or pledge. Nothing in the provisions of the Trust Agreement described in this section precludes the prepayments of the Certificates under the Trust Agreement.

(c) After the payment or deemed payment of all the interest and principal represented by all Outstanding Certificates and Additional Obligations as provided in this section, the Trustee shall execute and deliver to the Corporation and the City all such instruments as may be necessary or desirable to evidence the discharge and satisfaction of the Trust Agreement, and the Trustee shall pay over or deliver to the City all moneys or securities held by it pursuant to the Trust Agreement which are not required for the payment of the interest and principal represented by such Certificates and Additional Obligations. Notwithstanding the discharge and satisfaction of the Trust Agreement, Owners of Certificates and Additional Obligations shall thereafter be entitled to payments due under the Certificates and Additional Obligations pursuant to the Installment Purchase Agreement, but only from amounts deposited pursuant to the provisions described under paragraph (a) above and from no other source.

***Payments from Credit Support Instruments.*** Provisions under this section shall only apply to Certificates or Additional Obligations for which there is a Credit Support Instrument, which shall provide for the payment of principal of and interest with respect to such Certificates or Additional Obligations.

(a) The rights and obligations of Credit Providers other than the Bond Insurer with respect to the payment of the principal and interest represented by Certificates, shall be governed by the terms of the applicable Credit Support Instrument and any Supplemental Trust Agreement.

(b) So long as the Bond Insurance Policy is in full force and effect and the Bond Insurer is not in default thereunder, the City and the Trustee will comply with the following provisions by which the Bond Insurer will pay any principal or interest payment due and payable with respect to the Certificates and any Additional Obligations insured under its Bond Insurance Policy but for which there are insufficient funds for the payment thereof:

(1) If, on the third day preceding any interest payment date for the Certificates there is not on deposit with the Trustee sufficient moneys available to pay all principal of and interest with respect to the Certificates due on such date, the Trustee shall immediately notify the Bond Insurer and State Street Bank and Trust Company, N.A., New York, New York or its successor as its Fiscal Agent (the "Fiscal Agent") of the amount of such deficiency. If, by said interest payment date, the City has not provided the amount of such deficiency, the Trustee shall simultaneously make available to the Bond Insurer and to the Fiscal Agent the registration books for the Certificates maintained by the Trustee. In addition:

(A) The Trustee shall provide the Bond Insurer with a list of the Bondholders entitled to receive principal or interest payments from the Bond Insurer under the terms of the Bond Insurance Policy and shall make arrangements for the Bond Insurer and its Fiscal Agent (i) to mail checks or drafts to Bondholders entitled to receive full or partial interest payments from the Bond Insurer and (ii) to pay principal of the Certificates surrendered to the Fiscal Agent by the Bondholders entitled to receive full or partial principal payments from the Bond Insurer; and

(B) The Trustee shall, at the time it makes the registration books available to the Bond Insurer pursuant to (A) above, notify Bondholders entitled to receive the payment of principal of or interest with respect to the Certificates from the Bond Insurer (i) as to the fact of such entitlement, (ii) that the Bond Insurer will remit to them all or part of the interest payments coming due subject to the terms of the Bond Insurance Policy, (iii) that, except as provided in

paragraph (2) below, in the event that any Bondholder is entitled to receive full payment of principal from the Bond Insurer, such Bondholder must tender his Certificate with the instrument of transfer in the form provided on the Certificate executed in the name of the Bond Insurer, and (4) that, except as provided in paragraph (2) below, in the event that such Bondholder is entitled to receive partial payment of principal from the Bond Insurer, such Bondholder must tender his Certificate for payment first to the Trustee, which shall note on such Certificate the portion of principal paid by the Trustee, and then, with an acceptable form of assignment executed in the name of the Bond Insurer, to the Fiscal Agent, which will then pay the unpaid portion of principal to the Bondholder subject to the terms of the Bond Insurance Policy.

(2) In the event that the Trustee has notice that any payment of principal of or interest with respect to a Certificate has been recovered from a Bondholder pursuant to the United States Bankruptcy Code by a trustee in bankruptcy in accordance with the final, nonappealable order of a court having competent jurisdiction, the Trustee shall, at the time it provides notice to the Bond Insurer, notify all Bondholders that in the event that any Bondholder's payment is so recovered, such Bondholder will be entitled to payment from the Bond Insurer to the extent of such recovery, and the Trustee shall furnish to the Bond Insurer its records evidencing the payments of principal of and interest with respect to the Certificates which have been made by the Trustee and subsequently recovered from Bondholders, and the dates on which such payments were made.

(3) The Bond Insurer shall, to the extent it makes payment of principal of or interest with respect to the Certificates, become subrogated to the rights of the recipients of such payments in accordance with the terms of the Bond Insurance Policy and, to evidence such subrogation, (A) in the case of subrogation as to claims for past due interest, the Trustee shall note the Bond Insurer's rights as subrogee on the registration books maintained by the Trustee upon receipt from the Bond Insurer of proof of the payment of interest thereon to the Bondholders of such Certificates and (B) in the case of subrogation as to claims for past due principal, the Trustee shall note the Bond Insurer's rights as subrogee on the registration books for the Certificates maintained by the Trustee upon receipt of proof of the payment of principal thereof to the Bondholders of such Certificates. Notwithstanding anything in the Trust Agreement or the Certificates to the contrary, the Trustee shall make payment of such past due interest and past due principal directly to the Bond Insurer to the extent that the Bond Insurer is a subrogee with respect thereto.

(c) Notwithstanding anything in the Trust Agreement to the contrary, in the event that the principal and/or interest due with respect to the Certificates or Additional Obligations shall be paid an Insurer pursuant to a Municipal Bond Insurance Policy, such Certificates or Additional Obligations shall remain Outstanding for all purposes, not be defeased or otherwise satisfied and not be considered paid by the City, and the assignment and pledge of the Payment Fund and the Reserve Fund and all covenants, agreements and other obligations of the City to the Owners of the Certificates and Additional Obligations shall continue to exist and shall run to the benefit of such Insurer, and such Insurer shall be subrogated to the rights of such Owners.

## INSTALLMENT PURCHASE AGREEMENT

The Installment Agreement sets forth certain terms and conditions of the purchase of the Project by the City. Certain provisions of the Installment Purchase Agreement are summarized below. Other provisions are summarized in the Official Statement under the caption "SECURITY FOR THE SERIES 1998 CERTIFICATES." The summary does not purport to be complete or definitive and is qualified in its entirety by reference to the full terms of the Installment Purchase Agreement.

**Selected Definitions**

**"Accountant's Report"** means a report signed by an Independent Certified Public Accountant.

**"Adjusted Debt Service"** means, for any Fiscal Year, Debt Service for such Fiscal Year minus an amount equal to earnings from investments in any Reserve Fund or Reserve Account for such Fiscal Year.

**"Adjusted Net System Revenues"** means, for any Fiscal Year, the Net System Revenues for such Fiscal Year minus an amount equal to earnings from investments in any Reserve Fund or Reserve Account for such Fiscal Year.

**"Authorized City Representative"** means the City Manager of the City or such other officer or employee of the City or other person who has been designated in writing as such representative by the City Manager.

**"Authorizing Ordinance"** means the ordinance pursuant to which the Installment Purchase Agreement was authorized and any additional Ordinance or official authorizing act of the council of the City approving execution and delivery of any Supplement to the Installment Purchase Agreement or any Issuing Instrument.

**"Balloon Indebtedness"** means, with respect to any Series of Obligations twenty-five percent (25%) or more of the principal of which matures on the same date or within a 12-month period (with sinking fund payments on Term Obligations deemed to be payments of matured principal), that portion of such Series of Obligations which matures on such date or within such 12-month period; provided, however, that to constitute Balloon Indebtedness the amount of indebtedness maturing on a single date or over a 12-month period must equal or exceed 150% of the amount of such Series of Obligations which matures during any preceding 12-month period. For purposes of the definition, the principal amount maturing on any date shall be reduced by the amount of such indebtedness which is required, by the documents governing such indebtedness, to be amortized by prepayment or redemption prior to its stated maturity date.

**"Bond Counsel"** means a firm of attorneys which are nationally recognized as experts in the area of municipal finance.

**"Capacity Charge"** means a charge imposed upon a person, firm, corporation or other entity incident to the granting of a permit for a new water connection or due to an increase in water usage by the addition of any type of dwelling, commercial or industrial unit, which charge is based upon an increase in water consumption as measured by equivalent dwelling units, and the proceeds of which are used to construct, improve and expand the Water System to accommodate the additional business of such added dwellings or commercial or industrial units.

**"Components"** means components of the Project specified in a Supplement.

**"Consultant"** means the consultant, consulting firm, engineer, architect, engineering firm, architectural firm, accountant or accounting firm retained by the City to perform acts or carry out the duties provided for such consultant in the Installment Purchase Agreement. Such consultant, consulting firm, engineer, architect, engineering firm or architectural firm shall be nationally recognized within its profession for work of the character required. Such accountants or accounting firm shall be independent certified public accountants licensed to practice in the State of California.

**"Credit Provider"** means any municipal bond insurance company, bank or other financial institution or organization which is performing in all material respects its obligations under any Credit Support arrangements for some or all of the Parity Obligations.

**"Credit Provider Reimbursement Obligations"** means obligations of the City to repay, from Net System Revenues, amounts advanced by a Credit Provider as credit support or liquidity for Parity Obligations, which obligation shall be a Subordinated Obligation.

**"Credit Support Instrument"** means a policy of insurance, a letter of credit, a stand-by purchase agreement, revolving credit agreement or other credit arrangement pursuant to which a Credit Provider provides credit or liquidity support with respect to the payment of interest, principal or the purchase price of any Parity Obligations.

**"Debt Service"** means, except as otherwise provided in the next clause, for any Fiscal Year, the sum of (a) the interest payable during such Fiscal Year on all Outstanding Parity Obligations, assuming that all Outstanding Serial Parity Obligations are retired as scheduled and that all Outstanding Term Parity Obligations are redeemed or paid from sinking fund payments as scheduled (except to the extent that such interest is to be paid from the proceeds of sale of any Parity Obligations), (b) that portion of the principal amount of all Outstanding Serial Parity Obligations maturing on the next succeeding principal payment date which falls in such Fiscal Year (excluding Serial Obligations which at the time of issuance are intended to be paid from the sale of a corresponding amount of Parity Obligations), (c) that portion of the principal amount of all Outstanding Term Parity Obligations required to be redeemed or paid on any redemption date which falls in such Fiscal Year (together with the redemption premiums, if any, thereon); provided that, (1) as to any Balloon Indebtedness, Tender Indebtedness and Variable Rate Indebtedness, interest thereon shall be calculated as provided in the definition of Maximum Annual Debt Service and principal shall be deemed due at the nominal maturity dates thereof; (2) the amount on deposit in a debt service reserve fund on any date of calculation of Debt Service shall be deducted from the amount of principal due at the final maturity of the Parity Obligations for which such debt service reserve fund was established and in each preceding year until such amount is exhausted; (3) the amount of any interest payable on any Parity Obligation for which there exists a Qualified Swap Agreement shall be the net amount payable by the City as provided in paragraph (d) or paragraph (e), as applicable, of the definition of Maximum Annual Debt Service; and (4) the amount of payments on account of Parity Obligations which are redeemed, retired or repaid on the basis of the accreted value due on the scheduled redemption, retirement or repayment date shall be deemed principal payments, and interest that is compounded and paid as part of the accreted value shall be deemed payable on the scheduled redemption, retirement or repayment date but not before.

**"Default Rate"** means the Maximum Rate.

**"Defaulted Obligations"** means Obligations in respect of which an Event of Default has occurred and is continuing.

**"Engineer's Report"** means a report signed by an Independent Engineer.

**"Fiscal Year"** means the period beginning on July 1 of each year and ending on the next succeeding June 30, or any other twelve-month period selected and designated as the official Fiscal Year of the City.

**"Independent Certified Public Accountant"** means any firm of certified public accountants appointed by the City, and each of whom is independent pursuant to the Statement on Auditing Standards No. 1 of the American Institute of Certified Public Accountants.

**"Independent Engineer"** means any registered engineer or firm of registered engineers of national reputation generally recognized to be well qualified in engineering matters relating to water systems, appointed and paid by the City.

**"Installment Payment Date"** means any date on which an Installment Payment is due as specified in or determined pursuant to a Supplement.

**"Installment Payments"** means the Installment Payments scheduled to be paid by the City under and pursuant the Master Installment Purchase Agreement and any Supplement.

**"Installment Payment Obligations"** means Obligations consisting of or which are supported in whole by Installment Payments.

**"Issuing Instrument"** shall mean any indenture, trust agreement or Installment Purchase Agreement including any Supplement under which Obligations are issued or created.

**"Law"** means the Charter and all laws of the State supplemental thereto.

**"Maintenance and Operation Costs of the Water System"** means (a) a Qualified Take or Pay Obligation and (b) the reasonable and necessary costs spent or incurred by the City for maintaining and operating the Water System, calculated in accordance with generally accepted accounting principles, including (among other things) the costs of the purchase, delivery or storage of water, the reasonable expenses of maintenance and repair and other expenses necessary to maintain and preserve the Water System in good repair and working order, and including administrative costs of the City attributable to the Water System, including the Project and the Installment Purchase Agreement, salaries and wages of employees, payments to employees retirement systems (to the extent paid from System Revenues), overhead, taxes (if any), fees of auditors, accountants, attorneys or engineers and insurance premiums, and including all other reasonable and necessary costs of the City or charges required to be paid by it to comply with the terms of the Obligations, including the Installment Purchase Agreement, including any amounts required to be deposited in the Rebate Fund pursuant to the Tax Certificate, and fees and expenses payable to any Credit Provider (other than in repayment of a Credit Provider Reimbursement Obligation), but excluding in all cases (1) depreciation, replacement and obsolescence charges or reserves therefor, (2) amortization of intangibles or other bookkeeping entries of a similar nature, (3) costs of capital additions, replacements, betterments, extensions or improvements to the Water System which under generally accepted accounting principles are chargeable to a capital account or to a reserve for depreciation, (4) charges for the payment of principal and interest on any general obligation bond heretofore or hereafter issued for Water System purposes, (5) charges for the payment of principal and interest on any debt service on account of any obligation on a parity with or subordinate to the Installment Payments, and (6) all payments made pursuant to any Qualified Swap Agreement.

**"Maximum Annual Debt Service"** means, at any point in time, with respect to Parity Obligations then Outstanding, the maximum amount of principal and interest becoming due on the Parity Obligations in the then current or any future Fiscal Year, calculated by the City or by an Independent Certified Public Accountant as provided in the definition and provided to the Trustee. For purposes of calculating Maximum Annual Debt Service, the following assumptions shall be used to calculate the principal and interest becoming due in any Fiscal Year:

(a) in determining the principal amount due in each year, payments shall (except to the extent a different subsection of the definition applies for purposes of determining principal maturities or amortization) be assumed to be made in accordance with any amortization schedule established for such debt, including the amount of any Parity Obligations which are or have the characteristics of commercial paper and which are not intended at the time of issuance to be retired from the sale of a corresponding amount of Parity Obligations, and including any scheduled mandatory redemption or prepayment of Parity Obligations on the basis of accreted value due upon such redemption or prepayment, and for such purpose, the redemption payment or prepayment shall be deemed a principal payment; provided, however, that with respect to Parity Obligations which are or have the characteristics of commercial paper and which are intended at the time of issuance to be retired from the sale of a corresponding amount of Parity Obligations, and which would not constitute Balloon Indebtedness, each maturity thereof shall be treated as if it were to be amortized in substantially equal installments of principal and interest over a term of 30 years commencing in the year of such stated maturity; in determining the interest due in each year, interest payable at a fixed rate shall (except to the extent subsection (b) or (c) of the definition applies) be assumed to be made at such fixed rate and on the required payment dates;

(b) if all or any portion or portions of an Outstanding Series of Parity Obligations constitutes Balloon Indebtedness or if all or any portion or portions of a Series of Parity Obligations or such payments then proposed to be issued would constitute Balloon Indebtedness, then, for purposes of determining Maximum Annual Debt Service, each maturity which constitutes Balloon Indebtedness shall be treated as if it were to be amortized in substantially equal annual installments of principal and interest over a term of 30 years commencing in the year the stated maturity of such Balloon Indebtedness occurs, the interest rate used for such computation shall be determined as provided in (d) or (e) below, as appropriate, and all payments of principal and interest becoming due prior to the year of the stated maturity of the Balloon Indebtedness shall be treated as described in (a) above;

(c) if any of the Outstanding Series of Parity Obligations constitutes Tender Indebtedness or if Parity Obligations proposed to be issued would constitute Tender Indebtedness, then for purposes of determining Maximum Annual Debt Service, Tender Indebtedness shall be treated as if the principal amount of such Parity Obligations were to be amortized in accordance with the amortization schedule set forth in such Tender

Indebtedness or in the standby purchase or liquidity facility established with respect to such Tender Indebtedness, or if no such amortization schedule is set forth, then such Tender Indebtedness shall be deemed to be amortized in substantially equal annual installments of principal and interest over a term of 30 years commencing in the year in which such Series first subject to tender, the interest rate used for such computation shall be determined as provided in (d) or (e) below, as appropriate;

(d) if any Outstanding Parity Obligations constitute Variable Rate Indebtedness (except to the extent paragraph (b) relating to Balloon Indebtedness or paragraph (c) relating to Tender Indebtedness applies), the interest rate on such Obligation shall be assumed to be 110% of the daily average interest rate on such Parity Obligations during the 12 months ending with the month preceding the date of calculation, or such shorter period that such Parity Obligations shall have been Outstanding; provided that in the event that such Variable Rate Indebtedness has been issued in connection with a Qualified Swap Agreement, the interest rate for purposes of computing Maximum Annual Debt Service shall be determined by (1) calculating the annualized net amount paid by the City under such Variable Rate Indebtedness and Qualified Swap Agreement (after giving effect to payments made under the Variable Rate Indebtedness and made and received by the City under the Qualified Swap Agreement) during the 12 months ending with the month preceding the date of calculation, or such shorter period that such Qualified Swap Agreement has been in effect, and (2) dividing the amount calculated in clause (1) by the average daily balance of the related Parity Obligations Outstanding during the 12-month period contemplated by clause (1);

(e) if Parity Obligations proposed to be issued will be Variable Rate Indebtedness (except to the extent subsection (b) relating to Balloon Indebtedness or subsection (c) relating to Tender Indebtedness applies), then such Parity Obligations shall be assumed to bear interest at 80% of the average of the average Revenue Bond Index during the calendar quarter preceding the calendar quarter in which the calculation is made, or if that index is no longer published, another similar index selected by the City, or if the City fails to select a replacement index, an interest rate equal to 80% of the yield for outstanding United States Treasury bonds having an equivalent maturity, or if there are no such Treasury bonds having such maturities, 100% of the lowest prevailing prime rate of any of the five largest commercial banks in the United States ranked by assets; provided that in the event that such Variable Rate Indebtedness will be issued in connection with a Qualified Swap Agreement, the interest rate for purposes of computing Maximum Annual Debt Service shall be determined by (1) calculating the net amount to be paid by the City under such Variable Rate Indebtedness and Qualified Swap Agreement after giving effect to payments to be made under the Variable Rate Indebtedness and to be made and received by the City under the Qualified Swap Agreement) for the period during which the Qualified Swap Agreement is to be in effect and for the purpose any variable rate of interest agreed to be paid thereunder shall be deemed to be the rate at which the related Parity Obligation shall be assumed to bear interest, and (2) dividing the amount calculated in clause (1) by the average principal amount of the related Parity Obligation to be Outstanding during the first year after the issuance of such Parity Obligation;

(f) if moneys or Permitted Investments have been deposited by the City into a separate fund or account or are otherwise held by the City or by a fiduciary to be used to pay principal and/or interest on specified Parity Obligations, then the principal and/or interest to be paid from such moneys, Permitted Investments or from the earnings thereon shall be disregarded and not included in calculating Maximum Annual Debt Service;

(g) if Parity Obligations are Paired Obligations, the interest thereon shall be the resulting linked rate or effective fixed rate to be paid with respect to such Paired Obligations; and

(h) in the event that an agreement or commitment which, at the time of calculation is a Qualified Swap Agreement is or is to be in effect with respect to a Parity Obligation which is not Variable Rate Indebtedness, the interest rate of such Parity Obligation for purposes of calculating Maximum Annual Debt Service shall be calculated as follows:

(1) for such a Qualified Swap Agreement which is in effect on the date of calculation, the interest rate shall be calculated in the same manner as is specified in paragraph (d) for a Qualified Swap Agreement issued in connection with Variable Rate Indebtedness which is Outstanding on the date of calculation; and

(2) for such a Qualified Swap Agreement which is not in effect on the date of calculation, the interest rate shall be calculated in the same manner as is specified in paragraph (e) for a Qualified Swap Agreement to be issued in connection with Variable Rate Indebtedness to be Outstanding after the date of calculation, and for the purpose any variable rate of interest agreed to be paid thereunder shall be assumed to be the rate assumed for Variable Rate Indebtedness described in paragraph (e).

**"Maximum Rate"** means, on any day, the maximum interest rate allowed by law.

**"Net Proceeds"** means, when used with respect to any insurance, self insurance or condemnation award, the proceeds from such award that are remaining after payment of all expenses (including attorneys' fees) incurred in the collection of such proceeds.

**"Net System Revenues"** means, for any Fiscal Year, the System Revenues for such Fiscal Year less the Maintenance and Operation Costs of the Water System for such Fiscal Year.

**"Obligations"** means (a) obligations of the City for money borrowed (such as bonds, notes or other evidences of indebtedness) or as installment purchase payments under any contract (including Installment Payments), or as lease payments under any financing lease (determined to be such in accordance with generally accepted accounting principles), the principal and interest on which are payable from Net System Revenues; (b) obligations to replenish any debt service reserve funds with respect to such obligations of the City; (c) obligations secured by or payable from any of such obligations of the City; and (d) obligations of the City payable from Net System Revenues under (1) any contract providing for payments based on levels of, or changes in, interest rates, currency exchange rates, stock or other indices, (2) any contract to exchange cash flows or a series of payments, or (3) any contract to hedge payment, currency, rate spread or similar exposure, including but not limited to interest rate swap agreements and interest rate cap agreements.

**"Outstanding,"** when used as of any particular time with respect to Obligations, means all Obligations theretofore or thereupon executed, authenticated and delivered by the City or any trustee or other fiduciary, except (a) Obligations theretofore cancelled or surrendered for cancellation; (b) Obligations paid or deemed to be paid within the meaning of any defeasance provisions thereof; (c) Obligations owned by the City or the Corporation; and (d) Obligations in lieu of or in substitution for which other Obligations have been executed and delivered.

**"Owner"** means any person who shall be the registered owner of any Outstanding Obligation certificate or other evidence of a right to receive Installment Payments directly or as security for payment of the Obligation.

**"Paired Obligations"** shall mean any Series (or portion thereof) of Parity Obligations designated as Paired Obligations in a Supplement or related Issuing Instrument or other document authorizing the issuance or incurrence thereof, which are simultaneously issued or incurred (a) the principal of which is of equal amount maturing and to be redeemed (or cancelled after acquisition thereof) on the same dates and in the same amounts, and (b) the interest rates which, taken together, result in an irrevocably fixed interest rate obligation of the City for the terms of such Paired Obligations.

**"Parity Installment Obligation"** means Obligations consisting of or payable from Installment Payments which are not subordinated in right of payment to other Installment Payments.

**"Parity Obligations"** means (a) Parity Installment Obligations, (b) Obligations the principal and interest of which are payable on a parity with Parity Installment Obligations, (c) Reserve Fund Obligations, and (d) payments due under Qualified Swap Agreements that do not constitute termination or unwinding payments.

**"Paying Agent" or "Paying Agents"** means, with respect to an Installment Payment Obligation or Series of Installment Payment Obligations, the bank, trust company or other financial institution, if any, or other entities designated as the place or entity which shall make payment on such Installment Payment Obligation or a Series of Installment Payment Obligations and/or the interest thereon instead of or in addition to the Treasurer's office.

**"Payment Fund"** means the fund designated in the Issuing Instrument as the fund into which Installment Payments are to be deposited for the purposes of paying principal or interest on related Obligations.

**"Permitted Investments"** means investments which pursuant to an Issuing Instrument are permissible for the investment of funds received from the sale of Obligations pursuant to the Issuing Document or from other funds held pursuant to the Issuing Document.

**"Project"** means the construction, replacement and improvements to the Water System described in the Installment Purchase Agreement and as modified with respect to Components in conformance with the Installment Purchase Agreement.

**"Purchase Price"** means the principal amount plus interest thereon owed by the City to the Corporation under the terms the Installment Purchase Agreement and as specified in a Supplement.

**"Qualified Swap Agreement"** means a contract or agreement, payable from Net System Revenues on a parity with Parity Obligations to the extent provided in the definition of Parity Obligations, intended to place Obligations on the interest rate, currency, cash flow or other basis desired by the City, including, without limitation, any interest rate swap agreement, currency swap agreement, forward payment conversion agreement or futures contract, any contract providing for payments based on levels of, or changes in, interest rates, currency exchange rates, stock or other indices, any contract to exchange cash flows or a series of payments, or any contract, including, without limitation, an interest rate floor or cap, or an option, put or call, to hedge payment, currency, rate, spread or similar exposure, between the City and a counterparty; provided that not less than 30 days prior to the City's execution of such contract or agreement, each Rating Agency which maintains a rating with respect to any Parity Obligation receives notice in writing of the City's pending execution thereof.

**"Qualified Take or Pay Obligation"** means the obligation of the City to make use of any facility, property or services, or some portion of the capacity thereof, or to pay therefor from System Revenues, or both, whether or not such facilities, properties or services are ever made available to the City for use, and there is provided to the City a certificate of the City or of an Independent Engineer to the effect that the incurrence of such obligation will not adversely affect the ability of the City to comply with City's covenant to fix, prescribed and collect rate and charges for the Water Service in the manner prescribed in Master Installment Purchase Agreement.

**"Rebate Requirement"** shall have the meaning specified in any Tax Certificate.

**"Reserve Fund Obligation"** means the obligation of the City to pay amounts advanced under any Reserve Fund Credit Facility entered into in accordance with the provisions of the Trust Agreement or any supplement thereto, which obligation shall be a Parity Obligation.

**"Reserve Fund Credit Facility"** shall mean a letter of credit, line of credit, surety bond, insurance policy or similar facility deposited in the Reserve Fund established under the Trust Agreement in lieu of or in partial substitution for cash or securities on deposit therein.

**"Reserve Requirement"** shall have the meaning given to such term in any Issuing Instrument or Supplement.

**"Serial Obligations"** means Obligations for which no sinking fund payments are provided.

**"Serial Parity Obligations"** means Serial Obligations which are Installment Payments or are payable on a parity with Parity Installment Obligations.

**"Series"** means Obligations issued at the same time or sharing some other common term or characteristic and designated as a separate Series.

**"Subordinated Obligations"** means any Obligations, the payment of principal and interest on which are subordinated in right of payment to Parity Obligations.

**"Supplement"** means a supplement, substantially in the form provided in the Master Installment Purchase Agreement, providing for the payment of specific Installment Payments as the Purchase Price for Components of the Project, executed and delivered by the City and the Corporation.

**"System Revenues"** means all income, rents, rates, fees, charges and other moneys derived from the ownership or operation of the Water System, including, without limiting the generality of the foregoing,

(a) all income, rents, rates, fees, charges, or other moneys derived by the City from the water services or facilities, and commodities or byproducts, including hydro-electric power, sold, furnished or supplied through the facilities of or in the conduct or operation of the business of the Water System, and including, without limitation, investment earnings on the operating reserves to the extent that the use of such earnings is limited to the Water System by or pursuant to law, and earnings on any Reserve Fund for Obligations but only to the extent that such earnings may be utilized under the Issuing Instrument for the payment of debt service for such Obligations;

(b) standby charges and Capacity Charges (which may not be used to pay Maintenance and Operation Costs of the Water System) derived from the services and facilities sold or supplied through the Water System;

(c) the proceeds derived by the City directly or indirectly from the lease of a part of the Water System;

(d) any amount received from the levy or collection of taxes which are solely available and are earmarked for the support of the operation of the Water System;

(e) amounts received under contracts or agreements with governmental or private entities and designated for capital costs for the Water System (which may not be used to pay Maintenance and Operation Costs of the Water System); and

(f) grants for maintenance and operations received from the United States of America or from the State of California; provided, however, that System Revenues shall not include: (1) in all cases, customers' deposits or any other deposits or advances subject to refund until such deposits or advances have become the property of the City; and (2) the proceeds of borrowings.

(g) Notwithstanding the foregoing, there shall be deducted from System Revenues any amounts transferred into a Rate Stabilization Fund as contemplated by the Master Installment Purchase Agreement, and any amounts transferred from current System Revenues to the Secondary Purchase Fund as contemplated by the Master Installment Purchase Agreement, and there shall be added to System Revenues any amounts transferred out of such Rate Stabilization Fund or the Secondary Purchase Fund to pay Maintenance and Operation Costs of the Water System.

**"Tax Certificate"** shall mean any certificate delivered with respect to the maintenance of the tax-exempt status of Tax-Exempt Installment Payment Obligations.

**"Tax-Exempt Installment Payment Obligations"** means Installment Payment Obligations in respect of which it is intended that the interest component thereof will be excluded from gross income pursuant to Section 103 of the Code.

**"Tender Indebtedness"** means any Parity Obligations or portions of Parity Obligations, a feature of which is an option, on the part of the holders thereof, or an obligation, under the terms of such Parity Obligations, to tender all or a portion of such Parity Obligations to the City, a Paying Agent or other fiduciary or agent for payment or purchase and requiring that such Bonds or portions of Bonds or that such rights to payments or portions of payments be purchased if properly presented.

**"Term Parity Obligations"** means Term Obligations which are Parity Installment Obligations or are payable on a parity with Parity Installment Obligations.

**"Term Obligations"** means Obligations which are payable on or before their specified maturity dates from sinking fund payments established for that purpose and calculated to retire such Obligations on or before their specified maturity dates.

**"Trustee"** means a financial institution acting in its capacity as Trustee under and pursuant to the any Issuing Instrument, and its successors and assigns.

**"Variable Rate Indebtedness"** means any portion of indebtedness evidenced by Parity Obligations the interest rate on which is not established at the time of incurrence of such indebtedness and has not, at some subsequent date, been established at a rate which is not subject to fluctuation or subsequent adjustment, excluding Paired Obligations.

**"Water Service"** means the collection, conservation, production, storage, treatment, transmission, furnishing and distribution services made available or provided by the Water System.

**"Water System"** means any and all facilities, properties, improvements and works at any time owned, controlled or operated by the City as part of the public utility system of the City for water purposes, for the development, obtaining, conservation, production, storage, treatment, transmission, furnishing and distribution of water and its other commodities or byproducts for public and private use (whether located within or without the City), and any related or incidental operations designated by the City as part of the Water System, including reclaimed and re-purified water.

**"Water Utility Fund"** means the fund by that name established under the Charter.

**Acquisition and Construction of the Project**

***Acquisition and Construction of the Project; Components.*** (a) The Corporation has agreed to cause the Project to be constructed, acquired and installed by the City, as agent of the Corporation. The City will enter into contracts and provide for, as agent of the Corporation, the complete construction, acquisition and installation of the Project. The City has agreed that it will cause the construction, acquisition and installation of the Project to be diligently performed.

(b) Except to the extent of proceeds of Obligations which are deposited in an Acquisition Fund, the Corporation shall be under no liability of any kind or character whatsoever for the payment of any cost of any Components. In the event the proceeds of Obligations deposited in an Acquisition Fund are insufficient to complete the construction, acquisition and installation of Components, the City shall cause to be deposited in such Acquisition Fund (or shall otherwise appropriate and encumber) from and to the extent of available amounts on deposit in the Water Utility Fund (or other lawfully available moneys) an amount equal to that necessary to complete the construction, acquisition and installation of such Components.

(c) The Corporation will not undertake to cause any component of the Project to be constructed, acquired or installed unless and until the City and the Corporation have entered into a Supplement specifying the Components of the Project to be installed, the date of completion, the purchase price to be paid by the City under the Installment Purchase Agreement for that Component of the Project, and the Installment Payments or the method of calculating Installment Payments.

***Changes to the Project.*** (a) From time to time and at any time, the City may modify or amend the description of the Project, to eliminate any part thereof and/or to substitute another Project or Projects, all without obtaining any consent, by filing an amendment with the Corporation and the Trustee; provided however, that no such amendment shall substitute a Project or Projects which are not to be accounted for as an asset of the Water

Utility Fund or shall in any way impair the obligations of the City contained in any Supplement executed and delivered prior to any such amendment.

(b) The City may substitute other improvements for those listed as Components in any Supplement, but only if the City first files with the Corporation and the Trustee a certificate of an Authorized City Representative, in the form described in the Installment Purchase Agreement.

(c) Substituted Components may include or consist of an undivided interest in such Components, in which event the costs associated with the substituted Components over and above the undivided interest need not be deposited in the Acquisition Fund (or otherwise appropriated and encumbered); provided, however, that the certificate of an Authorized City Representative specifies that the funds necessary to complete the substituted Components are on deposit in the Acquisition Fund or otherwise appropriated and encumbered.

**Installment Payments**

***Purchase Price.*** (a) The City will pay the Purchase Price for any Components being purchased as provided in a Supplement. The Purchase Price to be paid by the City to the Corporation pursuant to any Supplement to the Installment Purchase Agreement, solely from Net System Revenues and from no other sources, is the sum of the principal amount of the City's obligations under such Supplement plus the interest to accrue on the unpaid balance of such principal amount from the effective date thereof over the term thereof, subject to prepayment as provided therein.

(b) The principal amount of the Installment Payments to be made by the City under a Supplement shall be paid at least three Business Days prior to the date such Installment Payments are payable as specified in such Supplement or at such other earlier time or times and in the manner or manners as specified in such Supplement. In the event the principal amount of an Installment Payment is not paid by the date the same is due and payable as specified in such Supplement, the same shall bear interest at the Default Rate, commencing on the day the same as due, to, but not including, the payment date.

(c) The interest to accrue on the unpaid balance of such principal amount shall be paid at least three Business Days prior to the date such interest is payable as specified in a Supplement or at such other earlier time or times as specified in such Supplement, and shall be paid by the City as and constitute interest paid on the principal amount of the City's obligations thereunder. Interest shall be payable in an amount not exceeding the Maximum Rate at the time of incurring such obligation, at such intervals and according to such interest rate formulas as shall be specified in a Supplement or by reference to any Issuing Instrument to which such Supplement relates, and shall be payable with such frequency as shall be specified therein. In the event that interest is not paid by the date such interest is payable, to the extent permitted by applicable law, such interest thereafter bear interest at the Default Rate, commencing on the day the same is due, to, but not including, the payment date.

***Installment Payments; Reserve Fund Payments.*** (a) The City shall, subject to any rights of prepayment provided for in a Supplement, pay to the Corporation, solely from Net System Revenues and from no other sources, the Purchase Price in Installment Payments over a period not to exceed the maximum period permitted by law, all as specified in a Supplement.

(b) In the event that a Trustee notifies the City that the amount on deposit in a Reserve Fund or Reserve Account is less than the Reserve Requirement, the City shall deposit or cause to be deposited, solely from Net System Revenues in accordance with the Installment Purchase Agreement, in such Reserve Fund or Reserve Account such amounts on a monthly basis as are necessary to increase the amount on deposit therein to the Reserve Requirement in the ensuing twelve months.

(c) The obligation of the City to make the Installment Payments solely from Net System Revenues is absolute and unconditional, and until such time as the Purchase Price shall have been paid in full (or provision for the payment thereof shall have been made pursuant to the Installment Purchase Agreement), the City will not discontinue or suspend any Installment Payments required to be made by it under the section when due, whether or

not the Project or any part thereof is operating or operable or has been completed, or its use is suspended, interfered with, reduced or curtailed or terminated in whole or in part, and such Installment Payments shall not be subject to reduction whether by offset or otherwise and shall not be conditioned upon the performance or nonperformance by any party of any agreement for any cause whatsoever.

**System Revenues**

***Commitment of the Net System Revenues.*** All Parity Obligations, including Parity Installment Payment Obligations, shall be secured by a prior lien on and pledge of Net System Revenues, and within such lien priority, such Parity Obligations shall be of equal rank without preference, priority or distinction of any Parity Obligations over any other Parity Obligations. The City has granted such prior lien on and pledge of Net System Revenues to secure Parity Obligations. Such lien and pledge shall constitute a first lien on Net System Revenues. The City represents and states that it has not previously granted any lien or charge on any of the Net System Revenues; provided, however, that out of Net System Revenues there may be apportioned such sums for such purposes as are expressly permitted by the Installment Purchase Agreement.

***Allocation of System Revenues.*** (a) In order to carry out and effectuate the commitment and pledge contained in the Installment Purchase Agreement, the City agrees and covenants that all System Revenues shall be received by the City in trust and shall be deposited when and as received in the Water Utility Fund, which fund the City agrees and covenants to maintain so long as any Installment Payment Obligations or payments due by the City under any Qualified Swap Agreement related thereto remain unpaid, and all moneys in the Water Utility Fund shall be so held in trust and applied and used solely as provided below. The City shall pay from the Water Utility Fund: (1) directly or as otherwise required all Maintenance and Operation Costs of the Water System; (2) to the Trustee, as assignee of the Corporation, for deposit in the Payment Fund for Parity Obligations, including Reserve Fund Obligations, the amounts specified in any Issuing Instrument, as payments due on account of Parity Obligations, other than payments due as Parity Obligations by the City under a Qualified Swap Agreement; and (3) to the counterparty specified in any Qualified Swap Agreement, the amounts or payments due under such Qualified Swap Agreement as Parity Obligations. In the event there are insufficient Net System Revenues to make all of the payments contemplated by clauses (2) and (3) of the immediately preceding sentence, then said payments should be made as nearly as practicable, pro rata, based upon the respective unpaid principal amounts of said Parity Obligations.

(b) After the payments contemplated by subsection (a) above have been made, and in any event not less frequently than January 15 and July 15 of each year, any remaining Net System Revenues shall be used to make up any deficiency in the Reserve Funds and Reserve Accounts for Parity Obligations. Notwithstanding the use of a Credit Facility, as defined in the Trust Agreement, in lieu of depositing funds in the Reserve Fund, as defined in the Trust Agreement, in the event of any draw on the Credit Facility, there shall be deemed a deficiency in the Reserve Fund and any Reserve Account until the amount of the Credit Facility is restored to its pre-draw amount. In the event there are insufficient Net System Revenues to make up all deficiencies in all Reserve Funds and Reserve Accounts for Parity Obligations, such payments into Reserve Funds and Reserve Accounts shall be made as nearly as practicable pro rata based on the respective unpaid principal amount of all Parity Obligations. Any amounts thereafter remaining in the Water Utility Fund may from time to time be used to pay for capital expenditures for the Water System or any other Water System purpose, including payments on account of Subordinated Obligations, provided the following conditions are met:

(1) all Maintenance and Operation Costs of the Water System are being and have been paid and are then current; and

(2) all deposits and payments contemplated by clauses (2) and (3) of paragraph (a) above shall have been made in full and no deficiency in any Reserve Fund or Reserve Account for Parity Obligations shall exist, and there shall have been paid, or segregated within the Water Utility Fund, the amounts payable during the current month pursuant to clauses (2) and (3) of paragraph (a) above.

***Additional Obligations.*** (a) The City may not create any Obligations the payments of which are senior or prior in right to the payment by the City of Parity Obligations.

(1) Without regard to section (c) below, the City may at any time enter into or create an obligation or commitment which is a Reserve Fund Obligation or a Qualified Swap Agreement, provided the Obligation to which the Qualified Swap Agreement relates is a Parity Obligation.

(2) After the initial issuance of Parity Obligations, the City may at any time and from time to time issue or create any other Parity Obligations, provided:

(3) There shall not have occurred and be continuing (A) an Event of Default under the terms of the Installment Purchase Agreement, any Issuing Instrument or any Credit Support Instrument, or (B) an event of default or termination event (as defined in any Qualified Swap Agreement) under any Qualified Swap Agreement; and

(4) The City obtains or provides a certificate or certificates, prepared by the City or at the City's option by a Consultant, showing that:

(A) the Net System Revenues as shown by the books of the City for any 12 consecutive month period within the 18 consecutive months ending immediately prior to the incurring of such additional other Parity Obligations shall have amounted to at least 1.20 times the Maximum Annual Debt Service on all Parity Obligations to be Outstanding immediately after the issuance of the proposed Parity Obligations; or

(B) the estimated Net System Revenues for the five fiscal years following the earlier of (i) the end of the period during which interest on those Parity Obligations is to be capitalized or, if no interest is to be capitalized, the Fiscal Year in which the Parity Obligations are issued, or (ii) the date on which substantially all new facilities financed with such Parity Obligations are expected to commence operations, will be at least equal to 1.20 times the Maximum Annual Debt Service for all Parity Obligations which will be Outstanding immediately after the issuance of the proposed Parity Obligations.

(b) For purposes of the computations to be made as described in subsection (c)(2)(B) above, the determination of Net System Revenues:

(1) may take into account any increases in rates and charges which relate to the Water System and which have been approved by the City Council, and shall take into account any reduction in such rates and charges which have been approved by the City Council, which will, for purposes of the test described in subsection (c)(2)(B), be effective during a Fiscal Year ending within the five-year period for which such estimate is made; and

(2) may take into account an allowance for any estimated increase in such Net System Revenues from any revenue producing additions or improvements to or extensions of the Water System, to be made with the proceeds of such additional indebtedness or with the proceeds of Parity Obligations previously issued, all in an amount equal to the estimated additional average annual Net System Revenues to be derived from such additions, improvements and extensions during the five-year period contemplated by subsection (c)(2)(B), all as shown by such certificate of the City or a Consultant, as applicable; and

(3) for the period contemplated by subsection (c)(2)(B) Maintenance and Operation Costs of the Water System shall initially be deemed to be equal to such costs for the 12 consecutive months immediately prior to incurring such other Parity Obligations for the first year of the five-year period, but adjusted if deemed necessary by the City or a Consultant, as applicable, for any increased Maintenance and Operations Costs of the Water System which are, in the judgment of the City or a Consultant, as applicable,

essential to maintaining and operating the Water System and which will occur during any Fiscal Year ending within the period contemplated by subsection (c)(2)(B).

(c) The certificate or certificates described above in subsection (c)(2)(B) shall not be required if the Parity Obligations being issued are for the purpose of (1) issuing the Parity Obligations initially issued under the Installment Purchase Agreement or (2) refunding (A) any then Outstanding Parity Obligations if at the time of the issuance of such Parity Obligations a certificate of an Authorized City Representative shall be delivered showing that Adjusted Debt Service in each Fiscal Year on all Parity Obligations Outstanding after the issuance of the refunding Parity Obligations will not exceed Adjusted Debt Service in each corresponding Fiscal Year on all Parity Obligations Outstanding prior to the issuance of such Parity Obligations; or (B) then Outstanding Balloon Indebtedness, Tender Indebtedness or Variable Rate Indebtedness, but only to the extent that the principal amount of such indebtedness has been put, tendered to or otherwise purchased by a standby purchase or other liquidity facility relating to such indebtedness.

(d) Without regard to section (c) above, if (1) no Event of Default has occurred and is continuing and (2) no event of default or termination event attributable to an act of or failure to act by the City under any Qualified Swap Agreement or Credit Support Instrument has occurred and is continuing, the City may issue or incur Subordinated Obligations, and such Subordinated Obligations may be paid only in accordance with the provisions of the Installment Purchase Agreement.

**Selected Covenants of the City**

***Compliance With Installment Purchase Agreement And Ancillary Agreements.*** (a) The City will punctually pay Parity Obligations in strict conformity with the terms of the Installment Purchase Agreement and thereof, and will faithfully observe and perform all the agreements, conditions, covenants and terms contained in the Installment Purchase Agreement required to be observed and performed by it, and will not terminate the Installment Purchase Agreement for any cause including, without limiting the generality of the foregoing, any acts or circumstances that may constitute failure of consideration, destruction of or damage to the Project, commercial frustration of purpose, any change in the tax or other laws of the United States of America or of the State of California or any political subdivision of either or any failure of the Corporation to observe or perform any agreement, condition, covenant or term contained in the Installment Purchase Agreement required to be observed and performed by it, whether express or implied, or any duty, liability or obligation arising out of or connected with the Installment Purchase Agreement or the insolvency, or deemed insolvency, or bankruptcy or liquidation of the Corporation or any force majeure, including acts of God, tempest, storm, earthquake, war, rebellion, riot, civil disorder, acts of public enemies, blockade or embargo, strikes, industrial disputes, lock outs, lack of transportation facilities, fire, explosion, or acts or regulations of governmental authorities.

