INTERIM REPORT NO. 13

THE CASE FOR PROPOSED ADJUSTMENTS TO WATER AND WASTEWATER RATES IN THE CITY OF SAN DIEGO

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SUMMARY

The City of San Diego is at a critical juncture. The City's infrastructure is falling into disrepair. The City's water system, wastewater system, streets and stormdrains all need critical upgrades to continue to provide reliable service to the citizens of San Diego. The City is taking an important step towards improving our infrastructure by proposing water and sewer rate adjustments to increase revenue and fund related projects. This report reviews the history of the water and wastewater systems, describes the improvements proposed by the City to maintain these systems in working order, and addresses the proposed adjustments to water and sewer rates and the related legal requirements.

The City has no choice but to implement the proposed rates to fix our water and wastewater systems. Since 1997, the City has been under a State Department of Health Services compliance order to upgrade its water treatment plants and replace the aging cast iron water pipes that have been breaking throughout the City. The Federal Safe Drinking Water Act imposes new drinking water standards that the City must meet by 2011.

The wastewater system has been the subject of litigation almost continuously for the last 20 years over proper treatment and collection of sewage. Litigation is currently pending in federal court, brought by the federal government and environmental groups, to force the City to repair and replace its aging sewer pipes. The City has reached a reasonable agreement which would settle the case, but rate increases are necessary to fund the capital improvements required by the proposed final consent decree.

The City Attorney recommends the City Council approve the proposed water and wastewater rate adjustments, as supported by the water and wastewater cost of service studies. The City is legally required to improve our water and wastewater systems, and we do not have the option of postponing these projects any longer.

PROPOSED WATER RATE ADJUSTMENTS

I. INTRODUCTION

A. History of the San Diego Water Department.

On April 20, 1901, San Diegans voted to enter into the municipal water business by buying the holdings within the city limits of the San Diego Water Company and the Southern California Mountain Water Company, thus creating the City of San Diego Water Department.[1] Today, San Diego boasts one of the largest and most complex water storage, treatment and delivery systems in the world, supplying water customers across San Diego through more than 3,460 miles of pipeline.[2]

City founders recognized that if San Diego was going to move forward, a more reliable source of water was needed. By 1906, the Bonita Pipeline was built connecting the Lower Otay water supply to Chollas Heights Reservoir where the City's first filtration plant was constructed.[3] After water rights to the San Diego River were secured, in 1935 the City completed the El Capitan Dam and El Capitan Pipeline, which connected the reservoir to the City's water supply system. (*Id.*) In 1943, following two years of construction, the San Vicente Dam and pipeline were dedicated providing another source of water for the quickly growing populace. (*Id.*)

Dams met the City's needs until the early 1940s when, due to World War II, the population of San Diego exploded. Without imported water, there was not enough local rainfall to sustain the new population.[4] The Metropolitan Water District of Southern California ("MWD") was formed in 1928 to develop, store and distribute supplemental water in Southern California.[5] In 1946, the San Diego County Water Authority was annexed into the MWD to import and distribute Colorado River water, which was by then reaching Los Angeles but not San Diego.[6] In an emergency measure signed by President Franklin D. Roosevelt, a committee was formed to find a way to get water from the Colorado River to San Diego.[7] An aqueduct was built to carry water from the MWD's Colorado River Aqueduct 71 miles south to the new San Vicente Reservoir. The new aqueduct was completed in 1947, giving San Diego access to Colorado River water. (*Id.*)

By 1950, the City had built the Alvarado Water Filtration plant, located on the banks of the Murray Reservoir. This treatment plant remains, today, the heart of the city's water filtration system. The Otay Water Filtration plant soon followed and by 1962, the Miramar Filtration Plant was also online.[8] These plants continue to meet the needs of San Diegans, but all three must be regularly rehabilitated and upgraded to ensure San Diegans have a safe, reliable source of water.

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[1] Water Department General Information, [www.sandiego.gov/water/gen-info/index.shtml].
[2] City of San Diego Water Department PUAC Presentation, Page 2, November 28, 2006.
[3] Water Department General Information, [www.sandiego.gov/water/gen-info/index.shtml].
[4] Public Facilities Financing Authority, Sub. Water Revenue Bonds, Series 2002 Oct. 2002, Page 14.
[5] Strategic Plan for Water Supply 1997-2015, July 1997, Executive Summary.
[6] Strategic Plan for Water Supply 1997-2015, July 1997, Pgs. 1-1 to 2-2.
[7] City of San Diego Water Utility 2002 Annual Financial Report, Page 8.
[8] Water Department General Information, [www.sandiego.gov/water/gen-info/index.shtml].