(b) The City will faithfully observe and perform all the agreements, conditions, covenants and terms contained in the Installment Purchase Agreement, including Supplements, and any Issuing Instrument, Credit Support Instrument or Qualified Swap Agreement relating to Parity Obligations required to be observed and performed by it, and it is expressly understood and agreed by and between the parties to the Installment Purchase Agreement that each of the agreements, conditions, covenants and terms contained in the Installment Purchase Agreement and therein is an essential and material term of the purchase of and payment for each Component by the City pursuant to, and in accordance with, and as authorized under the Law.

(c) The City will faithfully observe and perform all of the agreements and covenants of the City contained in each Authorizing Ordinance and will not permit the same to be amended or modified so as to adversely affect the Owners of Installment Payment Obligations or the counterparty to any Qualified Swap Agreement that is in effect.

(d) The City shall be unconditionally and irrevocably obligated, as long as any Installment Payment Obligations remain Outstanding and unpaid, to take all lawful action necessary or required to continue to entitle the City to collect and deposit such System Revenues in the Water Utility Fund for use as provided in the Installment Purchase Agreement; provided, however, such obligation does not, in any way, limit the City's ability to undertake

any and all legal actions, including any appeals, in the defense of a federal court order dictating a water system configuration other than that approved and adopted by the City.

***Against Encumbrances.*** The City will not make any pledge of or place any lien on the Net System Revenues except as otherwise provided or permitted in the Installment Purchase Agreement.

***Debt Service Reserve Fund.*** The City will maintain or cause to be maintained each Reserve Fund and Reserve Account at the applicable Reserve Requirement. In the event the amount in any such fund or account falls below the applicable Reserve Requirement, the City will replenish such fund or account up to the applicable Reserve Requirement pursuant to the Installment Purchase Agreement.

***Against Sale or Other Disposition of Property.*** (a) The City will not sell, lease or otherwise dispose of the Water System or any part thereof essential to the proper operation of the Water System or to the maintenance of the System Revenues, except as provided in the Installment Purchase Agreement. Further, the City will not, except as otherwise provided in the Installment Purchase Agreement, enter into any agreement or lease which impairs the operation of the Water System or any part thereof necessary to secure adequate Net System Revenues for the payment of the Parity Obligations or which would otherwise impair the rights of the Corporation with respect to the System Revenues or the operation of the Water System.

(b) The City may dispose of any of the works, plant properties, facilities or other parts of the Water System, or any real or personal property comprising a part of the Water System, only upon the approval of the City Council and consistent with one or more of the following:

(1) the City in its discretion may carry out such a disposition if the facilities or property being disposed of are not material to the operation of the Water System, or shall have become unserviceable, inadequate, obsolete or unfit to be used in the operation of the Water System or are no longer necessary, material or useful to the operation of the Water System, and if such disposition will not materially reduce the Net System Revenues and if the proceeds of such disposition are deposited in the Water Utility Fund;

(2) the City in its discretion may carry out such a disposition if the City receives from the acquiror an amount equal to the fair market value of the portion of the Water System disposed of. As used in the subparagraph (2), "fair market value" means the most probable price that the portion being disposed of should bring in a competitive and open market under all conditions requisite to a fair sale, the willing buyer and willing seller each acting prudently and knowledgeably and assuming that the price is not affected by coercion or undue stimulus. The proceeds of the disposition shall be used (A) to promptly redeem, or irrevocably set aside for the redemption of, Parity Obligations, and/or (B) to provide for a part of the cost of additions to and betterments and extensions of the Water System; provided, however, that before any such disposition under the subparagraph (2), the City must obtain (i) a certificate of an Independent Engineer to the effect that upon such disposition and the use of the proceeds of the disposition as proposed by the City, the remaining portion of the Water System will retain its operational integrity and the Net System Revenues will be at least equal to 1.20 times the Adjusted Debt Service on all Outstanding Parity Obligations during the five fiscal years following the Fiscal Year in which the disposition is to occur, taking into account (aa) the reduction in revenue resulting from the disposition, (bb) the use of any proceeds of the disposition for the redemption of Parity Obligations, (cc) the Independent Engineer's estimate of revenue from customers anticipated to be served by any additions to and betterments and extensions of the Water System financed in part by the proceeds of the disposition, and (dd) any other adjustment permitted in the preparation of a certificate under Installment Purchase Agreement, and (ii) confirmation from the Rating Agencies to the effect that the rating then in effect on any Outstanding Parity Obligations will not be reduced or withdrawn upon such disposition.

(c) The City will operate the Water System in an efficient and economical manner, provided that the City may remove from service on a temporary or permanent basis such part or parts of the Water System as the City shall determine, so long as (a) Net System Revenues are equal to 120% of Adjusted Debt Service for the then

current Fiscal Year, after giving effect to any defeasance of Parity Obligations occurring incident to such removal, and for each Fiscal Year thereafter to and including the Fiscal Year during which the last Installment Payment is due, after giving effect to such defeasance, as evidenced by (1) an Engineer's Report on file with the City, or (2) a Certificate of the City, if the value of the parts of the Water System to be so removed, as shown in the most recently published financial statements of the Water Utility Fund for which there is an accountant's report, is less than 5% of the total Water System Plant assets, as shown on such financial statements, and (b) the City shall have filed with the Trustee an opinion of Bond Counsel to the effect that the removal of such part or parts of the Water System will not adversely affect the exclusion from gross income for federal income tax purposes of the interest on Tax-Exempt Installment Payment Obligations.

***Prompt Acquisition and Construction.*** The City will take all necessary and appropriate steps to construct, acquire and install the Project, as agent of the Corporation, with all practicable dispatch and in an expeditious manner and in conformity with law so as to complete the same as soon as possible.

***Maintenance and Operation of the Water System; Budgets.*** The City will maintain and preserve the Water System in good repair and working order at all times and will operate the Water System in an efficient and economical manner and will pay all Maintenance and Operation Costs of the Water System as they become due and payable. The City will adopt and make available to the Corporation, on or before the effective date of the Installment Purchase Agreement, a budget approved by the City Council of the City setting forth the estimated Maintenance and Operation Costs of the Water System for the period from such date until the close of the then current Fiscal Year. On or before August 1, of each Fiscal Year, the City will adopt, and on or before 120 days after the beginning of the Fiscal Year, make available to the Corporation a budget approved by the City Council of the City setting forth the estimated Maintenance and Operation Costs of the Water System for such Fiscal Year. Any budget may be amended at any time during any Fiscal Year and such amended budget shall be filed by the City with the Corporation.

***Amount of Rates and Charges; Rate Stabilization Fund; Other Funds.*** The City will fix, prescribe and collect rates and charges for the Water Service which will be at least sufficient (1) to pay all Obligations (other than Parity Obligations), and (2) to yield during each Fiscal Year Adjusted Net System Revenues equal to 120% of the Adjusted Debt Service for such Fiscal Year. The City may make adjustments from time to time in such rates and charges and may make such classification thereof as it deems necessary, but shall not reduce the rates and charges then in effect unless the Net System Revenues from such reduced rates and charges will at all times be sufficient to meet the requirements of the paragraph.

***Payment of Claims.*** The City will pay and discharge any and all lawful claims for labor, materials or supplies which, if unpaid, might become a lien on the System Revenues or any part thereof or on any funds in the hands of the City or the Trustee might impair the security of the Installment Payments, but the City shall not be required to pay such claims if the validity thereof shall be contested in good faith.

***Compliance with Contracts.*** The City will comply with, keep, observe and perform all agreements, conditions, covenants and terms, express or implied, required to be performed by it contained in all contracts for the use of the Water System and all other contracts affecting or involving the Water System to the extent that the City is a party thereto.

***Insurance.*** (a) The City will procure and maintain or cause to be procured and maintained insurance on the Water System with responsible insurers, in such amounts and against such risks (including accident to or destruction of the Water System) as are usually covered in connection with water systems similar to the Water System, or it will self-insure or participate in an insurance pool or pools with reserves adequate, in the reasonable judgment of the City, to protect the Water System against loss. In the event of any damage to or destruction of the Water System caused by the perils covered by such insurance or self insurance, the Net Proceeds thereof shall be applied to the reconstruction, repair or replacement of the damaged or destroyed portion of the Water System. The City shall begin such reconstruction, repair or replacement promptly after such damage or destruction shall occur, and shall continue and properly complete such reconstruction, repair or replacement as expeditiously as possible, and shall pay out of such Net Proceeds all costs and expenses in connection with such reconstruction, repair or

replacement so that the same shall be completed and the Water System shall be free and clear of all claims and liens unless the City determines that such property or facility is not necessary to the efficient or proper operation of the Water System and therefore determines not to reconstruct, repair or replace such project or facility. If such Net Proceeds exceed the costs of such reconstruction, repair or replacement, then the excess Net Proceeds shall be deposited in the Water Utility Fund and be available for other proper uses of funds deposited in the Water Utility Fund.

(b) The City will procure and maintain such other insurance which it shall deem advisable or necessary to protect its interests and the interests of the Corporation, which insurance shall afford protection in such amounts and against such risks as are usually covered in connection with water systems similar to the Water System; provided that any such insurance may be maintained under a self-insurance program so long as such self-insurance is maintained in the amounts and in the manner usually maintained in connection with water systems similar to the Water System.

(c) All policies of insurance required to be maintained in the Installment Purchase Agreement shall, to extent reasonably obtainable, provide that the Corporation and the Trustee shall be given 30 days' written notice of any intended cancellation thereof or reduction of coverage provided thereby. The City shall certify to the Corporation and Trustee annually on or before August 31 that it is in compliance with the insurance requirements under the Installment Purchase Agreement.

***Accounting Records; Financial Statements and Other Reports.*** (a) The City will keep appropriate accounting records in which complete and correct entries shall be made of all transactions relating to the Water System, which records shall be available for inspection by the Corporation and the Trustee at reasonable hours and under reasonable conditions.

(b) The City will prepare and file with the Corporation and the Trustee annually (commencing with the Fiscal Year ending June 30, 1998), within 270 days of the close of each Fiscal Year, financial statements of the Water Utility Fund for the preceding Fiscal Year prepared in accordance with generally accepted accounting principles, together with an Accountant's Report thereon.

(c) The City will furnish a copy of the financial statements referred to in subsection (b) above to any Owner of the Certificates requesting a copy thereof.

***Payment of Taxes and Compliance with Governmental Regulations.*** The City will pay and discharge all taxes, assessments and other governmental charges which may hereafter be lawfully imposed upon the Water System or any part thereof or upon the System Revenues when the same shall become due, except that the City may contest in good faith any taxes, assessments and other governmental charges so long as the City shall have budgeted for the amount being contested and, if appropriate, such amount shall have been included as a Maintenance and Operation Cost of the Water System. The City will duly observe and conform with all valid regulations and requirements of any governmental authority relative to the operation of the Water System or any part thereof, but the City shall not be required to comply with any regulations or requirements so long as the validity or application thereof shall be contested in good faith.

***Collection of Rates and Charges; No Free Service.*** The City will have in effect at all times rules and regulations for the payment of bills for Water Service. Such regulations may provide that where the City furnishes water to the property receiving Water Service, the Water Service charges shall be collected together with the water rates upon the same bill providing for a due date and a delinquency date for each bill. In each case where such bill remains unpaid in whole or in part after it becomes delinquent, the City may disconnect such premises from the water service, and such premises shall not thereafter be reconnected to the water service except in accordance with City operating rules and regulations governing such situations of delinquency. To the extent permitted by law, the City will not permit any part of the Water System or any facility thereof to be used or taken advantage of free of charge by any authority, firm or person, or by any public agency (including the United States of America, the State of California and any city, county, district, political subdivision, public authority or agency thereof).

***Eminent Domain Proceeds.*** If all or any part of the Water System shall be taken by eminent domain proceedings, then subject to the provisions of any Authorizing Ordinance, the Net Proceeds thereof shall be applied to the replacement of the property or facilities so taken, unless the City determines that such property or facility is not necessary to the efficient or proper operation of the Water System and therefore determines not to replace such property or facilities. Any Net Proceeds of such award not applied to replacement or remaining after such work has been completed shall be deposited in the Water Utility Fund and be available for other proper uses of funds deposited in the Water Utility Fund.

***Tax Covenants.*** There shall be included in each Supplement relating to Tax-Exempt Installment Payment Obligations such covenants as are deemed necessary or appropriate by Bond Counsel for the purpose of assuring that interest on such Installment Payment Obligations shall be excluded from gross income under Section 103 of the Code.

***Subcontracting.*** Nothing in the Installment Purchase Agreement to the contrary shall prevent the City from delegating the power to be an operator of some or all of the Water System, even though the City continues to retain ownership of the Water System and its operations, and no such subcontracting arrangement shall relieve the City of any of its obligations under the Installment Purchase Agreement. Prior to the effective date of any such delegation, the City shall deliver to the Trustee an opinion of Bond Counsel to the effect that the proposed delegation will not have an adverse effect on the exclusion from gross income for federal income tax purposes of the interest component of Tax-Exempt Installment Payment Obligations.

**Prepayment of Installment Payments**

Provisions may be made in any Supplement for the prepayment of Installment Payments, in whole or in part, in such multiples and in such order of maturity and from funds of any source, and with such prepayment premiums and other terms as are specified in the Supplement. Said Supplement shall also provide for any notices to be given relating to such prepayment.

**Events of Defaults and Remedies of the Corporation**

***Events of Default and Acceleration of Maturities.*** If one or more of the following Events of Default shall happen, that is to say:

(a) if default shall be made in the due and punctual payment of or on account of any Parity Obligation as the same shall become due and payable;

(b) if default shall be made by the City in the performance of any of the agreements or covenants required in the Installment Purchase Agreement to be performed by it (other than as specified in subsection (a) above), and such default shall have continued for a period of 60 days after the City shall have been given notice in writing of such default by the Corporation or the Trustee;

(c) if any Event of Default specified in any Supplement, Authorizing Ordinance or Issuing Instrument shall have occurred and be continuing; or

(d) if the City shall file a petition or answer seeking arrangement or reorganization under the federal bankruptcy laws or any other applicable law of the United States of America or any state therein, or if a court of competent jurisdiction shall approve a petition filed with or without the consent of the City seeking arrangement or reorganization under the federal bankruptcy laws or any other applicable law of the United States of America or any state therein, or if under the provisions of any other law for the relief or aid of debtors any court of competent jurisdiction shall assume custody or control of the City or of the whole or any substantial part of its property;

then and in each and every such case during the continuance of such Event of Default the Corporation shall upon the written request of the Owners of 25% or more of the aggregate principal amount of all Series of Parity Installment Obligations Outstanding, voting collectively as a single class, by notice in writing to the City, declare

the entire unpaid principal amount thereof and the accrued interest thereon to be due and payable immediately, and upon any such declaration the same shall become immediately due and payable, anything contained in the Installment Purchase Agreement to the contrary notwithstanding; provided, that with respect to a Series of Parity Installment Obligations which is credit enhanced by Credit Support, acceleration shall not be effective unless the declaration is consented to by the related Credit Provider and, provided further, that nothing in the Installment Purchase Agreement shall affect the rights of the parties to a Qualified Swap Agreement to terminate such Qualified Swap Agreement. The subsection, however, is subject to the condition that if at any time after the entire principal amount of all Series of Parity Installment Obligations and the accrued interest thereon shall have been so declared due and payable and before any judgment or decree for the payment of the moneys due shall have been obtained or entered, the City shall deposit with the Corporation a sum sufficient to pay the unpaid principal amount of all such Series of Parity Installment Obligations and the unpaid payments of any other Parity Obligations referred to in clause (a) above due prior to such declaration and the accrued interest thereon, with interest on such overdue installments at the rate or rates applicable thereto in accordance with their terms, and the reasonable expenses of the Corporation, and any and all other defaults known to the Corporation (other than in the payment of the entire principal amount of the unpaid Parity Installment Obligations and the accrued interest thereon due and payable solely by reason of such declaration) shall have been made good or cured to the satisfaction of the Corporation or provision deemed by the Corporation to be adequate shall have been made therefor, then and in every such case the Corporation, by written notice to the City, may rescind and annul such declaration and its consequences; but no such rescission and annulment shall extend to or shall affect any subsequent default or shall impair or exhaust any right or power consequent thereon.

***Application of Net System Revenues Upon Acceleration.*** All Net System Revenues received after the date of the declaration of acceleration by the Corporation as provided in the Installment Purchase Agreement shall be applied in the following order:

(a) First, to the payment of the costs and expenses of the Corporation and the Trustee if any, in carrying out the provisions of the provisions of the Installment Purchase Agreement related to default and remedies thereunder, including reasonable compensation to its accountants and counsel; and

(b) Second, to the payment of the entire principal amount of the unpaid Parity Installment Obligations and the unpaid principal amount of all other Parity Obligations and the accrued interest thereon, with interest on the overdue installments at the rate or rates of interest applicable thereto in accordance with their respective terms. In the event there are insufficient Net System Revenues to pay the entire principal amount and accrued interest on all Parity Obligations, then accrued interest (and payments due to the counterparty to a Qualified Swap Agreement) shall first be paid and any remaining amount shall be paid on account of principal, and in the event there are insufficient Net System Revenues to fully pay either interest or principal in accordance with the foregoing, then payment shall be prorated within a priority based upon the total amounts due in the priority.

**Discharge of Installment Payment Obligations**

***Discharge of Installment Payment Obligations.*** If the City shall pay or cause to be paid or there shall otherwise be paid to the Owners all Outstanding Installment Payment Obligations of a Series the interest thereon and the principal thereof and the redemption premiums, if any, thereon or if all such Outstanding Installment Payment Obligations shall be deemed to have been paid at the times and in the manner stipulated in the applicable Issuing Instrument, then, as to any such Series, all agreements, covenants and other obligations of the City under the Installment Purchase Agreement shall thereupon cease, terminate and become void and be discharged and satisfied, except for the obligation of the City to pay or cause to be paid all sums due under the Installment Purchase Agreement.

**Miscellaneous**

***Liability of City Limited to System Revenues.*** (a) Notwithstanding anything contained in the Installment Purchase Agreement, the City shall not be required to advance any moneys derived from any source of income other than the Net System Revenues and the other funds provided in the Installment Purchase Agreement for the payment

of the Installment Payments or for the performance of any other agreements or covenants required to be performed by it contained in the Installment Purchase Agreement. The City may, however, but in no event shall be obligated to, advance moneys for any such purpose so long as such moneys are derived from a source legally available for such purpose and may be legally used by the City for such purpose.

(b) The obligation of the City to make the Installment Payments is a special obligation of the City payable solely from such Net System Revenues and other funds provided for in the Installment Purchase Agreement, and does not constitute a debt of the City or of the State of California or of any political subdivision thereof within the meaning of any constitutional or statutory debt limitation or restriction.

***Amendments.*** (a) The Installment Purchase Agreement may be amended with respect to a Series of Installment Payment Obligations in writing as may be mutually agreed by the City and the Corporation, with the written consent of any Credit Provider for any Installment Payment Obligations and the Owners of a majority in aggregate principal amount of such Series of Installment Payment Obligations then Outstanding, provided that no such amendment shall (1) extend the payment date of any Installment Payment, or reduce the amount of any Installment Payment without the prior written consent of the Owner of each Obligation so affected; or (2) reduce the percentage of Installment Payment Obligations the consent of the Owners of which is required for the execution of any amendment of the Installment Purchase Agreement without the prior written consent of each of the Owners so affected.

(b) Notwithstanding subsection (a) above, the City agrees that, so long as it shall have any obligations under a Qualified Swap Agreement, it shall not amend or modify, or consent to the amendment or modification of, the Installment Purchase Agreement that would in any way adversely affect (1) the rights of a counterparty to a Qualified Swap Agreement under the Installment Purchase Agreement, or (2) the obligations of the City under the Installment Purchase Agreement to such a counterparty without the prior written consent of such Qualified Swap Provider.

(c) The Installment Purchase Agreement and the rights and obligations of the City and the Corporation under the Installment Purchase Agreement may also be amended or supplemented at any time by an amendment of the Installment Purchase Agreement or supplement to the Installment Purchase Agreement which shall become binding upon execution by the City and the Corporation, without the written consents of any Owner of Installment Payment Obligations or any Credit Provider, but only to the extent permitted by law and only upon receipt of an unqualified opinion of Bond Counsel selected by the City to the effect that such amendment or supplement is permitted by the provisions of the Installment Purchase Agreement and is not inconsistent with the Installment Purchase Agreement and does not adversely affect the exclusion of the interest portion of the Installment Payments received by the Owners from gross income for federal income tax purposes, and only for any one or more of the following purposes:

(1) to add to the covenants and agreements of the Corporation or the City contained in the Installment Purchase Agreement other covenants and agreements thereafter to be observed or to surrender any right or power in reserved in the Installment Purchase Agreement to or conferred upon the Corporation or the City, and which shall not adversely affect the interests of the Owners of the Installment Payment Obligations;

(2) to cure, correct or supplement any ambiguous or defective provision contained in the Installment Purchase Agreement or in regard to questions arising under the Installment Purchase Agreement, as the Corporation or the City may deem necessary or desirable and which shall not adversely affect the interests of the Owners of the Installment Payment Obligations;

(3) to make such other amendments or modifications which shall not materially adversely affect the interests of the Owners of the Installment Payment Obligations; and

(4) to provide for the issuance of Parity Installment Payment Obligations.

*Net Contract.* The Installment Purchase Agreement shall be deemed and construed to be a net contract, and the City shall pay absolutely net during the term of the Installment Payments and all other payments required under the Installment Purchase Agreement, free of any deductions and without abatement, diminution or setoff whatsoever.

## 1998-1 SUPPLEMENT TO MASTER INSTALLMENT PURCHASE AGREEMENT

The 1998-1 Supplement to Master Installment Agreement sets forth certain terms and conditions of the purchase of specified Components of the Project by the City. Certain provisions of the 1998-1 Supplement are summarized below. The summary does not purport to be complete or definitive and is qualified in its entirety by reference to the full terms of the 1998-1 Supplement.

### Selected Definitions

**"Component Obligation Series 1998"** means the Certificates of Undivided Interest (In Installment Payments Payable From Net System Revenues of the Water Utility Fund of the City of San Diego, California) Series 1998.

### Additional Covenants

In addition to the covenants specified in the Agreement, the following additional covenants are added with respect to the Component Obligation Series 1998:

***Additional Covenant relating to Tax Exemption.***

(a) The City will not directly or indirectly use or permit the use of any proceeds of the Component Obligation Series 1998 or any other funds of the City or of the Project or take or omit to take any action that would cause the Component Obligation Series 1998 to be "private activity bonds" within the meaning of Section 141 of the Code, or obligations which are "federally guaranteed" within the meaning of Section 149(b) of the Code.

(b) The City covenants that it will not take any action, or fail to take any action, if any such action or failure to take action would adversely affect the exclusion from gross income of the interest represented by the Component Obligation Series 1998 under Section 103 of the Code. The City will not directly or indirectly use or permit the use of any proceeds of the Component Obligation Series 1998 or any other funds of the City, or take or omit to take any action, that would cause the Component Obligation Series 1998 to be "arbitrage bonds" within the meaning of Section 148(a) of the Code. To that end, the City will comply with all requirements of Section 148 of the Code to the extent applicable to the Component Obligation Series 1998. In the event that at any time the City is of the opinion that for purposes of this section it is necessary to restrict or limit the yield on the investment of any moneys held by the Trustee under the Trust Agreement or otherwise, the City shall so instruct the Trustee in writing, and shall cause the Trustee to take such action as may be necessary in accordance with such instructions.

(c) Without limiting the generality of the foregoing, the City agrees that there shall be paid from time to time all amounts required to be rebated to the United States of America pursuant to Section 148(f) of the Code and any temporary, proposed or final Treasury Regulations as may be applicable to the Component Obligation Series 1998 from time to time. This covenant shall survive payment in full or defeasance of the Component Obligation Series 1998. The City specifically covenants to pay or cause to be paid to the United States of America at the times and in the amounts determined under this section the Rebate Requirement, as described in the Tax Certificate and to otherwise comply with the provisions of the Tax Certificate executed by the City in connection with the execution and delivery of the Component Obligation Series 1998.

(d) Notwithstanding any provision of this section, if the City shall provide to the Trustee an opinion of nationally recognized Bond Counsel to the effect that any action required under this section is no longer required, or to the effect that some further action is required, to maintain the exclusion from gross income of the interest on the Component Obligation Series 1998 pursuant to Section 103 of the Code, the City may rely conclusively on such

opinion in complying with the provisions of the 1998-1 Supplement, and the covenants under the 1998-1 Supplement shall be deemed to be modified to that extent.

# APPENDIX B

## CERTAIN INFORMATION REGARDING THE CITY OF SAN DIEGO AND AREA

## APPENDIX B

## CERTAIN INFORMATION REGARDING THE CITY OF SAN DIEGO AND AREA

***The information and expressions of opinion set forth herein have been obtained from sources believed to be reliable, but such information is not guaranteed as to accuracy or completeness. Statements contained herein which involve estimates, forecasts, or matters of opinion, whether or not expressly so described herein, are intended solely as such and are not to be construed as representations of facts. The information and expressions of opinion herein are subject to change without notice, and neither delivery of this Official Statement nor any sale of the 1998 Certificates made thereafter shall under any circumstances create any implication that there has been no change in the affairs of the City or in any other information contained herein since the date of the Official Statement.***

### INTRODUCTION

With a total population of 1.2 million in 1998 and a land area of 330 square miles, the City of San Diego (the "City") is the sixth largest city in the nation and the second largest city in California. The City is the county seat for the County of San Diego (the "County") and is the County's business and financial center.

The City's population grew by 14% between 1989 and 1998 for an average increase of 16,800 annually. A major factor in the City's growth is its quality of life. In addition to having a favorable climate, the City offers a wide range of cultural and recreational services to both residents and visitors. With mild temperatures year round, the City's numerous beaches, parks, tennis courts, and golf courses are in constant use.

Another factor in the City's growth is an expanding diversified economy. Recent growth has been concentrated in four major areas: high tech manufacturing and research (including electronics, communications equipment, scientific instruments, drugs, and biomedical equipment); professional services; tourism; and international trade. In addition to these expanding industries, the City benefits from a stable economic foundation composed of basic manufacturing (ship building, industrial machinery, television & video equipment, and printing & publishing), public and private higher education, health services, military, and local government.

Expansion in the high tech manufacturing and research component of the City's economic base has been led by the rapid emergence of telecommunications. Major participants in the City's telecommunications industry include manufacturers of personal communications equipment, radio/TV communications equipment, network communications equipment/systems, satellite communications equipment, and military surveillance/guidance systems. The City is the primary location for telecommunications firms in the County, with the Sorrento Valley area emerging as a major center in the development and manufacturing of products using wireless and digital technology.

Another component of the City's high tech industry is the biotechnology sector, which includes companies involved in developing chemical and biological products for use in the treatment and diagnosis of diseases and various medical conditions. As with telecommunications, the biotechnology industry is concentrated in the City, with the highest concentration in the area around the University of California, San Diego. Growth in both biotechnology and other high tech industries has been facilitated by the City's well established research organizations. Among the more important research facilities located in the City are the Scripps Research Institute, the Salk Institute for Biological Studies, and the San Diego Super Computer Center.

The City is also home to a growing software industry. Components within this industry include basic computer programming services, prepackaged software, systems integration services, and development of multimedia products.

## ECONOMIC AND DEMOGRAPHIC INFORMATION

***Data contained under this caption is intended to portray economic, demographic, and business trends within the City. While not constituting direct revenue sources as such, these trends help explain changes in revenue sources such as property taxes, sales taxes, and transient occupancy taxes, which could be impacted by economic conditions.***

### Population

As set forth in Table 1 below, between January 1, 1989 and January 1, 1998, the City's population has increased by 151,600 (or by approximately 16,800 new residents annually in the nine year period).

**Table 1**
**POPULATION GROWTH**
***Calendar Years 1989 through 1998***

| Calendar Year [1] | City of San Diego | Annual Growth Rate | County of San Diego | Annual Growth Rate | State of California | Annual Growth Rate |
|---|---|---|---|---|---|---|
| 1989 | 1,073,200 | 0.0% | 2,388,700 | 3.9% | 29,063,000 | 2.6% |
| 1990 | 1,110,500 | 3.5% | 2,498,000 | 3.3% | 29,760,000 | 2.4% |
| 1991 | 1,126,000 | 1.4% | 2,539,600 | 1.7% | 30,296,000 | 1.8% |
| 1992 | 1,141,300 | 1.4% | 2,583,500 | 1.7% | 30,845,000 | 1.8% |
| 1993 | 1,156,200 | 1.3% | 2,614,200 | 1.2% | 31,303,000 | 1.5% |
| 1994 | 1,163,000 | 0.6% | 2,638,500 | 0.9% | 31,661,000 | 1.1% |
| 1995 | 1,170,200 | 0.6% | 2,658,600 | 0.8% | 31,910,000 | 0.8% |
| 1996 | 1,179,500 | 0.8% | 2,682,100 | 0.9% | 32,223,000 | 1.0% |
| 1997 | 1,199,000 | 1.7% | 2,729,100 | 1.8% | 32,670,000 | 1.4% |
| 1998 | 1,224,800 | 2.2% | 2,794,800 | 2.4% | 33,252,000 | 1.8% |

[1] As of January 1 of the calendar year

Source: State of California, Department of Finance

As indicated in the following table, enrollment in kindergarten through grade 12 in the San Diego Unified School District has continued to grow at a relatively moderate pace during the 1990's.

**Table 2**
**SAN DIEGO UNIFIED SCHOOL DISTRICT**
**ENROLLMENT AND ATTENDANCE**
***School Year 1993-94 through 1997-98***

| School Year | Average Daily Attendance |
|---|---|
| 1993-94 | 123,509 |
| 1994-95 | 124,992 |
| 1995-96 | 127,892 |
| 1996-97 | 130,284 |
| 1997-98 | 132,201 |

Source: San Diego Unified School District, Controller

**Employment Summary**

As seen in Table 3, the City's unemployment rate for calendar year 1997 averaged 4.3% which was down from a 5.4% rate during calendar year 1996. The City's 1997 unemployment rate was below both the national rate of 5.0% and the State rate of 6.3%.

**Table 3**
**ESTIMATED AVERAGE ANNUAL EMPLOYMENT AND UNEMPLOYMENT OF RESIDENT LABOR FORCE**
***Calendar Years 1993 through 1997***

| | 1993 | 1994 | 1995 | 1996 | 1997 |
|---|---|---|---|---|---|
| **Civilian Labor Force City of San Diego** | | | | | |
| Employed | 518,200 | 525,800 | 525,600 | 536,500 | 562,400 |
| Unemployed | 44,100 | 40,500 | 36,500 | 30,600 | 25,400 |
| **Unemployment Rates** | | | | | |
| City | 7.8% | 7.2% | 6.6% | 5.4% | 4.3% |
| County | 7.7 | 7.0 | 6.4 | 5.3 | 4.2 |
| California | 9.2 | 8.6 | 7.8 | 7.2 | 6.3 |
| United States | 6.8 | 6.1 | 5.6 | 5.4 | 5.0 |

Source: State of California Employment Development Department, Labor Market Information Division; U.S. Department of Labor, Bureau of Labor Statistics

Table 4 provides the Employment Development Department's estimates of total annual nonagricultural wage and salary employment by major industry in the County during the period 1993 to 1997. Annual employment information is not regularly compiled by sector for the City alone. As shown, total nonagricultural wage and salary employment in the County increased by 102,100 new jobs during this period.

**Table 4**
**SAN DIEGO COUNTY**
**WAGE AND SALARY EMPLOYMENT**
***Calendar Years 1993 through 1997***

| | 1993 | 1994 | 1995 | 1996 | 1997 |
|---|---|---|---|---|---|
| Mining | 400 | 400 | 300 | 400 | 400 |
| Construction | 39,500 | 40,600 | 43,600 | 45,500 | 52,500 |
| Manufacturing | 117,500 | 114,100 | 114,900 | 117,500 | 122,100 |
| Nondurable Goods | 32,300 | 32,300 | 31,600 | 32,200 | 33,600 |
| Durable Goods | 85,200 | 81,800 | 83,300 | 85,200 | 88,500 |
| Transportation, Communications, Utilities [1] | 35,700 | 36,400 | 37,400 | 38,300 | 41,100 |
| Trade | 225,500 | 227,000 | 229,500 | 235,900 | 241,100 |
| Wholesale | 39,700 | 42,000 | 42,900 | 42,700 | 44,500 |
| Retail | 185,800 | 185,100 | 186,600 | 193,200 | 196,600 |
| Finance, Insurance, Real Estate | 62,200 | 59,100 | 55,800 | 57,400 | 60,900 |
| Services | 287,300 | 296,100 | 310,900 | 321,200 | 338,800 |
| Government | 179,100 | 181,500 | 186,100 | 190,100 | 192,500 |
| Federal | 44,300 | 45,400 | 45,700 | 45,800 | 44,900 |
| State and Local | 134,700 | 136,100 | 140,400 | 144,300 | 147,600 |
| TOTAL NONAGRICULTURAL[2] | 947,200 | 955,300 | 978,600 | 1,006,200 | 1,049,300 |

[1] Includes trucking and transit services, telephone and broadcast/cables services, and gas and electric services
[2] Figures may not add to total due to independent rounding

Source: State of California Employment Development Department

Since the industry employment data referenced above is organized by standard industrial classification codes, employment in the various high tech categories, such as Telecommunications, Biotechnology, and Software may not fall into a single employment sector alone. For example, some categories of firms in Telecommunications appear in Manufacturing, while certain other categories appear in Services.

The following is a discussion of the trends shown in the above Wage and Salary Employment table.

***Manufacturing***. During the early 1990's, manufacturing employment in the County recorded sharp declines, due primarily to the relocation of much of its aerospace industry. After bottoming out in 1994, manufacturing employment recorded consecutive annual increases of approximately 800 and 2,600 in 1995 and 1996, respectively. Manufacturing employment continued to grow in 1997, averaging 122,100 for the year, up by 4,600 jobs from 1996, with gains reported in most major categories, including electronics, industrial machinery and aerospace.

***Construction***. Construction employment in the County grew by approximately 7,000 during 1997, after increasing by approximately 1,900 during 1996.

***Transportation, Communications and Utilities***. The Transportation, Communications and Utilities industry classification recorded a net increase of 2,800 new jobs in the County during 1997. This included a gain of approximately 1,600 in Transportation and 1,300 in Communications, partially offset by a loss of approximately 100 jobs in the Electric and Gas Utilities category.

***Wholesale and Retail Trade***. Combined, the Retail and Wholesale Trade sectors account for 23% of total nonagricultural wage and salary employment during 1997. Wholesale trade added approximately 1,800

jobs in 1997, after a decline of approximately 200 during 1996. Retail trade employment increased by approximately 3,400 in 1997 after increasing by approximately 6,600 in 1996.

***Finance, Insurance and Real Estate.*** Countywide employment in the Finance, Insurance and Real Estate sector increased by approximately 3,500 jobs during 1997, after adding approximately 1,600 jobs during 1996.

***Services.*** Employment in the County's Services sector grew by approximately 17,600 jobs, or 5.5% in 1997, following a gain of 10,300 jobs the previous year. All of the major categories recorded year-to-year gains, led by Business Services (+6,400) and Engineering and Management (+3,100).

Much of the growth in the Engineering and Management category during 1996 and 1997 is related to gains in the Telecommunications and Biotechnology subcategories within this grouping. The strong growth in the Business Services category reflects increases in the Data Services and Software subcategories.

***Government.*** The Government sector, which accounted for 18% of total 1997 nonagricultural wage and salary employment in the County, grew by approximately 2,400 jobs during 1997. This increase occurred in State and local government agencies, with almost all of the increase due to gains in public education. Federal employment was down by 900 jobs during the year.

***Military Employment and Civilian Defense Spending.*** According to the San Diego Chamber of Commerce, the County, with a total military and civilian payroll of $3.7 billion in the federal fiscal year 1996, continued to lead all counties in the nation in terms of combined military and civilian payrolls. Total civilian defense contracts awarded to County-based businesses totaled $2.8 billion during the federal fiscal year 1996, down slightly from $2.9 billion in the previous year. The Department of Defense also spent $1.2 billion on base operation expenses, $1.0 billion on retirement benefits, and another $0.9 billion on various classified contracts, sub contracts, and other contracts of less than $1,000 each. The 1996 total of $9.6 billion represented only a fractional increase over the $9.56 billion reported in 1995. According to the U.S. Department of Commerce's "Consolidated Federal Funds Report," the County ranked third in the nation in the dollar volume of federal expenditures and obligations by the Department of Defense during federal fiscal year 1996, behind only St. Louis, Missouri and Los Angeles, California. In 1995, Los Angeles County and San Diego County were ranked first and second, respectively. The San Diego Chamber of Commerce estimates that as of June 1, 1996, total active duty military personnel in the County totaled 113,140 and the total civilian employment was 22,900.

**Taxable Sales**

According to the California State Board of Equalization, taxable transactions at retail and other outlets in the City during calendar year 1996 totaled approximately $11.3 billion, up 6.9% from 1995, and up 16.9% from 1992. Table 5 provides annual sales information by type of outlet for the period 1992 through 1996.

**Table 5**
**CITY OF SAN DIEGO**
**TAXABLE TRANSACTIONS**
***Calendar Years 1992 through 1996***
***(in thousands)***

| | 1992 | 1993 | 1994 | 1995 | 1996 |
|---|---|---|---|---|---|
| Retail Stores | | | | | |
| Apparel | $ 421,282 | $ 433,780 | $ 447,313 | $ 434,581 | $ 451,984 |
| General Merchandise | 1,024,472 | 1,043,784 | 1,054,734 | 1,074,910 | 1,120,672 |
| Drug | 181,573 | 175,783 | 178,139 | 173,447 | 183,977 |
| Food | 617,011 | 508,069 | 495,380 | 498,605 | 521,014 |
| Packaged Liquor | 76,271 | 68,333 | 61,625 | 61,532 | 62,141 |
| Eating and Drinking | 1,110,814 | 1,119,170 | 1,148,154 | 1,229,823 | 1,307,079 |
| Home Furnishings and Appliances | 329,786 | 346,672 | 405,446 | 447,654 | 492,104 |
| Building Materials and Farm Implements | 426,600 | 441,905 | 426,329 | 441,099 | 469,293 |
| Auto Dealers & Supplies | 839,980 | 902,145 | 958,513 | 1,042,689 | 1,089,331 |
| Service Stations | 608,878 | 610,907 | 607,873 | 604,944 | 672,559 |
| Other | 1,193,881 | 1,266,404 | 1,298,837 | 1,381,085 | 1,492,879 |
| Total Retail Stores | 6,830,548 | 6,916,952 | 7,082,343 | 7,390,369 | 7,863,033 |
| All Other Outlets | 2,823,557 | 2,760,162 | 2,975,794 | 3,167,820 | 3,426,610 |
| Total All Outlets | $ 9,654,105 | $ 9,677,114 | $ 10,058,137 | $ 10,558,189 | $ 11,289,643 |

Source: California State Board of Equalization

**Tourism**

According to the San Diego Chamber of Commerce, the visitor industry is the County's third largest industry in terms of income generation, behind manufacturing and the military.

As shown in Table 6, visitor spending in the County totaled $4.37 billion in 1997, up 26.7% from 1993 and up 7.9% from 1996.

**Table 6**
**SAN DIEGO COUNTY**
**TOTAL VISITOR SPENDING**
***Calendar Years 1993 through 1997***
***(in billions)***

| Calendar Year | Amount |
|---|---|
| 1993 | $ 3.45 |
| 1994 | 3.64 |
| 1995 | 3.80 |
| 1996 | 4.05 |
| 1997 | 4.37 |

Source: San Diego Convention and Visitors Bureau

As shown in Table 7, the transient occupancy tax (TOT) revenues have been exhibiting a strong upward trend since Fiscal Year 1993. The TOT revenues have grown by 67% between Fiscal Year 1993 and Fiscal Year 1997.

**Table 7**
**CITY OF SAN DIEGO**
**TRANSIENT OCCUPANCY TAX[1]**
***Fiscal Years 1993 through 1997[2]***

| Fiscal Year | Amount |
|---|---|
| 1993 | $44,283,382 |
| 1994 | 49,997,305[3] |
| 1995[4] | 57,209,942 |
| 1996 | 64,200,771 |
| 1997 | 74,789,009 |

(1) Includes General Fund portion of TOT (5.5¢ of 10.5¢) and balance (5¢ of 10.5¢) allocated to Special Promotional Programs
(2) Fiscal Year refers to the twelve month period from July 1 of the previous year to June 30 of the referenced year
(3) In the year ended June 30, 1994, the City began accounting for transient occupancy tax revenues on an accrued basis, rather than on a cash basis, as allowable under the National Council on Governmental Accounting (NCGA) Statement No. 1
(4) Rate increase from 9% (9¢ per $1) of hotel room rates to 10.5% (10.5¢ per $1) on August 1, 1994

Source: City of San Diego, Budget and Management Services

As shown in Table 8, contributing to the growth in visitor spending has been growth in convention spending. Estimated direct and indirect spending by both delegates and exhibitors in association with conventions hosted at the San Diego Convention Center totaled $257.3 million in 1997, up 4% from 1996 and up by 61% from 1993.

**Table 8**
**SAN DIEGO CONVENTION CENTER[1]**
***Calendar Years 1993 through 1997***

| Calendar Year | Estimated Spending[2] | Number of Conventions | Total Delegate Attendance |
|---|---|---|---|
| 1993[3] | $160,112,046 | 52 | 236,600 |
| 1994 | 210,435,456 | 48 | 232,600 |
| 1995 | 243,669,716 | 49 | 330,510 |
| 1996 | 247,375,380 | 52 | 285,812 |
| 1997 | 257,276,865 | 59 | 290,802 |

(1) Table includes only the San Diego Convention Center; it does not include other sources of convention activity in the San Diego region
(2) These estimates are based on historical spending patterns since the opening of the Convention Center in 1989
(3) Convention spending was down in 1993 due to the impact of the recession and the rescheduling of several larger conventions to 1992 in order to coincide with the America's Cup in the Spring of 1992

Source: San Diego Convention and Visitors Bureau

The City is the focal point for tourism in the County. The Convention Center, approximately 75% of the County's hotel and motel rooms, and all of the County's major tourist attractions, including the world-renowned San Diego Zoo, the San Diego Wild Animal Park and Sea World, are located in the City. Other attractions located in the City include the Cabrillo National Monument on Point Loma, the historic Gaslamp Quarter in the downtown area, the Old Town State Park, and Balboa Park -- home to the San Diego Zoo and a host of other cultural and recreational activities. According to the San Diego Convention and Visitors Bureau, total attendance at all of these attractions, including museums, totaled 20.5 million during 1997, up 1.7% from 1996.

In addition to the many permanent attractions available to visitors, the City has also been host to a number of major events. The City hosted the America's Cup in 1992 and 1995 and the Super Bowl in January 1998. In addition, the City was the site for the Republican National Convention held in August 1996.

Associated with the growth in tourism has been an increase in traffic through San Diego's Lindbergh Field International Airport. According to the San Diego Unified Port District, in 1997 there were 7.2 million arrivals, up 4.3% from 1996. In January 1998, the San Diego Unified Port District completed a $238 million expansion to the airport. Features of this expansion include an expanded terminal, a new pedestrian bridge, and improved roadways and parking lots.

**International Trade**

The table below is from the International Trade Administration's *Exporter Location Series.* This data is compiled on an f.a.s. (free alongside ship) basis and includes domestic exports and re-exports. The total value of exports from the County during 1996 totaled $6.7 billion, up 13.6% from 1995.

**Table 9**
**VALUATION OF EXPORTS**
**ORIGINATING IN SAN DIEGO COUNTY**
***Calendar Years 1992 through 1996***
***(in billions)***

| Calendar Year | Total Exports |
|---|---|
| 1992 | $ 4.4 |
| 1993 | 4.4 |
| 1994 | 4.9 |
| 1995 | 5.9 |
| 1996 | 6.7 |

Source: International Trade Administration

## Major Employers

The City is host to a diverse mix of major employers representing industries ranging from education and health services, to diversified manufacturing, financial services, retail trade and amusement and recreation. Table 10 provides information published in the *1997-98 Business Referral Directory* of the Greater San Diego Chamber of Commerce. All of the businesses listed in the following page have their main offices in the City, with many having branch offices and/or production facilities in other areas of the County. Accordingly, not all employees of these businesses are employed within the City.

**Table 10**
**CITY OF SAN DIEGO**
**MAJOR EMPLOYERS** [1]
***Calendar Year 1997***

| Employer | Product/Service |
|---|---|
| **10,000 or More Employees:** | |
| San Diego Unified School District | Education |
| Scripps Health | Health Service |
| Sharp Health Care | Health Service |
| University of California, San Diego | Higher Education |
| **5,000 - 9,999 Employees:** | |
| San Diego Community College District | Higher Education |
| Kaiser Permanente | Health Service |
| National Steel & Shipbuilding Company | Shipbuilding, Repair |
| Qualcomm | Wireless Communications |
| **3,000 - 4,999 Employees:** | |
| Cubic Corporation | Electronic Systems |
| Foodmaker | Restaurants |
| FPA Medical Management | Medical Management Services |
| Palomar Pomerado Health System | Health Service |
| Price Costco | Warehouse/Shopping Clubs |
| Home Depot | Building Materials |
| Pacific Bell | Utility |
| San Diego Gas & Electric/Enova Corporation | Utility |
| San Diego State University | Higher Education |
| Science Applications International Corporation | Research and Development |
| Solar Turbines | Gas Turbine Manufacturing |
| University of California Medical Center | Health Service |
| **2,000 - 2,999 Employees:** | |
| Bank of America | Banking |
| Catholic Diocese of San Diego | Churches/Schools |
| Lucky Stores | Food Services |
| Manpower Temporary Services | Employment Service |
| Mercy Hospital & Health Centers | Health Service |
| Sony Technology Center | Electronics |
| Target Stores - San Diego | Retail |
| Ace Parking | Parking Stations and Garages |
| Hewlett Packard Company | Electronic Instruments |
| Scripps Medical Clinic | Health Service |
| University of San Diego | Higher Education |
| Scripps Research Institute | Biomedical Research |
| Wal-Mart | Retail |
| Wells Fargo Bank | Banking |

[1] Does not include various major public employers, including the City, the County, and the federal government with a combined total employment of 176,700

Source: Greater San Diego Chamber of Commerce

## Effective Buying Income

Table 11 shows the per capita Effective Buying Income (EBI) for the City, the County, the State, and the United States for calendar years 1992 through 1996. The estimates for each calendar year are published in the September issue of the following calendar year (i.e., data for 1997 will be published in the September 1998 issue). The purpose of this table is to show the EBI within the City of San Diego as compared to other locations.

**Table 11**
**PER CAPITA EFFECTIVE BUYING INCOME**
***Calendar Years 1992 through 1996***

| Calendar Year | City of San Diego | County of San Diego | State of California | United States |
|---|---|---|---|---|
| 1992 | $16,181 | $15,947 | $16,124 | $15,255 |
| 1993 | 16,667 | 16,485 | 16,672 | 16,064 |
| 1994 | 17,220 | 17,034 | 17,275 | 16,918 |
| 1995 [1] | 14,770 | 14,609 | 14,759 | 14,965 |
| 1996 | 15,139 | 14,975 | 15,068 | 15,555 |

[1] Prior to 1995, estimates of EBI were based on the Bureau of Economic Analysis definition of 'personal income' less personal tax payments. Beginning in 1995, the estimates were based on the Census Bureau's definition of 'money income' less personal tax payments. Since the Census definition excludes certain sources of income, such as interest and rents, employer contributions to private pension funds, and Medicaid and Medicare, the overall figures from 1995 onwards were lower compared to the prior years. (According to Sales & Marketing Management Magazine, personal income is greater than 'money income' by 11-14%.) In addition, because of geographic differences in sources of income, per capita EBI estimates based on 'money income' for some areas, such as California and San Diego, were below the national average.

Source: Sales & Marketing Management Magazine "Survey of Buying Power"

## Building Permits

Table 12 provides a summary of the building permit valuations, and the number of new dwelling units authorized in the City, for Fiscal Years 1993 through 1997. The valuation of non-residential permits includes both private commercial construction and publicly funded, non-tax generating projects.

**Table 12**
**CITY OF SAN DIEGO**
**BUILDING PERMIT VALUATIONS**
**AND NUMBER OF DWELLING UNITS**
***Fiscal Years Ended June 30, 1993 through 1997***

| | 199 | 1994 | 1995 | 1996 | 1997 |
|---|---|---|---|---|---|
| **Valuation (in thousands):** | | | | | |
| Residential | $319,21 | $475,878 | $432,957 | $396,681 | $541,443 |
| Nonresidential | 301,12 | 325,245 | 382,514 | 450,301 | 478,887 |
| Total | $620,33 | $801,123 | $815,471 | $846,982 | $1,020,330 |
| **Number of New Dwelling Units:** | | | | | |
| Single Family | 1,11 | 1,860 | 1,440 | 1,468 | 2,197 |
| Multiple Family | 88 | 992 | 1,212 | 774 | 1,014 |
| Total | 1,99 | 2,852 | 2,652 | 2,242 | 3,211 |

Source: City of San Diego, Development Services Department

**Business Development Program**

The City recognizes the need to improve the local business climate and aggressively support economic development and job creation activities. To achieve this, the City has established a comprehensive Business Development Program. A key element of this program is the Business Expansion and Retention Program (BEAR Program) which represents a proactive effort on the part of the City to work directly with businesses to improve the retention rate among local firms and to expand the level of investment and job growth. This program was created in mid 1995 by integrating the City's existing business development activities to provide centralized coordination, data management, and to expand operational relationships with partnership agencies such as the Economic Development Corporation and San Diego Gas & Electric Corporation. Some of the BEAR Program components include Business Incentives, Targeted Assistance, Business Cooperation Program, Business Outreach, and Business Finance.

The primary focus of the City's overall business development effort has been on streamlining the current permitting process and, when feasible, eliminating or reducing existing fees and permits. A major component of this streamlining effort has been the creation of a "one-stop" permitting center to reduce the development permit processing time by as much as one-half. The center eliminates the need for permit applicants to seek approval from several City departments by consolidating the review and permit process into a "one-stop process.

The City also operates the Business Resource Station, an interactive information center designed to provide aspiring entrepreneurs with everything they need to know about starting a small business in the City. In 1994, the City Council reduced the Business License Tax for all businesses with 12 or fewer employees from $125 and $5 per employee to $70 per business and $3 per employee, and in 1995 reduced it even further, to a flat fee of $34 per business with no per employee charge.

**Transportation**

San Diego has a well-developed and relatively uncongested highway system. Access in and out of the region is provided by five major freeways running north and south and three freeways running east and west.

Public transportation through the City and metropolitan surrounding communities is provided by the San Diego Metropolitan Transit Development Board ("MTDB"). The San Diego Trolley, Inc. operates a fleet of electric trolleys that provides transportation for commuters and tourists from downtown San Diego to San Ysidro (adjacent to Tijuana), and from downtown San Diego to the southern part of the County and East County. The East Line extension to Santee was completed in June 1996. This 3.6 mile extension connects El Cajon with Santee. The trolley also provides service from downtown San Diego to the waterfront area, including the Convention Center. Another extension that provides service from downtown to the historical Old Town section of the City was completed in June 1996. In addition, the Mission Valley extension, which connects Old Town with the Mission Valley shopping area, ending at the Mission San Diego, opened in December 1997.

A 43-mile Coaster Commuter rail line from Oceanside to downtown San Diego came into service in 1995. This line links communities along the coast from Oceanside to Del Mar with downtown San Diego and is operated by North County Transit District ("NCTD").

Proposition A, voter approved in November 1987, authorized a one-half cent increase to the local sales tax to fund transportation improvements for the San Diego region. Through Fiscal Year 1997, the City has been allocated $138.1 million in Proposition A funds and expects to receive an additional $57.8 million through Fiscal Year 2000.

State Propositions 108/111/116, voter approved in June 1990, increased the State gas tax and authorized the sale of rail bonds. The revenues generated from these measures are to be used to implement a comprehensive Statewide transportation funding program through the year 2000. Increased revenues to the City resulting from Proposition 111's increased gas tax subventions are estimated at $66.7 million over the ten year period from 1991 through 2000. Through Fiscal Year 1997, the City has received approximately $40.8 million in Proposition 111 funds. Revenues from this source supplement the City's street maintenance and resurfacing program, and other street related services, including traffic light and signal maintenance, median maintenance and traffic engineering to ensure efficient traffic flow.

# APPENDIX C

# FORM OF CONTINUING DISCLOSURE AGREEMENT

## APPENDIX C

## FORM OF CONTINUING DISCLOSURE AGREEMENT

**Relating to**

**$385,000,000**
**CERTIFICATES OF UNDIVIDED INTEREST**
**(In Installment Payments**
**Payable From Net System Revenues**
**of the Water Utility Fund of the City of San Diego, California) Series 1998**

This Continuing Disclosure Agreement (this "Disclosure Agreement") is executed and delivered by the City of San Diego (the "City") and the State Street Bank and Trust Company of California, N.A. (the "Dissemination Agent") in connection with the execution and delivery of $385,000,000 Certificates of Undivided Interest (In Installment Payments Payable From Net System Revenues of the Water Utility Fund of the City of San Diego, California) Series 1998 (the "Certificates"). The Certificates are being executed and delivered pursuant to a Trust Agreement, dated as of August 1, 1998, among the City, the San Diego Facilities and Equipment Leasing Corporation (the "Corporation") and State Street Bank and Trust Company of California, N.A., as trustee (the "Trustee"). Principal and interest evidenced by the Certificates will be paid from installment payments made by the City pursuant to a Master Installment Purchase Agreement, dated as of August 1, 1998, between the Corporation and the City, as amended by the 1998 Supplement, dated as of August 1, 1998, between the City and the Corporation (collectively, the "Installment Purchase Agreement"). Pursuant to Section 6.08 of the Trust Agreement, the City and the Dissemination Agent covenant and agree as follows:

SECTION 1. Purpose of the Disclosure Agreement. This Disclosure Agreement is being executed and delivered by the City and the Dissemination Agent for the benefit of the Owners and Beneficial Owners of the Certificates and in order to assist the Participating Underwriters in complying with the Rule (defined below). The City and the Dissemination Agent acknowledge that the Corporation has undertaken no responsibility with respect to any reports, notices or disclosures provided or required under this Disclosure Agreement, and has no liability to any person, including any Owner or Beneficial Owner of the Certificates, with respect to the Rule.

SECTION 2. Definitions. In addition to the definitions set forth in the Trust Agreement, which apply to any capitalized term used in this Disclosure Agreement unless otherwise defined in this Section, the following capitalized terms shall have the following meanings:

"Annual Report" shall mean any Annual Report provided by the City pursuant to, and as described in, Sections 3 and 4 of this Disclosure Agreement.

"Beneficial Owner" shall mean any person which has or shares the power, directly or indirectly, to make investment decisions concerning ownership of any Certificates (including persons holding Certificates through nominees, depositories or other intermediaries).

"Disclosure Representative" shall mean the Deputy City Manager of the City or his or her designee, or such other person as the City shall designate in writing to the Dissemination Agent and the Trustee from time to time.

"Dissemination Agent" shall mean State Street Bank and Trust Company of California, N.A., or any successor Dissemination Agent designated in writing by the City which has filed with the Trustee a written acceptance of such designation.

"Listed Events" shall mean any of the events listed in Section 5(a) of this Disclosure Agreement.

"National Repository" shall mean any Nationally Recognized Municipal Securities Information Repository for purposes of the Rule.

"Participating Underwriter" shall mean any of the original underwriters of the Certificates required to comply with the Rule in connection with offering of the Certificates.

"Repository" shall mean each National Repository and the State Repository, if any.

"Rule" shall mean Rule 15c2-12(b)(5) adopted by the Securities and Exchange Commission under the Securities Exchange Act of 1934, as the same may be amended from time to time.

"State" shall mean the State of California.

"State Repository" shall mean any public or private repository or entity designated by the State as the state repository for the purpose of the Rule and recognized as such by the Securities and Exchange Commission. As of the date of this Disclosure Agreement, there is no State Repository.

SECTION 3. Provision of Annual Reports.

(a) The City shall, or shall cause the Dissemination Agent to, not later than 270 days after the end of the City's fiscal year (which fiscal year presently ends June 30), commencing with the report for the 1998-99 fiscal year, provide to each Repository and the Dissemination Agent an Annual Report which is consistent with the requirements of Section 4 of this Disclosure Agreement. The Dissemination Agent shall have no duty or obligation to review such Annual Report. The Annual Report may be submitted as a single document or as separate documents comprising a package, and may cross-reference other information as provided in Section 4 of this Disclosure Agreement; provided that the audited financial statements of the City may be submitted separately from the balance of the Annual Report and later than the date required above for the filing of the Annual Report if they are not available by that date. If the City's fiscal year changes, it shall give notice of such change in the same manner as for a Listed Event under Section 5(f).

(b) Not later than fifteen (15) Business Days prior to the date specified in subsection (a) for providing the Annual Report to the Repositories, the City shall provide the Annual Report to the Dissemination Agent. If by such date the Dissemination Agent has not received a copy of the Annual Report, the Dissemination Agent shall contact the City to inquire if the City is in compliance with the first sentence of this subsection (b).

(c) If the Dissemination Agent is unable to verify that an Annual Report has been provided to the Repositories by the date required in subsection (a), the Dissemination Agent shall send a notice to each Repository and the Municipal Securities Rulemaking Board in substantially the form attached as Exhibit A.

(d) The Dissemination Agent shall:

(i) determine each year prior to the date for providing the Annual Report the name and address of each National Repository and the State Repository, if any; and

(ii) file a report with the City, the Corporation and the Trustee certifying that the Annual Report has been provided pursuant to this Disclosure Agreement, stating the date it was provided, and listing all the Repositories to which it was provided.

SECTION 4. Content of Annual Reports. The City's Annual Report shall contain or include by reference the following:

(a) The audited financial statements of the City for the prior fiscal year, prepared in accordance with generally accepted accounting principles as promulgated from time to time by the Financial Accounting Standards Board or as otherwise required by applicable State law. If the City's audited financial statements are not available by the time the Annual Report is required to be filed pursuant to Section 3(a), the Annual Report shall contain unaudited financial statements in a format similar to the financial statements contained

in the final Official Statement, and the audited financial statements shall be filed in the same manner as the Annual Report when they become available.

(b) An update of the information contained in Table 2 of the Official Statement, dated August 4, 1998 (the "Official Statement"), relating to the Certificates, for the most recently completed fiscal year.

(c) An update of the information contained in Table 3 of the Official Statement for the five most recently completed fiscal years.

(d) An update of the information contained in Table 4 of the Official Statement for the five most recently completed fiscal years.

(e) An update of the information contained in Table 5 of the Official Statement for the five most recently completed fiscal years.

(f) An update of the information contained in Table 6 of the Official Statement for the five most recently completed fiscal years.

(g) An update of the information contained in Table 7 of the Official Statement for the five most recently completed fiscal years.

(h) An update of the information contained in Table 8 of the Official Statement for the five most recently completed fiscal years.

(i) Information contained in Table 9 of the Official Statement will be available either in the City's audited financial statements, or will be updated in the Annual Report in tabular form similar to Table 9.

(j) Information contained in Table 10 of the Official Statement will be available either in the City's audited financial statements, or will be updated in the Annual Report in tabular form similar to Table 10.

(k) Information contained in Table 11 of the Official Statement will be available either in the City's audited financial statements, or will be updated in the Annual Report in tabular form similar to Table 11.

(l) An update of the information contained in the Official Statement under the heading "PENSION PLAN" for the most recently completed fiscal year.

(m) An update of the information contained in the Official Statement under the heading "LABOR RELATIONS" for the most recently completed fiscal year.

(n) An update of the information contained in Table 12 of the Official Statement for the five most recently completed fiscal years.

(o) An update of the information contained in the Official Statement under the heading "INVESTMENT OF FUNDS – Pool Liquidity and Other Characteristics," " – Derivatives" and " – Reverse Repurchase Agreements" and contained in Table 13 of the Official Statement for the most recently completed fiscal year.

SECTION 5. Reporting of Significant Events.

(a) The City shall give, or cause to be given, notice of the occurrence of any of the following events with respect to the Certificates, if material:

(i) principal and interest payment delinquencies;

(ii) non-payment related defaults;

(iii) modifications to rights of owners of the Certificates;

(iv) optional, contingent or unscheduled bond calls;

(v) defeasances;

(vi) rating changes;

(vii) adverse tax opinions or events affecting the tax-exempt status of the Certificates;

(viii) unscheduled draws on debt service reserves reflecting financial difficulties.

(ix) unscheduled draws on credit enhancements reflecting financial difficulties;

(x) substitution of credit or liquidity providers, or their failure to perform;

(xi) release, substitution or sale of property securing repayment of the Certificates.

(b) The Dissemination Agent shall, as soon as reasonably practicable after obtaining actual knowledge of the occurrence of any of the Listed Events contact the Disclosure Representative, inform such person of the event, and request that the City promptly notify the Dissemination Agent in writing whether or not to report the event pursuant to subsection (f) and promptly direct the Dissemination Agent whether or not to report such event to the owners of the Certificates. In the absence of such direction, the Dissemination Agent shall not report such event unless otherwise required to be reported by the Dissemination Agent in its capacity as Trustee under the Trust Agreement. The Dissemination Agent may conclusively rely upon such direction (or lack thereof). For purposes of this Disclosure Agreement, "actual knowledge" of the occurrence of such Listed Events shall mean actual knowledge by the Dissemination Agent, if other than the Trustee, and if the Dissemination Agent is the Trustee, then by the officer at the corporate trust office of the Trustee with regular responsibility for the administration of matters related to the Trust Agreement. The Dissemination Agent shall have no responsibility to determine the materiality of any of the Listed Events.

(c) Whenever the City obtains knowledge of the occurrence of a Listed Event, whether because of a notice from the Dissemination Agent pursuant to subsection (b) or otherwise, the City shall as soon as possible determine if such event would be material under applicable federal securities laws.

(d) If the City has determined that knowledge of the occurrence of a Listed Event would be material under applicable federal securities laws, the City shall promptly notify the Dissemination Agent in writing. Such notice shall instruct the Dissemination Agent to report the occurrence pursuant to subsection (f).

(e) If in response to a request under subsection (b), the City determines that the Listed Event would not be material under applicable federal securities laws, the City shall so notify the Dissemination Agent in writing and instruct the Dissemination Agent not to report the occurrence pursuant to subsection (f).

(f) If the Dissemination Agent has been instructed by the City to report the occurrence of a Listed Event, the Dissemination Agent shall file a notice of such occurrence with the Municipal Securities Rulemaking Board and the Repositories with a copy to the City. Notwithstanding the foregoing, notice of Listed Events described in subsections (a)(iv) and (v) need not be given under this subsection any earlier than the notice (if any) of the underlying event is given to the Owners of affected Certificates pursuant to the Trust Agreement.

SECTION 6. Termination of Reporting Obligation. The City's obligations under this Disclosure Agreement shall terminate upon the legal defeasance, prior redemption or payment in full of all of the Certificates. If the City's obligations under the Installment Purchase Agreement are assumed in full by some other entity, such person shall be responsible for compliance with this Disclosure Agreement in the same manner as if it were the City and the City shall have no further responsibility hereunder. If such termination occurs prior to the final maturity of the

Certificates, the City shall give notice of such termination in the same manner as for a Listed Event under Section 5(f).

SECTION 7. Dissemination Agent. The City may, from time to time, appoint or engage a Dissemination Agent to assist it in carrying out its obligations under this Disclosure Agreement, and may discharge any such Agent, with or without appointing a successor Dissemination Agent. The initial Dissemination Agent shall be State Street Bank and Trust Company of California, N.A. The Dissemination Agent shall not be responsible in any manner for the content of any notice or report prepared by the City pursuant to this Disclosure Agreement.

SECTION 8. Amendment; Waiver. Notwithstanding any other provision of this Disclosure Agreement, the City and the Dissemination Agent may amend this Disclosure Agreement (and the Dissemination Agent shall agree to any amendment so requested by the City, provided, the Dissemination Agent shall not be obligated to enter into any such amendment that modifies or increases its duties or obligations hereunder) and any provision of this Disclosure Agreement may be waived, provided that the following conditions are satisfied:

(a) If the amendment or waiver relates to the provisions of Sections 3(a), 4, or 5(a), it may only be made in connection with a change in circumstances that arises from a change in legal requirements, change in law, or change in the identity, nature or status of an obligated person with respect to the Certificates, or the type of business conducted;

(b) The undertaking, as amended or taking into account such waiver, would, in the opinion of nationally recognized bond counsel, have complied with the requirements of the Rule at the time of the original issuance of the Certificates, after taking into account any amendments or interpretations of the Rule, as well as any change in circumstances; and

(c) The amendment or waiver either (i) is approved by the Owners of the Certificates in the same manner as provided in the Trust Agreement for amendments to the Trust Agreement with the consent of Owners, or (ii) does not, in the opinion of the Dissemination Agent or nationally recognized bond counsel, materially impair the interests of the Owners or Beneficial Owners of the Certificates.

In the event of any amendment or waiver of a provision of this Disclosure Agreement, the City shall describe such amendment in the next Annual Report, and shall include, as applicable, a narrative explanation of the reason for the amendment or waiver and its impact on the type (or, in the case of a change of accounting principles, on the presentation) of financial information or operating data being presented by the City. In addition, if the amendment relates to the accounting principles to be followed in preparing financial statements, (i) notice of such change shall be given in the same manner as for a Listed Event under Section 5(f), and (ii) the Annual Report for the year in which the change is made should present a comparison (in narrative form and also, if feasible, in quantitative form) between the financial statements as prepared on the basis of the new accounting principles and those prepared on the basis of the former accounting principles.

SECTION 9. Additional Information. Nothing in this Disclosure Agreement shall be deemed to prevent the City from disseminating any other information, using the means of dissemination set forth in this Disclosure Agreement or any other means of communication, or including any other information in any Annual Report or notice of occurrence of a Listed Event, in addition to that which is required by this Disclosure Agreement. If the City chooses to include any information in any Annual Report or notice of occurrence of a Listed Event, in addition to that which is specifically required by this Disclosure Agreement, the City shall have no obligation under this Disclosure Agreement to update such information or include it in any future Annual Report or notice of occurrence of a Listed Event.

SECTION 10. Default. In the event of a failure of the City or the Dissemination Agent to comply with any provision of this Disclosure Agreement, pursuant to Section 6.08 of the Trust Agreement, the Trustee may (and, at the request of any Participating Underwriter, the Owners of at least 25% in aggregate principal amount of Outstanding Certificates, shall), or any Owner or Beneficial Owner of the Certificates may take such actions as may be necessary and appropriate, including seeking mandate or specific performance by court order, to cause the City or the Dissemination Agent, as the case may be, to comply with its obligations under this Disclosure Agreement. A

default under this Disclosure Agreement shall not be deemed an Event of Default under the Trust Agreement or the Installment Purchase Agreement, and the sole remedy under this Disclosure Agreement in the event of any failure of the City or the Dissemination Agent to comply with this Disclosure Agreement shall be an action to compel performance.

SECTION 11. Duties, Immunities and Liabilities of Dissemination Agent. The Dissemination Agent shall have only such duties as are specifically set forth in this Disclosure Agreement, and the City agrees to indemnify and save the Dissemination Agent, its officers, directors, employees and agents, harmless against any loss, expense and liabilities which it may incur arising out of or in the exercise or performance of its powers and duties hereunder, including the costs and expenses (including attorneys fees) of defending against any claim of liability, but excluding liabilities due to the Dissemination Agent's negligence or willful misconduct. The Dissemination Agent shall have no duty or obligation to review any information provided to it hereunder and shall not be deemed to be acting in any fiduciary capacity for the City, the Corporation, the Owners of the Certificates or any other party. The Dissemination Agent shall not have any liability to the Owners of the Certificates or any other party for any monetary damages or financial liability of any kind whatsoever related to or arising from this Disclosure Agreement. The obligations of the City under this Section shall survive resignation or removal of the Dissemination Agent and payment of the Certificates.

SECTION 12. Notices. Any notices or communications to or among any of the parties related to this Disclosure Agreement may be given as follows:

| | |
|---|---|
| To the City: | City of San Diego<br>Financial and Technical Services Business Center<br>202 C Street, M.S. 9-B<br>San Diego, California 92101-3868<br>Attention: Ms. Patricia T. Frazier, Deputy City Manager<br>Telephone: (619) 236-6070<br>Fax: (619) 236-7344 |
| To the Dissemination Agent | State Street Bank and Trust Company of California, N.A.<br>633 5th Street, 12th Floor<br>Los Angeles, California 90071<br>Attention: Corporate Trust Department<br>Telephone: (213) 362-7345<br>Fax: (213) 362-7357 |

Any person may, by written notice to the other persons listed above, designate a different address or telephone number(s) to which subsequent notices or communications should be sent.

SECTION 13. Beneficiaries. This Disclosure Agreement shall inure solely to the benefit of the Corporation, the City, the Dissemination Agent, the Participating Underwriters and Owners and Beneficial Owners from time to time of the Certificates, and shall create no rights in any other person or entity.

SECTION 14. Counterparts. This Disclosure Agreement may be executed in several counterparts, each of which shall be an original and all of which shall constitute but one and the same instrument.

Dated: August 18, 1998

CITY OF SAN DIEGO

By_____
Title: City Manager

STATE STREET BANK AND TRUST
COMPANY OF CALIFORNIA, N.A.,
as Trustee,

By:_____
Authorized Officer

EXHIBIT A

NOTICE TO REPOSITORIES OF FAILURE TO FILE ANNUAL REPORT

| | |
|---|---|
| Name of Issuer: | City of San Diego |
| Name of Issue: | Certificates of Undivided Interest (In Installment Payments Payable From the Water Utility Fund of the City of San Diego, California) Series 1998 |
| Name of Obligated Person: | City of San Diego |
| Date of Issuance: | August 18, 1998 |

NOTICE IS HEREBY GIVEN that the City of San Diego has not provided an Annual Report with respect to the above-named Certificates as required by Section 6.08 of the Trust Agreement, dated as of August 1, 1998 among the San Diego Facilities and Equipment Leasing Corporation, the City and State Street Bank and Trust Company of California, N.A., as trustee. [The City anticipates that the Annual Report will be filed by _____.]

Dated:_____

STATE STREET BANK AND TRUST COMPANY OF CALIFORNIA, N.A.,
as Dissemination Agent, on behalf of the City of San Diego

By:_____

cc: City of San Diego

# APPENDIX D

# ENGINEER'S STATEMENT OF FEASIBILITY

# CITY OF SAN DIEGO

# JUNE 1998

REPORT

# ENGINEER'S STATEMENT OF FEASIBILITY

*City of San Diego*

June 1998

O'BRIEN & GERE ENGINEERS, INC.

5000 Brittonfield Parkway
P.O. Box 4873
Syracuse, New York 13221

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## Executive summary

This Engineer's Statement of Feasibility summarizes the results of an independent review of the City's proposed Capital Improvement Plan (CIP) for its potable water supply, treatment, storage and distribution system. The CIP is to be implemented by the City's Water Department, which has formed a separate division, the CIP Program Management Division, to complete the necessary projects. The CIP which was included in this review includes those projects to be undertaken from the present time, through 2006. This review examined the City's ability to implement this CIP, and to provide adequate resources to operate and maintain the facilities in its system, both now and in the future. The City requested that O'Brien & Gere review five different aspects of the City's proposed program as follows:

*Engineering Review*: Review the City's ability to plan, design, construct and maintain the integrity of the proposed improvements, in accordance with the City's own schedule, as well as the Department of Health Services (DOHS) Compliance Order schedule.

*Institutional Analysis*: Review the current and proposed organizational and management structure that will provide the resources necessary to implement and manage the CIP program.

*Cost Estimating Procedures and Techniques*: Review the City's cost estimating procedures, as applied to the CIP. Review the cost estimating guidelines for reasonableness and compare the resulting cost estimates to recent prices for projects in the San Diego area, to verify that the resulting estimates reasonably represent costs in the area.

*Operations and Maintenance Evaluation*: Review the adequacy of the Department's operation and maintenance programs, both present and proposed for the future. Review staffing levels and proposed expenditures to verify that they are reasonable, given the systems to be operated and maintained. Compare proposed staffing and expenditures to several similar utilities to assess the adequacy of the City's proposed programs.

*Revenue Program Evaluation*: Review the City's financial model results, and assess the adequacy of the financing plan to provide sufficient revenues to cover the forecasted expenditures. These expenditures include those necessary to design and construct facilities; to operate and maintain completed facilities (as well as those already existing in the City's system); to repay annual debt service; to provide funds for "pay as you go" projects; and to cover other funding requirements that may arise.

**Opinion:**
Based on our evaluation of the above described areas, it is our opinion that the proposed CIP is feasible, and can be funded and completed within the timetables described in the documents provided for review. Specifically, the plan is adequate with respect to the following areas:

*Engineering*: The City has the ability to plan, design, construct and maintain the integrity of the proposed capital improvements to the water system. The planned projects will allow the City to continue to meet Safe Drinking Water Act requirements, as well as the California Department of Health Services Compliance Order No.04-14-96CO-022, as amended through Amendment No. 3 dated April 6, 1998.

*Organization and Management:* The organization and management structure in place is adequate to implement the Capital Improvement Program.

*Cost Estimating Techniques*: The cost estimating techniques used for the proposed CIP are appropriate and yield reasonable results.

*Operations and Maintenance*: The operations and maintenance programs in place are adequate, and the programs described for operating and maintaining the upgraded and expanded system are reasonable. Budgeted costs and staffing levels for the planning period are reasonable.

*Revenue Program*: Based on the CIP reviewed, the City's revenue and cost assumptions and the resulting forecasted revenue stream in the City's financial model are reasonable. The forecasted revenues are adequate to fund projected debt service requirements, operations and maintenance expenditures, coverage requirements, payments to reserve accounts and capital expenditures for the water system. The financing plan is feasible

based on current information and the expected conditions for the planning period of 1998 through 2006.

# 1. Introduction and overview

## 1.1. Scope of Services

The City retained O'Brien & Gere Engineers, Inc., in association with Damon S. Williams Associates; Peer Review, Inc.; and Mac. Perez Consulting Engineers to prepare an Engineer's Statement of Feasibility for the program. These four firms comprise the Feasibility Engineering Evaluation Team (the Engineering Team). The purpose of the Engineer's Statement of Feasibility is to provide an independent assessment of the CIP and the City's ability to implement it in the time frame necessary; and the City's ability to operate and maintain its system, both presently and in the future. In order to provide this independent assessment, five specific areas were reviewed by the team: engineering aspects of the CIP; the operation and maintenance program for the system; the organization and management structure (also referred to as the "institutional analysis"); the cost estimating procedures and techniques used by the City, its staff and its consultants; and the revenue program for providing adequate revenue to pay for and operate the system.

In conducting its evaluation, the Engineering Team met with key City personnel, including the General Manager, the CIP Program Manager, and staff in planning, engineering, operation/maintenance, financing, and program management. The Engineering Team toured the three water treatment plants, as well as several pumping station, pipeline and storage projects to give familiarity with the system. The Engineering Team conducted in-depth interviews with key personnel to gather the necessary detail about the CIP, the management structure of the department and the current and proposed operation and maintenance programs. A listing of the documents that were reviewed is included as Appendix A to this report.

In providing this Statement of Feasibility, the Engineering Team has relied upon the accuracy and reliability of documents prepared by other parties and furnished to us by the City. Where it was believed to be appropriate, more critical review of certain items such as financial data and cost

estimates was provided. Many documents, such as reports, memos, organization charts, and the Program Management Plan, were presumed to be accurate for purposes of our review, and were not independently verified. Where necessary, additional information was requested during the course of this review. Issues of concern were summarized in memos to the Program Manager and were resolved as they arose.

For certain portions of our review, we gathered information from similar water utilities. Specifically, other water utilities were contacted and information gathered relating to the operation and maintenance review, for comparing projected water rates, and for the cost estimating review.

## 1.2. Consultant qualifications

The Engineering Team performed its activities for this review under the direction of O'Brien & Gere Engineers, consistent with the requirements of the City of San Diego Water Department.

O'Brien & Gere Engineers, Inc. (O'Brien & Gere) is a nationally-recognized consulting engineering firm which has provided municipal engineering services to many municipal agencies in its 52 year history. It is a privately owned firm, with 31 offices in the United States and abroad. It provides services including studies and evaluations; design; construction review and construction management; construction inspection; and facility start up and commissioning. In addition to the engineering firm, the O'Brien & Gere companies offer laboratory analytical services; contract operation services; construction management and design/build services.

O'Brien & Gere has provided water system engineering services to a number of large water purveyors including studies, design and construction review services. O'Brien & Gere has also acted as independent engineer for, among others, the Birmingham Water Works and Sewer Board, the Monroe County Water Authority, the Onondaga County Water Authority and the Metropolitan Water Board in Syracuse, NY, and the Upper Mohawk Valley Regional Water Board in Utica, NY. In this role, reviews similar to those required by the City of San Diego have been provided to these clients.

*Damon S. Williams Associates (DSWA) of Phoenix, Arizona reviewed the City's Operation and Maintenance Program expenditures and staffing levels for this Statement of Feasibility.* The firm specializes in water and wastewater planning, engineering, operations and maintenance, cost estimating, design and construction administration and has provided similar services to the City related to the Engineer's Statements of Feasibility for the wastewater system improvements.

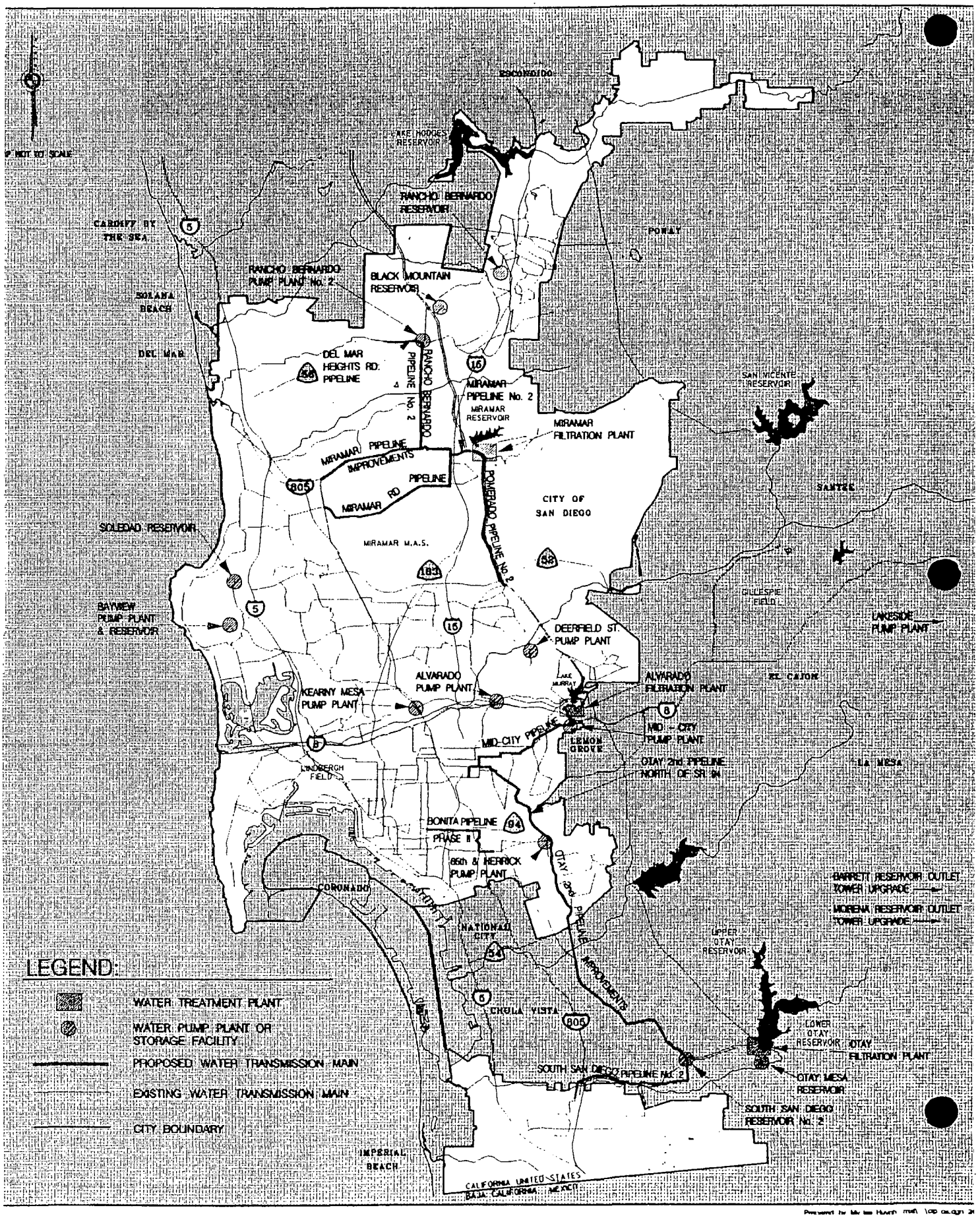
*Peer Review, Inc. has performed the Institutional Analysis for this Statement of Feasibility.* Peer Review, Inc. is a Denver, Colorado-based firm, provides management consulting services to a number of clients, including large water utilities. William Miller, a Director of Peer Review, was the General Manager of the Denver Water Board for 12 years, and is a highly respected water utility consultant. Mr. Miller has been involved with management analysis projects for the cities of Cleveland, Ohio and Providence Rhode Island.

*Mac. Perez Consulting Engineers performed the Cost Estimating Review for this Statement of Feasibility.* Mac. Perez is a San Diego-based small business enterprise, providing services in civil and environmental engineering. Their range of professional services spans from the conceptual stage, through design and construction management services.

## 1.3. Introduction/history

The City of San Diego Water Department (the Department) currently provides potable water to a service area which includes all of the area within the City boundaries, as shown on the following figure. The Department also supplies treated water on a wholesale basis to the California-American Water Company, the City of Del Mar, and the Santa Fe and San Dieguito Irrigation Districts. Demand from these customers outside the City boundaries average 5% of the total City demand.

# THE WATER DEPARTMENT
# CAPITAL IMPROVEMENTS PROGRAM



The current municipal ownership of the system began at the turn of the century when the City purchased the privately-owned San Diego Water Company. Between 1913 and 1935, the City purchased a number of reservoirs to supplement its raw water supply. In the early 1940's, as the City's population grew to over 400,000, the City began to import raw water from the Colorado River Aqueduct, completed in 1941 by the Metropolitan Water District of Southern California (MWD). Shortly thereafter, the San Diego County Water Authority (CWA) was formed to deliver Colorado River water to San Diego County. The CWA joined the MWD in 1946, and the First San Diego Aqueduct was completed in 1947. The CWA also receives imported water from the San Joaquin-Sacramento Delta area in northern California as a member of the MWD and in turn supplies this water to its customers. On average, up to 90% of the City's water is imported via the CWA from these sources; ten percent derives from local runoff.

As a result of a 1993 sanitary survey of the City of San Diego Water Utilities Department (a predecessor agency to the current Department), the California Department of Health Services concluded that, while there were no violations of water quality standards, deficiencies exist in the City's physical facilities which require correction. The Department of Health Services subsequently worked with the City to develop a compliance agreement, which was ultimately converted to a Compliance Order dated January 22, 1997. This Compliance Order requires that the City complete the design and construction of capital projects involving system reservoirs, water treatment plants, pump plants, transmission pipelines, and water mains.

Recognizing that it would be undertaking a large capital improvement program involving all facets of its water supply system, the City commenced the preparation of its Strategic Plan for Water Supply in May 1996. This plan, which was prepared by the Department with the assistance of consultants, and with the participation of numerous community leaders, examined alternatives for providing an adequate supply of potable water to the area through the year 2015. The planning process was formulated to gain community and public support for the necessary program. The Council approved the strategic Plan in August 1997 after an intensive process of review and selection of alternatives. The Strategic Plan alternatives focused on system-wide strategies, not just individual projects. The resulting document identified a recommended alternative based on a number of criteria. The group considered the alternative

selected an optimum plan for meeting the area's water supply needs through 2015. A notable conclusion of the Strategic Plan was that the City does not have adequate treatment plant capacity to meet current and projected water demands. Therefore the City needs to purchase treated water to meet current peak demands.

Since the completion of the Strategic Plan in July 1997, the City has begun the process of implementing the recommended alternative as follows:

- It has formed a separate division within the Department to implement the CIP (the CIP Program Management Division), and has nearly completed the staffing of the division. The group is led by the CIP Program Manager, an executive management position which reports directly to the Water Department Manager and is responsible for all aspects of the CIP.

- It has retained the services of Parsons Infrastructure and Technology Group, Inc. (Parsons) to act as the Engineer Program Manager and to assist City staff in implementing the CIP. Parsons has completed the Program Management Plan (PMP), which is a comprehensive document that summarizes the projects included in the CIP, the cost estimating procedures used to arrive at individual project estimates, the organizational structure of the CIP group, as well as the Water Department as a whole, and the operation and maintenance program planned for the Department.

- It has retained a financing team to assist in implementing financing for the CIP in 1998.

- It has undertaken a Value Engineering (VE) review of the various aspects of the CIP to ensure that the projects will meet the City's requirements in a cost effective manner. VE has focused on the more well-defined projects, such as the water treatment plant designs and certain of the reservoir projects, and has examined the "global" aspects of the CIP, as well as the proposed standards and guidelines which will be instituted for the CIP.

- It has undertaken the design of certain crucial projects, such as the upgrade of the Alvarado plant, is being completed so that construction can commence as soon as financing is in place. Other projects are being

advanced through the planning or preliminary design phases, and their implementation will follow as scheduled in the CIP.

## 1.4. Current system description

A typical water supply system draws raw water from a source, provides treatment to the water to remove impurities and provide disinfection to inactivate microorganisms, and then conveys the treated water to customers via a network of pipelines referred to as the transmission and distribution system. The transmission and distribution system typically contains pumping facilities to maintain system pressure and to convey water throughout the system, and it also contains water storage facilities which provide a "reserve" of water to meet peak demands and firefighting requirements. The system which the City owns and operates is typical in that it contains these elements. It is an extensive supply, treatment, storage and distribution system, which includes:

- Nine local surface raw water storage reservoirs
- Connections to San Diego County Water Authority (CWA) aqueducts, which supply both raw and treated water to the City
- Three water treatment plants
- Thirty-eight treated water storage facilities
- Approximately 2,890 miles of water transmission and distribution piping
- Forty-five water pump plants

The City obtains raw water via its surface water storage reservoirs and from the CWA via its supply system. The City also has the ability at present to take treated water from the CWA to supplement its local supplies. Given the semi-arid nature of the San Diego area, and its limited surface and ground water supplies, approximately 90% of the City's water historically has been supplied from distant sources, such as the Colorado River and the California State Water Project.

The City operates three water treatment plants with a total current rated capacity of 300 million gallons per day (mgd). The treatment plants serve different areas of the City. The Miramar Treatment Plant, which serves the northern portion of the City, is the largest plant, and is rated at 140 mgd. The plant was originally constructed in 1962 and has been expanded since

then to its current rating. Raw water is provided to the plant from the CWA through the 48 inch diameter Miramar Pipeline and the 69 inch diameter CWA Second Aqueduct. Treated water flows from the plant through the 66 inch diameter Miramar Pipeline. The plant is considered a conventional treatment plant, and contains rapid mix, coagulation, flocculation, sedimentation basins, filtration and disinfection facilities. Disinfection is provided through chloramination, a process in which chlorine and ammonia are added to the treated water. Chloramination provides a longer-lasting chlorine residual than the use of chlorine alone, thus helping to maintain the high quality of the water in the distribution system. Treated water is stored on site in two reservoirs which have capacities of 21 and 31 million gallons, respectively.