In addition, San Diego depends on the massive statewide water delivery system known as the State Water Project. Plans called for the construction of 23 dams and reservoirs, 22 pumping plants, six power plants, 473 miles of canals, 175 miles of pipelines and 20 miles of tunnels.[9] It took more than a decade to complete, but in April of 1972, just in time to temper the effects of another drought, water from the State Water Project arrived in Southern California. Since 1972, the city of San Diego has been receiving a blend of water from the Colorado River and, thanks to the State Water Project, the Sierras in Northern California.

Recognizing the ongoing problems of supply and demand of water in San Diego, the City started a Water Conservation Program in 1985.[10] Since then the program has been active in public outreach, educating the public on ways to conserve water. Water conservation educational information is distributed via the media, special events and elementary school visits.

One of the most popular aspects of the Water Conservation section is the Residential Water Survey Program. (*Id.*) This award-winning program, which began in 1992, offers residential customers an interior and exterior water use survey of their home. The complimentary service consists of a water usage analysis including flow rates of fixtures, checking for leaks, installing water saving devices, and water efficient landscape and irrigation recommendations. A typical household participating in this program can reduce daily water consumption by 13 %.

In 1996, the wastewater collection and treatment functions were separated from the Water Utilities Department, forming the Metropolitan Wastewater Department.[11] In 1997, the Water Utilities Department became the Water Department.[12] Also in 1997, the Water Department created the Capital Improvements Program ("CIP") to improve, expand and seismically retrofit nearly every aspect of the water storage, treatment and distribution systems.[13]

Today, the Water Department is more than a water purveyor. On a regional scale, it is actively involved in securing imported water supplies for San Diegans. On a local scale, the Water Department conducts vital programs including water conservation, water reclamation, customer service, public outreach, meter reading, system repair and maintenance.

II. WATER SYSTEM OVERVIEW

A. Water Department Infrastructure.

The City's water system contains over 3,460 miles of pipelines ranging in size from 4 inches in diameter to 7 feet in diameter.[14] The system utilizes 49 pump stations to maintain pressure in 90 different pressure zones to provide service to the City's customers. (*Id.*) In

[9] City of San Diego Water Utility 2002 Annual Financial Report, Page 9.
[10] Natural Resources & Culture Committee Executive Summary Sheet, Page 3, December 1, 2006.
[11] Public Facilities Financing Authority, Sub. Water Revenue Bonds, Series 2002 Oct. 2002, Page 15.
[12] City of San Diego Water Utility 2002 Annual Financial Report, Page 10.
[13] Public Facilities Financing Authority, Sub. Water Revenue Bonds, Series 2002 Oct. 2002, Page 21.
[14] Water Cost of Service Rate Study Final Report, Page 1-1, Raftelis Financial Cons., 12/14/2006.

addition, the City utilizes over 180 miles of water pipelines that were installed from the late 1880s through the 1930s that have reached the end of their life span.[15] These corroded and deteriorated cast-iron pipes threaten the City's ability to provide water safely and reliably to residents. In addition, deferred maintenance has hastened deterioration to other components of the City's system, including pump stations, reservoirs and water treatment plants. By 2001, the City was also facing a potential treated water shortage. (*Id.*)

The infrastructure challenges were further complicated by new regulations set forth in the 1996 Federal Safe Drinking Water Act requiring the City to upgrade its three water treatment plants. (*Id.*) Based on population growth projections, the City anticipated that demand would exceed the water system's storage, treatment and delivery capabilities within the next 15 years. Finally, by 1997, the Water Department was operating in its 10th year with no consumer rate increases to fund needed infrastructure improvements. (*Id.*)

B. The Capital Improvements Program.

To address the critical infrastructure needs of the City, the Water Department set out to develop a comprehensive strategic plan to identify the City's future needs for water. The capital improvement plan focused on identifying what local water development programs and water treatment and delivery facilities the City would need to be able to continue reliably providing San Diegans with clean, safe water. Once the plan was in place, the City was ready to make the necessary repairs to the system, but it lacked the funding. The Water Department made repeated attempts to obtain a rate increase from the City Council to raise the funds, but failed repeatedly to receive support from the City Council.[16]

In 1996, the City formed a public advisory group to help the City's Water Department develop a long-term plan for addressing the City's current and future water storage, treatment and delivery needs.[17] Through the public advisory group, the City hoped to educate the public on the immediate and long-term challenges facing the City's water system and gain the community's and the City Council's support for the plan, including a proposed rate increase.