The Alvarado Plant, located at Lake Murray, serves the central portion of the City and has a rated capacity of 120 mgd. It was originally constructed in 1950 with a capacity of 66 mgd and has been expanded to attain its current rated capacity. It receives raw water from several sources: the CWA, Lake Murray, and the El Capitan and San Vicente Reservoirs. This water is conveyed to the plant through the CWA First and Second Aqueducts and the El Monte Pipeline. Treated water flows from the plant to the City's system through the Trojan Pipeline (54" diameter) and the Murray Pipeline (48" diameter). It is also a conventional plant, and has rapid mix, coagulation, flocculation, sedimentation, filtration and disinfection facilities. As with the Miramar plant, chloramination is used for disinfection. The plant has three treated water reservoirs: the 35 million gallon Earl Thomas Reservoir, and two 21 million gallon reservoirs which were recently constructed.

The Otay Plant, located in the southern-most part of the City, receives raw water from the CWA and the Otay, Barrett and Morena Reservoirs, and is rated at 40 mgd. It is the smallest of the City's plants and serves the southern-most portions of the City's system. The plant was originally constructed in 1914, with a capacity of 14 mgd, and has been improved and expanded to the current capacity. The 48 inch Otay Pipeline and the CWA Second Aqueduct convey raw water to the plant, while the Otay #2 and #3 pipelines (30 and 54 inch diameters, respectively) convey treated water to the system. Plant processes include rapid mix, coagulation, flocculation, sedimentation, filtration and disinfection through chloramination. There is a treated water reservoir (the South San Diego Reservoir) with a capacity of 15 million gallons.

The total treated water storage volume available at the three treatment facilities is thus 144 million gallons.

The storage tanks and reservoirs in the City's distribution system provide additional treated water storage which assists in maintaining system pressure, as well as in meeting peak and fire flow demands. There are 30 such facilities in the City's system, with a combined storage volume of approximately 80 million gallons. Many of these storage facilities are approaching the end of their useful lives and must be rehabilitated or replaced. Additional storage capacity must also be added in certain areas to meet system demands.

The City's transmission and distribution system consists of approximately 2,890 miles of pipeline, with transmission mains of up to 72 inches in diameter. Portions of the transmission and distribution system are approaching the end of their useful lives, or are not optimally sized to meet current and future demands. These lines must be rehabilitated or replaced, or, in some cases, paralleled with new lines to provide adequate capacity. The City also has undertaken a program to systematically replace the old cast iron mains in its distribution system, approximately 200 miles of which remain.

Forty five pump plants located throughout the system boost water to areas of higher elevations. As with the other physical facilities in the system, some of the pump plants are approaching the end of their useful lives, or require expansion or upgrade to meet projected demands. Eleven pump plants are scheduled for such work in the CIP.

## 1.5. CIP overview and planned system upgrades

The CIP contains projects that can be classified into one of six categories as they relate to the water system. The categories for these projects are:

- Water Treatment Plants
- Pipelines
- Pump Plants
- Treated Water Storage Facilities
- Operations Center Facility
- Miscellaneous

Each project has been described in detail in individual project profile sheets which are contained in the PMP. A summary of the projects is contained in Table 1-1 following this section. Each project has been assigned a CIP Number which is the basis for identifying the project and is the level at which costs are assigned as the project proceeds. The following is a brief summary of the projects included in the CIP.

Water Treatment Plants:
The largest share of the costs in the CIP is for treatment plant upgrades and expansion.

The Alvarado Plant will be the first plant to undergo work consisting of treatment process upgrades and expansion of plant capacity from the current 120 mgd to 150 mgd to meet the projected water demand through 2015. The full increased plant capacity is scheduled to be available by November 30, 2001. Discussions with the designer of the Alvarado plant upgrade/expansion indicate that the plant's current condition is adequate to allow it to continue in operation until the upgrade/expansion is complete. In addition, prior to 2001, it may be possible to run the plant for short periods of time at the higher capacity, if necessary to meet demands.

The plant upgrade will include work on the rapid mix facility, existing filters, raw water chemical building, treated water chemical building, operation building, Lake Murray and College Ranch pump plant main switchgear building, yard piping, instrumentation and control, electrical and civil/site work, and the existing flocculation and sedimentation basins. In addition to work on existing processes, new flocculation and sedimentation basins, filters and sludge handling facilities will be constructed. The Earl Thomas reservoir will be retained for treated water storage. The CIP project includes an adequate budget for the installation of ozonation facilities at the plant. The City has elected to defer installation until such time as the requirements of the Safe Drinking Water Act dictate that it be installed.

After the completion of the work at the Alvarado Plant, the Miramar plant will undergo extensive upgrade scheduled to be complete in May, 2004. The Miramar plant's capacity will be expanded from 140 mgd to 180 mgd to meet projected water demand through 2015. Discussions with the designer of the Miramar plant upgrade/expansion indicate that the plant's

current condition is also adequate to allow it to continue in operation until the upgrade/expansion is complete.

The plant's existing flocculation and sedimentation basins will be rehabilitated, the ten existing filters will be removed, and the operations building will be modified and improved. Major new construction includes a new pump plant, rapid mix basins, a blending structure to blend raw water from different sources prior to treatment, flocculation and sedimentation basins, filters, chemical feed and storage facilities, and sludge handling and disposal facilities. The design will allow for the future installation of ozonation facilities at such time as the Safe Drinking Water Act requirements mandate it. The CIP project budget includes the cost for these facilities.

The Otay Plant will be upgraded to meet Safe Drinking Water Act requirements. The settling basins at this plant are being repaired to address corrosion of concrete caused by the application of high dosages of certain chemicals in the past. The plant's raw water pumping station will have a variable frequency drive added to one of the pumps in order to allow operators to more closely match production rates to water demands. The upgrade to meet Safe Drinking Water Act requirements includes ozonation facilities to provide pre- and post-ozonation, granular activated carbon filter caps for the existing filters, a wash water recovery system, sludge handling facilities, electrical and instrumentation upgrades, site work and yard piping. As with the other plants, the project cost includes the ozonation facilities, but they will not be installed until such time as they are required by the Safe Drinking Water Act requirements. Additionally a future expansion to 60 mgd capacity is likely, when system demands require it, but is not included in this CIP.

Pipeline Projects:

Fourteen pipeline projects are scheduled to be undertaken as part of the CIP. The pipeline projects are further divided into distribution and transmission lines.

Distribution lines are the smaller diameter pipelines that directly service the residential and commercial customers connected to a meter. The water system currently retains approximately 200 miles of its original inventory of over 650 miles of cast iron distribution lines. Although still operating, these lines have exceeded their anticipated service life of 40 to 50 years.

The Water Department has begun replacing its entire inventory of cast iron lines, and this replacement work is continued in the CIP.

Transmission lines are larger diameter pipelines conveying raw water to the treatment facilities and treated water from the plants to storage facilities in the distribution system. The transmission line projects in the CIP in general include pipeline rehabilitation, pipeline replacement, and installation of new mains to satisfy water demands and to increase redundancy and reliability.

In addition to the pipeline work, the City plans to provide funds to the San Diego County Water Authority to support the design and construction of the Mid-City Meter Facility. This project will allow treated water from the Alvarado Plant placed in the County aqueduct through pump station SD-17 to be taken out in the Mid-City area and flow to the Mid-City Pipeline, which is to be constructed under this CIP. The City also plans to purchase the Pomerado Pipeline, which runs between the Miramar plant and the Tierrasanta area, from the County Water Authority. The pipeline will be used to supply treated water by gravity from the plant. The individual pipeline projects are listed in Table 1-1.

Pump Plants:
The City currently has 45 pump plants. There are eleven separate pump plant projects included in the CIP. Four of these projects will be the construction of new pump plants to satisfy new demands. The balance will consist of pump rehabilitation or replacement, electrical upgrades, and enclosure of pumps at various facilities. One of the pump plant projects involves the installation of a variable frequency drive at the Otay plant raw water pump station in order to allow operators to more closely match plant flows to demand.

Treated Water Storage Facilities:
Ten of the key existing treated water storage facilities in the system need repair or rehabilitation and are included in the CIP. The planned work ranges from demolition and reconstruction to installation of a liner to extend the operational life of the facility. In addition, three new facilities with a combined capacity of approximately 33 million gallons are planned to serve areas of new demands. Two of these are anticipated to be constructed by a developer and be cost-shared with the City through the terms of a development agreement. When these projects are complete, the

City will have approximately 113 million gallons of treated water storage capacity in its distribution system, compared to approximately 80 mgal at present.

Operations Center Facility:
The City plans to develop a Central Water Department Operations Station which would accommodate staff currently located at several facilities around the City. This consolidation of facilities would improve efficiency, eliminate redundant facilities, and improve the convenience of customer access to the Water Department, as it will be outside of the downtown area. At present, site review and selection is ongoing.

Miscellaneous Projects:
Some of the CIP projects are improvements and additions which will benefit the water system as a whole. Corrosion protection enhancements will be incorporated at several facilities, and improvements at several raw water surface reservoirs are planned, along with modernization of larger water service meters. Approximately 429 existing air and vacuum release valves and air release valves will be relocated from below grade vaults to above ground enclosures mounted on concrete pads. This will reduce the chance of cross connections or contamination of the potable water system, and will improve access for maintenance.

The City is undertaking an extensive upgrade of the telemetry system City-wide to improve its ability to remotely control facilities in the water transmission and distribution system. The new system will upgrade and centralize all telemetry system controls into one location (the Alvarado Filtration Plant) to facilitate control, monitoring and tracking of data, and improve service and emergency response time. The work is currently scheduled to be undertaken in two phases. In the first phase, the basic system "infrastructure" will be installed, including the main controls and servers at the Alvarado Plant. In the second phase, 53 remote units will be installed at pump plants, treated water storage facilities, treated water connections to the CWA and system pressure monitoring points.

Table 1-1
CITY OF SAN DIEGO
MUNICIPAL WATER CAPITAL IMPROVEMENT PROGRAM
ESTIMATED PROJECT APPROPRIATIONS
(DOLLARS IN THOUSANDS)
3% INFLATION REFLECTED IN YEARS 1997-2001; 4% THEREAFTER

| CIP No. | Project Name | F I S C A L Y E A 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | Total Estimated Expenditure |
|---|---|---|---|---|---|---|---|---|---|---|
| 73-331.0 | Annual Allocation - Pooled Contingencies | 6,141.0 | 10,154.8 | 17,970.1 | 21,262.7 | 19,335.9 | 16,347.3 | 6,899.4 | 4,061.3 | 102,172.5 |
| 73-347.0 | Annual Allocation - C I P Program Management | 4,625.3 | 4,380.9 | 5,309.5 | 5,227.6 | 5,436.7 | 5,654.2 | 5,880.3 | 3,057.8 | 39,572.3 |
| 73-312.0 | Annual Allocation - As Needed Consultant Services | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 73-310.0 | Annual Allocation - Corrosion Control | 0.0 | 490.5 | 794.0 | 832.7 | 869.5 | 907.9 | 1,156.7 | 986.5 | 6,037.8 |
| 73-024.0 | Annual Allocation - Freeway Relocation | 103.0 | 106.1 | 109.3 | 113.6 | 118.2 | 122.9 | 127.8 | 132.9 | 933.9 |
| 73-277.0 | Annual Allocation - Stand Pipe & Reservoir Restorations | 1,006.9 | 2,200.9 | 423.9 | 1,273.9 | 2,071.8 | 494.0 | 21.0 | 242.2 | 7,734.6 |
| 73-0830.0 | Annual Allocation - Water Main Replacements | 22,148.3 | 16,918.1 | 13,659.1 | 12,500.8 | 11,228.0 | 9,833.4 | 7,670.0 | 4,945.0 | 98,902.7 |
| 73-263.0 | Annual Allocation - Water Pump Station Restoration | 354.7 | 278.5 | 0.0 | 583.7 | 462.7 | 0.0 | 0.0 | 0.0 | 1,679.6 |
| 79-999.9 | Annual Allocation - Water Service Meter Replacement | 681.8 | 807.6 | 825.2 | 858.2 | 896.1 | 48.1 | 0.0 | 0.0 | 4,117.0 |

Table 1-1
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ESTIMATED PROJECT APPROPRIATIONS
(DOLLARS IN THOUSANDS)
3% INFLATION REFLECTED IN YEARS 1997-2001; 4% THEREAFTER

| CIP No. | Project Name | F I S C A L Y E A 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | Total Estimated Expenditure |
|---|---|---|---|---|---|---|---|---|---|---|
| 73-333.0 | Air Valve Adjustment | 540.8 | 557.1 | 573.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1,671.7 |
| 73-258.0 | Alvarado Joint Lab | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 73-261.0 | Alvarado Filtration Plant Upgrade and Expansion | 28,859.0 | 29,694.6 | 710.3 | 22,842.4 | 16,129.6 | 2,137.3 | 2,194.5 | 621.2 | 103,188.9 |
| 73-327.0 | Alvarado Water Pump Plant Rehabilitation | 189.2 | 0.0 | 432.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 621.3 |
| 73-317.0 | Barrett Reservoir Outlet Tower Upgrade | 0.0 | 0.0 | 18.2 | 81.7 | 716.2 | 0.0 | 0.0 | 0.0 | 816.1 |
| 73-236.0 | Bayview Reservoir Expansion | 968.4 | 1,109.8 | 8,007.9 | 1,765.5 | 587.2 | 0.0 | 0.0 | 0.0 | 12,438.8 |
| 73-265.0 | Bayview Water Pump Station | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 73-216.0 | Black Mountain Reservoir | 3,410.1 | 6,870.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 10,280.7 |
| 73-195.0 | Bonita Pipeline Phase I | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 70-920.0 | Bonita Pipeline - Phase II | 1,086.1 | 0.0 | 3,923.8 | 4,150.8 | 1,521.0 | 0.0 | 0.0 | 0.0 | 10,681.7 |
| 73-335.0 | Dams & Appurtenances Modification & Maintenance Study Only | 0.0 | 1,591.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1,591.4 |

Table 1-1
CITY OF SAN DIEGO
MUNICIPAL WATER CAPITAL IMPROVEMENT PROGRAM
ESTIMATED PROJECT APPROPRIATIONS
(DOLLARS IN THOUSANDS)
3% INFLATION REFLECTED IN YEARS 1997-2001; 4% THEREAFTER

| CIP No. | Project Name | F<br>1999 | I<br>2000 | S<br>2001 | C<br>2002 | A<br>2003 | L<br>2004 | Y<br>2005 | E<br>2006 | A | Total Estimated Expenditure |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 73-268.0 | Deerfield Street Water Pump Station | 2,418.7 | 3,186.2 | 33.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 5,638.6 |
| 73-251.0 | Del Mar Heights Road Pipeline | 0.0 | 0.0 | 201.9 | 9.3 | 1,470.3 | 0.0 | 0.0 | 0.0 | | 1,681.5 |
| 73-318.0 | El Capitan Reservoir Boating Facilities II | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 |
| 73-319.0 | El Capitan Reservoir Road Improvement | 80.0 | 0.0 | 507.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 587.6 |
| 73-336.0 | Joint Lab Stand-by Emergency Power | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 |
| 73-301.0 | Kearny Mesa Water Pump Plant | 232.7 | 193.0 | 1,571.8 | 205.5 | 0.0 | 0.0 | 0.0 | 0.0 | | 2,203.0 |
| 73-305.0 | La Jolla Shores Pipeline | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 |
| 73-283.0 | Lake Side Water Pump Plant | 974.1 | 2,500.4 | 7,672.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 11,146.5 |
| 73-246.0 | Mid-City Pipeline | 7,202.8 | 13,019.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 20,222.5 |
| 73-314.0 | Mid-City Pump Plant | 1,531.2 | 13,939.0 | 2,901.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 18,371.9 |

Table 1-1
CITY OF SAN DIEGO
MUNICIPAL WATER CAPITAL IMPROVEMENT PROGRAM
ESTIMATED PROJECT APPROPRIATIONS
(DOLLARS IN THOUSANDS)
3% INFLATION REFLECTED IN YEARS 1997-2001; 4% THEREAFTER

| CIP No. | Project Name | F I S C A L Y E A 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | Total Estimated Expenditure |
|---|---|---|---|---|---|---|---|---|---|---|
| 73-284.0 | Miramar Filtration Plant - Upgrade and | 8,033.2 | 0.0 | 22,311.6 | 33,494.2 | 38,715.3 | 11,008.1 | 0.0 | 0.0 | 113,562.4 |
| 70-910.2 | Miramar Pipeline Improvements | 4,942.6 | 7,067.8 | 0.0 | 4,884.3 | 6,826.1 | 3,827.1 | 0.0 | 0.0 | 27,547.9 |
| 73-337.0 | Miramar Pipeline No. 2 | 339.6 | 2.2 | 2,671.5 | 22.7 | 0.0 | 0.0 | 0.0 | 0.0 | 3,036.0 |
| 73-001.7 | Miramar Road Pipeline | 0.0 | 0.0 | 0.0 | 25.6 | 615.0 | 0.0 | 5,415.2 | 0.0 | 6,055.8 |
| 73-321.0 | Morena Reservoir Outlet Tower Upgrade | 0.0 | 0.0 | 0.0 | 165.0 | 202.6 | 617.3 | 1,879.0 | 0.0 | 2,863.9 |
| 73-338.0 | Operations Center Relocation | 2,145.1 | 0.0 | 12.0 | 15,356.0 | 9,923.0 | 0.0 | 0.0 | 0.0 | 27,436.1 |
| 73-339.0 | Otay F P - Basin Corrosion Repair | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 73-322.0 | Otay Filtration Plant - Raw Water Pump Conversion | 67.4 | 377.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 444.6 |
| 73-315.0 | Otay Filtration Plant - Raw Water Aqueduct | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 73-285.0 | Otay Filtration Plant - Upgrade Ph II | 0.0 | 0.0 | 1,321.1 | 0.0 | 0.0 | 13,553.0 | 0.0 | 0.0 | 14,874.1 |

Table 1-1
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ESTIMATED PROJECT APPROPRIATIONS
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3% INFLATION REFLECTED IN YEARS 1997-2001; 4% THEREAFTER

| CIP No. | Project Name | F I S C A L Y E A 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | Total Estimated Expenditure |
|---|---|---|---|---|---|---|---|---|---|---|
| 73-250.0 | Otay Mesa Reservoir | 396.2 | 116.7 | 3,224.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3,736.9 |
| 73-286.0 | Otay Second Pipeline Improvements | 374.4 | 2,740.8 | 2,409.7 | 9,566.0 | 9,564.8 | 5,862.3 | 0.0 | 0.0 | 30,518.0 |
| 73-346.0 | Paradise Mesa Pump Plant Upgrades | 141.0 | 0.0 | 1,080.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1,221.4 |
| 73-248.0 | Pomerado Pipeline No. 2 | 1,825.6 | 1,253.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3,079.2 |
| 73-340.0 | Potable Water Storage Recirculation | 31.5 | 137.6 | 418.0 | 1,301.6 | 0.0 | 0.0 | 0.0 | 0.0 | 1,888.7 |
| 73-341.0 | Rancho Bernardo Pipeline No. 2 | 1,474.7 | 0.0 | 10,521.4 | 2,340.4 | 0.0 | 0.0 | 0.0 | 0.0 | 14,336.5 |
| 73-342.0 | Rancho Bernardo Pump Plant No. 2 | 377.6 | 0.0 | 3,291.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3,668.7 |
| 73-328.0 | Rancho Bernardo Reservoir Rehabilitation | 0.0 | 127.9 | 304.4 | 2,425.4 | 540.6 | 95.5 | 0.0 | 0.0 | 3,493.8 |
| 73-302.0 | Reservoir Facilities Gas Tanks | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

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ESTIMATED PROJECT APPROPRIATIONS
(DOLLARS IN THOUSANDS)
3% INFLATION REFLECTED IN YEARS 1997-2001; 4% THEREAFTER

| CIP No. | Project Name | F I S C A L Y E A 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | Total Estimated Expenditure |
|---|---|---|---|---|---|---|---|---|---|---|
| 73-316.0 | San Pasqual Aquatic Treatment Facility - Phase II | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 73-291.0 | San Vicente Reservoir Water Quality Systems | 0.0 | 0.0 | 375.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 375.7 |
| 73-343.0 | Savage Dam Emergency Outlet Improvements | 0.0 | 0.0 | 62.0 | 316.6 | 0.0 | 0.0 | 0.0 | 0.0 | 378.6 |
| 73-272.0 | Soledad Reservoir | 1,473.4 | 0.0 | 19.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1,492.8 |
| 70-910.1 | Sorrento Valley Road Pipeline Relocation | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 73-249.0 | South San Diego Pipeline No. 2 | 10,508.4 | 4,953.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 15,462.1 |
| 73-344.0 | South San Diego Reservoir No. 2 | 661.8 | 3.5 | 5,990.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 6,655.7 |
| 73-325.0 | Sutherland Reservoir Boating Facility II | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 73-308.0 | Telemetry Control Systems - SCADA | 0.0 | 0.0 | 1,193.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1,193.3 |
| 73-329.0 | Tierrasanta Norte Water Pump Plant | 0.0 | 0.0 | 0.0 | 0.0 | 115.4 | 9.3 | 939.3 | 0.0 | 1,063.9 |

Table 1-1
CITY OF SAN DIEGO
MUNICIPAL WATER CAPITAL IMPROVEMENT PROGRAM
ESTIMATED PROJECT APPROPRIATIONS
(DOLLARS IN THOUSANDS)
3% INFLATION REFLECTED IN YEARS 1997-2001; 4% THEREAFTER

| CIP No. | Project Name | F<br>1999 | I<br>2000 | S<br>2001 | C<br>2002 | A<br>2003 | L<br>2004 | Y<br>2005 | E<br>2006 | A | Total Estimated Expenditure |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 73-304.0 | Water Supply and Reservoir Management Plan | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 |
| 73-229.0 | 65th and Herrick Pump Station | 1,868.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 1,868.7 |
| 70-942.0 | RWDS- CIP Pool Contingencies | 123.2 | 4.1 | | | | | | | | 127.3 |
| 70-941.0 | RWDS- Annual Allocation RWDS Retrofit Program | 5,150.0 | 2,121.8 | 1,609.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 8,881.6 |
| 70-934.0 | RWDS- Sorrento Valley Carroll Cyn. Subsystem | 265.9 | 80.6 | | | | | | | | 346.5 |
| 70-000.0 | RWDS Extensions | 1,272.4 | 1,315.7 | 1,344.5 | 1,398.5 | 1,137.7 | 1,567.3 | 992.1 | 90.3 | | 9,118.5 |
| | Total Appropriation by Fiscal Year | 124,026.8 | 128,302.4 | 123,806.1 | 143,004.8 | 128,483.6 | 72,085.0 | 33,175.3 | 14,137.2 | | 767,021.4 |

# 2. Engineering review

## 2.1. Introduction

The purpose of the Engineering Review was to review the City's ability to plan, design, construct and maintain the integrity of the proposed improvements, in accordance with the City's own schedule, as well as the Department of Health Services (DOHS) Compliance Order schedule.

## 2.2. Summary of engineering review

The Engineering Team reviewed the following major programs and documents provided by the City:

A. Strategic Plan For Water Supply:
As previously stated in Section 1.3, the Strategic Plan examines a number of alternatives available to meet the City's projected water needs for a 20 year planning period. This report was prepared with the participation of a number of community leaders, in order to ensure that it represents the needs and wishes of the City's constituents. One of the prime goals of the planning group was that the City decrease its the reliance on the purchase of treated water from the CWA by providing capacity to treat projected demand.

The Engineering Team reviewed the population and water demand projections of the Strategic Plan and found them to be reasonable. The Strategic Plan examines water demand projections for average and peak demands under both normal and dry conditions, and compares these projected demands to the quantity of treated water which will be available under a number of scenarios. Water demand projections were based on historical City demands, demand projections provided by the CWA, San Diego Association of Governments (SANDAG) population projections, and City projections of the impact of water conservation measures on demands.

The Strategic Plan participants examined several primary water supply alternatives and ranked them according to such criteria as reliability, certainty, emergency supply, efficiency of water use, cost, water quality considerations, environmental impacts, and others. The preferred alternative includes a plan for the City to expand its water treatment plants on a schedule that will provide sufficient treatment capacity to meet or exceed projected dry weather maximum day demands in 2015. In the interim, the City can meet projected demands through the continued purchase of treated water from the CWA under long term agreements. Projections were based on data meeting regional standards, and were adjusted when appropriate to account for actual local conditions. The dry weather maximum day demands as forecast in the Strategic Plan are:

| Fiscal Year: | Demand (mgd) |
|---|---|
| 2000 | 357.9 |
| 2005 | 374.9 |
| 2010 | 387.6 |
| 2015 | 404.6 |

The highest ranked, or preferred alternative, consists of the following:

- A "Base Case CIP", which includes those projects necessary to address the needs of the system at current demands. Completion of these projects is essential for system safety and reliability.
- Increasing water conservation by 5 percent over current levels through the implementation of several new programs.
- Expansion of the Miramar, Alvarado and Otay treatment plants, beginning in 1998 and concluding in 2011.
- Continued purchase of CWA treated water to meet peak demands until the City has adequate plant capacity of its own.
- A directive for the City to work with the CWA to pursue regional planning and projects of mutual benefit.
- Water reclamation projects including the construction of three new reclamation plants and associated transmission piping.

- The North City Repurification Project which will discharge highly treated water to the San Vicente Reservoir for subsequent use as a raw water supply.

- Ongoing consideration of other options such as desalination, use of ground water and use of gray water.

B. Program Management Plan:

The Engineering Team found the Program Management Plan to be sound and reasonable. The PMP was one of the first documents to come from the directives of the Strategic Planning process. TO prepare the PMP, the City retained the services of Parsons Infrastructure and Technology Group, Inc. as Engineer Program Manager. Parsons prepared the Program Management Plan (PMP), which provides a summary of the content and status of each project included in the CIP. The PMP also includes a summary of the cost estimating and scheduling procedures used by the City and the Engineer Program Manager, an assessment of the operation and maintenance program, and a discussion of the development of the proposed organization of the CIP Program Management Division.

In preparing the PMP, each project's status and schedule for completion was reviewed and updated, based on the use of a common project description, cost estimate and schedule template. Cost estimates were brought to a common date (July 1997), contingencies were applied, and costs were escalated to the mid-point of construction to account for estimated inflation. Each individual project cost and schedule was input into the master CIP schedule, and a projected cash flow histogram was developed. This projected cash flow, and the resulting work load on City and Engineer Program Manager personnel, were reviewed and revised as necessary to provide an overall CIP schedule that will meet the City's needs.

Critical review of the schedule was undertaken by the City to ensure that system operational requirements would be met during the completion of the CIP. For example, it is necessary that certain system storage projects be undertaken in series so that adequate pressure and fire demands will be available in the system at all times. Similarly, the two major treatment plants, Alvarado and Miramar, are both scheduled to be upgraded, but it would put unreasonable demands on the system if the two were under construction at the same time. Therefore, the schedule has been modified

so that the Alvarado upgrade will be completed prior to beginning the upgrade at Miramar.

The CIP schedule derived form the PMP has been used to renegotiate certain Compliance Order milestone dates between the City and the California Department of Health Services. Amendment No. 1, dated July 1, 1997 and Amendment No. 2, dated January 23, 1998, and Amendment No. 3 dated April 6, 1998 modified dates as necessary to maximize system reliability while meeting regulatory-driven requirements such as compliance with Safe Drinking Water Act requirements. The City is in compliance with the requirements of the amended Compliance Order.

The process followed in the PMP to update project information and to examine the impact of scheduling on City operations was found to be sound and consistent with accepted engineering practice. The City has implemented a system that will allow for periodic updates of the individual project schedules and the master schedule as projects develop. Impacts of schedule changes can be reviewed and adjustments made to the CIP as circumstances require, and with the specific concurrence of the CIP Program Manager.

C. Water Quality Studies:

The Engineering Team believes that the process to review plant design and incorporate state-of-the-art technology in the designs is reasonable based on our review of various water quality studies. In anticipation of the need to upgrade its water treatment plants to meet requirements of the Safe Drinking Water Act, the City retained Malcolm Pirnie in association with Powell Associates to study raw and treated water quality and to provide recommendations for the appropriate unit processes to be applied at the plants. The resulting report, issued in August 1990, provided recommended treatment strategies. Our review of this report indicates that the processes recommended for the plants continue to be adequate to meet Safe Drinking Water Act requirements. Given developments in regulations and treatment technology since the preparation of this report, the City is revisiting the recommendations and adjusting the plans for the plants accordingly.

D. Water Treatment Plant Preliminary Design Reports:

Based on the data provided in the Strategic Plan as well as other documents provided for our review, the Engineering Team believes that the City is

adequately addressing the need to determine the optimum capacity for each plant, given revised water demand projections and increased conservation efforts. The City is also appropriately updating plans given developments in treatment technologies. The decision to defer the installation of ozone until it is required to meet the Safe Drinking Water Act requirements will allow the City to refine the plans for ozonation and to take advantage of further developments in technology which may occur in the interim.

This conclusion was based on our review of Preliminary Design reports prepared for the proposed upgrade work at two of the City's water treatment plants, as well as discussions with City personnel in the course of preparing this report. The *Alvarado Filtration Plant Predesign Report* was prepared by Powell/Pirnie Associates and issued in June 1991 and the *Miramar Water Treatment Plant Predesign Report* was prepared by Malcolm Pirnie and issued in November 1993. These reports evaluated the plants and recommended layouts and construction sequencing to provide the needed upgrades. Design of the proposed upgrades for the Alvarado plant was initiated in June 1991, and for the Miramar plant in December 1993.

Since the preliminary design was completed, the City has revised its demand projections consistent with current demand data and is revisiting the need to expand the plants in its system to the extent originally planned. Advances in treatment technology have occurred in this time also. Recognizing these developments, the City has undertaken a review of the planned plant projects, and has redefined its priorities. The plant projects are being focused on the upgrades needed to meet current Safe Drinking Water Act requirements and provisions are being made in the designs to accommodate anticipated future requirements. The City is re-evaluating the need for, or extent of, expansions to the plants. The current designs will provide flexibility to expand the plants to meet future demands as well as to meet reasonably anticipated future water quality requirements. We find the City's approach in updating its plant projects to be consistent with sound engineering practice.

The Alvarado Plant will be upgraded and expanded to 150 mgd capacity in this CIP. Final design of the Alvarado upgrade/expansion is being completed by Malcolm Pirnie/Powell Associates, and is presently approximately 90% complete. The project will be advertised for bids so that construction can commence as soon as financing is in place.

Further review of the projected demands in the northern and western parts of the City indicates that it may be more economical to build a new "North City" plant than to expand the Miramar plant in the future. A decision on whether to proceed with the North City plant is expected to be made no later than July 1999, at which time the scope of other projects will be re-examined as needed. Should the City proceed with the North City plant, other pipeline and pump plant project scopes may be revised. The CIP project for the Miramar plant includes the cost to provide the 180 mgd capacity. The North City plant will only be selected as the preferred alternative if the cost to construct that plant and provide adequate treated water transmission infrastructure is lower than the cost to expand the Miramar plant. Therefore for planning purposes, the CIP includes the higher projected cost, and is thus conservative from a financial view.

A review of the plans for the plant upgrades indicates that the proposed processes are expected to allow the treated water to continue to meet Safe Drinking Water Act requirements. Minor issues related to the designs were addressed with the City in the course of this review.

E. Pipeline Design Documents:

The Engineering Team's review of the documents for the specific pipeline projects indicates that they are in accordance with the typical pipeline construction documents we would expect to see for projects of this nature. The projects themselves have been selected based on defined needs to provide system capacity and redundancy, or to replace or rehabilitate pipelines which are known to be in a deteriorated condition. The process followed to develop, design and construct pipeline projects is consistent with good engineering practice.

Many of the projects to be undertaken as part of the CIP involve pipeline rehabilitation, replacement and providing parallel pipes in areas where demands require additional transmission capacity. We specifically reviewed the Mid-City Pipeline and the Deerfield Water Pump Plant and Discharge Pipeline design documents during the preparation of this Statement of Feasibility to ascertain the City's general approach to pipeline projects and to review specific cases.

In general, the process for taking a pipeline project from the conceptual stage through the design stage is as follows: The City's planning group prepares conceptual descriptions of the required project and uses the City's

water system model to determine the extent of the required improvements and the impact of the proposed improvements on system operation. Currently, the model is being updated, as are the demand projections used in the model, to provide accurate results.

Based upon favorable results in the modeling effort, the project as defined by the planning group is taken to approximately a 10% completion point by the planning group. This level of project definition includes initial alignment studies, geotechnical, traffic and permitting evaluations to determine if there are any major impediments to project completion. A preliminary cost estimate is also prepared using the cost estimating guidelines from the PMP.

When a project has been brought to this level of completion by the planning group, it is then turned over to the appropriate engineering group for further work. The design of some pipeline projects will be completed in-house. In such cases, the assigned CIP project manager will manage the completion of the project by City forces in a manner similar to using an outside consultant.

Pipeline replacement and paralleling in highly developed areas such as are typical in the San Diego area, will require extensive utility coordination as well as public outreach to minimize impacts on the affected communities. The City has implemented a proactive community outreach program which has thus far demonstrated success in gaining public acceptance of the Strategic Plan as well as individual projects.

F. Pump Plant Design Documents:

Projects have been selected based on defined needs in accordance with good engineering practice. Numerous pump plants will be upgraded or replaced in the CIP, due to increased system demands or the plant being obsolete and inefficient. We reviewed several pump plant projects in the preparation of this Statement of Feasibility, including the Hillandale pump plant, and the 65th and Herrick and the Deerfield Water Pump Plant and Discharge Pipeline project. We believe that in determining the specific scope of a pump plant project, the City uses the appropriate criteria and processes: the hydraulics of the system are reviewed, including future demand projections, and the appropriate pump sizing is performed, along with a determination of the controls for the station.

G. Treated Water Storage Projects:
The Engineering Team believes that the City's processes in identifying potential treated water storage projects are consistent with good engineering practice. A number of treated water storage projects are included in the CIP. These projects are summarized in the PMP. Although no design documents were provided to the Engineering Team, in general, we believe that the City is appropriately reviewing the need to expand reservoir capacities and provide new system storage given recent demand trends. Projects are prioritized based on defined needs, such as known deterioration of existing facilities or projected system demands requiring additional capacity. In addition, the City is reviewing appropriate seismic criteria and considering a recommendation for site specific seismic designs.

H. Annual Cast Iron Main Replacement Projects:
The program which the City has committed to in order to replace the remaining cast iron mains in the system is a necessary program and has been scheduled to extend over a period of time such that it will not unduly burden the City personnel in any given year. We believe it is a systematic and reasonable program to accomplish the necessary end result.

The City has committed in the DOHS Compliance Order to replace the remaining cast iron mains in its distribution system which have the potential to be problematic due to their age. Given the City engineering staff's experience in designing these projects, it is reasonable and appropriate that they continue to handle them for the CIP. The procedure which the City has proposed, in which there will be a memorandum of understanding between the CIP Program Management Division and the in-house City staff providing design (see Section 3.1, Project Management and Organization), is expected to provide adequate cost and schedule controls for these projects.

There is a backlog of cast iron water main replacement projects for which design is complete and which have been held pending availability of funds. The City has elected, for the first two fiscal years of this CIP, to accelerate the rate of cast iron main replacement. The City's Engineering and Capital Projects Department will provide construction inspection and management services for these projects, so this acceleration will not place additional labor burden on the CIP Program Management personnel. Should it be necessary, a mechanism has been put in place to use outside consultant services to supplement the City's Engineering personnel during this period.

I. Value Engineering Reports:
Recognizing that there may be more cost effective ways of achieving the desired results on any given project, the City has undertaken a value engineering review of key aspects of the CIP. Our Engineering Team finds the use of Value Engineering is reasonable by accepted industry standards.

Value Engineering is a process which is accepted in the industry, in which projects are reviewed by teams of professionals who can provide fresh perspectives and suggest more cost effective means to accomplish the same end.

As discussed above, the water treatment plant designs have been reviewed by the City and the design consultants, and additionally a Value Engineering review was completed in October 1997. The City and its consultants are reviewing recommendations for changes as part of the final design phase. In addition, separate value engineering reviews have been completed for the system reservoir projects, the standards and guidelines being developed for the CIP, and for the pipeline projects in the CIP. Value Engineering recommendations in each of these areas have been reviewed. Value Engineering will continue to be done on specific projects under the CIP, at the appropriate stage in design development.

J. Standardization Program:
The City has recognized that standardizing equipment and parts can provide economies to the City. It is moving forward with plans to standardize, to the extent allowed, certain parts, equipment and City vehicles. Standardization will also allow the City to use personnel more interchangeably at its facilities to provide O&M services. Given the benefits that can be seen by appropriate use of this process, it is a reasonable course for the City to follow to pursue this action.

K. Proposed Standards and Guidelines:
The City, in anticipation of the need to provide consistent guidance to its personnel as well as numerous outside consultants during the completion of the CIP, is preparing standards and guidelines for use by those involved in the CIP. The Engineering Team finds the City's efforts at standardizing these documents and procedures is consistent with sound engineering practice.

The Water and Sewer Design Guide prepared by the Water Utilities Department and dated September 8, 1994; the Standard Drawings volume

which includes San Diego Area Regional Standard Drawings and dated May 2, 1997; the Standard Specifications for Public Works Construction 1997 edition, issued by the Southern California chapters of the APWA and AGC, and as amended specifically for the City of San Diego are all included as supporting documents for the development of the project specific standards for the CIP. These standards and guidelines are being developed by Parsons Infrastructure in its role as Engineer Program Manager. They include cost estimating guidelines as outlined in the PMP; contract document guidelines which will include standard "boilerplate" and specification sections; and development of standard details for use in contract drawings.

The use of standard contract documents and details will provide uniformity to documents produced by the City for this CIP. This practice provides the benefit of contractor familiarity and would be expected, based on past experience with other utilities who use such standard documents, to result in more bidders on a given project, and thus more competitive prices.

L. Public Outreach Programs:
Beginning with the preparation of the Strategic Plan, the City has recognized the need to involve the public and to gain support for the CIP as well as individual projects within the CIP. It has thus instituted a proactive public outreach program for this CIP which has demonstrated success in obtaining approval of the Strategic Plan as well as individual projects. The program includes the commitment of significant resources throughout the CIP, and this commitment will be essential to obtain approvals and to keep the CIP on track. We find the outreach program to be well planned, consistent with the practices of other major utilities, and necessary for the continued success of the CIP.

## 2.3. Conclusion

The documents and programs reviewed by the Engineering Team have been summarized above. The Engineering Team found:

- The Strategic Plan and the Program Management Plan are sound and reasonable.

- The process to review plant design and incorporate state-of-the-art technology in the designs is reasonable.

- The City is adequately addressing the need to determine the optimum capacity for each plant, given revised water demand projections and increased conservation efforts.

- The City's practices for completing pipeline projects are in accordance with the typical pipeline construction documents we would expect to see for projects of this nature. Projects have been selected based on defined needs in accordance with good engineering practice.

- The City's processes in identifying potential treated water storage projects are consistent with good engineering practice.

- The program which the City has committed to in order to replace the remaining cast iron mains in the system is a necessary program and has been scheduled to extend over a period of time such that it will not unduly burden the City personnel in any given year. We believe it is a systematic and reasonable program to accomplish the necessary end result.

- The use of Value Engineering is reasonable by accepted industry standards.

- The City's efforts at standardizing various documents and procedures for use in the CIP is consistent with sound engineering practice.

Based on the information provided by the City, it is our opinion that:

- The CIP program has been defined based on a well-documented need, and has been appropriately communicated to the public.

- The management strategy for implementing the CIP is appropriate and recognizes that changes may be required as the program develops. The City has allowed itself flexibility to adapt to changes required as the program evolves.

- The City effectively prioritizes and plans for future improvements to the water system based on projected demands and defined needs.

- The planned projects will allow the City to continue to meet Safe Drinking Water Act requirements and to ultimately meet projected growth of demand in its service area.

- The City is in compliance with the requirements of the DOHS Compliance Order #04-14-96CO-022, as amended through Amendment No. 3 dated April 6, 1998.

- The CIP Projects will increase the reliability and extend the useful life of the City's water supply, treatment, storage and distribution systems, and will decrease the City's reliance on imported treated water, consistent with the stated goal in the Strategic Plan.

- With the commitment of the resources identified in the documents provided for review, and with the receipt of the long term financing assumed in the City's financial model (see section 6 of this report) in the first half of calendar year 1998, the schedule in the CIP is achievable.

- The City is able to plan, design, construct and maintain integrity of the proposed system improvements in accordance with the City's own schedule, as well as the Department of Health Services Compliance Order schedule.

# 3. Institutional analysis

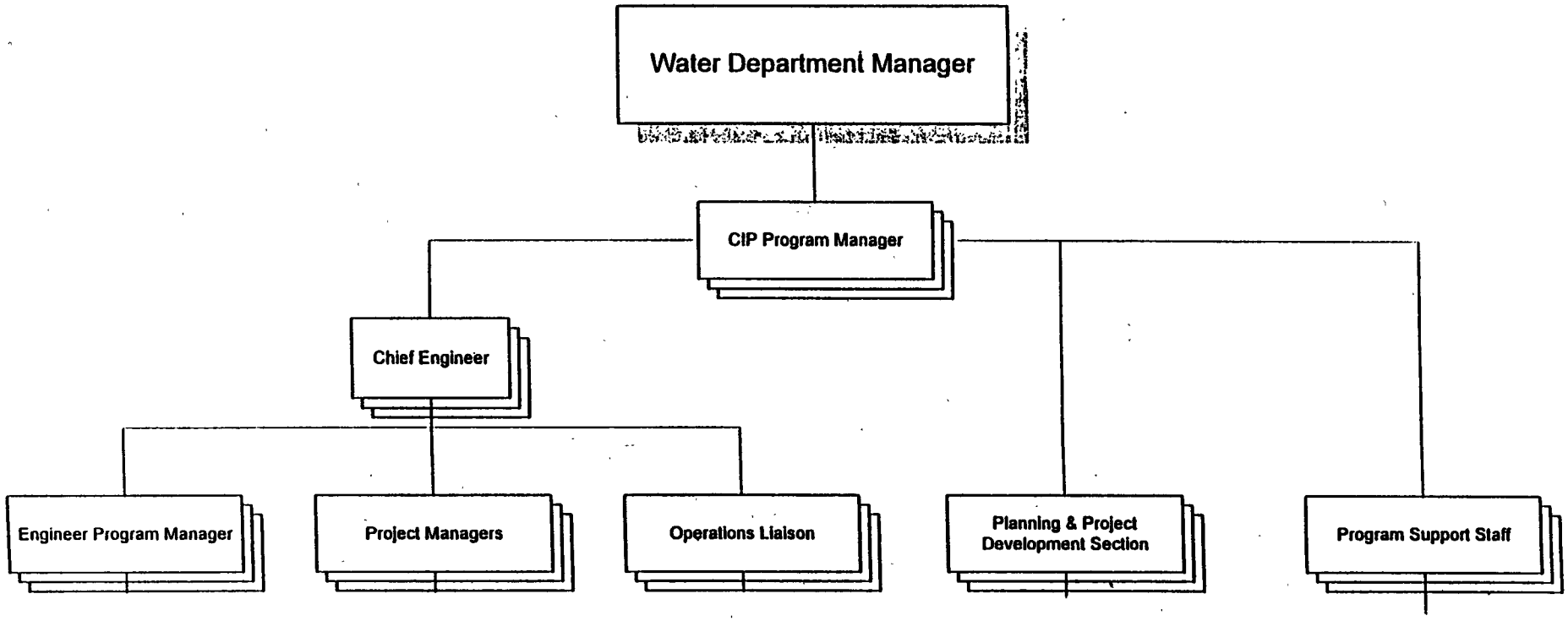
## 3.1. Project management organization

A key consideration in undertaking a program of the magnitude that the City has begun, is the ability of the organization to implement and manage the work. This Institutional Analysis involved a review of the organizational and management structure of the CIP Program Management Division, as well as the qualifications of individuals chosen to fill key positions, in order to arrive at an opinion of the City's ability to implement and manage the CIP.

The City Water Department is headed by the Water Department Manager, under which there are three divisions: Management Services Division, Water Operations Division and Capital Improvements Program. Refer to the Organization Chart following this page for a depiction of the Department organization. The Water Department is overseen by the Deputy City Manager for Public Works. This position is filled by George Loveland, who has been employed by the City for 31 years. He previously served as the Water Department and as the Deputy Water Utilities Director responsible for water distribution, sewer collection and water production. The Water Department Manager is Larry Gardner, who has been with the City for thirteen years, the last four of which have been as Water Operations Chief Deputy Director.

The Management Services Division Deputy Director is Deborah Van Wanseele. She has been with the City for 26 years, and has in this time assumed positions of increasing authority in various City Departments prior to this position. The Acting Water Operations Division Deputy Director is Kent Floro. Mr. Floro has been with the City for 18 years, and has been the Assistant Deputy Director of the Water Production and Water Operations Divisions.

# CAPITAL IMPROVEMENTS PROGRAM ORGANIZATION



The City Water Department has assumed overall project management responsibility for the CIP. A CIP Program Management Division has been formed within the Water Department for the purposes of implementing the CIP. The Division is under the direction of Marsi Steirer, CIP Program Manager, who reports directly to the Water Department Manager. Ms. Steirer has been with the City of San Diego for twelve years, and with the Water Department for more than nine years, where she has developed and managed the water conservation program, and well as the Strategic Plan for Water Supply. She is thus familiar with the water system itself, and possesses a strong management background. As the CIP Program Manager, she has the authority to implement the CIP program within the defined program budget.

An Environmental Coordinator will report directly to the CIP Program Manager; this position is presently vacant. A Senior Public Information Officer provides support to the CIP Program Manager on issues related to community outreach and public relations. Wendy Hovland, who previously provided similar services to the City on the wastewater program, has been retained by the City to fill this position. A Supervising Management Analyst, also reporting to the CIP Program Manager, supervises a group of financial and administrative analysts, as well as a records management group. Samuel Gray has been with the City for 22 years, and with the Water Department for 8 years. Prior to becoming the Supervising Management Analyst, he was involved in the projection and monitoring of expenditures and revenues for the Department.

Engineering functions will be the responsibility of the Chief Engineer. This position is filled by Nick Kanetis, P.E., a registered Professional Civil Engineer with 18 years of experience. For the past seven years, Mr. Kanetis has filled several engineering positions at the City of San Diego Engineering and Capital Projects Department, and has managed several large capital projects. Additionally, he served as the Assistant Deputy Director of the Field Engineering Division of the Engineering and Capital Projects Department.

Within the engineering group, projects will generally be completed by one of three project management teams, each of which is headed by a Senior Civil Engineer and staffed with engineers and support staff. The project management teams include one for the completion of the water treatment plant upgrade/expansion work, and one each for the completion of system projects in the North and South areas of the City. The Senior Civil

Engineers are all registered Professional Civil Engineers: Vic Bianes, P.E. heads the group assigned to the water treatment plant projects. He has eleven years of experience with the City's Water Department, and has designed and managed many water and sewer system projects in this time. He also has played a key role in the public outreach program which the City has instituted for the CIP. Steven Wallace, P.E. heads the group assigned to the "north" projects. Also a registered Civil Engineer, he has been with the City for nine years, and has managed a variety of projects in this time. He has also been a participant in community outreach programs similar to the program for the CIP. The South Senior Civil Engineer position is vacant at present.

In addition to the three specific project management groups, a General CIP Support function is filled by a Senior Civil Engineer. Ronald Bankhead, P.E. has 27 years of experience with the City's Water Department, and has been deeply involved in the development of the specific projects which comprise the CIP. He is also intimately familiar with the water system model used by the City.

An operations liaison group will provide input from operations and maintenance personnel to the engineers. Gary Hogue, P.E., a registered Professional Civil Engineer, has worked with the City for 27 years and was formerly a supervisor in charge of an engineering section supporting the Water Department's Operations Division. As a Senior Civil Engineer, he will provide the lead for the liaison group.

The Planning and Development Group, also headed by a Senior Civil Engineer, provides project planning, modeling, and conceptual design for individual CIP projects. Leonard Wilson, P.E. is the Senior Civil Engineer in charge of this planning group. He has been with the City of San Diego for twelve years, and has worked with the Water Department and developers to plan for future facility needs in the City. He will continue in this role as the head of the Planning and Development Group.

Parsons Infrastructure and Technology Group, Inc. has been selected as Engineer Program Manager for the CIP. In this capacity, Parsons will provide support to the City in project scheduling, cost estimating, permit coordination, safety program and owner controlled insurance program, and will provide engineering staff to support City personnel. Parsons assisted the City with preparation of the Program Management Plan issued in

November 1997. The Parsons staff is led by David Bird, P.E. who has 35 years of experience in engineering and project management. He has participated in major water and wastewater projects during his career and is a registered Professional Civil Engineer. Parsons' personnel work closely with the City's staff at the CIP Program Management offices.

Consulting engineering firms are being used to complete the design of large, complex projects in the CIP. Powell/Pirnie Associates is providing final design services for the Alvarado Filtration Plant project, and Camp, Dresser, McKee is designing the Miramar Filtration Plant project. Both firms are nationally recognized engineering firms with extensive experience in water filtration plant design and construction. The City has selected $CH_2M$ Hill, a nationally recognized firm, to provide construction inspection, contract administration and construction management services for the Alvarado Filtration Plant construction phase. The design firms will be involved in the construction phase, providing design clarifications and modifications, reviewing shop drawings and otherwise assisting the construction management team.

Projects involving replacement of cast iron pipes will be designed by City Engineering and Capital Projects Department personnel because of their experience in dealing with the issues that arise in such projects. Additionally, other projects may be designed by City personnel, in which case a "Memorandum of Understanding", similar to an outside consultant agreement, will be signed by both the engineering group and the CIP Program Manager. The use of a memorandum of understanding between the two City groups will provide the Program Management Division with assurance that the project will be managed, and the costs controlled, with a level of attention similar to that provided by outside consultants.

For other CIP projects, design and construction services will be provided by either qualified internal resources or consulting firms. Determinations will be made for projects based on in-house personnel work loads, project size and complexity, and project scheduling.

## 3.2. Project controls

In conjunction with the initiation of the construction phase of the first CIP projects, the City, with Parsons' assistance, is adopting a number of practices to ensure that cost, schedule and quality goals are met in an optimal manner. These approaches include value engineering as well as

design and constructability reviews to ensure that project design and bid packages will result in responsive and competitive bids; and an owner controlled insurance program (OCIP), a project-wide coordinated insurance, safety and loss prevention program intended to increase project safety and reduce overall project insurance costs.

Cost and schedule are monitored and updated through the use of Primavera Project Planner by Primavera Systems, Inc., a commonly used scheduling and cost control software. Section 2, Engineering Review, discusses the procedure that was followed to bring all CIP projects to a common date for cost estimating purposes, and to prepare a common description and cost estimating template for use in the CIP. Standard phases of projects were defined and a work breakdown structure was developed for scheduling, cost collection and budgeting to provide a direct and consistent relationship between cost and schedule. A cost loaded project schedule is developed for each project and, after approval by the Project and Program Managers, is incorporated into the Program Master Schedule. Actual progress on the defined activities is tracked and compared to the original baseline. On a monthly basis throughout a project, detailed reports regarding cost and schedule trends are prepared for the Project Managers' review to allow corrective actions to be implemented in a timely way.

## 3.3. Conclusions

Based upon a review of the Division organization; key position qualifications; the qualifications of those individuals specifically filling key positions; information related to the functions of City and consultant personnel; and discussions with key City personnel, it is our opinion that:

- The organization and management structure is adequate to successfully implement and manage the CIP.

- Individuals filling key management positions have appropriate qualifications for their positions and responsibilities. Key personnel have been selected from senior City staff and are familiar with the City's water system as well as the procedures followed by the City. Professional positions are filled with individuals having the appropriate professional licenses.

- The City has appropriately contracted for necessary program management, design and construction services with recognized firms having extensive experience and capabilities in their respective areas of responsibility.

- The City's approach to the use of outside consultants to assist it is sound and is consistent with the practices of other governmental agencies with which we have been involved, and who have undertaken projects of similar scope and complexity.

- City and consultant staff are capable of completing the implementation of the CIP projects and have instituted appropriate procedures to optimize cost, schedule and quality of the constructed projects.

# 4. Cost estimating techniques

## 4.1. Review of estimating techniques

This section summarizes the research and assumptions used to develop the cost estimating techniques proposed in the Program Management Plan, and provides our assessment of whether the techniques used are reasonable and consistent with sound engineering practice.

Cost estimating techniques developed by Parsons relied, where available, on historical contract bid costs from the Engineering and Capital Projects Department. Where historical data were unavailable, cost information was obtained from similar agencies within the western United States or from the Means Heavy Construction database.

Formulas or unit cost equations for deriving various costs for major construction components were developed by Parsons from the resource data mentioned above. In addition, empirical cost factors were developed for non-construction project activities, including cost markups based on actual past project programming and/or project planning experience.

### 4.1.1. Development of formulas

Construction cost curves were developed by Parsons for the following elements:

- Water Treatment Plants
- Reservoirs
- Pumping Plants
- Pipelines including boring and jacking

For large and small diameter pipelines, tunnels, associated valves, reservoirs, and pump plants, there exists a relatively large historical data base from which to develop cost curves. The City has completed many

projects of this nature from which actual cost data can be used. For treatment plants, where limited data exists, Parsons developed curves using the information available and exercising sound engineering judgment. Parsons referenced the San Diego Water Utilities Department, the Southern Nevada Water Authority, the Los Angeles Department of Water and Power, and the Metropolitan Water District of Southern California as source agencies from which they developed their cost curves. The design work involving the Alvarado and Miramar plants is also far enough advanced that there is a reasonable degree of certainty to the estimated construction costs.

Actual contract bid costs were used to develop cost curves and/or to verify that construction costs were within acceptable limits. Where actual construction cost data was not available, information from similar utility agencies in the western United States and/or Means Heavy Construction data was used.

Allowances were included in the cost curves based on the amount of cost data available and the extent of unknowns which could not be quantified at the present time. This approach is a reasonable and prudent approach.

### 4.1.2. Application of non-construction costs

The application of non-construction cost factors or markups provide the necessary project budget allowances for project contingencies, escalation, and engineering, legal, and management (ELM) costs.

Project contingency is a non-construction cost normally applied as a percentage of the estimated construction cost. The application of additional non-construction costs to cover such unforeseen project contingencies as adverse soil conditions, utility conflicts, environmental mitigation, and other unplanned and unidentifiable costs, including geographical market factors, is a necessary programming or project budget management tool.

Project cost contingencies were applied as a percentage of the construction estimates as follows:

| Phase | Project Contingency |
|---|---|
| Start of Project Definition | 30% |
| End of Project Development Phase | 25% |
| End of 30% Design | 20% |

| | |
|---|---|
| End of 75% Design | 15% |
| End of 90% Design | 10% |
| Construction Award | 5%-10% |

As a project moves from the conceptual stage through the design and then to the start of construction, cost estimates are refined, and the applied contingency is reduced in accordance with the above table. This approach is a reasonable and prudent approach for estimating project costs and the contingencies applied at the various stages of project completion are consistent with those applied in the industry. The application of these contingency percentages to the various projects has resulted in an overall project contingency amount of $102,172,000, which is approximately 15% of the estimated construction cost of $664,849,000. Contingencies are tracked under a separate number (73-331.0) in the CIP.

Costs for all non-construction project activities were subjected to the same analytical process used to derive schedule durations and schedule templates. Schedules and costs for schedule activities were derived from the Engineering and Capital Projects Department's database for water projects. Average costs for schedule activities were calculated by averaging the costs for activities by project type, and a resultant cost template for non-construction activities was developed.

For certain activities, primarily those that are internal to the City and generally are not sensitive to project size (e.g., bid and award process), lump sum estimates were developed. For other activities, which are sensitive to project size, a percentage of estimated construction cost was used. This method for establishing non-construction costs is standard and typical in the industry.

## 4.2. Research similar capital projects

In order to confirm that the formulas developed for use in project cost estimating provides a reasonably accurate result, actual cost data was gathered for a number of similar capital projects performed in the local Southern California area. Cost data was broken down into categories similar to those used for cost curve development. The data was then plotted on the associated cost curve to assess how accurately the curves tracked to the actual projects costs. Acceptable upper and lower limits of accuracy for planning, as defined by the American Association of Cost

Engineers (AACE) and as referenced in the PMP, are from -30% to +50%. These limits were used to assess cost accuracy. The results that were obtained indicate that the cost curves will provide results which generally fall within the commonly used range of accuracy for the planning phase of a project.

As more cost data specific to San Diego becomes available, through the receipt of bid prices on projects, cost projection curves will be refined when necessary to reflect this data.

## 4.3. Conclusions

Based on our research and study of the assumptions and work performed by Parsons to develop the cost estimating techniques and cost curves to be used for forecasting project costs for the City of San Diego Water Department's Capital Improvement Program, we conclude that:

- The research performed and assumptions made by Parsons in the development of the cost curves incorporated sound engineering judgment.
- The techniques and cost curves recommended by Parsons are reasonable.
- The cost curves can reasonably be expected to accurately forecast project construction costs within the planning limits required.

# 5. Operations and maintenance

## 5.1. Introduction/background

The Operations & Maintenance (O&M) evaluation included review of O&M costs, staffing levels and general staff qualifications in order to arrive at an opinion as to the adequacy of the current and proposed future programs. The O&M evaluation focused on current and projected O&M costs for the City of San Diego Water Department Water Operations Division. The Engineering Team reviewed actual expenditures for Fiscal Year 1997 (FY 97) which ended June 30, 1997 and the proposed FY 98 budgets and staffing and assessed their adequacy and reasonableness. This section presents the results of the review that was completed.

In order to assist in the evaluation of adequacy and reasonableness, existing and projected O&M budgets and staffing levels for the City of San Diego Water Department were compared to several other water facilities of comparable size. The Engineering Team conducted telephone surveys to obtain comparative data for water systems and treatment facilities in the western and southwestern United States. Information was collected from six other agencies that operate treatment plants with design capacities between 15 and 480 million gallons per day (mgd). The Engineering Team collected information on raw water sources, treatment processes, staffing, and O&M costs for each of the plants, and used this information as a basis for comparison of the upgrades and enhancements being proposed by the City of San Diego.

The various agencies contacted for this review collect and manage their data on different time schedules and in different manners than does the City of San Diego. For example, the City of San Diego uses more than 1000 object accounts for classifying expenditures. The Southern Nevada Water System uses less than 100. As a result, it was sometimes necessary to infer which expenses fell into which object account. Also, some agencies track production-related expenditures and staffing very specifically while others do not. For example, East Bay Municipal Utility District's (EBMUD) maintenance staffing and expenditures cover all maintenance, production

and distribution, while the data provided by the Salt Lake City Water Department was isolated for only water production-related activities.

A summary of the budget and staffing comparisons is presented in Table 5-1 and Table 5-2, respectively. The interpretation of the data contained in each table is discussed in detail in the following sections.

## 5.2. Operations & maintenance costs for water operations division

### 5.2.1. Present costs

The FY 97 O&M expenditures associated with the three treatment plants were obtained from City staff and represent O&M-related costs specific to each of the plants. These costs are comprised of direct and indirect expenses. Direct expenses include salaries, chemicals, water purchases, equipment/facility repair, operating supplies, fuel and utilities. Indirect expenses include professional services, leases, office expenses and other items necessary for the operation of a facility but not directly related to the production of water. Our study showed that on average direct expenses made up 85% of the total O&M costs with salaries, chemicals, water purchases and utilities contributing the most. The plant-specific O&M expenditures for direct and indirect expenses other than purchase of water were $2,474,940 at the Miramar plant, $2,820,886 at the Alvarado plant, and $1,981,894 at the Otay plant.

These plant specific costs do not include water purchase costs, expenditures for capital improvement projects, reimbursements from other departments or other plant-related O&M expenditures (e.g., from Instrumentation and Telemetry, Engineering, and Construction and Maintenance). The City does not track these "other" plant-related O&M expenditures on a per-plant basis. In order to include "other" plant-related O&M expenditures, we must look at overall O&M expenditures for water production. The total of the "treatment unit" costs was $13,810,154 for FY 97. This figure includes the individual plant expenses cited above, as well as the "other" plant related expenses which are not tracked on a plant-specific basis. The costs for operating the plants are compared to other facilities in Table 5-1.

Table 5-1
WATER TREATMENT PLANT OPERATIONS AND MAINTENANCE BUDGETS FOR SELECTED CITIES

| City/Plant | Design Flow (MGD) | Avg. Daily Flow (MGD) | Total Personnel | Number of Shifts | Direct Costs ($) (1) | Indirect Costs ($) (2) | Total Costs ($) | Personnel Costs | Nonpersonnel Costs | Unit Costs ($/MG) (3) | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|
| City of San Diego, Water Dept. | | | | | | | | | | | Average with water purchases (4) |
| Miramar | 140 | 88 | 16.3 | 3 | $2,290,877 | $184,063 | $2,474,940 | $802,413 | $1,672,527 | $77.12 | Without water purchases |
| Alvarado | 120 | 85 | 15.4 | 3 | $2,680,391 | $140,495 | $2,820,886 | $676,810 | $2,144,076 | $90.78 | Without water purchases |
| Otay | 40 | 18.6 | 12.3 | 3 | $1,752,587 | $229,307 | $1,981,894 | $620,103 | $1,361,791 | $291.07 | Without water purchases. |
| | | | | | $11,888,622 | $1,921,532 | $13,810,154 | $6,184,302 | $7,625,852 | $197.36 | Average without water purchases. |
| City of Phoenix, Water Prod. Div. | | | 8 | 1 | | | | | | | Budget includes lab and elect. maint. personnel |
| Union Hills | 160 | 93 | 37 | 4 | $13,877,985 | $350,350 | $14,228,335 | $1,918,465 | $12,309,870 | $419.16 | With water purchases. |
| Val Vista | 160 | 100 | 30 | 4 | $4,509,584 | $938,751 | $5,448,335 | $1,662,710 | $3,785,625 | $149.27 | With water purchases. |
| Deer Valley | 150 | 47 | 25 | 4 | $4,369,625 | $261,657 | $4,631,282 | $1,568,879 | $3,062,403 | $269.97 | With water purchases. |
| Squaw Peak | 140 | 44 | 25 | 4 | $4,235,659 | $215,684 | $4,451,343 | $1,536,337 | $2,915,006 | $277.17 | With water purchases. |
| Verde | 50 | 21 | 25 | 4 | $2,456,339 | $622,115 | $3,078,454 | $1,381,358 | $1,697,096 | $401.62 | With water purchases. |
| | | | | | | | $16,970,295 | | | $152.44 | Average without water purchases. |
| EBMUD, O&M Department | | | | | | | | | | | |
| Walnut Creek | 80 | 41.5 | - | 3 | $1,235,914 | $22,269 | $1,258,183 | $763,679 | $494,504 | $82.85 | |
| Lafayette | 45 | 11.4 | - | 3 | $923,038 | $93,412 | $1,016,450 | $695,568 | $320,882 | $241.25 | |
| Orinda | 175 | 112.8 | - | 3 | $2,625,156 | $50,199 | $2,675,355 | $1,308,732 | $1,366,623 | $64.94 | |
| Sobrante | 60 | 23.6 | - | 3 | $2,218,470 | $97,505 | $2,315,975 | $949,480 | $1,366,495 | $267.56 | |
| San Pablo | 55 | 3.4 | - | 3 | $177,686 | $31,933 | $209,619 | $130,923 | $78,696 | $170.02 | |
| Upper San Leandro | 60 | 13.9 | - | 3 | $1,671,191 | $85,047 | $1,756,238 | $975,980 | $780,258 | $344.62 | |
| Denver Water | | | | | $1,599,703 | $1,021,827 | $2,621,530 | $1,207,633 | $1,413,897 | | Supervision and Administration costs; not included in total costs. |
| Marston | 220 | 24 | 21 | 2 | $1,870,357 | $1,194,710 | $3,065,067 | $866,357 | $2,198,710 | $385.94 | |
| Moffat | 210 | 39 | 20 | 2 | $2,320,860 | $1,482,474 | $3,803,334 | $872,310 | $2,931,024 | $290.46 | |
| Foothills | 250 | 151 | 22 | 2 | $3,170,104 | $2,024,938 | $5,195,042 | $863,904 | $4,331,138 | $102.78 | |
| Lab | - | - | 26.5 | 1 | $1,462,439 | $934,148 | $2,396,587 | $1,077,469 | $1,319,118 | | |
| Total | | | | | $8,823,760 | $5,636,270 | $14,460,030 | $3,680,040 | $10,779,990 | $202.01 | |
| Southern Nevada Water System | 480 | 306 | 105 | 3 | $32,000,368 | $795,550 | $32,795,918 | $6,629,672 | $26,166,246 | $292.70 | |
| City of San Francisco | | | | | | | | | | | |
| Sunol | 160 | 43.3 | 17 | 3 | $2,293,538 | $50,000 | $2,343,538 | $1,180,800 | $1,162,738 | $175.00 | Indirect and nonpersonnel costs not tracked, but estimated. Unit cost provided by Sunol staff. |
| Salt Lake City Water Dept. | | | | | | | | | | | |
| Big Cottonwood | 46 | 19.2 | - | 3 | $764,235 | $267,995 | $1,032,230 | $510,517 | $521,712 | $146.95 | |
| City Creek | 15 | 6.9 | - | 3 | $578,677 | $184,109 | $762,786 | $466,085 | $296,701 | $303.63 | |
| Parley's | 45 | 13.1 | - | 3 | $825,929 | $670,932 | $1,496,861 | $504,551 | $992,309 | $312.43 | |

Notes
(1)Direct Costs include personnel services, materials and supplies, chemicals, utilities, gasoline, solvents, tools, etc.
(2)Indirect Costs include rental fees, professional services, outside laboratory services, groundskeeping, etc.
(3)Unit Costs were determined by dividing the Total Cost by the Total Annual Flow given in Table 5-2.
(4)San Diego's Unit Costs were based on the quantity of water requiring treatment and excluded the quantity of treated water purchased from SDCWA.

From Table 5-1 the treatment plants operate at production costs of approximately $77 per million gallons (MG) at Miramar, $91 per MG at Alvarado and $291 per MG at Otay and an overall treatment unit cost of $197 per MG when the three plants are considered together. Further examination of Table 5-1 yields a minimum treatment unit cost of $65 per MG, a maximum of $401 per MG and an average of $247 per MG for the other utilities surveyed. This comparison indicates that San Diego's treatment unit cost falls well within the range of the O&M costs presented from the other agencies. This is true for the individual plants as well as for the overall treatment unit cost.

Water purchase expenditures significantly impact the total unit cost for the City of San Diego Water Department. For calendar year 1998 the City of San Diego will purchase most of its water (70-90%) at costs of $1,316 per MG for unfiltered water and $1,568 per MG for filtered water from CWA. Adding this purchased water cost to the O&M expenses results in a total unit cost of $993 per MG of treated water versus $197 as discussed above without water purchases. The total unit cost of $993 per MG is less than the purchase cost of water because the City receives 10 - 30% of its water from local surface water sources, with no purchase cost. The "no-cost" water from local sources decreases the total unit cost to $993.

Foctoring in water purchase expenditures for the other surveyed agencies' costs does not provide a reasonable basis for comparison because they:

- do not purchase water (e.g., EBMUD, Denver Water, City of San Francisco and Salt Lake City Water Department), or
- pay a negligible amount for their purchases (e.g., Southern Nevada Water System at $1.69 per MG), or
- pay much less (e.g., City of Phoenix at $134 per MG).

It is not appropriate to base this analysis on data which include water purchases because of the higher cost of purchasing raw water in San Diego. The comparison of unit treatment costs excluding water purchases is applicable for this assessment. The City's unit costs to produce treated water were reviewed and found to be within the range of costs of other similar utilities.

### 5.2.2. Projected costs

The CIP projects represent significant upgrades and expansion to the Alvarado and Miramar plants. Operations and maintenance costs as projected by the City are expected to increase annually based on normal escalation factors of between 3 and 4% through the year 2006.

The Engineering Team reviewed the City's projected O&M production costs and found them to be reasonable for the planning period. In preparing the projected costs, the City has anticipated that the upgrades and expansions at the plants will make plant operation simpler for the operators, therefore not requiring additional staff. It has projected that new equipment will be less problematic than the aging equipment currently at the Alvarado and Miramar plants, and that the more sophisticated instrumentation and control systems which will be implemented during the plant work will allow more automatic operation. Operational costs other than labor, which would include items such as power consumption and chemical costs, are expected to increase as the flow through the plant increases. Since a significant increase in flow is not anticipated immediately after the expansion and upgrade work, we find the current projections are adequate for the planning period.

## 5.3. Operations & maintenance staffing for water operations division

### 5.3.1. Present staffing needs/levels

For FY 1997 there was a total of 232 positions in the Water Operations Division which are associated with the production of water. This included 22 operations positions, 47 maintenance positions and 8 engineering positions. The remainder of the positions were administrative, support and lab personnel. For FY 1998, the O&M staff decreased to 209 positions consisting of the same number of operations, maintenance and engineering positions. The 23 eliminated positions consist of 4 positions which are now handled by contracted services and 19 positions which were transferred to the sewer fund.

In order to compare the City's water operations staffing levels to those of other utilities surveyed, the number of employees per million gallons of water produced was calculated for each. As shown on Table 5-2, the City of San Diego is comparable to the other utilities surveyed in the treatment plant O&M employees per mgd.

Table 5-2
WATER TREATMENT PLANT OPERATIONS AND MAINTENANCE STAFFING FOR SELECTED CITIES

| City/Plant | Total Annual Flow (MG) | Avg Daily Flow (MGD) | Total Personnel | Production O&M Personnel | Total Personnel Per MGD | O&M Personnel Per MGD | Production-Related Personnel Breakdown | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Mgmt | Admin | Oper | Maint | Safety | Lab | Engr & Constr Mgmt | Other |
| **City of San Diego, Water Dept.** | | | | 69 | | | 1 | 16 | 0 | 35 | 0 | 47 | 8 | 81 |
| Miramar | 32,092 | 88 | - | 13 | | 0.15 | 0 | 3.3 | 8 | 5 | 0 | 0 | 0 | 0 |
| Alvarado | 31,073 | 85 | - | 12 | | 0.14 | 0 | 3.4 | 7 | 5 | 0 | 0 | 0 | 0 |
| Otay | 6,809 | 18.6 | - | 9 | | 0.48 | 0 | 3.3 | 7 | 2 | 0 | 0 | 0 | 0 |
| Treated Water From SDCWA | 17,626 | | | | | | | | | | | | | |
| Totals | 87,601 | 191.6 | 743.97 | | 3.88 | | 1 | 26 | 22 | 47 | 0 | 47 | 8 | 81 |
| **City of Phoenix, Water Prod. Div.** | | | 92 | | | | 1 | 12 | 0 | 0 | 0 | 0 | 1 | 78 |
| Union Hills | 33,945 | 93 | 37 | 32 | - | 0.34 | 0 | 3 | 18 | 14 | 0 | 0 | 0 | 2 |
| Val Vista | 36,500 | 100 | 30 | 26 | - | 0.26 | 0 | 3 | 14 | 12 | 0 | 0 | 0 | 1 |
| Deer Valley | 17,155 | 47 | 25 | 20 | - | 0.43 | 0 | 3 | 10 | 10 | 0 | 0 | 0 | 2 |
| Squaw Peak | 16,060 | 44 | 25 | 21 | - | 0.48 | 0 | 3 | 10 | 11 | 0 | 0 | 0 | 1 |
| Verde | 7,665 | 21 | 25 | 21 | - | 1.00 | 0 | 3 | 14 | 7 | 0 | 0 | 0 | 1 |
| Totals | 111,325 | 305 | 234 | | 0.77 | | | | | | | | | |
| **EBMUD, O&M Department** | | | | | | | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 |
| Walnut Creek | 15,186 | 41.5 | - | - | - | - | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 |
| Lafayette | 4,213 | 11.4 | - | - | - | - | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 |
| Orinda | 41,198 | 112.8 | - | - | - | - | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 |
| Sobrante | 8,656 | 23.6 | - | - | - | - | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 |
| San Pablo | 1,233 | 3.4 | - | - | - | - | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 |
| Upper San Leandro | 5,096 | 13.9 | - | - | - | - | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 |
| Totals | 75,582 | 206.6 | 834 | 213 | 4.04 | 1.03 | 0 | 7 | 47 | 138 | 0 | 17 | 0 | 4 |
| **Denver Water** | | | | | | | 3 | 1 | 0 | 1 | 0 | 23.5 | 0 | 0 |
| Marston | 7,942 | 24 | 21 | 19 | 0.88 | 0.79 | 2 | 0 | 8 | 11 | 0 | 0 | 0 | 0 |
| Moffat | 13,094 | 39 | 20 | 18 | 0.51 | 0.46 | 2 | 0 | 8 | 10 | 0 | 0 | 0 | 0 |
| Foothills | 50,545 | 151 | 22 | 20 | 0.15 | 0.13 | 2 | 0 | 8 | 12 | 0 | 0 | 0 | 0 |
| Lab | | | 26.5 | | | | | | | | | | | |
| Totals | 71,581 | 214 | 89.5 | | 0.42 | | | | | | | | | |
| **Southern Nevada Water System** | 112,045 | 306 | 105 | - | 0.34 | 0.14 | 1 | 11 | 11 | 31 | 0 | 22 | 1 | 28 |
| **City of San Francisco** | | | | | | | | | | | | | | |
| Sunol | 12,572 | 43.3 | 17 | - | 0.39 | 0.36 | 0 | 1 | 11 | 5 | 0 | 0 | 0 | 0 |
| **Salt Lake City Water Dept.** | | | | | | | | | | | | | | |
| Big Cottonwood | 7,024 | 19.2 | 10.2 | 9 | - | 0.47 | 1 | 0.2 | 9 | 0 | 0 | 0 | 0 | 0 |
| City Creek | 2,512 | 6.9 | 9.2 | 8 | - | 1.16 | 1 | 0.2 | 8 | 0 | 0 | 0 | 0 | 0 |
| Parley's | 4,791 | 13.1 | 11.2 | 10 | - | 0.76 | 1 | 0.2 | 10 | 0 | 0 | 0 | 0 | 0 |
| Totals | 14,328 | 39.3 | | 27 | | 0.69 | | | | | | | | |

When comparing the total staff per mgd, the City is higher than the average. It should be noted, however, that some of the surveyed utilities (e.g., Salt Lake City Water Department and Denver Water) were very specific when providing their staffing figures, including production-related personnel only. Other agencies including the City of San Diego did not make this distinction and as a result, the O&M personnel per MGD ratios for the latter are much larger. The City of San Diego included all Water Department staff, which includes administrative, water production, water distribution and service staff. Similarly, EBMUD includes the entire O&M department in its staffing numbers. As a result, its personnel/mgd numbers are relatively comparable with San Diego's.

As a further check on staffing levels, each plant's figures were reviewed individually.

- The Miramar Treatment Plant is currently rated at a maximum capacity of 140 mgd. For FY 97 the O&M staff consisted of eight operators and five maintenance personnel. Two of the operator positions are "over-budget" positions in that they were not planned into the overall budget, but are nonetheless necessary for operations and have been for a number of years.

- The Alvarado Treatment Plant is currently rated at a maximum capacity of 120 mgd. For FY 97 the O&M staff consisted of seven operators and five maintenance personnel. Similarly, one of the operator positions is over-budgeted.

- The Otay Treatment Plant is currently rated at a maximum capacity of 40 mgd. For FY 97 the O&M staff consisted of seven operators and two maintenance personnel. Again, two of the operator positions are over-budgeted.

On a per-plant basis, staffing at the Miramar Treatment Plant for FY 97 was 0.15 O&M personnel per mgd. Alvarado was 0.14 and Otay was 0.48. A factor affecting the plant-specific cost is the current flow at each facility versus its design capacity. Each facility has certain required staffing levels and expenses regardless of actual flows being treated. These costs will decrease on a per million gallon basis as more flow goes through the facility. For example, Otay operated at only 46% of its design flow (based on the average daily flow for FY 97) while Miramar and Alvarado operated at 63% and 71%, respectively. This lends to a partial explanation of Otay's

higher O&M personnel per mgd ratio. In comparison with other agencies, Southern Nevada Water System operates at an average of 306 mgd (64% of capacity) and 0.14 O&M personnel per mgd and the City of Phoenix's Verde plant operates at an average of 21 mgd (42% of capacity) and 1.0 O&M personnel per mgd. The City's current Operations and Maintenance staffing levels are within the limits shown in this survey.

### 5.3.2. Projected staffing needs/levels

The City anticipates that the upgrades and expansions at the plants will make plant operations simpler for the operators, therefore not requiring additional staff. As can be seen on Table 5-2, other utilities having facilities of similar capacity as the expanded plants have slightly higher O&M staffing levels than does the City of San Diego. However, based on recent interviews with City of San Diego staff and considering the increased automation which will be implemented at the plants, current staffing levels are considered adequate for the planning period.

## 5.4. Water distribution system operation & maintenance

The majority of projects anticipated to be funded by this bond measure which will impact system operational costs are production related. Of projects anticipated to impact operational costs, only 16% of the funding is anticipated to be applied to distribution division projects. Projects which are scheduled to "replace in kind" or "rehabilitate existing" equipment were considered to have no or minimal impact on the overall cost of operating the water system. There are several projects which will add overall length to the distribution system through the installation of new mains, or will add pumping stations to the system. These projects will be completed and brought on line at varying times and thus will not have an immediate and significant impact on distribution system operations and maintenance activities. There is no significant upward impact on O&M costs due to distribution system projects.

The Water Operations Division has implemented a computerized monitoring system to track the costs and hours required for each system maintenance activity. Each time a crew performs work in the water system, data is entered regarding the time spent and the materials used for the activity. The tracking system provides the ability to monitor by activity type and by work crew, and provides reports which compare work activity

in the system to the benchmarks that have been established based on past maintenance activities in the City. This pro-active system allows the division to allocate resources effectively and efficiently and to maintain productivity of its crews. The planned Central Water Department Operations Station will provide further economies through the elimination of redundant facilities and positions, and will locate staff at one central facility. The Water Operations Division operational approach appears adequate for the planning period.

## 5.5. Conclusions

Based on the information provided by the City as well as comparison to other utilities surveyed for this report, the following conclusions have been reached:

- Operations and maintenance costs for the City of San Diego Water Department appear reasonable. On a cost-per-million-gallons-treated basis, the City of San Diego operates well within the average of the utilities surveyed.

- With regards to staffing, the City falls within the range of other utilities of similar size, both with the existing facilities and with the long-range expansions.

- Plant operators are required to obtain appropriate levels of certification as dictated by their duties. Overall, the O&M staff are adequately experienced and receive appropriate training.

- We find that, as a group, the operations and maintenance staff of the City of San Diego Water Department is qualified to operate water treatment and distribution systems.

# 6. City financial projections

The City has developed and uses a financial planning model to produce financial projections that test and evaluate different financial scenarios for its planned Water Department Capital Improvement Program (CIP) and related financing. This section discusses the review that was undertaken and the resultant opinion of the adequacy of the City's financial projection processes.

We have reviewed the City's model and financial projections through interviews with the City's financial staff, reviewing general descriptions of the model's design and logic; reviewing principal assumptions and input data; and evaluating results produced by the model. We did not review the equations, algorithms or resulting program functions that compose the model, nor did we independently check the model by calculating financial estimates and comparing these results to the City's model outputs. A summary of our review, findings and conclusions is presented in this section.

## 6.1. Description of the City's model

The City's financial model was developed by Brown and Caldwell Consulting Engineers, beginning in Fiscal Year 1990, and has been modified and updated over time by City staff in consultation with Paradigm Management Consultants, the City's financial advisors for this project. The model is capable of calculating estimates using diverse input variables, allowing the City to run sensitivity analyses for different variables, and to "optimize" the model for alternative key financial objectives or parameters (e.g., coverage ratio).

The model is large and complex, and appears to incorporate applicable financial elements of the City's Water Department operations, including (but not limited to) such key items as revenues (by type and source); interest income; expenditures (by type); sources and uses of capital funds; reserve account transactions and balances; rate increases (by category);

debt service; debt service coverage ratio; population growth estimates; conservation savings; water usage (by category); interest rates; inflation factors; and asset accounts.

Based on our interviews, City staff has run numerous scenarios, in consultation with the City's financial advisors, that include varying amounts of capital expenditures, rate changes and water sales, together with other variable inputs. We reviewed preliminary model results, in addition to the final run, dated June 16, 1998, which resulted in the financial projections presented in this document. Because the capital improvement program and its financing are spread out over several years, the City has flexibility in delaying or modifying capital expenditures should revenue shortfalls occur, subject to applicable modifications to the schedule contained in the State Department of Health Services Compliance Order, as amended.

The City's financial projections used in our review are summarized in Tables 6-1 through 6-6, dated June 16, 1998. All financial projections extend through FY 2006. Tables 6-1 through 6-6 present six tables (out of a total of 22) from the City's financial model.

**TABLE 6-1**
**CITY OF SAN DIEGO WATER REVENUE FUND**
**REVENUE, EXPENDITURES, CASH BALANCES, ETC.**
**(Escalated Dollars in Thousands)**

| | ACTUAL | | | PROJECTED | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **DESCRIPTION** | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
| **Revenue** | | | | | | | | | | | | |
| Balance from Prior Year | 84,188 | 62,564 | 42,437 | 16,419 | 19,356 | 139,317 | 36,440 | 97,897 | 850 | 66,782 | 16,609 | 57,896 |
| Bond Proceeds | 0 | 0 | 0 | 0 | 261,790 | 0 | 173,566 | 0 | 175,525 | 0 | 49,636 | 0 |
| Sale of Water | 131,111 | 137,450 | 148,681 | 159,520 | 176,228 | 190,036 | 200,561 | 215,998 | 225,573 | 238,481 | 248,379 | 260,477 |
| Sale of Reclaimed Water | 25 | 157 | 205 | 269 | 300 | 5,280 | 7,397 | 8,319 | 9,035 | 9,946 | 10,732 | 11,096 |
| Water System Capacity Charges | 7,296 | 14,237 | 8,308 | 13,000 | 10,000 | 8,070 | 8,942 | 9,315 | 9,515 | 8,804 | 9,052 | 9,232 |
| Grants | 295 | 2,239 | 3,345 | 3,559 | 2,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Interest Earnings | 7,710 | 8,121 | 10,227 | 6,500 | 14,981 | 13,209 | 14,003 | 12,712 | 13,232 | 11,540 | 10,421 | 10,932 |
| Other Revenue | 14,589 | 23,767 | 29,990 | 11,377 | 11,384 | 13,598 | 13,854 | 34,615 | 14,382 | 16,153 | 18,630 | 16,211 |
| Total Revenue | 245,214 | 248,535 | 243,193 | 210,644 | 496,039 | 369,510 | 454,764 | 378,856 | 448,111 | 351,706 | 363,459 | 365,844 |
| **Expenditures** | | | | | | | | | | | | |
| Capital Appropriations | 34,709 | 51,478 | 52,592 | 20,696 | 124,026 | 126,280 | 123,254 | 143,005 | 128,439 | 71,949 | 33,066 | 14,224 |
| Water Purchases | 61,761 | 63,858 | 71,756 | 84,351 | 96,018 | 94,418 | 95,411 | 100,906 | 102,158 | 107,431 | 108,682 | 113,011 |
| Operating and Maintenance Expenses | 86,338 | 89,872 | 101,620 | 84,934 | 88,051 | 90,419 | 92,921 | 97,499 | 101,154 | 105,020 | 108,857 | 112,778 |
| Debt Service | 0 | 0 | 0 | 0 | 14,347 | 15,651 | 25,587 | 31,036 | 39,392 | 44,909 | 49,396 | 50,954 |
| Other Expenditures | (158) | 890 | 806 | 1,307 | 34,279 | 6,302 | 19,694 | 5,560 | 10,187 | 5,788 | 5,562 | 6,066 |
| Total Expenditures | 182,650 | 206,098 | 226,774 | 191,288 | 356,722 | 333,070 | 356,868 | 378,006 | 381,329 | 335,097 | 305,563 | 297,033 |
| **Unrestricted Balance** | 62,564 | 42,437 | 16,419 | 19,356 | 139,317 | 36,440 | 97,897 | 850 | 66,782 | 16,609 | 57,896 | 68,811 |
| **Restricted Accounts** | | | | | | | | | | | | |
| Operating Reserve | 0 | 0 | 0 | 0 | 15,870 | 16,163 | 16,472 | 17,037 | 17,488 | 17,965 | 18,439 | 18,923 |
| Water Purchase Reserve | 0 | 0 | 0 | 0 | 9,602 | 9,442 | 9,541 | 10,091 | 10,216 | 10,743 | 10,868 | 11,301 |
| Debt Service Reserve | 0 | 0 | 0 | 0 | 20,158 | 20,158 | 33,921 | 33,921 | 47,838 | 47,838 | 51,806 | 51,806 |
| Restricted Balance | 0 | 0 | 0 | 0 | 45,630 | 45,762 | 59,933 | 61,048 | 75,542 | 76,547 | 81,113 | 82,030 |
| **Year End Cash Balance** | 153,984 | 137,317 | 117,222 | 83,812 | 179,871 | 166,426 | 157,145 | 145,578 | 128,601 | 118,299 | 128,477 | 149,428 |
| **Debt Coverage Ratio** | 0.00 | 0.00 | 0.00 | 0.00 | 1.86 | 2.91 | 1.66 | 2.77 | 1.65 | 1.65 | 1.65 | 1.65 |
| **Total Debt Issuance** | 0 | 0 | 0 | 0 | 284,570 | 284,570 | 473,815 | 473,815 | 665,195 | 665,195 | 719,705 | 719,705 |
| **SFD Monthly Bill, 14 HCF** | $21.77 | $22.97 | $23.46 | $24.72 | $27.39 | $29.90 | $31.29 | $33.34 | $34.26 | $35.86 | $36.84 | $38.23 |
| General Rate Increase, Percent | 0.00% | 0.00% | 0.00% | 53.00% | 40.40% | 28.80% | 4.25% | 4.25% | 2.75% | 2.75% | 2.75% | 2.50% |
| Overall Rate Increase, Percent | 0.52% | 5.53% | 2.13% | 5.37% | 10.78% | 9.18% | 4.63% | 6.57% | 2.75% | 4.66% | 2.73% | 3.80% |
| **Capacity Charge, EDU** | $4,012 | $4,012 | $2,000 | $2,000 | $2,000 | $2,000 | $2,000 | $2,000 | $2,000 | $2,000 | $2,000 | $2,000 |
| Increase, Percent | 12.00% | 0.00% | -50.15% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |

**TABLE 6-2**
**CITY OF SAN DIEGO WATER REVENUE FUND**
**OPERATING REVENUES AND EXPENSES**
**(Escalated Dollars in Thousands)**

| DESCRIPTION | ACTUAL 1995 | 1996 | 1997 | PROJECTED 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **OPERATING REVENUES** | | | | | | | | | | | | |
| Sale of Water | 131,111 | 137,450 | 148,681 | 159,520 | 176,228 | 190,036 | 200,561 | 215,998 | 225,573 | 238,481 | 248,379 | 260,477 |
| Service Charges | 156 | 144 | 186 | 185 | 185 | 189 | 192 | 196 | 199 | 203 | 207 | 211 |
| Fire Hydrant Rentals | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Land and Building Rentals | 1,862 | 2,358 | 2,471 | 2,427 | 2,402 | 2,448 | 2,494 | 2,542 | 2,590 | 2,639 | 2,689 | 2,740 |
| New Water Services | 469 | 534 | 687 | 800 | 600 | 611 | 623 | 635 | 647 | 659 | 672 | 684 |
| Refund of Prior Years' Expenditures | 296 | 58 | 7,302 | 68 | 38 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Services Rendered Other Funds | 4,866 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Services Rendered to Others | 700 | 5,765 | 10,539 | 7,884 | 7,158 | 7,294 | 7,433 | 7,574 | 7,718 | 7,864 | 8,014 | 8,166 |
| Recreation Program and Fees | 1,261 | 1,478 | 1,366 | 1,366 | 1,337 | 1,362 | 1,388 | 1,415 | 1,442 | 1,469 | 1,497 | 1,525 |
| Other Revenue | 3,654 | 4,810 | 1,234 | 1,991 | 1,439 | 1,466 | 1,494 | 1,523 | 1,552 | 1,581 | 1,611 | 1,642 |
| Reclaimed Water Sales | 25 | 157 | 205 | 269 | 300 | 5,280 | 7,397 | 8,319 | 9,035 | 9,946 | 10,732 | 11,096 |
| **TOTAL OPERATING REVENUE** | 144,400 | 152,754 | 172,671 | 174,510 | 189,687 | 208,686 | 221,582 | 238,201 | 248,755 | 262,843 | 273,801 | 286,542 |
| **OPERATING EXPENSES** | | | | | | | | | | | | |
| Water Purchases | 61,761 | 63,858 | 71,756 | 84,351 | 96,018 | 94,418 | 95,411 | 100,906 | 102,158 | 107,431 | 108,682 | 113,011 |
| Operation and Maintenance Expenses | 86,338 | 89,872 | 101,620 | 84,934 | 88,051 | 90,419 | 92,921 | 97,499 | 101,154 | 105,020 | 108,857 | 112,778 |
| **TOTAL OPERATING EXPENSES** | 148,099 | 153,730 | 173,376 | 169,285 | 184,069 | 184,837 | 188,333 | 198,405 | 203,312 | 212,450 | 217,539 | 225,789 |
| **OPERATING INCOME** | (3,699) | (976) | (705) | 5,225 | 5,618 | 23,849 | 33,250 | 39,796 | 45,443 | 50,393 | 56,262 | 60,753 |
| **OTHER INCOME (CHARGES)** | | | | | | | | | | | | |
| Prior Year Encumbrances Cancelled | 3,717 | 1,809 | 14,466 | 2,500 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sale of Discarded Materials and Facilities | 52 | 47 | 51 | 50 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 |
| Sale of Sand and Gravel | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Interest Earnings (a) | 7,710 | 8,121 | 10,227 | 6,500 | 14,043 | 12,101 | 12,545 | 10,846 | 11,013 | 8,909 | 7,689 | 8,082 |
| Damages Recovered | 163 | 99 | 62 | 65 | 75 | 76 | 78 | 79 | 81 | 82 | 84 | 86 |
| Water Main Area Charges | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Water System Capacity Charges | 7,296 | 14,237 | 8,308 | 13,000 | 10,000 | 8,070 | 8,942 | 9,315 | 9,515 | 8,804 | 9,052 | 9,232 |
| Sale of Land | 276 | 8,203 | 1,577 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| Rate Stabilization Fund Transfer | 0 | 0 | 0 | 0 | (5,000) | (2,000) | (15,000) | 20,500 | (5,000) | 1,500 | 3,700 | 1,000 |
| **TOTAL OTHER INCOME** | 19,214 | 32,516 | 34,691 | 22,215 | 19,268 | 18,398 | 6,717 | 40,893 | 15,763 | 19,450 | 20,681 | 18,557 |
| **NET REV. AVAIL. DEBT SVC.** | 15,515 | 31,540 | 33,986 | 27,440 | 24,886 | 42,248 | 39,967 | 80,689 | 61,206 | 69,843 | 76,943 | 79,310 |
| **DEBT COVERAGE RATIO** | 0.00 | 0.00 | 0.00 | 0.00 | 1.86 | 2.91 | 1.66 | 2.77 | 1.65 | 1.65 | 1.65 | 1.65 |
| **ADDITIONAL CHARGES** | | | | | | | | | | | | |
| Contribution to Operating Reserve | 0 | 0 | 0 | 0 | 10,870 | 292 | 309 | 565 | 451 | 477 | 474 | 484 |
| Contribution to Water Purchase Reserve | 0 | 0 | 0 | 0 | 9,602 | (160) | 99 | 549 | 125 | 527 | 125 | 433 |
| Emergency Reserve | 0 | 0 | 0 | 0 | 5,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Net Debt Service (Less DSRF Interest) | 0 | 0 | 0 | 0 | 13,409 | 14,543 | 24,129 | 29,170 | 37,173 | 42,278 | 46,664 | 48,105 |
| Addition to Continuing Appropriations | 0 | 8,249 | 3,590 | 0 | 33,544 | 0 | 6,356 | 13,124 | 0 | 0 | 0 | 0 |
| Incr./(Decr.) in Desig. for Future Yr Exp. | (21,624) | (20,127) | (26,018) | 2,937 | 26,235 | (102,877) | (30,225) | (97,046) | (11,119) | (50,173) | 25,284 | 10,915 |
| Addition to Accd Ann. Lv. and Sick Lv. | (351) | 30 | (336) | 50 | 50 | 300 | 300 | 300 | 300 | 300 | 300 | 300 |
| Unallocated Reserve | 193 | 860 | 1,142 | 1,257 | 3,757 | 3,870 | 3,986 | 4,145 | 4,311 | 4,483 | 4,663 | 4,849 |
| | (21,782) | (10,988) | (21,622) | 4,244 | 102,468 | (84,032) | 4,954 | (49,192) | 31,241 | (2,107) | 77,510 | 65,086 |
| **NET REVENUE AVAIL. FOR SYS. ASSET** | 37,297 | 42,528 | 55,608 | 23,196 | (77,582) | 126,280 | 35,013 | 129,881 | 29,965 | 71,949 | (567) | 14,224 |

NOTES:
(a) - Water Fund share of pooled investment earnings. Excludes interest earned on bond funds.