The City invited more than 30 community members to participate in the advisory group, called the Strategic Plan for Water Supply Public Advisory Group ("PAG"). (*Id.*) In addition, the PAG evaluated the current condition of the City's water treatment and delivery system. Many of the system's most vital components, including pipes, treatment plants, storage reservoirs and pump stations, had reached the end of their life span and needed to be replaced. The City also needed to upgrade its system to meet the requirements of the 1996 Safe Drinking Water Act, and expand the system's size and capacity to meet the demands of San Diego's growing community.

In early 1997, after a year of work, the PAG released the Strategic Plan for Water Supply, which outlined a $773 million CIP.[18] The plan's preferred alternative included upgrading all three of the City's water treatment plants and expanding the capacity of two of the three

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[15] Water Department General Information, [www.sandiego.gov/water/cip/background.shtml].
[16] Public Facilities Financing Authority, Sub. Water Revenue Bonds, Series 1998 Aug. 1998, Page 24.
[17] Water Department General Information, [www.sandiego.gov/water/cip/background.shtml].
[18] Strategic Plan for Water Supply 1997-2015, July 1997, Executive Summary.

treatment plants. It also included service upgrades and repairs to pump stations and reservoirs; implementing state and federal mandated projects; increasing water conservation by 5% over current levels; and continuing the current water reclamation projects, such as the North City Reclamation System.[19] By utilizing conservation measures, this alternative met 100% of the City's projected water demands.

The Strategic Plan for Water Supply received tremendous support from key community stakeholders and the media. City staff worked closely with the PAG to ensure that members of the City Council received their messages of support. In August 1997, the City Council approved a water revenue plan including an initial rate increase to support the recommended infrastructure improvements, along with a financing plan that issued bonds for the first time in more than thirty years. (*Id.*) In 1998, the City sold nearly $385 million in water bonds in one day, and the bond rate was 5.09 %, the lowest rate on a City transaction in decades. (*Id.*) The money raised by selling the bonds was allocated directly to infrastructure improvements, upgrades and enhancements.

In 1999, the San Diego County Grand Jury issued a report critical of San Diego's reliance on imported water, due to the City's importation of up to 90 percent of its existing water supply from the Colorado River and the California State Water Project. The Grand Jury recommended the development of additional local water supplies to help protect against future water shortages.

The potential for severe shortages worsened with the appellate court decision of *San Diego County Water Authority v. Metropolitan Water District of Southern California*, 117 Cal.App.4th 13 (2004). In that case, the court upheld a formula used by MWD that limits San Diego to 15% of MWD's water supply in the event of a water shortage, even though San Diego currently uses 22% of MWD's water supply. This means that if a water shortage occurs, San Diego could immediately lose almost a third of the water it receives from MWD while other cities, like Los Angeles, will actually be allowed to take more water than they are using now. San Diego's petition for review by the California Supreme Court was denied.

In response to state and federal mandates requiring the City to upgrade its water treatment facilities, replace cast iron water mains, and implement a wide variety of improvements throughout the water system, the Water Department's CIP was redesigned to address these issues as well as ensure sufficient capacity and water quality for the future. In order to support this CIP, additional funds will be required through a combination of bonds, grants, state revolving fund loans and cash. This investment in infrastructure will require a series of rate increases beginning July 1, 2007, which will be presented to the City Council in January of 2007.