**TABLE 6-3**
**CITY OF SAN DIEGO • CONSOLIDATED WATER CAPITAL FINANCING**
(Escalated Dollars in Thousands)

| DESCRIPTION | ACTUAL 1995 | 1996 | 1997 | PROJECTED 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Consolidated Capital Expend.** | 44,031 | 45,038 | 63,468 | 61,909 | 90,482 | 133,190 | 116,898 | 129,881 | 138,792 | 108,667 | 46,400 | 21,967 |
| Less Inelgible for Financing | | | | | | | | | | | | |
| (1) Prior Year Construction | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| (2) Grant Receipts | 295 | 2,239 | 3,345 | 3,559 | 2,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| (3) Other Inelgible | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Net Financeable** | 43,736 | 42,799 | 60,123 | 58,350 | 88,482 | 133,190 | 116,898 | 129,881 | 138,792 | 108,667 | 46,400 | 21,967 |
| **Consolidated % Debt Financed** | None | None | None | None | 70.45% | 70.37% | 70.05% | 70.59% | 70.95% | 70.91% | 72.49% | 72.85% |
| **PAY-AS-YOU-GO EXPEND.** | 43,736 | 42,799 | 60,123 | 58,350 | 26,144 | 39,463 | 35,013 | 38,199 | 40,318 | 31,616 | 12,766 | 5,964 |
| **AMOUNT DEBT FINANCED** | 0 | 0 | 0 | 0 | 62,338 | 93,727 | 81,885 | 91,681 | 98,474 | 77,051 | 33,633 | 16,003 |
| **TOTAL EXPENDITURES** | 43,736 | 42,799 | 60,123 | 58,350 | 88,482 | 133,190 | 116,898 | 129,881 | 138,792 | 108,667 | 46,400 | 21,967 |
| **SOURCE OF DEBT** | | | | | | | | | | | | |
| Bond Issue | 0 | 0 | 0 | 0 | 284,570 | 0 | 189,245 | 0 | 191,380 | 0 | 54,510 | 0 |
| Commercial Paper | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Construction Fund Drawdown | 0 | 0 | 0 | 0 | 0 | 93,727 | 0 | 91,681 | 0 | 77,051 | 0 | 16,003 |
| **TOTAL SOURCES** | 0 | 0 | 0 | 0 | 284,570 | 93,727 | 189,245 | 91,681 | 191,380 | 77,051 | 54,510 | 16,003 |
| **USE OF DEBT** | | | | | | | | | | | | |
| Current Year Capital Expenditures | 0 | 0 | 0 | 0 | 62,338 | 93,727 | 81,885 | 91,681 | 98,474 | 77,051 | 33,633 | 16,003 |
| Commercial Paper Takeout | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| Reimb. for Prior Year Capital Expenditures | 0 | 0 | 0 | 0 | 105,726 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Debt Service Reserve Fund | 0 | 0 | 0 | 0 | 20,158 | 0 | 13,763 | 0 | 13,918 | 0 | 3,968 | 0 |
| Issue Costs | 0 | 0 | 0 | 0 | 2,622 | 0 | 1,916 | 0 | 1,938 | 0 | 906 | 0 |
| Construction Fund | 0 | 0 | 0 | 0 | 93,727 | 0 | 91,681 | 0 | 77,051 | 0 | 16,003 | 0 |
| **TOTAL USES** | 0 | 0 | 0 | 0 | 284,570 | 93,727 | 189,245 | 91,681 | 191,380 | 77,051 | 54,510 | 16,003 |
| Debt Service Reserve Fund Balance | 0 | 0 | 0 | 0 | 20,158 | 20,158 | 33,921 | 33,921 | 47,838 | 47,838 | 51,806 | 51,806 |
| Earnings on Debt Service Reserve Fund | 0 | 0 | 0 | 0 | 938 | 1,109 | 1,458 | 1,866 | 2,219 | 2,631 | 2,732 | 2,849 |
| Earnings on Funds Awaiting Expenditure | 0 | 0 | 0 | 0 | 6,297 | 2,577 | 3,647 | 2,521 | 3,473 | 2,119 | 903 | 440 |
| **PRINCIPAL REPAYMENT** | | | | | | | | | | | | |
| Annual Debt Service | 0 | 0 | 0 | 0 | 14,347 | 15,651 | 25,587 | 31,036 | 39,392 | 44,909 | 49,396 | 50,954 |
| Principle Repayment | 0 | 0 | 0 | 0 | 0 | 0 | 4,495 | 4,750 | 7,865 | 8,320 | 11,705 | 12,355 |
| Debt Outstanding | 0 | 0 | 0 | 0 | 284,570 | 284,570 | 469,320 | 464,570 | 648,085 | 639,765 | 682,570 | 670,215 |

**TABLE 6-4**
**CITY OF SAN DIEGO WATER SYSTEM**
**PROJECTED APPROPRIATION SCHEDULE FOR CAPITAL IMPROVEMENT PROGRAM**
(Escalated Dollars in Thousands)

| | ACTUAL | | | PROJECTED | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DESCRIPTION | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
| Annual Expansion Related Approp. | 30,561 | 37,304 | 45,406 | 11,115 | 46,646 | 46,892 | 62,730 | 48,701 | 45,322 | 15,787 | 4,699 | 1,795 |
| Annual Replacement Related Approp. | 4,752 | 14,612 | 13,374 | 12,330 | 70,570 | 77,888 | 58,122 | 92,905 | 82,024 | 54,730 | 27,484 | 12,252 |
| Total, CIP Appropriations (a) | 35,313 | 51,916 | 58,780 | 23,445 | 117,215 | 124,780 | 120,852 | 141,606 | 127,346 | 70,518 | 32,183 | 14,047 |
| Expansion Related Capital Expend. | 11,710 | 21,113 | 41,295 | 41,479 | 23,309 | 52,530 | 49,640 | 50,686 | 49,956 | 38,882 | 9,612 | 4,207 |
| Replacement Related Capital Expend. | 32,321 | 23,925 | 22,173 | 20,430 | 53,905 | 77,137 | 64,271 | 77,797 | 87,699 | 68,218 | 35,795 | 17,670 |
| Total Expenditures (b) | 44,031 | 45,038 | 63,468 | 61,909 | 77,214 | 129,667 | 113,911 | 128,483 | 137,655 | 107,099 | 45,407 | 21,877 |
| Continuing Appropriations (b) | 18,697 | 26,632 | 25,643 | 6,405 | 2,783 | 193 | 222 | 454 | 527 | 163 | (73) | (0) |
| Encumbered Balance (b) | 30,809 | 31,123 | 35,702 | 16,227 | 53,321 | 48,509 | 55,400 | 68,292 | 57,865 | 21,512 | 8,415 | 599 |
| Cancelled Appropriations (b) | 21,326 | 1,838 | 0 | 5,987 | 1 | 0 | 10 | 4 | 24 | 80 | 95 | 4 |

NOTES:
(a) - Source: Fiscal Years 1993-1996, City of San Diego Annual Budget. Fiscal Year 1994, City of San Diego Annual Budget (adjusted).
Fiscal Years 1997-2005, Water Utility Capital Improvement Program Project Appropriations, Expenditures, and Encumbrances, Water Utilities Engineering Division.
(b) - Source: Fiscal Years 1993-1995, Support schedules to the City of San Diego Water Utilities Annual Financial Report provided by the Auditor and Comptroller.
Fiscal Years 1996-2005, Water Utility Capital Improvement Program Project Appropriations, Expenditures, and Encumbrances, Water Utilities Engineering Division.

**TABLE 6-5**
**CITY OF SAN DIEGO WATER REVENUE FUND**
**GROWTH ESTIMATES AND FINANCIAL PARAMETERS**

| | ACTUAL | | | PROJECTED | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DESCRIPTION | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
| **GROWTH ESTIMATES** (a) | | | | | | | | | | | | |
| Population, City of San Diego | 1,164,039 | 1,183,100 | 1,190,200 | 1,201,900 | 1,213,600 | 1,235,517 | 1,253,518 | 1,271,520 | 1,289,521 | 1,307,523 | 1,325,524 | 1,340,910 |
| Cumulative Percentage Change | 4.82% | 6.53% | 7.17% | 8.23% | 9.28% | 11.25% | 12.87% | 14.49% | 16.12% | 17.74% | 19.36% | 20.74% |
| Projected Permit Activity (EDU's Sold) | 1,819 | 3,549 | 4,158 | 6,507 | 5,005 | 4,035 | 4,471 | 4,657 | 4,758 | 4,402 | 4,526 | 4,616 |
| | | | | | | 0 | | | | | | |
| **INTEREST RATES** | | | | | | | | | | | | |
| Earnings on Fund Balance | 4.50% | 5.50% | 5.50% | 5.50% | 5.50% | 5.50% | 5.50% | 5.50% | 5.50% | 5.50% | 5.50% | 5.50% |
| Municipal Bond Rate | 5.75% | 5.75% | 5.75% | 5.75% | 5.50% | 5.75% | 5.75% | 5.75% | 5.75% | 5.75% | 5.75% | 5.75% |
| **BOND TERM** | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 |
| **INFLATION FACTOR** | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.030 | 1.061 | 1.103 | 1.147 | 1.193 | 1.241 | 1.291 |
| **WATER PURCHASES (AF)** (b) | 152,496 | 148,507 | 162,742 | 190,070 | 196,498 | 194,993 | 195,747 | 198,224 | 200,700 | 203,177 | 205,653 | 208,136 |
| **COST OF PURCH. WATER ($/AF)** | $405 | $430 | $441 | $444 | $467 | $485 | $488 | $510 | $510 | $530 | $530 | $544 |
| **COST OF PURCH. RECL. WATER ($/AF)** | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| **COST OF PURCH. REPUR. WATER ($/AF** | $405 | $430 | $441 | $444 | $467 | $485 | $488 | $510 | $510 | $530 | $530 | $544 |

NOTES:
(a) - Source: Fiscal Year 1994 - 1997, City of San Diego Planning Department; Fiscal Year 2000, and 2010, based on SANDAG Regional Growth Forecast percentage increases.
(b) - Source: Fiscal years 1993-1998, City of San Diego, Water Production Division

**TABLE 6-6**
**CITY OF SAN DIEGO**
**WATER DEMAND AND MARKET COMPOSITION**

| DESCRIPTION | ACTUAL 1995 | 1996 | 1997 | PROJECTED 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **WATER SALES (Earned Sales in Millions of Cubic Feet)** | | | | | | | | | | | | |
| Single Family Domestic | 2,911.7 | 3,134.1 | 3,311.2 | 3,281.7 | 3,327.8 | 3,331.3 | 3,372.4 | 3,420.8 | 3,469.3 | 3,517.7 | 3,566.1 | 3,607.5 |
| Other Domestic | 2,016.3 | 2,097.6 | 2,180.3 | 2,182.7 | 2,213.4 | 2,215.7 | 2,243.0 | 2,275.2 | 2,307.4 | 2,339.7 | 2,371.9 | 2,399.4 |
| Commercial | 2,810.4 | 2,949.9 | 3,130.1 | 2,917.6 | 2,916.6 | 2,832.7 | 2,783.6 | 2,806.5 | 2,829.5 | 2,852.4 | 2,875.4 | 2,913.6 |
| Industrial | 330.0 | 344.7 | 338.5 | 429.6 | 435.6 | 436.1 | 441.5 | 447.8 | 454.2 | 460.5 | 466.8 | 472.3 |
| Outside City Services | 2.4 | 2.7 | 2.5 | 15.3 | 15.5 | 15.5 | 15.7 | 16.0 | 16.2 | 16.4 | 16.6 | 16.8 |
| Other Utilities | 515.3 | 564.4 | 580.9 | 585.7 | 594.0 | 594.6 | 601.9 | 610.6 | 619.2 | 627.8 | 636.5 | 643.9 |
| Irrigation Districts | | | | | | | | | | | | |
| Total, Water Sales | 8,586.1 | 9,093.4 | 9,543.5 | 9,412.6 | 9,502.8 | 9,425.8 | 9,458.1 | 9,576.9 | 9,695.7 | 9,814.5 | 9,933.3 | 10,053.5 |
| **WATER CONSERVATION (% Of Normal Consumption Based on 1989 Usage Adjusted for Growth)** | | | | | | | | | | | | |
| | 13.8% | 10.2% | 6.3% | 7.6% | 7.3% | 8.8% | 9.0% | 9.0% | 9.0% | 9.0% | 9.0% | 9.0% |
| **METER SIZE DISTRIBUTION** | | | | | | | | | | | | |
| 1 Inch and Smaller | 226,518 | 229,213 | 231,786 | 234,065 | 236,343 | 240,611 | 244,117 | 247,623 | 251,128 | 254,634 | 258,140 | 261,136 |
| 1 1/2 Inch | 8,437 | 9,055 | 9,180 | 9,270 | 9,360 | 9,530 | 9,668 | 9,807 | 9,946 | 10,085 | 10,224 | 10,342 |
| 2 Inch | 10,312 | 10,488 | 10,631 | 10,736 | 10,840 | 11,036 | 11,197 | 11,357 | 11,518 | 11,679 | 11,840 | 11,977 |
| 3 Inch | 317 | 310 | 320 | 323 | 326 | 332 | 337 | 342 | 347 | 352 | 356 | 361 |
| 4 Inch | 343 | 352 | 358 | 362 | 365 | 372 | 377 | 382 | 388 | 393 | 399 | 403 |
| 6 Inch | 213 | 217 | 215 | 217 | 219 | 223 | 226 | 230 | 233 | 236 | 239 | 242 |
| 8 Inch | 107 | 107 | 108 | 109 | 110 | 112 | 113 | 115 | 117 | 118 | 120 | 121 |
| 10 Inch | 25 | 24 | 24 | 24 | 25 | 25 | 25 | 26 | 26 | 27 | 27 | 27 |
| 12 Inch | 5 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 |
| 16 Inch | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| **Total, City Water Meters** | 246,278 | 249,771 | 252,627 | 255,110 | 257,594 | 262,246 | 266,066 | 269,887 | 273,708 | 277,529 | 281,350 | 284,616 |
| **SINGLE FAMILY ACCOUNTS** | 195,109 | 198,979 | 201,459 | 203,439 | 205,420 | 209,130 | 212,177 | 215,224 | 218,271 | 221,318 | 224,365 | 226,969 |
| **RECLAIMED WATER SALES (Millions of Cubic Feet)** | | | | | | | | | | | | |
| San Pasqual | 25.0 | 27.0 | 27.0 | 27.0 | 27.0 | 27.0 | 27.0 | 27.0 | 27.0 | 27.0 | 27.0 | 27.0 |
| All Other Areas | 0.0 | 0.0 | 0.0 | 87.1 | 130.7 | 217.8 | 304.9 | 326.7 | 348.5 | 370.3 | 392.0 | 392.0 |
| **RECLAIMED WATER METER SIZE DISTRIBUTION** | | | | | | | | | | | | |
| 1 Inch and Smaller | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 1/2 Inch | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 2 Inch | 0 | 0 | 0 | 18 | 99 | 155 | 217 | 246 | 266 | 286 | 306 | 306 |
| 3 Inch | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 Inch | 0 | 0 | 0 | 3 | 5 | 7 | 10 | 10 | 10 | 10 | 10 | 10 |
| 6 Inch | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 8 Inch | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 10 Inch | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 12 Inch | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16 Inch | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Total, City of San Diego Reclaimed Water | 0 | 0 | 0 | 29 | 112 | 170 | 235 | 264 | 284 | 304 | 324 | 324 |

## 6.2. Water rate requirements

For ten years prior to August 1997, water rates were regularly increased to compensate for increases in the cost of water purchased from CWA. However, the City Council chose not to adopt increases for purposes of funding municipal capital projects. This decision was largely the product of the Council's concern about the impact of additional water rate increases on an already depressed local economy which was also struggling with the adverse impact of a long-term drought and a call for voluntary conservation.

On August 12th, 1997, the Council adopted a City Manager recommended series of water rate increases for fiscal years 1998, 1999 and 2000. The adopted increases were designed to increase the revenues generated by retail water sales within the City by 6% for three successive years.

As a result of hearings held before the Council's Natural Resources and Culture (NR&C) Committee in May of 1997, the Council directed the City Manager to generate the adopted 6% increases in annual revenue by raising the fixed base fee component of the water rate structure while maintaining commodity charges at their July 1, 1996 levels with adjustments for increases in the cost of purchased water. This approach was chosen as a way to recover a greater portion of the fixed costs of the water system via fixed charges, thereby reducing the utility's vulnerability to revenue fluctuations resulting from variations in demand.

An analysis of the application of the approved increases to different components of the rate structure is beyond the scope of our review; however, we have been assured by City financial staff that the changes to the rate structure result in average annual increases of 6%, and the model incorporates these changes.

Future increases in Water Department operating revenues are significantly dependent on future (beyond 2000) rate increases. Approximately 30% of operating revenue growth after 1997 is from the approved rate increases; approximately 55% is from assumed rate increases; and approximately 15% is from increased water sales, including reclaimed water sales. With that said, the assumed rate increases after FY 2000 average approximately 3.2% per year, which appears to be reasonable, and is less than the average annual cost inflation factors for 2001 through 2006, of 3.8% per year.

We also note that the City Council has authority to set water rates to meet revenue requirements. The policies used by the City to establish rates were reviewed as part of this assignment. As stated in the San Diego Municipal Code, Section 67.55, as amended January 24, 1983, "the rates to be charged and collected for water supplied...shall be established from time to time by a resolution of the City Council..." An exception to that policy was approved by the City Council as Ordinance 0-17699 on October 7, 1991, granting authority to the City manager to adjust water rates as necessary "to compensate proportionately for any increase in the cost of water and energy purchased by the City." Since approximately $18.5 million, or about 45% of the estimated increase in operating expenses (excluding debt service) between 2000 and 2006 is attributable to purchased water, the City administration appears to have the requisite authority to increase rates to offset the additional costs for purchased water. The City Manager has exercised this authority by increasing the commodity charge component of the water service charges from time to time to adjust for the cost of water purchased by the City.

## 6.3. Model assumptions

The financial projections presented by the City for review are based on the following key assumptions:

- All projects contained in the CIP, plus reimbursements for prior eligible projects, plus continuing expenditures for other (non-CIP) Water Department projects are included in the projections.
- Rate increases authorized by City Council are included for Fiscal Years 1998, 1999 and 2000.
- A total of $719,705,000 will be financed via a series of issues of long term installment obligations through 2006. An average interest rate of 5.75% was assumed for these issues, with 30-year amortization periods for each.
- Accruals are included for an operating reserve, unallocated reserve, rate stabilization fund, emergency reserve and debt service reserve.

- Interest earnings on reserve balances and bond funds are assumed to be at 5.5% per year.

- Annual cost escalation factors for expenditures were assumed at 3% for 2000 and 2001, and 4% for 2002 through 2006.

- The CIP projects are completed in accordance with the schedules and cost estimates set forth in Section 1.

- Annual overall rate increases beyond FY 2000 are estimated at 4.25% for 2001 and 2002, 2.75% for 2003 through 2005, and 2.50% for 2006.

- Population growth between 1997 and 2006 totals an estimated cumulative 13.6% (150,710 increase on a 1,190,200 base).

- Water purchases from other agencies are projected to increase by 28%, from 162,742 acre-feet in 1997 to 208,136 acre-feet in 2006. It should be noted that 1996 and 1997 were relatively wet years, with above average rainfall and runoff to City-owner reservoirs, which resulted in significantly lower water purchase requirements than normal. The City's estimates for water purchases are based on a normal percentage of about 90% for 1998 through 2006. During that period, purchased water volume increases by about 3.5%, compared to an increase in total water sales of 6.8% during the same period.

- The cost of purchased water has a significant impact on annual operating costs, with an assumed 90% of the City's total water requirements purchased from the San Diego County Water Authority and California State Water Project under long-term agreements. The cost escalation factors for purchased water were derived by the City based on the agreements. In 2006, estimated water purchase expenditures of $113,011,000 represent 50% of total annual operating (non-capital, non-debt service) expenditures.

- The average homeowner's cost for water service and water consumption will increase by 63%, from $23.46/month to $38.23/month by 2006, based on the approved rate increases and estimated rate increases used by the City in the model.

- The City's initiative and on-going program to distribute and sell reclaimed water is estimated by the City to generate $11,096,000 of

revenues in 2006 (3.9% of total annual operating revenues). The total sales in 1997 were $205,000. Use of reclaimed water reduces the amount of outside water purchases.

Based on our review, the assumptions made to produce the financial model results presented in Tables 6-1 through 6-6 are reasonable and appropriately conservative, for the purposes of this analysis. It is important to note that neither the City nor O'Brien & Gere make any representation that the assumptions will in fact, occur. In addition, while we believe that the information provided to us by the City is reasonably accurate from a materiality perspective, we have not independently verified such information and cannot provide any assurances as to its accuracy and completeness. It can be anticipated that actual future conditions will differ from those assumed in the model, and the actual results will vary from the forecast productions.

## 6. 4 Rate Comparison

As noted, the City Council has approved a three year, six percent per year general rate increase. After the initial three year period, the rate case model assumes rate increases of 2.50% to 4.25% per year through 2006. Data regarding base fees and commodity charges was gathered from several other water utilities. This information was used to compare an average monthly single family domestic customer's bill in San Diego to those which would result from the same consumption in the other utility systems. The average single family domestic customer consumes 1,400 cubic feet (14 HCF) of water per month; this consumption rate was used for comparison purposes. Where rates were provided in consumption units other than HCF, the rates were converted for comparison purposes. The results are presented in Table 6-7.

Table 6-7
COMPARISON OF AVERAGE MONTHLY BILL
SINGLE FAMILY DOMESTIC USER

1998 DATA

| Description | City of San Diego | Denver Water | East Bay Municipal Water District | Salt Lake City | Las Vegas Valley Water District | Capistrano Valley Water District | City of Phoenix |
|---|---|---|---|---|---|---|---|
| Monthly Base Fees (1" meter and smaller): | | | | | | | |
| Base service charge ($) | $4.77 | $3.63 | $8.61 | $5.90 | $5.34 | $6.15 | $5.16 |
| Consumption Charges ($/HCF) | | | | | | | |
| | $1.25 | $1.02 | $1.19 | $0.52 | $0.73 | $1.23 | $1.06 |
| | $1.60 | -- | $1.47 | -- | -- | $1.55 | -- |
| Subtotal consumption charges ($) | $19.95 | $14.24 | $18.80 | $7.28 | $10.26 | $18.82 | $9.54 |
| **AVERAGE MONTHLY BILL ($)** | **$24.72** | **$17.87** | **$27.41** | **$13.18** | **$15.60** | **$24.97** | **$14.70** |

*Assumed monthly usage (HCF):* *14*

The City's Monthly Base Fee for meters 1" and smaller in size is within the range of the other utilities surveyed; it falls toward the lower end of the range. Consumption charges slightly exceed those of other utilities surveyed. The other utilities do not purchase water or pay a much lower charge for their water purchases, with the exception of the Capistrano Valley Water District, which purchase approximately 70% of its water.

The comparison demonstrated that the current monthly bills for City of San Diego single family domestic customers are comparable to those of other purveyors in the western United States.

## 6. 5 Conclusions

O'Brien & Gere reviewed the City's financial model, assumptions used in the model, the Water Department's CIP and associated schedule and the results of the model run presented in Tables 6-1 through 6-6. Based on this review, we have reached the following conclusions and opinion:

- The City's overall assumptions and basis for the assumptions are reasonable. The financial projections presented by the City accurately summarize costs and revenues by source and function through 2006.

- The results of the financial projections appear to be achievable and reasonable, based on the information and conditions existing at this point in time. Annual operations and maintenance costs are reasonable and are estimated to increase at rates that are appropriate, based on recent historical inflationary trends. While revenue projections are partially based on future rate increases that will require approval, the annual percentage increases are reasonable, being comparable to or below recent historical inflationary trends.

- The use of capital funds and the acquisitions of these funds through installment issues are based on the CIP cost estimates and schedule. The Water Department has flexibility in delaying or deferring non-CIP capital projects that are included in the financial projections.

- The minimum coverage ratio computed by the model is 1.65, after a total installment issuance value of $719,705,000 is reached in 2005.

## Appendix A

## Documents Reviewed for Engineer's Statement of Feasibility

1. *Master Installment Purchase Agreement* by the City of San Diego and the San Diego Infrastructure Financing Corporation, draft dated 3/2/98.

2. *Preliminary Official Statement for Certificates of Undivided Interest*, Series 1998.

3. *Water and Sewer Design Guide*, City of San Diego, September 8, 1994.

4. *Water Plants Master Plan Report*, October 1990, Powell/Pirnie Associates.

5. *Treated Water Supply Study*, August 1994, Camp, Dresser & McKee, Inc.

6. *City of San Diego Standard Drawings*, March 1997.

7. *Water & Municipal Sewer Approved Materials List*, MWWD & WD, July 1, 1997.

8. *Water Department CIP* colored map of Preferred Alternative, Undated

9. *Elevation and Capacity of Treated Water Storage Reservoirs of 1 mg and Larger*, City of San Diego, August 24, 1997

10. *Rancho Bernardo Hydraulic Profile Schematic*, City of San Diego, Undated

11. *Water Supply System Capacities and Hydraulic Gradients*, City of San Diego, Undated

12. *Soledad Mountain Hydraulic Profile Sketch*, KCM, Undated

13. *Program Management Plan* (PMP), 3 volume set, Parsons Infrastructure and Technology, Inc., November 1997.

14. *Strategic Plan for Water Supply 1997-2015*, Camp Dresser McKee, July 1997

15. *"Greenbook" Standard Specifications for Public Works Construction*, 1997 Edition.

16. *1997 Regional Supplement Amendments to Greenbook*, January 1997.

17. *Greenbook Supplement Amendments*, City of San Diego, May 2, 1997.

18. *SANDAG Series 8 Regional Growth Forecast*, 1990-2015, San Diego Association of Governments, July 12, 1995.

19. Southern Nevada Water Authority, *Treatment and Transmission Facility Cost Estimating Criteria*, August 31, 1994.

20. Engineering and Capital Projects Organization Chart, November 1997 and February 26, 1998

21. Water Department Organization Chart, November 1997 and February 26, 1998

22. Water Department, CIP Division Organization Chart, November 1997 and February 26, 1998

23. Map of Cast Iron Water Mains Less Than or Equal to 15" Diameter, City of San Diego

24. Alvarado Filtration Plant Predesign Report, Powell/Pirnie, June 1991

25. Miramar Water Treatment Plant Predesign Report, Pirnie, November 1993

26. Alvarado Water Filtration Plant 90% Progress Submittal Drawings, Powell/Pirnie

27. *Deerfield Water Pump Plant and Discharge Pipeline* plans and specs, Powell & Associates, December 1994

28. Water Department Maintenance Costs, as referenced Chapter 7 of PMP, November 1997

29. *Mid-City Pipeline* 95% Drawings, Powell & Associates, Undated

30. Fiscal Year 1998 Proposed Budget

31. Report on O&M Activities, provided November 20, 1997 by Larry Gardner, Dated September 24, 1997.

32. *Value Engineering Study-Reservoirs*, City of San Diego, October 1997

33. *The San Diego Story*, by George Loveland, for AWWA presentation, October 1997

34. *Value Engineering Study- Global Plan*, City of San Diego, September 1997

35. *Water Infrastructure Revenue Plan*, for Rate Increase Resolution, July 16, 1997

36. *Value Engineering Study- Standards and Guidelines Project*, City of San Diego, August 1997

37. Agreement between City of San Diego and Parsons Infrastructure & Technology, Inc., 1998

38. City of San Diego Water Department 1996 Annual Financial Report

39. Charter of the City of San Diego, California

40. Compliance Order No. 04-14-96CO-022, Department of Health Services to City of San Diego, January 27, 1997 and Amendment No. 2 dated January 23, 1998

41. City of San Diego Water Department CIP Project Schedules, March 20, 1998, 5 pages

42. Ordinance No. 0-17699, Adopted October 7, 1991, Related to Sewer and Water Rate Adjustment

43. Section 67.55, City of San Diego Municipal Code Related to Water Rates, General Water Service Within the City of San Diego, as amended January 24, 1983.

44. City of San Diego Rate Case Model Output dated March 30, 1998.

45. Optimized Reclaimed Water Distribution System Northern Area Project Descriptions, Received March 18, 1998.

46. CIP Reimbursement Project Descriptions, Received March 1998

47. CIP Reimbursement Project Cost Summaries, Received March 19, 1998.

48. CIP Escalated Project Costs, provided by Parsons Infrastructure & Technology, March 6, 1998.

49. *Engineer's Statement of Feasibility*, Section VII- Cost Estimation, San Diego Wastewater Program, City of San Diego, August 1, 1993

50. City of Los Angeles Department of Water and Power, *City of Los Angeles Cost Estimating Manual*, Los Angeles, California

51. *Economic Impact of Granular Activated Carbon Treatment for California Water Suppliers*, Metropolitan Water District of Southern California, James M. Montgomery Consulting Engineers, Inc., Los Angeles, California, June 1987

52. Chloramine Preliminary Design Final Report, Metropolitan Water District of Southern California, James M. Montgomery Consulting Engineers, Inc., Los Angeles, California, April 1982

53. Las Vegas Valley Water District, *Approved Rates, Effective 1/1/96*, December 6, 1995

54. Denver Water, *System Development Charge Schedule and Rate Schedule No. 1*, Effective January 1, 1998, undated

55. Salt Lake City, Utah *Ordinance No. 39 of 1997*, relating to water rates, June 10, 1997

56. East Bay Municipal Utility District Water Rates, Effective July 1, 1997, undated

57. Capistrano Valley Water District, *Schedule of Rates and Charges*, Effective July 1, 1996, dated January 29, 1996

58. *Budget for the Year Ending June 30, 1998*, Salt Lake City Corporation Department of Public Utilities

59. Denver Water Comprehensive Annual Financial Report for the Year Ending Dec. 31, 1996, Accounting Section of the Finance Division

60. City of San Diego Water Department FY 1997 Operations & Maintenance Supplies/Services/Other Expenditure and Encumbrance Analysis

61. City of San Diego Water Department FY 1993-96 Operations & Maintenance Supplies/Services/Other Expenditure and Encumbrance Analysis

62. City of San Diego Current Year Summary Financial Status as of 06/30/97, Auditor and Comptroller Report No. C40-121

63. San Diego County Water Authority, *Statement of Water Deliveries and Charges for the Month of December 1997*, City of San Diego

64. City of Phoenix Water Services Department, Water Production Division Organization Chart, Undated

65. City of Phoenix Water Services Department, Water Production Division Budget Information and Staffing

66. Salt Lake City Public Utilities Department Water Treatment Costs per Treatment Plant, July 1, 1996 through June 30, 1997

67. East Bay Municipal Utility District Water Operations and Maintenance Department Organization Chart

68. Southern Nevada Water Authority, Southern Nevada Water System Treatment and Transmission Budget Accounts, Fiscal Year 1997/98 Budget

69. 1997/98 Program Year Budget, Water Services Business, Summary of Multi year O&M Expenditures

# APPENDIX E

# INFORMATION CONCERNING THE WATER SUPPLY OF THE SAN DIEGO COUNTY WATER AUTHORITY

## APPENDIX E

## INFORMATION CONCERNING THE WATER SUPPLY OF THE SAN DIEGO COUNTY WATER AUTHORITY

**The information contained in this APPENDIX E was obtained from an Official Statement dated December 19, 1997 of CWA and other sources believed to be accurate, but has not been independently verified by the City.**

### General

The MWD was created in 1928 by vote of the electorates of eleven Southern California cities to provide a supplemental supply of water for domestic and municipal uses at wholesale to its constituent agencies. The MWD service area comprises 5,168 square miles and includes portions of the six counties of Los Angeles, Orange, Riverside, San Bernardino, San Diego and Ventura. There are 27 constituent agencies of MWD, consisting of 14 cities, 12 municipal water districts and the CWA. A board of directors, currently numbering 51 members, governs MWD. Each constituent agency has at least one representative on the MWD Board. Representation and voting rights are based upon the assessed valuation of property within each constituent agency. The CWA has six members on the MWD Board.

The MWD owns and operates the Colorado River Aqueduct, which conveys water from Parker Dam on the Colorado River to Lake Perris near Riverside, California. The MWD also owns and operates the Lake Skinner Water Treatment Plant near Temecula, California that supplies treated water to the CWA. Acting as a wholesaler, the MWD annually supplies over 2 million acre-feet of water to more than 16 million Southern Californians.

The CWA was organized on June 9, 1944 for the primary purpose of supplying water to San Diego County for distribution to CWA's member agencies. The City is the largest of CWA's 23 member agencies. The CWA supplies both treated (via MWD's Lake Skinner Water Treatment Plant) and untreated water to San Diego County through five pipelines totaling 250 miles in length, more commonly known as the First and Second Aqueducts, with enough capacity to deliver nearly 1 million acre-feet per year. The Water Department takes untreated water from the First Aqueduct at a connection near San Vicente Reservoir, and both treated and untreated water at several connections along the Second Aqueduct in locations such as Rancho Bernardo, Rancho Penasquitos, the Miramar Filtration Plant, Tierrasanta and the Otay Filtration Plant.

### Primary Water Suppliers

The CWA is the largest purchaser of water from the MWD. In the Fiscal Year ended June 30, 1997, the CWA's water purchases from MWD represented approximately 27.8% of MWD's total deliveries.

In the Fiscal Year ended June 30, 1997, MWD supplied 1,787,857 acre-feet of water. During years of normal precipitation, existing water supplies of MWD are sufficient to meet demands within the service area of MWD. In the future, several variables could impact to some extent the availability of both existing and future supplies in normal years.

Supply deficiencies can occur during periods of drought. Increased use of MWD water, coupled with a reduction of MWD's existing water supplies (as described below under "MWD Water Supply") could reduce the amount of water available to MWD to supply the CWA.

The Metropolitan Water District Act, California Statutes 1969, Chapter 209, as amended (the "MWD Act") provides a preferential entitlement for the purchase of water by each of the MWD constituent agencies. This preferential right is based upon a ratio of all payments made to MWD by each constituent agency compared to total payments made by all constituent agencies on tax assessments and otherwise, except purchases of water, toward the capital cost and operating expense of MWD. Based upon such formula, the CWA has a statutory preferential right to 13.33% of MWD's total supply. It is MWD's declared policy to meet all the supplemental needs of each of its member agencies, including the CWA. Moreover, legal issues also exist as to whether or not California Water Code

provisions could be invoked to require reasonable regulations for the allocation of water in time of shortage notwithstanding the provisions of the MWD Act. MWD has not, in fact, used preferential rights to allocate water supplies during prior periods of drought. Instead, MWD has allocated water based on uniform reduction by class of water service, with adjustments made for growth, loss of local supply and other water supply related factors. During the six-year California drought that ended in 1992, MWD implemented a water delivery reduction plan in stages, commencing with a call for voluntary conservation measures and culminating in a reduction methodology resulting in a 31% overall reduction from base year figures in water deliverable to the CWA. A more severe stage was considered, but was not needed to be implemented. Any extended curtailment could be accompanied by an increase in MWD water charges to its constituent agencies and consequently could necessitate an increase in water rates to the member agencies of the CWA.

***MWD Water Supply***

MWD obtains its water supply from two primary sources: the Colorado River via the Colorado River Aqueduct and the State Water Project via the Edmund G. Brown California Aqueduct.

*Colorado River Water.* Under applicable laws, agreements and treaties governing the use of water from the Colorado River, MWD and certain other California water agencies are entitled to use 4.4 million acre-feet ("MAF") of Colorado River water annually, plus 50% of surplus Colorado River water as may be declared on an annual basis by the United States Secretary of the Interior. In the past, the Secretary of the Interior also made available to California water that was apportioned to but unused by Arizona and Nevada. However, Arizona and Nevada are approaching full use of their basic apportionment's (including storage of apportioned water), thereby reducing the likelihood that unused or surplus water that has been available to MWD and other California water users will continue to be available. California's current annual use is approximately 5.2 MAF of water.

The Colorado River Aqueduct, owned and operated by MWD, transports water from the Colorado River to MWD's service area. Work on the Colorado River Aqueduct commenced in 1933 and water deliveries started in 1941. Additional facilities were completed by 1961 to meet additional requirements of MWD's member agencies. MWD owns all of the components of the Colorado River Aqueduct. The Colorado River Aqueduct is 242 miles long, starting at Lake Havasu. After deducting evaporation and seepage losses in transporting and storing the water and considering maintenance requirements, the maximum capacity available for delivery by MWD to its member agencies is approximately 1.2 MAF a year.

MWD currently diverts water from the Colorado River under a fourth priority right of 550,000 acre-feet per year and a fifth priority right of 662,000 acre-feet per year. A 1963 United States Supreme Court decision permits Arizona to increase its diversion of Colorado River water for the Central Arizona Project, which began diverting Colorado River water in 1985. As a result of such Colorado River diversions by Arizona, MWD's total diversions could eventually be restricted to its fourth priority right of 550,000 acre-fee per year. In addition, if it is determined by a court that use of water by certain California Indian reservations and other California users holding present perfected rights would reduce water available to MWD under its fourth priority, MWD's total diversions of Colorado River water could be further restricted. Since 1985, these entities have used less than 20,000 acre-feet annually of their rights to approximately 49,000 acre-feet of California apportionment annually. In addition, water is available from a conservation program with the Imperial Irrigation District ("IID") (106,000 acre-feet per year upon full implementation), and a demonstration project on underground storage of Colorado River water in Central Arizona. By agreement, the Coachella Valley Water District may use 50,000 acre-feet of the MWD/IID program under certain water conditions. In years in which surplus water or water unused by Arizona or Nevada is available, MWD would have the highest priority of any California contractor to divert up to one-half of the surplus water by virtue of its fifth priority right of up to 662,000 acre-feet. Furthermore, any water left unused by other California contractors with a higher priority than MWD to use of California's apportionment would also be available.

Recent discussions and negotiations among the California agencies that have interest in the delivery of water from the Colorado River have taken place in response to concerns expressed by the United States Secretary of the Interior and the other Colorado River basin states with regard to California's long-term use of surplus water. In particular, discussions among the California agencies have focused on the development of a "California 4.4 Plan." This plan presently under consideration proposes that the California agencies begin reducing their reliance on surplus Colorado River water and limit usage to the state's basic apportionment of 4.4 MAF when hydrology and demands require such limitations. The California 4.4 Plan also proposes interim and long-term reservoir operations

criteria, storage and conservation measures, including the use of water transfers from agriculture to urban water users. The CWA proposal to transfer water from IID described below is a key component of the California 4.4 Plan. See "Future CWA Water Supply." Recently enacted legislation, Section 1812.5 of the California Water Code, requires the State Director of Water Resources to assist the Colorado River Board and the six California water agencies that derive water from the Colorado River, including MWD, to develop the California 4.4 Plan. Section 1812.5 provides that there shall be no shifting of costs for actions taken pursuant to its terms to water users in any county in the State. The effect and probability of a final agreement among the California agencies is uncertain.

*State Water Project.* MWD's other major source of water is the State Water Project ("SWP"), which is owned by the State of California and operated by the State of California Department of Water Resources ("DWR"). This project transports unregulated water directly from the Sacramento-San Joaquin Delta (the "Delta") and Feather River water released from Oroville Dam that has traveled to the Delta, south via the California Aqueduct to four delivery points near the northern and eastern boundaries of MWD. The total length of the California Aqueduct is 444 miles.

MWD is one of 29 agencies which have contracts for water service from DWR, but is the largest agency in terms of the number of people it serves (more than 16 million), the quantity of SWP water to which it is entitled (approximately 48% of total SWP entitlement), and the total amount of annual payments made to DWR (approximately 70%).

In 1960, MWD signed a contract with DWR for the ultimate delivery of 1,500,000 acre-feet of water per year. This amount was later increased to 2,011,500 acre-feet, principally to offset the impending loss of a portion of MWD's dependable Colorado River supply resulting from the 1963 United States Supreme Court decision in *Arizona v. California*, which determined California's basic apportionment to be 4.4 MAF.

The SWP was designed to meet demands of 4.2 MAF/yr. Initial SWP facilities were completed in the early 1970's, and it was envisioned that additional facilities would be constructed as contractor demands increased. Several factors, including public opposition, increased costs, and increased non-SWP demands for limited water supplies, combined to delay the construction of additional facilities. At the same time, contractors' demands for SWP entitlement water have been increasing.

The quantity of SWP water available for delivery each year is controlled by both hydrology and operational considerations. The SWP was unable to meet contractors' requests for entitlement water in the drought periods of 1977, 1990-92, and 1994. In 1990, SWP deliveries totaled 2.6 MAF, including deliveries of 1.4 MAF to MWD. During the following year, however, the SWP delivered less than 550,000 acre-feet to its entitlement contractors, of which MWD received 381,000 acre-feet, or about 20% of its full entitlement. MWD was unable to obtain its requested SWP deliveries in 1977 and 1991. In its 1993 California Water Plan Update (Bulletin 160-93), DWR projects that future SWP supplies in normal weather years will be insufficient to meet demands unless additional facilities are constructed. DWR's planning efforts are currently focused on the CALFED effort to develop a long-term Bay-Delta solution discussed below.

The Endangered Species Act ("ESA") listings of the delta smelt and winter-run chinook salmon, fish species that reside in or migrate through the San Francisco Bay-Sacramento/San Joaquin River Delta (the "Bay-Delta"), have further constrained SWP operations and reduced SWP supply reliability. The potential ESA listings of several other fish species, including the splittail, spring-run chinook salmon, and late fall-run chinook salmon, have the potential to affect SWP operations in the future. The 1994 Principles for Agreement on Bay-Delta Standards Between the State of California and Federal Government (the "Bay-Delta Accord"), which were signed by representatives of state and federal agencies as well as major urban, agricultural and environmental interests, established standards designed to protect listed threatened and endangered species. The Bay-Delta Accord also provided that should any additional listings occur over the term of the accord, no additional water would be required from water users beyond that provided for in the Accord. The initial term of the Bay-Delta Accord was three years, but MWD anticipates that an extension will be obtained by agreement of the parties.

On December 1, 1994, the agricultural and urban SWP contractors and DWR concluded nearly two years of negotiations and reached agreement on principles for a significant amendment to the State Water Contract, known as the Monterey Agreement. After drafting of the amendment and other supporting and implementing documents, the Monterey Agreement became effective on August 9, 1996. To date, 26 of the 29 SWP contractors have signed the Monterey Agreement, and DWR is implementing the agreement for those contractors who have signed.

The Monterey Agreement includes a number of water allocation and water management provisions. Under the Monterey Agreement, all categories of SWP water are allocated among all contractors in proportion to SWP entitlement, irrespective of whether the water is used for agricultural or urban purposes. Further, a permanent shortage provision of the original State Water Contract was eliminated. The Monterey Agreement provides for improved water management through increased access to and flexibility by the contractors in the use of existing SWP facilities, and increased opportunities for contractors to firm up their SWP supplies. These provisions include: the ability to store SWP water outside a contractor's service area for later use within its service area, both in groundwater storage and in SWP surface reservoirs; the ability to transport non-project water through SWP facilities; and, for contractors such as MWD, which pay for certain SWP terminal reservoirs, access to a portion of the water stored in those reservoirs in addition to otherwise approved deliveries.

DWR's implementation of the Monterey Agreement is being challenged for alleged noncompliance with the California Environmental Quality Act. The California Supreme Court has heard an appeal regarding such litigation and is expected to render a decision in early 1998.

The supply and reliability issues affecting the SWP are a result of long-standing environmental problems in the Bay-Delta estuary, which provides water for two-thirds of all Californians. In addition to its importance to urban and agricultural water users, the Bay-Delta is of critical ecological importance. The Bay-Delta is the largest estuary on the West Coast, and provides habitat for more than 120 fish and wildlife species. Increasing demands on the Bay-Delta from urban and agricultural uses have contributed to the destruction of habitat, the decline of several estuarine and anadromous fish species, and the deterioration of water quality. Other factors that have contributed to the decline of the Bay-Delta ecosystem include the dredging and filling of tidal marshes, the construction of levees, urban runoff, agricultural drainage, runoff from abandoned mines, and the introduction of non-native species, such as the Asian clam.

The greatest potential for supply improvement on the SWP is expected to come from work being done by a group of state and federal agencies charged with developing a long-term solution to four general Bay-Delta problems: ecosystem quality, water quality, water supply reliability and system vulnerability. This organization, dubbed CALFED, established a Bay-Delta Program in 1995 that is incorporating input from the public, environmental groups and water users in the development of a Bay-Delta solution. CALFED expects to issue a draft Environmental Impact Report/Environmental Impact Statement in early 1998 and to select a preferred alternative by the end of 1998.

Measures for improving near-term water supply and reliability that could be included in the preferred alternative include the installation of screens and acoustic barriers to prevent fish from entering the intakes of water diversion points and the enlargement of south Delta channels and installation of operable barriers to improve south Delta flow circulation. Long-term measures could include modifications to Delta channels to improve the flow of water through the Delta, the construction of a new isolated conveyance facility, and the construction of new offstream and groundwater storage. Four common programs will be included in all Bay-Delta Program alternatives: ecosystem restoration, water use efficiency, water quality, and levee system integrity. Implementation of a preferred alternative may take 20 to 30 years.

A coalition of urban, agricultural and environmental Bay-Delta stakeholders have successfully worked together to secure state and federal funds for the CALFED Program. In 1996, California voters passed Proposition 204, which included about $600 million for CALFED's ecosystem restoration efforts. Also in 1996, the U.S. Congress approved, and the President signed into law, the California Bay-Delta Environmental Enhancement Act, which authorized $430 million over three years for CALFED's restoration program ($143.3 million per year in 1998, 1999 and 2000). The Fiscal Year 1998 federal budget approved in September 1997 includes $85 million for the CALFED effort. Preliminary capital cost estimates for a CALFED solution range from $4 to $8 billion. It is expected that a portion of the cost of a CALFED solution will be funded by water users.

For the purposes of its long-range water supply planning document, the MWD's Integrated Resources Plan ("IRP"), adopted in January 1996, MWD assumes the construction of south Delta improvements by 2000, and a new Delta water transfer facility and additional south of Delta storage by 2010. MWD estimates that completion of the facilities envisioned in the IRP would increase its dependable (dry-year) SWP supplies from the current level of 0.65 MAF to 1.35 MAF in 2020. If the facilities are not implemented within the time frame envisioned, MWD may not achieve the SWP yields projected in its IRP. Failure to implement the facilities could also limit the amount of transfer water from the Central Valley that MWD projects it will need to fully implement the IRP.

*Other Sources of Supply*. The IRP identifies a diverse mix of water resources designed to provide water supply reliability through the year 2020. In addition to Colorado River and SWP water, MWD's "Preferred Resources Mix" calls for conservation (to reduce long-term demands), expanded use of reclaimed water, ground water, conjunctive use, water transfers and desalination.

***Future CWA Water Supply***

***Water Resources Plan Overview.*** The CWA's projected water demands and recommended future supplies are developed through the CWA's Water Resources Plan ("WRP"), which was updated in February 1997. The 1997 WRP estimated water demand through 2015. Six water supply alternatives containing various mixes of water resources were evaluated, using criteria including total cost, reliability, degree of CWA control, environmental impacts, feasibility, rate impacts, reliability and water quality. The recommended alternative for resources development provides for a future mix of supplies that includes water purchases from MWD, core transfers and additional local supplies. Under this mix of supplies, expected purchases of water from MWD would increase, but the percentage of total CWA service area water supply from MWD would decline from the current level of about 90% to about 60% by 2015. Most of this reduction is from the development of water level transfers.

*Water Transfers*. Water transfers have emerged as one of the CWA's greatest potential resources outside of purchases from MWD. Water transfers often involve purchasing water for a specified period from an agency or district that then reduces its water use by that amount. The principle behind transfers is that market forces may reallocate water. The core transfer recommended in the WRP would provide the CWA up to 200,000 acre-feet/year.

Intrastate transfers of Colorado River water were considered in the WRP as the best potential source for long-term transfers because of the reliability of the water. The agricultural agencies that could provide this water enjoy first through third priorities to 3.85 MAF/yr. of the state's 4.4 MAF/yr. allocation. These priorities are higher than MWD's fourth priority allocation of 550,000 acre-feet. This means that the water would likely remain available for transfer even during drought, because the transferring agency, as holder of the water right, is in a relatively senior position to other water rights holders.

The cost of transferred water can be divided into two general components: the acquisition cost from the transferring agency and the cost to convey the water to the CWA. The conveyance cost introduces a third party into any transfer agreement because virtually all potential transfers rely upon using MWD, SWP, and/or U.S. Bureau of Reclamation Central Valley Project facilities to transport (or "wheel") the water to the CWA's service area. Under current state law, these public agencies are required to provide 70% of unused capacity in their distribution systems to wheel transferred water, provided that compensation at the lawful rate is made to cover the costs and that no harm is done to other water users. Wheeling would not be an issue if the CWA were to build a separate facility to transfer water from the Colorado River. Initial studies have indicated, however, that for water transfers of 200,000 acre-feet/yr. or less, construction of a new conveyance facility financed solely by the CWA would not be cost-effective.

*Wheeling*. For the past few years, MWD has attempted to establish a wheeling policy that would govern how its facilities would be made available for transfers and the compensation that MWD would consider reasonable for transferring non-MWD water through the MWD system. In November 1996, MWD adopted a set of principles to be used in setting wheeling rates. Short-term (less than one year) wheeling rates of $262 per acre-foot for water wheeled under firm wheeling service (that is, wheeling service using "received" conveyance capacity that is subject to interruption only in emergencies) and $141 per acre-foot for non-firm wheeling service (that is, wheeling service to be available only when capacity is available and which may be interrupted at MWD's discretion) were established by MWD in January 1997. Long-term wheeling rates are expected to be addressed as part of an ongoing MWD rate refinement process. Wheeling charges could have a major impact on the total cost of transferred supplies. As discussed below, the CWA and others have challenged the validity of these rates.

*Environmental.* Both the Colorado River and the Bay-Delta sources of transfer raise significant environmental considerations. The environmental focus for both sources has been declining fisheries and aquatic ecosystems.

*Water Quality.* Colorado River supplies are relatively high in salts, in the form of total dissolved solids, posing potential additional treatment costs. Although SWP supplies have lower salt levels, water from the Bay-Delta can be high in organic compounds that react with chlorine to form various disinfection by-products, including trihalomethanes, such as chloroform. Higher water treatment costs are incurred to eliminate these potentially harmful compounds.

*Proposed CWA/Imperial Irrigation District Water Transfer.* In September 1995, the CWA approved a Memorandum of Understanding with IID to negotiate a long-term transfer of conserved agricultural water. Since then, the CWA Board and staff have been actively involved in exploring the feasibility of such a transfer, determining the amount of water available, and negotiating its acquisition cost.

In July 1996, the CWA and IID agreed to draft terms for a Cooperative Water Conservation and Transfer Program. On December 11, 1997, the CWA and IID released a proposed agreement for public comment. The duration of the agreement is anticipated to be 45 years with renewal provisions for an additional 30 years and would provide that the CWA purchase up to 200,000 acre-feet/yr. of water supply. A quantity of 20,000 acre-feet/yr. or more could be available beginning in 1999. This amount increases annually by 20,000 acre-feet/yr. for ten years to a total of 200,000 acre-feet/yr. An additional 100,000 acre-feet/yr. could become available for transfer after year ten of the agreement, subject to its availability. The proposed agreement is conditioned upon, among other things, the availability of a minimum of 130,000 acre-feet/yr. The volume of water committed to be purchased by the CWA represents only a portion of the CWA's current level of demand for untreated water.

The proposed agreement includes a formula to determine the water's price that includes a discount from the price of MWD water (starting at 25% in the first year of the agreement and declining over the next seventeen years to 5%) after an adjustment for the CWA's cost to convey the water in MWD's Colorado River Aqueduct. The proposed agreement also requires the CWA to make additional payments to IID under certain circumstances during times of water shortage. Based on current MWD price data and CWA conveyance cost estimates, the price of the transferred water would normally be less than the cost to the CWA of MWD supplied water and compares favorably to other alternative sources of supply that might be developed by the CWA or MWD. The proposed agreement is being closely analyzed by the CWA regarding its effect on the CWA's future financial flexibility and fixed obligations.

Water for the transfer would come from conservation measures undertaken in the Imperial Valley, either by IID or private property owners within the IID service area. IID has shared contractual rights of 3.85 MAF/yr. with present perfected rights to 2.6 MAF/yr. of Colorado River water. Conservation measures could include improvements to irrigation systems and distribution and storage systems and better water management. An IID study completed in 1995 found that up to 400,000 acre-feet of water could be made available for transfer using these methods. Permanent removal of land from production is not one of the conservation methods being considered.

*Wheeling Rate.* The wheeling rate from MWD for use of the Colorado River Aqueduct will have a major impact on the project's economic viability. The CWA and MWD currently disagree in principle over how a wheeling rate should be established. The CWA believes the rate should recover only the incremental costs of moving water through a particular transportation facility, in this case the Colorado River Aqueduct. MWD, on the other hand, proposes to recover costs from its entire system, including components of the SWP.

After establishing its short-term wheeling rate in January 1997, MWD filed a validation lawsuit, seeking judicial approval of its wheeling rate. The CWA, along with IID, farm and land development interests and two Indian tribes, challenged MWD's wheeling rate through this lawsuit. The suit was heard in November 1997, and a trial court judgment in favor of CWA was entered, holding that MWD could only charge for incremental costs.*

*Other Factors.* The CWA's transfer proposal has implications beyond the San Diego and MWD region, and several "outside" factors are influencing the outcome of the proposal. One of the major factors is pressure that

* The City understands that MWD has appealed this judgment to the Court of Appeals.

is being exerted on California to be able to reduce its Colorado River demand to the state's 4.4 MAF basic apportionment, when it is hydrologically necessary to do so. California currently has access to surplus water made available by above-average precipitation and the fact that Upper Basin States are not using their full entitlement, and is taking about 5.2 MAF. Other Colorado River basin states fear that California will continue to rely on this quantity of water, even as reservoir levels decline from drier weather. The California 4.4 Plan is being developed to address this issue. This plan identifies the CWA/IID water transfer as a key mechanism for reducing total California demand on the river. The federal government has also indicated that core agriculture-to-urban transfers are needed for California.

Another factor influencing the proposed transfer is the lack of certainty regarding future water supplies from Northern California. Northern California interests view the transfer favorably because it relieves pressure on the need to develop additional water for export from the Bay-Delta, where environmental constraints exist. Failure to keep the Colorado River Aqueduct full on a reliable basis through core transfers could require additional water deliveries from the SWP.

**Proposed Emergency Storage Project**

The purpose of the CWA's proposed Emergency Storage Project ("ESP") is to provide additional water in storage within San Diego County in case of a prolonged interruption of imported water supplies. The ESP would develop approximately 90,100 acre-feet of reservoir storage and supporting distribution facilities (pipelines and pump stations) to supplement existing emergency water supplies available to the region. Following a detailed study the CWA selected the Olivenhain/Hodges/San Vicente ESP Alternative, composed of the following major components:

- Construction of a new dam and reservoir at Olivenhain: providing an increased emergency supply of 18,000 acre-feet
- 3.8-mile pipeline from Olivenhain Reservoir to the CWA's existing Second Aqueduct
- Re-operation of Lake Hodges: providing an emergency supply of 20,000 acre-feet
- 1.5-mile pipeline from Lake Hodges to Olivenhain Reservoir
- San Vicente Reservoir expansion: dam would be raised 54 feet providing an emergency supply of 52,100 acre-feet
- 12-mile pipeline from San Vicente Reservoir to Second Aqueduct
- 6 pump stations ranging from 320 to 42,000 horse power

The project would be constructed in phases beginning in year 2000 and completing the final phase in year 2010. Total initial CWA project cost is approximately $534 million.

A joint EIR/EIS was prepared for the ESP. The Environmental Impact Report was certified in August 1996, and the Environmental Impact Statement was certified by the Army Corps of Engineers in June 1997, with a federal Section 404 permit issued in June 1997.

# APPENDIX F

## AUDITED FINANCIAL STATEMENTS OF THE WATER UTILITY FOR YEARS ENDED JUNE 30, 1997 AND JUNE 30, 1996

**CALDERON, JAHAM & OSBORN**
AN ACCOUNTANCY CORPORATION

CERTIFIED PUBLIC ACCOUNTANTS & CONSULTANTS
San Diego • El Centro • Brawley

# INDEPENDENT AUDITORS' REPORT

The Honorable Mayor, City Council
and City Manager of the
City of San Diego, California

We have audited the accompanying financial statements of the City of San Diego Water Utility as of June 30, 1997 and 1996 and for the years then ended, listed as Exhibits A, B and C in the foregoing table of contents. These financial statements are the responsibility of the City of San Diego management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with generally accepted auditing standards and *Government Auditing Standards,* issued by the Comptroller General of the United States. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

As described in Note 1 to the financial statements, the financial statements referred to above present only the Water Utility Enterprise fund of the City of San Diego and are not intended to present the financial position of the City of San Diego, California and results of its operations and the cash flows of its proprietary and similar trust fund types, in conformity with generally accepted accounting principles.

In our opinion, such financial statements present fairly, in all material respects, the financial position of the City of San Diego Water Utility at June 30, 1997 and 1996 and the results of its operations and its cash flows for the years then ended in conformity with generally accepted accounting principles.

In accordance with *Government Auditing Standards,* we have also issued our report dated November 7, 1997 on our consideration of the City of San Diego's internal control over financial reporting and our tests of its compliance with certain provisions of laws, regulations, contracts and grants.

The scope of our audits did not include the supplemental information listed as Exhibits D & E, Schedules and Tables listed in the foregoing table of contents. Such information has not been subjected to the auditing procedures applied in the audits of the basic financial statements and, accordingly, we express no opinion on it.

November 7, 1997

Comerica Bank Tower
600 "B" Street, Suite 1400
San Diego, CA 92101

Phone: 619/234-5137
Fax: 619/234-5162
E-mail: cjocpa@duke-net.com

# Balance Sheets

*June 30, 1997 and 1996*

*Exhibit A*

## ASSETS

| | June 30 1997 | June 30 1996 |
|---|---|---|
| **Utility Plant:** | | |
| Land | $ 1,414,333 | $ 1,414,333 |
| Plants, dams, canals, laterals and equipment | 578,097,068 | 554,950,378 |
| Other | 465,000 | 465,000 |
| Construction in progress | 243,015,851 | 192,404,723 |
| Total | 822,992,252 | 749,234,434 |
| Less Accumulated Depreciation | 162,276,237 | 153,094,997 |
| **Total Utility Plant – Net** | 660,716,015 | 596,139,437 |
| **Advances to City of San Diego Internal Service Funds (Note 5)** | 10,644,695 | 10,027,310 |
| **Construction Grants Receivable** | 2,002,021 | 3,258,382 |
| **Current Assets:** | | |
| Cash or Equity in Pooled Cash and Investments (Note 2): | | |
| Water Operating Fund | 116,187,279 | 136,424,302 |
| Guarantee Deposit Funds | 1,035,024 | 892,270 |
| Total Cash or Equity in Pooled Cash and Investments | 117,222,303 | 137,316,572 |
| Accrued Interest Receivable | 1,417,275 | 1,790,692 |
| Accounts Receivable–Principally from Customers (Less Allowance for Doubtful Accounts of $543,303 and $942,300 Respectively) | 32,512,481 | 28,983,743 |
| Prepaid Expenses | 89,875 | 106,208 |
| Inventory of Water in Storage (Note 1) | 4,205,529 | 2,859,456 |
| Due from Other Funds | 0 | 0 |
| Operating Materials and Supplies, Principally at Average Cost | 294,740 | 232,754 |
| **Total Current Assets** | 155,742,203 | 171,289,425 |
| **TOTAL ASSETS** | $829,104,934 | $780,714,554 |

See Notes to Financial Statements.

## LIABILITIES AND EQUITY

| | June 30 1997 | June 30 1996 |
|---|---|---|
| **Current Liabilities:** | | |
| Obligations Under Reverse Repurchase Agreements (Note 2) | $ 0 | $ 2,697,667 |
| Accounts Payable | 30,696,865 | 20,011,205 |
| Accrued Payroll | 799,259 | 648,040 |
| Accrued Annual Leave and Sick Leave | 2,775,703 | 3,112,132 |
| Accrued SPSP Contributions Payable | 50,585 | 40,310 |
| Interest Accrued on Long-Term Debt | 5,984 | 0 |
| Long-Term Debt Due Within One Year | 109,229 | 0 |
| Liability Claims | 7,673,000 | 2,850,000 |
| Consumers' Guarantee Deposits | 852,443 | 686,176 |
| **Total Current Liabilities** | 42,963,068 | 30,045,530 |
| **Long-Term Liabilities:** | | |
| Capital Lease Obligations | 476,507 | 0 |
| **Deferred Credits:** | | |
| Deferred Contributions in Aid of Construction | 569,910 | 448,948 |
| Other Deferred Credits | 3,727,868 | 3,351,355 |
| **Total Deferred Credits** | 4,297,778 | 3,800,303 |
| **TOTAL LIABILITIES** | 47,737,353 | 33,845,833 |
| **Commitments and Contingencies (Notes 4 and 8)** | | |
| **Equity:** | | |
| Contributions in Aid of Construction: | | |
| Federal | 6,735,301 | 6,091,787 |
| State | 11,448,539 | 11,993,166 |
| Municipal | 43,105,466 | 42,446,132 |
| Local | 2,596,059 | 2,596,059 |
| Developers | 339,895,456 | 324,469,859 |
| Capacity | 122,812,426 | 111,779,936 |
| Other | 929,765 | 2,290,012 |
| Total Contributions in Aid of Construction | 527,523,012 | 501,666,951 |
| Retained Earnings: | | |
| Invested in Assets of the System | 237,423,972 | 202,764,317 |
| Designated for Subsequent Years' Capital Projects and Operations | 16,420,597 | 42,437,453 |
| Total Retained Earnings | 253,844,569 | 245,201,770 |
| **Total Equity** | 781,367,581 | 746,868,721 |
| **TOTAL LIABILITIES AND EQUITY** | $829,104,934 | $780,714,554 |

# Statements of Income and Retained Earnings

*For the Years Ended June 30, 1997 and 1996*

*Exhibit B*

| | Year Ended June 30 | |
|---|---|---|
| | 1997 | 1996 |
| **Operating Revenues:** | | |
| Sales of Water: | | |
| Inside City: | | |
| Domestic | $ 89,573,749 | $ 84,356,638 |
| Commercial and Industrial | 56,495,724 | 53,432,936 |
| Outside City: | | |
| Domestic, Commercial and Industrial | 90,301 | 86,654 |
| Other Utilities | 4,673,806 | 4,365,577 |
| Irrigation Districts | 474,266 | 988,692 |
| Total Sales of Water | 151,307,846 | 143,230,497 |
| Other Operating Revenues: | | |
| Recreation | 1,392,958 | 1,475,582 |
| Fire Services and Back Flow Device Maintenance | 1,222,482 | 1,176,560 |
| Rent from Use of Facilities | 2,366,229 | 2,914,883 |
| Customer Service Charges | 823,621 | 926,506 |
| Storage and Transportation of Water from Other Agencies | 213,703 | 200,882 |
| Other Operating Grants | 4,472,263 | 3,326,528 |
| Miscellaneous (Net) | 6,966,998 | 1,241,262 |
| Total Other Operating Revenues | 17,458,254 | 11,262,203 |
| **Total Operating Revenues** | 168,766,100 | 154,492,700 |
| **Operating Expenses (Note 5)** | 162,369,257 | 162,099,832 |
| **OPERATING INCOME (LOSS)** | 6,396,843 | (7,607,132) |
| **Nonoperating Revenues (Expenses):** | | |
| Interest Income (Note 2) | 9,926,997 | 8,636,255 |
| Interest Expense | (16,826) | 0 |
| Gain (Loss) on Sale/Retirement of Fixed Assets | (6,799,839) | 4,740,006 |
| Sale of Gravel, Land, etc | 51,190 | 47,667 |
| Reverse Repurchase Agreement Interest Expense | 0 | (590,311) |
| Other | 679,071 | 10,427 |
| **Total Nonoperating Revenues (Expenses)** | 3,840,593 | 12,844,044 |
| Operating Transfers In | 83,991 | 556,090 |
| Operating Transfers Out | (1,678,628) | (100,000) |
| NET INCOME | 8,642,799 | 5,693,002 |
| Retained Earnings at Beginning of Year | 245,201,770 | 239,508,768 |
| RETAINED EARNINGS AT END OF YEAR | $253,844,569 | $245,201,770 |

See Notes to Financial Statements.

# Statements of Cash Flows

*For the Years ended June 30, 1997 and 1996*

*Exhibit C*

| | Year Ended June 30 | |
|---|---|---|
| | 1997 | 1996 |
| **Cash Flows From Operating Activities** | | |
| Operating Income (Loss) | $6,396,843 | ($7,607,132) |
| Adjustments to Reconcile Operating Income (Loss) to Net Cash Provided By (Used For) Operating Activities: | | |
| Depreciation and Amortization | 12,759,173 | 9,935,886 |
| Changes in Assets and Liabilities: | | |
| (Increase) Decrease in Accounts Receivable–Net | (3,528,738) | (7,048,037) |
| (Increase) Decrease in Due From Other Funds | 0 | 500,000 |
| (Increase) Decrease in Inventory of Water in Storage | (1,408,059) | 11,958,495 |
| (Increase) Decrease in Prepaid Expenses | 16,333 | 29,224 |
| Increase (Decrease) in Accounts Payable | 10,685,660 | 4,657,776 |
| Increase (Decrease) in Accrued Payroll, Accrued Leave & Accrued SPSP Contributions Payable | (174,935) | (112,795) |
| Increase (Decrease) in Liability Claims | 4,823,000 | (1,718,793) |
| Increase (Decrease) in Deferred Credits | 497,475 | (338,333) |
| Other Nonoperating Revenue | 679,071 | 10,427 |
| **Net Cash Provided by (Used For) Operating Activities** | 30,745,823 | 10,266,718 |
| **Cash Flows From Noncapital Financing Activities** | | |
| Operating Transfers In from/(Out to) Other Funds | (1,594,637) | 456,090 |
| Payments for Advances and Deposits | (451,118) | 811,094 |
| **Net Cash Provided by (Used For) Noncapital Financing Activities** | (2,045,755) | 1,267,184 |
| **Cash Flows From Capital and Related Financing Activities** | | |
| Proceeds from Contributed Capital | 13,101,498 | 14,005,054 |
| Acquisition of Fixed Assets | (71,169,251) | (52,795,640) |
| Proceeds from Sale of Fixed Assets | 1,706,989 | 13,243,311 |
| Principal Payment on Capital Lease | (25,478) | 0 |
| Interest Paid on Long-Term Debt | (10,842) | 0 |
| **Net Cash Provided by (Used For) Capital and Related Financing Activities** | (56,397,084) | (25,547,275) |
| **Cash Flows From Investing Activities** | | |
| Net Increase (Decrease) in Obligations Under Reverse Repurchase Agreements | (2,697,667) | (10,775,694) |
| Interest and Dividends Received on Investments | 10,300,414 | 8,711,527 |
| Reverse Repurchase Agreement Interest Paid | 0 | (590,311) |
| **Net Cash Provided by (Used For) Investing Activities** | 7,602,747 | (2,654,478) |
| **Net Increase (Decrease) in Cash and Cash Equivalents** | (20,094,269) | (16,667,851) |
| Cash and Cash Equivalents at July 1, 1996 | 137,316,572 | 153,984,423 |
| CASH AND CASH EQUIVALENTS AT JUNE 30, 1997 | $117,222,303 | $137,316,572 |

See Notes to Financial Statements.

## 1. ORGANIZATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Section Fifty-Three of the Charter of the City of San Diego (the "City") establishes a separate utility (the "Water Utility") which is included in the administrative organization of the City; its financial information and records are established and maintained by the City.

The accounting policies of the Water Utility conform to Generally Accepted Accounting Principles (GAAP) as applicable to governmental units. The following is a summary of the more significant of such policies:

### a. Basis of Presentation

The financial activities of the Water Utility are accounted for and reported as an Enterprise Fund of the City. The measurement focus is upon determination of net income, financial position and changes in cash flows.

Enterprise Funds are used to account for operations (a) that are financed and operated in a manner similar to private business enterprises where the intent of the governing body is that the costs (expenses, including depreciation) of providing goods or services to the general public on a continuing basis be financed or recovered primarily through user charges; or (b) where the governing body has decided that periodic determination of revenues earned, expenses incurred, and/or net income is appropriate for capital maintenance, public policy, management control, accountability or other purposes.

The Water Utility adopts all FASB Statements and Interpretations issued on or before November 30, 1989, unless those pronouncements conflict with or contradict GASB pronouncements.

### b. Basis of Accounting

The Water Utility uses the accrual basis of accounting. Under the accrual basis of accounting, revenues are recognized when earned, and expenses are recorded when incurred. Estimated unbilled revenues are recognized at the end of each fiscal year. This estimated amount is based on billings during the month following the close of the fiscal year.

### c. Inventories

Inventories, which consist of water in storage, are valued at the lower of cost (first-in, first-out basis) or market. Such inventories are expensed when consumed.

### d. Utility Plant

Fixed assets owned by the Water Utility are stated at cost if purchased or constructed, or at estimated fair market value if received as a donation. Depreciation has been provided over the estimated useful lives using the straight-line method. The estimated useful lives are as follows:

Plants, dams, canals, laterals and equipment: 5 -150 years

### e. Employee Annual Leave

The Water Utility provides annual leave to cover both vacation and sick leave. It is the Water Utility's policy to permit employees eligible for the Management Benefits plan to accumulate up to 17.5 weeks of earned but unused annual leave and all other employees to accumulate up to 15 weeks of earned but unused annual leave. Accumulation of these earnings will be paid to employees upon separation from service. Excess accumulated annual leave amounts not used by employees are forfeited on an annual basis.

In addition, sick leave earned through August 1981 by employees hired prior to July 1, 1975 is payable upon separation under the following conditions: (1) 50% of the employee's accrued amount upon retirement or death, or (2) 25% of the employee's accrued amount upon resignation. Annual leave benefits are recorded as a liability in the period earned by the employees.

### f. Claims and Judgments

Costs of claims and judgments are recorded when the liability is incurred and measurable.

### g. Contributions in Aid of Construction

Additions to contributions in aid of construction (approximately $25,856,000 in 1997 and $28,291,000 in 1996) represents facilities or cash contributed for facility construction by property owners or government agencies. Cash contributions in aid of construction for meters and service are classified as deferred credits until the facilities have been installed.

### h. Allocation for System Expansion

A percentage of water sales is allocated by ordinance for capital improvements.

### i. Estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amount of certain assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the related reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates. Management believes that the estimates are reasonable.

## 2. CASH AND INVESTMENTS

### a. Cash or Equity in Pooled Cash and Investments

Other cash resources of the Water Utility are combined with the cash resources of the City to form a pool of cash that is managed by the City Treasurer. As provided for by the Government Code, the cash balance of substantially all City funds and certain entities are pooled and invested by the City Treasurer for the purpose of increasing interest earnings through investment activities. The Water Utility's net share of the total pooled cash and investments is included in the accompanying balance sheet under the captions "Cash or Equity in Pooled Cash and Investments" and "Obligations under Reverse Repurchase Agreements". Interest earned on pooled investments is deposited to certain of the participating City funds and entities, including the Water Utility, based upon each fund's and each entity's average daily deposit balance during the allocation period with all remaining interest deposited to the City's General Fund.

The City may transact business only with banks, savings and loans, and investment securities dealers who are primary dealers regularly reporting to the New York Federal Reserve Bank. Exceptions to this rule can be made only upon written authorization of the City Treasurer. Authorized cash deposits and investments are governed by state law, as well as by the City's own written investment policy. Within the context of these limitations, permissible investments include (1 ) obligations of the U.S. government and federal agencies, (2) commercial paper rated A-1 by Standard & Poor's Corporation or P-1 by Moody's Commercial Paper Record, (3) bankers' acceptances, (4) negotiable and/or non-negotiable certificates of deposit and non-negotiable time deposits issued by a nationally or state chartered bank or a state or federal savings and loan association, (5) repurchase and reverse repurchase agreements, (6) the local agency investment fund established by the state treasurer and (7) financial futures contracts which are used to offset an existing financial position and not for outright speculation.

### b. Reverse Repurchase Agreements

Investment policies permit the City to enter into reverse repurchase agreements which is a sale of securities with a simultaneous agreement to repurchase them in the future at the same price plus a contract rate of interest. The market value of the securities underlying reverse repurchase agreements normally exceeds the cash received providing the dealers a margin against a decline in the market value of the securities. If the dealers default on their obligations to resell these securities to the City or provide securities of cash or equal value, the City could suffer an economic loss equal to the difference between the market value plus accrued interest of the underlying securities and the reverse repurchase agreement obligation, including accrued interest payable. In Fiscal Year 1997, however, the City did not enter into any reverse repurchase agreements. As such, there was no such credit exposure at year-end.

Deposits and investments are generally exposed to two types of risk; credit risk and market risk. Credit risk is the risk that a governmental entity will not be able (a) to recover deposits if the depository financial institution fails or (b) to recover the value of investment or collateral securities that are in the possession of an outside party if the counterparty to the investment or deposit transaction fails. Market risk is the risk that the value of an investment will decline.

In accordance with governmental reporting standards, the City has classified its deposits and investments by categories of credit risk. Information pertaining to the City's cash and investment pool may be found in the City's Comprehensive Annual Financial Report.

## 3. LONG-TERM DEBT

The City Charter provides that the bonded indebtedness for the development, conservation and furnishings of water cannot exceed 15% of the most recent assessed valuation of all real and personal property of the City subject to direct taxation, and 10% for other municipal improvements. At June 30, 1997, such limits for the City were $2,395,960 and $1,568,907 respectively.

## 4. LEASE COMMITMENTS

### Lease Revenue

The Water Utility has operating leases for certain land, buildings, and facilities with tenants and concessionaires who will provide the following minimum annual lease payments:

| Year Ending June 30 | |
|---|---|
| 1998 | $ 1,282,912 |
| 1999 | 1,211,741 |
| 2000 | 1,201,403 |
| 2001 | 1,165,358 |
| 2002 | 1,113,227 |
| Thereafter | 27,813,687 |
| Total | $33,788,328 |

This amount does not include contingent rentals which may be received under certain leases of property on the basis of percentage returns. Contingent rentals amounted to $1,156,591 in the year ended June 30, 1997.

The City has entered into capital lease agreements during the year for water meters. The total liability for these leases is $476,507 at June 30, 1997.

## 5. TRANSACTIONS WITH THE CITY OF SAN DIEGO

The Water Utility has financed the acquisition by the City's Internal Service Funds of certain vehicles and supplies used by the Water Utility. The Internal Service Funds charge the Water Utility for the use of the vehicles and supplies. However, there is no specific provision for the repayment of these advances or interest on them. It is the City's general intent that the advances be repaid as the financial condition of the Internal Service Funds permit.

Included in operating expenses is $3,009,771 in 1997 and $3,281,100 in 1996 charged by the City to the Water Utility for indirect general government expenditures incurred by the City. Such charges are based on a pro-rata portion of general government expenditures applicable to the Water Utility.

The Water Utility sells water to the City at commercial rates. Such revenues were approximately $4,636,405, in 1997 and $6,269,700 in 1996.

The Water Utility paid approximately $2,897,728 in 1997 and $7,425,500 in 1996 for computer services provided by the San Diego Data Processing Corporation, a non-profit corporation, of which the City is the sole member.

The Water Utility paid $6,850,880 and $7,162,100 in 1996 to the City for right-of-way impact assessment charges for the use of public right-of-way for water distribution systems.

## 6. CHARGE IN LIEU OF TAXES

Charge in lieu of taxes consists primarily of charges by the Metropolitan Water District of Southern California and the San Diego County Water Authority.

## 7. PENSION PLANS

The City has a defined benefit plan and various defined contribution pension plans covering substantially all of its employees.

## DEFINED BENEFIT PLAN

### a. Plan Description

All of the City and the San Diego Unified Port District (the "District") full-time employees participate in the San Diego City Employees' Retirement System ("SDCERS").

SDCERS is a public employee retirement system established in 1927 by the City and administered by a Board of Administration (the "Board") to provide retirement, disability, death and survivor benefits for its members.

In 1963, through an agreement between the City and the District, employees of the District became members of SDCERS.

The Plan is a defined benefit plan which covers all eligible employees of the City and the District. The Plan is a multiple-employer public employee retirement system that acts as a common investment and administrative agent for the City and the District. As a defined benefit plan, retirement benefits are determined primarily by a member's age at retirement, the length of membership service and the member's final compensation earnable based on the highest one-year period.

The Plan provisions applicable to general members are generally applicable to the District's general members and those applicable to lifeguard members are generally applicable to the District's safety members.

All full-time City and District employees are eligible to participate in the Plan. Salaried classified employees become members of the system upon employment. Salaried unclassified employees hired on or after August 11, 1995 become members upon employment.

SDCERS is considered part of the City of San Diego's financial reporting entity and is included in the City's financial reports as a pension trust fund.

SDCERS issues a stand-alone financial report which is available at its office located at 401 B Street, Suite 400, San Diego, California 92101.

### b. Funding Policy

SDCERS' funding policy provides for periodic employer contributions at actuarially determined rates that, expressed as percentages of annual covered payroll, are designed to accumulate sufficient assets to pay benefits when due. The normal cost and actuarial accrued liability are determined using the projected unit credit actuarial funding method. Unfunded actuarial accrued liabilities are being amortized as a level percent of payroll over a period of 30 years (25 years remaining).

Employees are required to contribute a percentage of their annual salary to the Plan. Contributions vary according to age at entry into the plan and salary. The City and the District contribute a portion of the employees' share and the remaining amount necessary to fund the system based on an actuarial valuation at the end of the preceding year under the projected unit credit method of actuarial valuation. Prior to June 30, 1993, contributions were based on the entry age normal cost method of valuation. During the period July 1, 1996 to June 30, 1997 contributions totaling $66,147,529 ($29,165,584 employer, $15,770,286 employee and $21,211,659 in employer offset contributions) were made. Of the employer contributions, $23,235,875 was applied to normal cost and $5,929,709 was applied to unfunded accrued liability. All of the employer offset contributions were applied to normal cost.

Significant actuarial assumptions used to compute contribution requirements were the same as those used to compute the standardized measure of the pension benefit obligation.

The following table shows the City and the District's required contributions and the percentage contributed for the current year and each of the two preceding years (in thousands):

| Year Ended June 30 | Actuarially Required Contributions (ARC) | Contributions Made | Percentage Contributed |
|---|---|---|---|
| 1995 | $ 18,474 | $ 18,474 | 100% |
| 1996 | 26,122 | 26,122 | 100 |
| 1997 | 29,166 | 29,166 | 100 |

There is no Net Pension Obligation at year end as Actuarially Required Contributions and Contributions Made have always been identical during the three-year period.

### DEFINED CONTRIBUTION PLANS

Pursuant to the City's withdrawal from the Federal Social Security System effective January 8, 1982, and to the Federal Government's mandate of a Social Security Medicare tax for all employees not covered by Social Security hired on or after April 1, 1986, the City established the Supplemental Pension Savings Plan ("SPSP"), a defined contribution plan administered by American Express Trust Company, Minneapolis, MN, which provides pension benefits for eligible full-time employees. In a defined contribution plan, benefits depend solely on amounts contributed to the plan plus investment earnings. Employees are eligible to participate from the date of employment. State legislation requires that both the employee and the City contribute an amount equal to 3% of the employee's total salary each month. Participants in the plan hired before April 1, 1986 and on or after April 1, 1986 may voluntarily contribute up to an additional 4.5% and 3.05%, respectively, of total salary.

The City also contributes an amount equal to the employee voluntary contributions. The City's contributions for each employee (and interest allocated to the employee's account) are fully vested after five years of continuous service. City contributions for, and interest forfeited by, employees who leave employment before five years of service are used to reduce the City's contribution requirement.

The City and the covered employees contributed approximately $32,191,000. As of June 30, 1997, market value of Plan assets totaled approximately $274,929,000. SPSP is considered part of the City of San Diego's financial reporting entity and is included in the City's financial reports as a Pension Trust Fund.

In addition, the City established a 401(k) Plan effective July 1, 1985. The plan is a defined contribution plan administered by American Express Trust Company, Minneapolis, MN, to provide pension benefits for all eligible full-time employees. Employees are eligible to participate twelve months after the date of employment. Employees make contributions to their 401(k) accounts through payroll deductions, and may also elect to have the City contribute to their 401(k) accounts through the City's Employees' Flexible Benefits Program.

The employees' 401(k) contributions were calculated pursuant to various combination arrangements. The covered employees and the City contributed approximately $7,667,000 during the fiscal year.

As of June 30, 1997, market value of Plan assets totaled approximately $49,667,000. The 401(k) Plan is considered part of the City of San Diego's financial reporting entity and is included in the City's financial reports as an Agency Fund.

## 8. POST RETIREMENT HEALTH INSURANCE

In addition to providing pension benefits, the City of San Diego Municipal Code provides certain health care insurance benefits for retired general and safety members of SDCERS who retired on or after October 6, 1980. At June 30, 1997, approximately 1,975 eligible retirees received benefits.

Certain health care insurance benefits were established during Fiscal Year 1995 for eligible retirees who retired prior to October 6, 1980 or who were otherwise not eligible to receive City-paid health care insurance as of June 30, 1994. At June 30, 1997, approximately 1,125 eligible retirees received benefits.

Currently, expenses for post-employment healthcare benefits are recognized as they are paid. For the fiscal year ended June 30, 1997, expenditures of approximately $5,017,000 were recognized for such health care benefits.

Substantially all of the City's general and safety members of SDCERS may become eligible for those benefits if they reach normal retirement age and meet service requirements as defined while working for the City.

## 9. COMMITMENTS AND CONTINGENCIES

The Water Utility's construction plans for various projects are estimated to cost approximately $62,691,000. As of June 30, 1997, the Utility's contractual commitments for the projects totaled approximately $35,702,000. The Utility intends to finance the contractual commitments with reserves and service charges, and the issuance of long-term debt.

The Water Utility is self-insured for general liability claims. At June 30, 1997 the Water Utility has recorded approximately $7,673,000 for such claims. These amounts represent the Utility's determination of the probable ultimate cost of the claims.

# Changes in Funds Available for Appropriation

*For the Year Ended June 30, 1997*

*Exhibit D*

*Unaudited*

| | Water Operating Fund |
|---|---|
| Funds Available for Appropriation at July 1, 1996 | $ 0 |
| Add: | |
| Cash Receipts (Schedule D-1) | 196,778,830 |
| Anticipated Contributions from Other Agencies at June 30, 1997 | 7,452,628 |
| Continuing Appropriations at July 1, 1996 | 26,632,137 |
| Continuing Appropriations Encumbered at July 1, 1996 | 31,123,000 |
| Accrued Annual Leave and Sick Leave at July 1, 1996 | 3,112,132 |
| Prior Years' Encumbrances Cancelled | 14,465,953 |
| Designated for Subsequent Years' Capital Projects and Operations at July 1, 1996 | 42,437,453 |
| Total Balances and Additions | 322,002,133 |
| Deduct: | |
| Expenditures and Encumbrances (Schedule D-2) | 273,688,026 |
| Anticipated Contributions from Other Agencies at June 30, 1996 | 3,475,172 |
| Accrued Annual Leave and Sick Leave at June 30, 1997 | 2,775,703 |
| Designated for Subsequent Years' Capital Projects and Operations at June 30, 1997 | 16,420,597 |
| Continuing Appropriations at June 30, 1997 | 25,642,635 |
| Total Balances and Additions | 322,002,133 |
| **FUNDS AVAILABLE FOR APPROPRIATION AT JUNE 30, 1997 (Exhibit A)** | $ 0 |

# Recreation Activities

*For the Year Ended June 30, 1997*

Exhibit E

*Unaudited*

| | Barrett Reservoir Station | Otay Reservoir Station | Sutherland Reservoir Station | Hodges Reservoir Station | Miramar Reservoir Station | El Capitan Reservoir Station | San Vicente Reservoir Station | Murray Reservoir Station | Total |
|---|---|---|---|---|---|---|---|---|---|
| REVENUES | | | | | | | | | |
| Fishing | $68,418 | $155,399 | $72,032 | $223,885 | $107,748 | $136,173 | $163,736 | $111,938 | $1,039,329 |
| Water Contact | 0 | 0 | 0 | 13,705 | 0 | 114,083 | 194,113 | 0 | 321,901 |
| TOTAL REVENUES | 68,418 | 155,399 | 72,032 | 237,590 | 107,748 | 250,256 | 357,849 | 111,938 | 1,361,230 |
| EXPENSES | | | | | | | | | |
| Fishing | 79,240 | 153,964 | 81,687 | 128,409 | 159,931 | 148,531 | 176,840 | 179,516 | 1,108,118 |
| Water Contact | 0 | 0 | 0 | 31,513 | 0 | 186,999 | 250,388 | 0 | 468,900 |
| TOTAL EXPENSES | 79,240 | 153,964 | 81,687 | 159,922 | 159,931 | 335,530 | 427,228 | 179,516 | 1,577,018 |
| GROSS PROFIT (LOSS) FROM OPERATIONS | ($10,822) | $1,435 | ($9,655) | $77,668 | ($52,183) | ($85,274) | ($69,379) | ($67,578) | (215,788) |
| DEPRECIATION ALL STATIONS | | | | | | | | | (111,451) |
| NET PROFIT FROM OPERATIONS | | | | | | | | | ($327,239) |
| PERCENT PROFIT | | | | | | | | | -24.04% |

# Changes – Plant in Service

*June 30, 1997*

*Schedule A-1*

*Unaudited*

| | Balance at June 30, 1996 | Additions | Retirements | Balance at June 30, 1997 |
|---|---|---|---|---|
| **Buildings and Structures:** | | | | |
| Source of Supply | $ 297,308 | $ 0 | $ 0 | $ 297,308 |
| Purification | 10,160,549 | 0 | 0 | 10,160,549 |
| Transmission | 193,437 | 0 | 0 | 193,437 |
| Recreation | 1,799,878 | 0 | 0 | 1,799,878 |
| Distribution | 3,905,385 | 0 | 0 | 3,905,385 |
| General | 720,913 | 26,628 | 10,086 | 737,455 |
| TOTAL BUILDINGS AND STRUCTURES | 17,077,470 | 26,628 | 10,086 | 17,094,012 |
| **Equipment:** | | | | |
| Source of Supply: | | | | |
| Impounding Dams and Reservoirs | 15,591,235 | 0 | 0 | 15,591,235 |
| Wells and Appurtenances | 87,243 | 0 | 14,061 | 73,182 |
| Intake and Section Mains | 2,663,881 | 0 | 0 | 2,663,881 |
| Purification: | | | | |
| Plant and Equipment | 7,555,383 | 19,658 | 11,456 | 7,563,585 |
| Laboratory | 1,090,180 | 48,610 | 172,391 | 966,399 |
| Transmission: | | | | |
| Reservoirs and Tanks | 6,763,221 | 0 | 0 | 6,763,221 |
| Mains and Canals | 5,362,746 | 0 | 0 | 5,362,746 |
| Booster Pumping | 614,395 | 0 | 0 | 614,395 |
| Recreation: | | | | |
| Miscellaneous Equipment | 680,294 | 269,867 | 1,158 | 949,003 |
| Distribution: | | | | |
| Reservoirs and Tanks | 8,700,400 | 0 | 1,000 | 8,699,400 |
| Mains and Appurtenances | 356,242,473 | 4,244,843 | 157,032 | 360,330,284 |
| Booster Pumping | 2,356,002 | 0 | 0 | 2,356,002 |
| Services | 63,410,533 | 1,257,672 | 53,011 | 64,615,194 |
| Meters | 16,366,328 | 3,295,387 | 5,607,216 | 14,054,499 |
| Hydrants | 23,941,578 | 272,664 | 21,367 | 24,192,875 |
| General: | | | | |
| Miscellaneous Equipment | 5,552,862 | 28,873,268 | 3,051,836 | 31,374,294 |
| Office Equipment | 7,305,835 | 6,259 | 6,067,552 | 1,244,542 |
| TOTAL EQUIPMENT | 524,284,589 | 38,288,228 | 15,158,080 | 547,414,737 |
| TOTAL BUILDINGS AND STRUCTURES AND EQUIPMENT | 541,362,059 | 38,314,856 | 15,168,166 | 564,508,749 |
| **Land:** | | | | |
| Source of Supply | 10,872,412 | 0 | 0 | 10,872,412 |
| Filtration and Purification | 163,693 | 0 | 0 | 163,693 |
| Transmission | 740,982 | 0 | 0 | 740,982 |
| Distribution | 1,811,232 | 0 | 0 | 1,811,232 |
| TOTAL LAND | 13,588,319 | 0 | 0 | 13,588,319 |
| TOTAL PLANT IN SERVICE (Exhibit A) | $554,950,378 | $38,314,856 | $15,168,166 | $578,097,068 |

# Operating Expenses

*For the Years Ended June 30, 1997 and 1996*

*Schedule B-1*

*Unaudited*

| | Year Ended June 30 | |
|---|---|---|
| | 1997 | 1996 |
| **Cost of Purchased Water Used:** | | |
| Inventory of Purchased Water in Storage – Beginning of Period | $ 2,859,456 | $ 14,782,379 |
| Water Purchased | 70,891,690 | 61,039,151 |
| Total Purchased Water Available | 73,751,146 | 75,821,530 |
| Inventory of Purchased Water in Storage – End of Period | 4,205,529 | 2,859,456 |
| TOTAL COST OF PURCHASED WATER USED | 69,545,617 | 72,962,074 |
| **Division of Production:** | | |
| Impounding and Transmission System: | | |
| Recreation | 2,200,380 | 1,678,157 |
| Operation Supervision and Office | 4,053,033 | 2,311,588 |
| Surface Source of Supply | 3,019,034 | 1,105,050 |
| Transmission | 360,923 | 976,481 |
| General Expense | 1,416,791 | 58,336 |
| Total Impounding and Transmission System | 11,050,161 | 6,129,612 |
| Filtration and Purification | 12,397,967 | 14,575,009 |
| TOTAL DIVISION OF PRODUCTION | 23,448,128 | 20,704,621 |
| **Division of Distribution:** | | |
| Operation Supervision and Office | 17,065,131 | 11,085,123 |
| Accrued Claims | 6,450,211 | 855,416 |
| Mains | 9,976,206 | 9,527,315 |
| Services | 3,506,674 | 3,739,809 |
| Hydrants | 850,138 | 479,731 |
| Meters | 2,367,936 | 2,465,332 |
| Booster Pumping Stations | 3,046,539 | 3,454,861 |
| Reservoirs and Tanks | 1,216,759 | 1,524,215 |
| TOTAL DIVISION OF DISTRIBUTION | 44,479,594 | 33,131,802 |
| **Accounting and Services:** | | |
| General Accounting | 376,019 | 2,375,521 |
| Customer Services | 5,163,134 | 5,650,032 |
| TOTAL ACCOUNTING SERVICES | 5,539,153 | 8,025,553 |
| **General and Administrative:** | | |
| Utilities Administration and Office | 660,044 | 5,853,463 |
| Expenses of Other City Departments Applicable to the Water Utility | 3,218,833 | 3,444,117 |
| Engineering Expenses | 36,095 | 3,614,393 |
| Water Research Grants | 0 | 2,685,254 |
| Other Insurance and Damage Claims | 0 | 135,816 |
| Uncollectible Accounts | 0 | 267,107 |
| General Expense | 1,897,984 | 378,915 |
| TOTAL GENERAL AND ADMINISTRATIVE | 5,812,956 | 16,379,065 |
| **Taxes:** | | |
| In Lieu Taxes: | | |
| San Diego County Water Authority | 652,515 | 673,231 |
| Taxes County of San Diego | 132,121 | 287,600 |
| TOTAL TAXES | 784,636 | 960,831 |
| DEPRECIATION AND AMORTIZATION | 12,759,173 | 9,935,886 |
| TOTAL OPERATING EXPENSES (Exhibit B) | $162,369,257 | $162,099,832 |

# Estimated and Actual Cash Receipts

*For the Year Ended June 30, 1997*

*Schedule D-1*

*Unaudited*

| | Estimate | Actual | Actual Over or (Under) Estimate |
|---|---|---|---|
| Sale of Water | $148,428,000 | $148,885,857 | $ 457,857 |
| Service Charges | 155,000 | 185,639 | 30,639 |
| Land and Building Rentals | 1,853,739 | 2,443,369 | 589,630 |
| New Water Services | 490,000 | 688,584 | 198,584 |
| Sale of Discarded Materials and Facilities | 50,000 | 51,190 | 1,190 |
| Interest Earnings | 7,590,000 | 10,227,114 | 2,637,114 |
| Damages Recovered | 117,000 | 62,463 | (54,537) |
| Services Rendered Other Funds | 4,257,313 | 9,794,716 | 5,537,403 |
| Services Rendered Others | 517,500 | 805,943 | 288,443 |
| Water System Capacity Charges | 6,427,000 | 8,308,454 | 1,881,454 |
| Recreation Program and Fees | 1,331,600 | 1,392,958 | 61,358 |
| Contributions in Aid | 2,882,600 | 4,813,731 | 1,931,131 |
| Sale of Land | 1,000,000 | 1,577,024 | 577,024 |
| Other Revenue | 189,199 | 7,541,788 | $7,352,589 |
| **TOTAL RECEIPTS (Exhibit D)** | $175,288,951 | $196,778,830 | $21,489,879 |

# Appropriations, Expenditures & Encumbrances

*For the Year Ended June 30, 1997*

*Schedule D-2*

*Unaudited*

| | Appropriations | Expenditures | Encumbrances | Total | Unencumbered Balance |
|---|---|---|---|---|---|
| **Maintenance and Operations** | | | | | |
| Salaries and Wages | $21,896,415 | $24,674,603 | $0 | $24,674,603 | ($2,778,188) |
| Supplies and Expenses | 141,710,910 | 128,799,033 | 15,172,360 | 143,971,393 | (2,260,483) |
| **Total Maintenance and Operations** | 163,607,325 | 153,473,636 | 15,172,360 | 168,645,996 | (5,038,671) |
| **Outlay:** | | | | | |
| Salaries and Wages | 4,302,281 | 4,197,931 | 0 | 4,197,931 | 104,350 |
| Construction | 121,960,800 | 59,269,896 | 35,701,957 | 94,971,853 | 26,988,947 |
| Equipment | 2,449,822 | 1,793,869 | 453,905 | 2,247,774 | 202,048 |
| **Total Outlay** | 128,712,903 | 65,261,696 | 36,155,862 | 101,417,558 | 27,295,345 |
| **Other:** | | | | | |
| San Diego County Water Authority | 767,720 | 652,515 | 0 | 652,515 | 115,205 |
| All American Canal | 255,000 | 132,121 | 0 | 132,121 | 122,879 |
| Reimbursement to City of San Diego: Expenses of Other City Departments Applicable to the Water Utility | 878,955 | 1,651,011 | 46,585 | 1,697,596 | (818,641) |
| Unallocated Reserve | 2,833,623 | 0 | 1,142,240 | 1,142,240 | 1,691,383 |
| **Total Other** | 4,735,298 | 2,435,647 | 1,188,825 | 3,624,472 | 1,110,826 |
| **TOTAL (Exhibit D)** | $297,055,526 | $221,170,979 | $52,517,047 | $273,688,026 | $23,367,500 |

# Comparative Statistics

*Last 30 Years*

*Table I*

*Unaudited*

| Fiscal Year | Water Utility Plant | Bonded Debt | Retained Earnings |
|---|---|---|---|
| 1996 - 1997 | $822,992,252 | $0 | $253,844,569 |
| 1995 - 1996 | 749,234,434 | 0 | 245,201,770 |
| 1994 - 1995 | 689,106,295 | 0 | 239,508,768 |
| 1993 - 1994 | 626,737,242 | 0 | 239,132,054 |
| 1992 - 1993 | 586,633,825 | 0 | 230,196,751 |
| 1991 - 1992 | 539,772,877 | 0 | 221,364,414 |
| 1990 - 1991 | 489,482,460 | 0 | 211,719,271 |
| 1989 - 1990 | 466,753,038 | 170,000 | 204,365,266 |
| 1988 - 1989 | 438,332,681 | 340,000 | 193,028,191 |
| 1987 - 1988 | 405,096,381 | 720,000 | 157,853,534 |
| 1986 - 1987 | 366,622,054 | 1,100,000 | 139,740,848 |
| 1985 - 1986 | 340,521,942 | 1,480,000 | 121,499,857 |
| 1984 - 1985 | 318,620,979 | 1,860,000 | 119,513,109 |
| 1983 - 1984 | 298,748,076 | 2,240,000 | 110,772,323 |
| 1982 - 1983 | 282,270,412 | 2,620,000 | 104,212,739 |
| 1981 - 1982 | 270,416,609 | 3,000,000 | 98,830,416 |
| 1980 - 1981 | 257,694,556 | 3,630,000 | 92,245,521 |
| 1979 - 1980 | 239,567,013 | 4,260,000 | 81,425,287 |
| 1978 - 1979 | 226,960,836 | 4,965,000 | 73,635,922 |
| 1977 - 1978 | 216,904,233 | 5,745,000 | 66,428,647 |
| 1976 - 1977 | 209,090,926 | 6,525,000 | 64,150,412 |
| 1975 - 1976 | 203,915,924 | 7,305,000 | 63,405,709 |
| 1974 - 1975 | 197,910,525 | 8,285,000 | 60,514,578 |
| 1973 - 1974 | 192,473,688 | 9,575,000 | 56,701,342 |
| 1972 - 1973 | 181,859,155 | 10,865,000 | 57,181,583 |
| 1971 - 1972 | 172,838,881 | 12,155,000 | 60,984,083 |
| 1970 - 1971 | 166,224,661 | 13,645,000 | 60,888,040 |
| 1969 - 1970 | 158,061,492 | 15,135,000 | 58,893,352 |
| 1968 - 1969 | 152,553,702 | 16,683,750 | 56,773,528 |
| 1967 - 1968 | 147,322,012 | 18,232,500 | 55,112,743 |

# Comparative Statistics

*Last 30 Years*

*Table I*

*Unaudited*

| Fiscal Year | Revenue | Maintenance and Operation Expenses | Water Purchased or Used* | | |
|---|---|---|---|---|---|
| | | | Imported Water | | Saline Water Cost |
| | | | Cost* | Acre Feet* | |
| 1996 - 1997 | $172,707,510 | $79,279,831 | $69,545,617 | 164,022.70 | $ 0 |
| 1995 - 1996 | 167,892,834 | 78,528,641 | 72,962,074 | 172,080.40 | 0 |
| 1994 - 1995 | 145,628,214 | 78,077,896 | 57,886,929 | 145,994.80 | 0 |
| 1993 - 1994 | 140,807,446 | 69,381,755 | 52,657,992 | 190,101.10 | 0 |
| 1992 - 1993 | 128,588,492 | 59,154,351 | 52,178,019 | 188,368.30 | 0 |
| 1991 - 1992 | 116,094,979 | 57,686,053 | 41,491,445 | 149,788.60 | 0 |
| 1990 - 1991 | 117,121,332 | 51,634,204 | 47,650,710 | 201,057.80 | 0 |
| 1989 - 1990 | 125,267,706 | 43,773,372 | 50,831,197 | 288,500.40 | 0 |
| 1988 - 1989 | 136,183,000 | 41,079,512 | 46,523,472 | 201,977.40 | 0 |
| 1987 - 1988 | 110,668,487 | 35,739,476 | 42,789,795 | 208,550.60 | 0 |
| 1986 - 1987 | 104,381,127 | 32,805,218 | 39,808,142 | 197,643.10 | 0 |
| 1985 - 1986 | 82,907,314 | 31,424,159 | 35,801,406 | 183,690.70 | 0 |
| 1984 - 1985 | 79,740,887 | 28,631,493 | 29,513,030 | 155,826.10 | 0 |
| 1983 - 1984 | 65,912,907 | 26,628,483 | 19,028,280 | 120,877.80 | 0 |
| 1982 - 1983 | 55,325,538 | 23,755,751 | 12,341,385 | 122,251.30 | 0 |
| 1981 - 1982 | 53,024,102 | 20,479,162 | 14,481,455 | 143,918.80 | 0 |
| 1980 - 1981 | 52,668,931 | 19,296,192 | 11,760,733 | 119,889.70 | 0 |
| 1979 - 1980 | 42,676,380 | 15,635,427 | 9,615,852 | 107,712.00 | 0 |
| 1978 - 1979 | 38,150,842 | 13,310,073 | 7,966,887 | 108,521.00 | 0 |
| 1977 - 1978 | 33,854,005 | 11,676,871 | 8,946,295 | 142,761.40 | 0 |
| 1976 - 1977 | 32,641,018 | 11,015,308 | 10,721,716 | 164,292.40 | 0 |
| 1975 - 1976 | 32,723,255 | 10,119,004 | 9,906,116 | 168,722.50 | 0 |
| 1974 - 1975 | 27,619,347 | 9,373,626 | 8,547,369 | 152,466.00 | 0 |
| 1973 - 1974 | 23,844,758 | 8,866,523 | 7,026,638 | 125,019.80 | 0 |
| 1972 - 1973 | 21,552,020 | 8,097,603 | 8,773,772 | 165,211.70 | 20,043 |
| 1971 - 1972 | 22,604,405 | 7,337,557 | 7,128,061 | 145,299.70 | 36,814 |
| 1970 - 1971 | 20,886,180 | 6,821,437 | 4,977,608 | 110,450.90 | 18,812 |
| 1969 - 1970 | 19,719,427 | 6,243,624 | 4,280,758 | 104,352.80 | 81,115 |
| 1968 - 1969 | 18,546,039 | 6,042,526 | 4,423,250 | 117,893.10 | 45,425 |
| 1967 - 1968 | 18,014,989 | 5,469,906 | 3,578,306 | 102,560.70 | 0 |

* Effective 1974-1975 the water data represents cost of water used. For the years 1973-1974 and prior, the water data represents water purchased. One acre foot equals 325,900 gallons.

*Table I Continued*

| Depreciation Amortization | In Lieu Taxes | Total Operating Expenses | Bonded Debt Interest | Income* (Net Loss) | Fiscal Year |
|---|---|---|---|---|---|
| $12,759,173 | $ 784,636 | $162,369,257 | $ 0 | $ 8,642,799 | 1996 - 1997 |
| 9,935,886 | 673,231 | 162,099,832 | 0 | 5,693,002 | 1995 - 1996 |
| 8,672,950 | 613,725 | 145,251,500 | 0 | 376,714 | 1994 - 1995 |
| 9,212,932 | 619,464 | 131,872,143 | 0 | 8,935,303 | 1993 - 1994 |
| 7,731,501 | 695,284 | 119,759,155 | 0 | 8,832,337 | 1992 - 1993 |
| 7,096,656 | 175,682 | 106,449,836 | 0 | 9,645,143 | 1991 - 1992 |
| 6,907,474 | 673,229 | 106,865,617 | 3,967 | 7,354,005 | 1990 - 1991 |
| 6,698,375 | 12,540,101 | 113,843,045 | 9,512 | 11,337,075 | 1989 - 1990 |
| 6,190,613 | 6,789,342 | 100,582,939 | 23,085 | 35,174,657 | 1988 - 1989 |
| 5,732,815 | 7,303,365 | 91,565,451 | 39,550 | 18,063,486 | 1987 - 1988 |
| 5,196,235 | 8,279,806 | 86,089,401 | 50,735 | 18,240,991 | 1986 - 1987 |
| 4,892,159 | 8,738,282 | 80,856,006 | 64,560 | 1,986,748 | 1985 - 1986 |
| 4,648,067 | 8,129,125 | 70,921,715 | 78,386 | 8,740,786 | 1984 - 1985 |
| 4,461,689 | 9,142,661 | 59,261,113 | 92,210 | 6,559,584 | 1983 - 1984 |
| 4,435,477 | 7,109,599 | 47,642,212 | 106,034 | 7,577,292 | 1982 - 1983 |
| 3,945,427 | 7,408,145 | 46,314,189 | 125,018 | 6,584,895 | 1981 - 1982 |
| 3,702,104 | 6,945,298 | 41,704,327 | 144,370 | 10,820,234 | 1980 - 1981 |
| 3,382,878 | 6,088,908 | 34,723,065 | 163,950 | 7,789,365 | 1979 - 1980 |
| 3,323,911 | 6,157,872 | 30,758,743 | 184,824 | 7,207,275 | 1978 - 1979 |
| 3,277,211 | 7,469,211 | 31,369,588 | 206,182 | 2,278,235 | 1977 - 1978 |
| 2,953,427 | 6,978,315 | 31,668,766 | 227,539 | 744,703 | 1976 - 1977 |
| 3,049,505 | 6,505,594 | 29,580,219 | 251,805 | 2,891,131 | 1975 - 1976 |
| 2,805,091 | 5,869,709 | 26,595,795 | 284,316 | 739,236 | 1974 - 1975 |
| 2,778,632 | 5,335,690 | 24,007,483 | 317,516 | (480,241) | 1973 - 1974 |
| 2,578,850 | 5,063,372 | 24,533,640 | 350,645 | (3,332,265) | 1972 - 1973 |
| 2,768,889 | 4,851,837 | 22,123,158 | 385,204 | 96,043 | 1971 - 1972 |
| 2,532,092 | 4,119,568 | 18,469,517 | 421,966 | 1,994,697 | 1970 - 1971 |
| 2,811,573 | 3,723,339 | 17,140,409 | 459,194 | 2,119,824 | 1969 - 1970 |
| 5,627,145 | 3,248,161 | 19,386,507 | 498,747 | 1,660,785 | 1968 - 1969 |
| 2,676,098 | 1,860,094 | 13,584,404 | 539,381 | 3,891,204 | 1967 - 1968 |

* After Operating Transfers

# General Statistics

***For the Year Ended June 30, 1997***

***Table II***

***Unaudited***

| | |
|---|---|
| Square Miles of Land Area (City) | 330.00 |
| Square Miles of Water Area (City) | 73.00 |
| Square Miles of Land and Water Area (City) | 403.00 |
| Population (Estimated June 30, 1997) | 1,197,077 |
| Population per Square Mile (Land) | 3,628 |
| Total Water Deliveries (Million Gallons) (Raw and Filtered) | 81,315.45 |
| Raw Water Used Outside City (Million Gallons) | 3,704.53 |
| Sales to California-American Water Company (Million Gallons) | 4,284.79 |
| Sales to City of Del Mar (Million Gallons) | 494.46 |
| Sales to Miscellaneous Users Outside City (Million Gallons) | 50.87 |
| Net Water Deliveries to City (Million Gallons) (Raw and Filtered) | 72,780.86 |
| Water Sales by Cal-Amer. Water Co., Within City's South Bay Area (Millions Gallons) | 1,666.37 |
| Total City Water Consumption, Including South Bay Area (Million Gallons) | 74,447.21 |
| Average Daily City Water Consumption (Million Gallons) | 203.96 |
| Average Daily Water Consumption Per Capita (Gallons) | 170.38 |
| Minimum Daily Filtered Water Consumption, January 23, 1997 (Million Gallons) | 133.78 |
| Maximum Daily Filtered Water Consumption, July 2, 1996 (Million Gallons) | 285.39 |
| Water Meters in Service June 30, 1997 | 252,890 |
| Water Distribution Mains in Service June 30, 1997 (Miles) | 2,728.21 |
| Fire Hydrants in Service June 30, 1997 | 22,458 |

# Local Climatic Statistics

*For the Year Ended June 30, 1997*

*Table III*

*Unaudited*

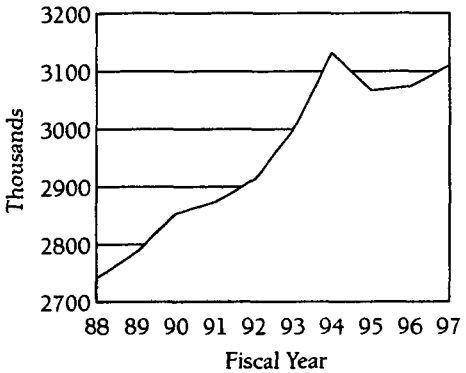
| | |
|---|---|
| Average Daytime Temperature - Season Fiscal Year 1997 | 69.9 F. |
| Average Nighttime Temperature - Season Fiscal Year 1997 | 58.7 F. |
| Average Temperature - Season Fiscal Year 1997 | 64.3 F. |
| Average Annual Temperature of Forty Year Period, 1957 - 1996 | 64.2 F. |
| Rainfall in the City of San Diego (at San Diego International Airport) During the Season Fiscal Year 1997 | 7.01 Inches |
| Normal Seasonal Rainfall | 9.90 Inches |
| Seasons Having Rainfall ABOVE Normal, Recorded Since Fiscal Year 1947 | 19 |
| Seasons Having Rainfall BELOW Normal, Recorded Since Fiscal Year 1947 | 31 |
| Heaviest Seasonal Rainfall Recorded During the Last Twenty Fiscal Years (FY 1978) | 18.71 Inches |
| Lightest Seasonal Rainfall Recorded During the Last Twenty Fiscal Years (FY 1996) | 5.11 Inches |
| Average Seasonal Rainfall Recorded During the Last Twenty Fiscal Years | 11.53 Inches |
| Heaviest Seasonal Rainfall Recorded Since Fiscal Year 1850 (FY 1884) | 25.97 Inches |
| Lightest Seasonal Rainfall Recorded Since Fiscal Year 1850 (FY 1961) | 3.46 Inches |

(Data Compiled from Official U.S. Weather Bureau Records)

# Customer and Sales Statistics

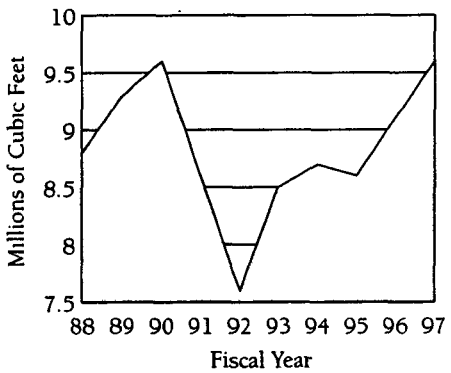
*Table IV*

Active Meter Accounts



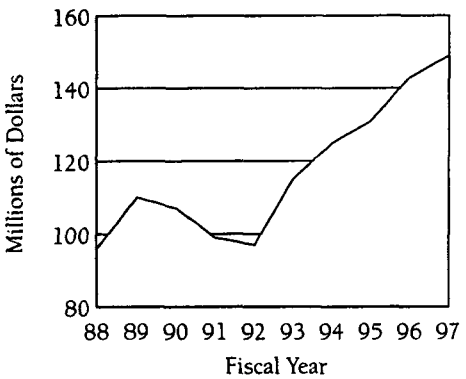

| Class | Year Ended June 30 1997 | 1996 | Growth Amount | Percent |
|---|---|---|---|---|
| **A. METER MONTHS BILLED** | | | | |
| Single Family Domestic | 2,505,365 | 2,474,460 | 30,905 | 1.2% |
| Other Domestic | 360,835 | 358,820 | 2,015 | 0.6% |
| Commercial | 235,987 | 232,471 | 3,516 | 1.5% |
| Industrial | 7,295 | 7,534 | (239) | -3.2% |
| Outside City Services | 757 | 813 | (56) | -6.9% |
| Other Utilities | 62 | 62 | 0 | 0.0% |
| TOTALS | 3,110,301 | 3,074,160 | 36,141 | 1.2% |

Sales of Water




| | | | | |
|---|---|---|---|---|
| **B. SALES OF WATER (Millions of Cubic Feet)** | | | | |
| Single Family Domestic | 3,311 | 3,134 | 177 | 5.6% |
| Other Domestic | 2,180 | 2,098 | 82 | 3.9% |
| Commercial | 3,157 | 2,977 | 180 | 6.0% |
| Industrial | 339 | 345 | (6) | -1.7% |
| Outside City Services | 2 | 3 | (1) | -33.3% |
| Other Utilities | 581 | 564 | 17 | 3.0% |
| TOTALS | 9,570 | 9,121 | 449 | 4.9% |

Revenues From Sales




| | | | | |
|---|---|---|---|---|
| **C. REVENUES (Thousand Dollars)** | | | | |
| Single Family Domestic | $53,798 | $51,508 | $2,290 | 4.4% |
| Other Domestic | 33,914 | 32,848 | 1,066 | 3.2% |
| Commercial | 49,739 | 47,961 | 1,778 | 3.7% |
| Industrial | 5,411 | 5,471 | (60) | -1.1% |
| Outside City Services | 81 | 87 | (6) | -6.9% |
| Other Utilities | 5,148 | 4,366 | 782 | 17.9% |
| Irrigation Districts | 1,252 | 989 | 263 | 26.6% |
| TOTALS | $149,343 | $143,230 | $6,113 | 4.3% |

# Principal Rates (As of June 30, 1997)

*Table V*

*Unaudited*

1. **General Water Service** (Domestic, Commercial and Industrial Use)

   a. Customer charge per meter per month:

| Size of Meter | Amount |
|---|---|
| 1 inch and smaller | $ 3.12 |
| 1 1/2 inch | 15.64 |
| 2 inch | 23.84 |
| 3 inch | 89.25 |
| 4 inch | 148.74 |
| 6 inch | 334.66 |
| 8 inch | 446.22 |
| 10 inch | 594.96 |
| 12 inch | 818.07 |
| 16 inch | 1,338.65 |

   b. Commodity Charge (in addition to customer charge) for each unit of 100 cubic feet (748 gallons).

| User Class | Rate |
|---|---|
| Single Family Domestic | 1.414 each for first twenty (20) units<br>1.551 for each subsequent unit |
| All Other | 1.470 each per unit |

2. For domestic, commercial, and industrial service outside the City, the rate is double those listed above. Water supplied for agriculture use outside the city is the same as the above rate for the All Other user class.

3. **Fire Service and Automatic Sprinklers**

| Size of Service Connection | Rate per Month |
|---|---|
| 1 1/2 inch | $ 6.26 |
| 2 inch | 8.35 |
| 3 inch | 12.53 |
| 4 inch | 16.70 |
| 6 inch | 25.05 |
| 8 inch | 33.40 |
| 10 inch | 41.75 |
| 12 inch | 50.10 |
| 16 inch | 66.80 |
| 20 inch | 83.50 |

**METRIC EQUIVALENTS**

1 Acre foot = 1234 Cubic Meters
HCF (100 ft P) = 2.832 Cubic Meters
1 Gallon = .003785 Cubic Meters

# APPENDIX G

# FORM OF CO-SPECIAL COUNSEL OPINION

## APPENDIX G

## FORM OF CO-SPECIAL COUNSEL OPINION

Orrick, Herrington & Sutcliffe LLP
777 South Figueroa Street
Suite 3200
Los Angeles, California 90017

Webster & Anderson
469 Ninth Street
Suite 240
Oakland, California 94607

_____, 1998

City of San Diego
202 C Street
San Diego, California 92101

San Diego Facilities and Equipment
Leasing Corporation
202 C Street
San Diego, California 92101

Certificates of Undivided Interest
(In Installment Payments Payable From Net System Revenues
of the Water Utility Fund of the City of San Diego, California) Series 1998
(Final Opinion)

Ladies and Gentlemen:

We have acted as co-special counsel in connection with the execution and delivery of $385,000,000 aggregate principal amount of Certificates of Undivided Interest (In Installment Payments Payable from Net System Revenues of the Water Utility Fund of the City of San Diego, California) Series 1998 (the "Certificates"), issued pursuant to a Trust Agreement, dated as of August 1, 1998 (the "Trust Agreement"), among the City of San Diego (the "City"), the San Diego Facilities and Equipment Leasing Corporation (the "Corporation") and State Street Bank and Trust Company of California, N.A., as trustee (the "Trustee"). The Certificates evidence the right to receive installment payments payable by the City to the Corporation pursuant to a Master Installment Purchase Agreement, dated as of August 1, 1998 (the "Master Installment Purchase Agreement"), between the Corporation and the City, as supplemented by the 1998 Supplement to the Master Installment Purchase Agreement, dated as of August 1, 1998 (the "1998 Supplement" and, together with the Master Installment Purchase Agreement, the "Installment Purchase Agreement"), between the City and the Corporation, under which the Corporation sells to the City portions of a Water System. Capitalized terms not otherwise defined herein shall have the meanings set forth in the Trust Agreement and the Installment Purchase Agreement.

In such connection, we have reviewed the Trust Agreement, the Installment Purchase Agreement, the Tax Certificate, dated the date hereof (the "Tax Certificate"), certificates of the City, the Corporation, the Trustee and others, an opinion of the City Attorney, an opinion of counsel to the Corporation, and such other documents, opinions and matters to the extent we deemed necessary to render the opinions set forth herein.

Certain agreements, requirements and procedures contained or referred to in the Trust Agreement, the Installment Purchase Agreement, the Tax Certificate and other relevant documents may be changed and certain actions (including, without limitation, defeasance of the Certificates) may be taken or omitted under the

circumstances and subject to the terms and conditions set forth in such documents. No opinion is expressed herein as to any Certificate or the interest component of any Installment Payment if any such change occurs or action is taken or omitted upon the advice or approval of counsel other than ourselves.

The opinions expressed herein are based on an analysis of existing laws, regulations, rulings and court decisions and cover certain matters not directly addressed by such authorities. Such opinions may be affected by actions taken or omitted or events occurring after the date hereof. We have not undertaken to determine, or to inform any person, whether any such actions are taken or omitted or events do occur. Our engagement with respect to the Certificates has concluded with their execution and delivery, and we disclaim any obligation to update this letter. We have assumed the genuineness of all documents and signatures presented to us (whether as originals or as copies) and the due and legal execution and delivery thereof by, and validity against, any parties other than the Corporation and the City. We have not undertaken to verify independently, and have assumed, the accuracy of the factual matters represented, warranted or certified in the documents, and of the legal conclusions contained in the opinions, referred to in the second paragraph hereof. Furthermore, we have assumed compliance with all covenants and agreements contained in the Trust Agreement, the Installment Purchase Agreement and the Tax Certificate, including without limitation covenants and agreements compliance with which is necessary to assure that future actions, omissions or events will not cause the interest portion of the Installment Payments to be included in gross income for federal income tax purposes.

In addition, we call attention to the fact that the rights and obligations under the Certificates, the Trust Agreement, the Installment Purchase Agreement and the Tax Certificate and their enforceability are subject to bankruptcy, insolvency, reorganization, arrangement, fraudulent conveyance, moratorium and other laws relating to or affecting creditors' rights, to the application of equitable principles, to the exercise of judicial discretion in appropriate cases and to the limitations on legal remedies against public entities in the State of California. We express no opinion with respect to any indemnification, contribution, choice of law, choice of forum or waiver provisions contained in the foregoing documents. Finally, we undertake no responsibility for the accuracy, completeness or fairness of the Official Statement or other offering material relating to the Certificates and express no opinion with respect thereto.

Based on and subject to the foregoing, and in reliance thereon, as of the date hereof, we are of the following opinions:

1. The Trust Agreement has been duly executed and delivered by, and constitutes the valid and binding obligation of, the City and the Corporation. The Trust Agreement creates a valid pledge, to secure the payment of the principal of and interest in respect of the Certificates, of the Installment Payments and any other amounts (including proceeds of the sale of the Certificates) held by the Trustee in any fund or account established pursuant to the Trust Agreement, except the Rebate Fund and the Costs of Issuance Fund, subject to the provisions of the Trust Agreement permitting the application thereof for other purposes and on the terms and conditions set forth therein.

2. The Installment Purchase Agreement has been duly executed and delivered by, and constitutes the valid and binding obligation of, the City. The Installment Purchase Agreement creates a valid pledge of Net System Revenues to secure the payment of Installment Payments to the Corporation, on the terms and conditions set forth therein.

3. Assuming due authorization, execution and delivery of the Trust Agreement and the Certificates by the Trustee, the Certificates are entitled to the benefits of the Trust Agreement.

4. The portion of each Installment Payment designated as and constituting interest paid by the City under the Installment Purchase Agreement and received by the registered owners of the Certificates is excluded from gross income for federal income tax purposes under Section 103 of the Internal Revenue Code of 1986, as amended, and is exempt from California personal income taxes. Such interest is not a specific preference item for purposes of the federal individual or corporate alternative minimum taxes, although we observe that it is included in adjusted current earnings when calculating corporate alternative minimum taxable income. We express no opinion regarding other tax consequences related to the ownership or disposition of, or receipt of the interest portion of the Installment Payments by the Holders of, the Certificates.

Faithfully yours,

ORRICK, HERRINGTON & SUTCLIFFE LLP

per

Respectfully submitted,

WEBSTER & ANDERSON

# APPENDIX H

# FORM OF MUNICIPAL BOND INSURANCE POLICY

Exhibit A

FGIC

Financial Guaranty Insurance
Company, doing business in California
as FGIC Insurance Company
115 Broadway
New York, NY 10006
(212) 312-3000
(800) 352-0001

*A GE Capital Company*

# Municipal Bond
# New Issue Insurance Policy

| | |
|---|---|
| **Issuer:** | **Policy Number:** |
| | **Control Number:** 0010001 |
| **Bonds:** | **Premium:** |

SPECIMEN

Financial Guaranty Insurance Company ("Financial Guaranty"), a New York stock insurance company, in consideration of the payment of the premium and subject to the terms of this Policy, hereby unconditionally and irrevocably agrees to pay to State Street Bank and Trust Company, N.A., or its successor, as its agent (the "Fiscal Agent"), for the benefit of Bondholders, that portion of the principal and interest on the above-described debt obligations (the "Bonds") which shall become Due for Payment but shall be unpaid by reason of Nonpayment by the Issuer.

Financial Guaranty will make such payments to the Fiscal Agent on the date such principal or interest becomes Due for Payment or on the Business Day next following the day on which Financial Guaranty shall have received Notice of Nonpayment, whichever is later. The Fiscal Agent will disburse to the Bondholder the face amount of principal and interest which is then Due for Payment but is unpaid by reason of Nonpayment by the Issuer but only upon receipt by the Fiscal Agent, in form reasonably satisfactory to it, of (i) evidence of the Bondholder's right to receive payment of the principal or interest Due for Payment and (ii) evidence, including any appropriate instruments of assignment, that all of the Bondholder's rights to payment of such principal or interest Due for Payment shall thereupon vest in Financial Guaranty. Upon such disbursement, Financial Guaranty shall become the owner of the Bond, appurtenant coupon or right to payment of principal or interest on such Bond and shall be fully subrogated to all of the Bondholder's rights thereunder, including the Bondholder's right to payment thereof.

This Policy is non-cancellable for any reason. The premium on this Policy is not refundable for any reason, including the payment of the Bonds prior to their maturity. This Policy does not insure against loss of any prepayment premium which may at any time be payable with respect to any Bond.

As used herein, the term "Bondholder" means, as to a particular Bond, the person other than the Issuer who, at the time of Nonpayment, is entitled under the terms of such Bond to payment thereof. "Due for Payment" means, when referring to the principal of a Bond, the stated maturity date thereof or the date on which the same shall have been duly called for mandatory sinking fund redemption and does not refer to any earlier date on which payment is due by reason of call for redemption (other than by mandatory sinking fund redemption), acceleration or other advancement of maturity and means, when referring to interest on a Bond, the stated date

FGIC is a registered service mark used by Financial Guaranty Insurance Company under license from its parent company, FGIC Corporation.

Financial Guaranty Insurance
Company, doing business in California
as FGIC Insurance Company
115 Broadway
New York, NY 10006
(212) 312-3000
(800) 352-0001

*A GE Capital Company*

FGIC.

# Municipal Bond
# New Issue Insurance Policy

for payment of interest. "Nonpayment" in respect of a Bond means the failure of the Issuer to have provided sufficient funds to the paying agent for payment in full of all principal and interest Due for Payment on such Bond. "Notice" means telephonic or telegraphic notice, subsequently confirmed in writing, or written notice by registered or certified mail, from a Bondholder or a paying agent for the Bonds to Financial Guaranty. "Business Day" means any day other than a Saturday, Sunday or a day on which the Fiscal Agent is authorized by law to remain closed.

SPECIMEN

In Witness Whereof, Financial Guaranty has caused this Policy to be affixed with its corporate seal and to be signed by its duly authorized officer in facsimile to become effective and binding upon Financial Guaranty by virtue of the countersignature of its duly authorized representative.

**President**

**Effective Date:**

**Authorized Representative**

State Street Bank and Trust Company, N.A., acknowledges that it has agreed to perform the duties of Fiscal Agent under this Policy.

**Authorized Officer**

**FGIC** is a registered service mark used by Financial Guaranty Insurance Company under license from its parent company, FGIC Corporation.

Financial Guaranty Insurance
Company, doing business in California
as FGIC Insurance Company
115 Broadway
New York, NY 10006
(212) 312-3000
(800) 352-0001

*A GE Capital Company*

FGIC

# Endorsement
## To Financial Guaranty Insurance Company Insurance Policy

**Policy Number:** **Control Number:** 0010001

SPECIMEN

It is further understood that the term "Nonpayment" in respect of a Bond includes any payment of principal or interest made to a Bondholder by or on behalf of the issuer of such Bond which has been recovered from such Bondholder pursuant to the United States Bankruptcy Code by a trustee in bankruptcy in accordance with a final, nonappealable order of a court having competent jurisdiction.

NOTHING HEREIN SHALL BE CONSTRUED TO WAIVE, ALTER, REDUCE OR AMEND COVERAGE IN ANY OTHER SECTION OF THE POLICY. IF FOUND CONTRARY TO THE POLICY LANGUAGE, THE TERMS OF THIS ENDORSEMENT SUPERSEDE THE POLICY LANGUAGE.

In Witness Whereof, Financial Guaranty has caused this Endorsement to be affixed with its corporate seal and to be signed by its duly authorized officer in facsimile to become effective and binding upon Financial Guaranty by virtue of the countersignature of its duly authorized representative.

**President**

**Effective Date:** **Authorized Representative**

**Acknowledged as of the Effective Date written above:**

**Authorized Officer**
**State Street Bank and Trust Company, N.A., as Fiscal Agent**

**FGIC** is a registered service mark used by Financial Guaranty Insurance Company under license from its parent company, FGIC Corporation.

Financial Guaranty Insurance
Company, doing business in California
as FGIC Insurance Company
115 Broadway
New York, NY 10006
(212) 312-3000
(800) 352-0001

*A GE Capital Company*

FGIC.

# Mandatory California State Amendatory Endorsement

## To Financial Guaranty Insurance Company Insurance Policy

**Policy Number:** **Control Number:** 0010001

SPECIMEN

The insurance provided by this Policy is not covered by the California Insurance Guaranty Association (California Insurance Code, Article 14.2).

NOTHING HEREIN SHALL BE CONSTRUED TO WAIVE, ALTER, REDUCE OR AMEND COVERAGE IN ANY OTHER SECTION OF THE POLICY. IF FOUND CONTRARY TO THE POLICY LANGUAGE, THE TERMS OF THIS ENDORSEMENT SUPERSEDE THE POLICY LANGUAGE.

In Witness Whereof, Financial Guaranty has caused this Endorsement to be affixed with its corporate seal and to be signed by its duly authorized officer in facsimile to become effective and binding upon Financial Guaranty by virtue of the countersignature of its duly authorized representative.

**President**

**Effective Date:** **Authorized Representative**

**Acknowledged as of the Effective Date written above:**

**Authorized Officer**
**State Street Bank and Trust Company, N.A., as Fiscal Agent**

FGIC is a registered service mark used by Financial Guaranty Insurance Company under license from its parent company, FGIC Corporation.