C. Significant CIP Projects.

The City's water system currently consists of nine raw water storage facilities, three water treatment plants, 30 treated water storage facilities and over 3,460 miles of water lines.[20] One of the nine raw water storage facilities, Lake Hodges Reservoir, is not currently connected to a treatment plant. The City owns and operates three water treatment plants with a combined

[19] Water Department General Information, [www.sandiego.gov/water/cip/background.shtml].
[20] Water Department General Information, [www.sandiego.gov/water/cip/index.shtml].

current capacity of 294 million gallons per day [MGD]. The 30 treated water storage facilities ensure consistent delivery to the 90 different pressure zones with the aid of 49 water pump stations. (*Id.*)

While the City has grown, local water sources have not changed. In general, only about 10 percent of the City's water supply is derived from local water sources.[21] The balance of the City's water supply is purchased from the San Diego County Water Authority ("CWA"). The CWA is a wholesale water agency that provided approximately 600,000 acre-feet per year ("AFY") of imported water to its 23 member agencies in San Diego County in 2001.[22] A 34-member Board of Directors governs the CWA. The City is the largest water user within the CWA and is represented by 10 Board members. (*Id.*) The purchases from the CWA include treated water that is delivered to the City's water distribution system and raw water that is transported to the City's water treatment plants. The CWA, in turn, currently gets its imported water from the Metropolitan Water District of Southern California ("MWD"), which comprises 23 public water agencies and is the largest wholesale water agency in the nation. (*Id.*)

The 1997 Strategic Plan for Water Supply called for the doubling of water savings, from 13,000 AFY to 26,000 AFY by 2005.[23] This was to be accomplished by continuing successful water conservation programs. The City achieved its 2005 goal, and estimated a total of 30,350 AFY savings by the end of Fiscal Year 2006. (30,350 AFY is equal to 27.1 million gallons per day ("MGD") of water saved.)[24] When compared to 11.6 MGD savings in 1997, the increase equates to 15.5 MGD. These efforts, along with proposed projects implementing the latest technologies such as brackish water desalination, are intended to provide the City with a reliable water supply that is less dependent on imports.

The Water Department's CIP was initiated in July 1998 and was in full execution until FY 2002, when funding constraints forced project cutbacks. Within the past few years, a series of highly visible water main breaks underscored the need to modernize many of the aging mains in the City's water distribution system. Many of these older pipes are made of cast iron and have been in service for nearly 100 years. The City is replacing 10-12 miles of cast iron water distribution mains every year. In addition to the water main replacement program, water infrastructure improvements have begun throughout the City. Four of the most significant projects include upgrades to the Alvarado, Miramar and Otay Treatment Plants, and increasing the capacity of the City's raw water reservoirs.

1. Alvarado Water Treatment Plant Expansion and Improvement Project.

The City of San Diego Water Department's Alvarado Water Treatment Plant ("WTP") began operation in January 1951. Located adjacent to Lake Murray near the City's border with La Mesa, the Alvarado WTP has served as the "heart" of the City's drinking water system for more than fifty years. Plant capacity is currently at 120 MGD and will be increased to 200 MGD by completion of the Expansion and Improvement Project.

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[21] Strategic Plan for Water Supply 1997-2015, July 1997, Pgs. 1-1 to 2-2.
[22] City of San Diego Long-Range Water Resources Plan (2002-2030) Adopted Dec. 9, 2002 Page 1-2.
[23] Strategic Plan for Water Supply 1997-2015, July 1997, Executive Summary.
[24] Water Cost of Service Rate Study Final Report, Page 1-2, Raftelis Financial Cons., 12/14/2006.

Construction for the Alvarado project began in September 1994. This initial work occurred prior to the existing CIP and included replacing one of the existing Alvarado reservoirs with two 21 million gallon reservoirs. This work was completed in early 1998. Under the umbrella of the CIP, the Expansion and Improvement Project began in 1998, and involves constructing eight new filters, constructing sedimentation and flocculation basins, implementing ozone as an alternative disinfectant, upgrading the Lake Murray and College Ranch pump stations and remodeling the existing Operations building. These improvements will be implemented in six phases, over the next several years.

2. Miramar Water Treatment Plant Upgrade and Expansion Project.

The Water Department's Miramar WTP began operation in 1962. The treatment plant is the sole provider of drinking water to an estimated 500,000 customers in the northern section of the City. The plant is located in the Scripps Miramar Ranch community on the shore of Miramar Reservoir. Currently the plant produces 140 MGD. The plant's sources include imported water brought in from San Diego County Water Authority aqueducts and rainfall.

Construction at the Miramar WTP began in summer 1998 and is scheduled for completion in 2010. The Miramar Water Treatment Plant Upgrade and Expansion Project includes a new rapid mix facility, installing new de-aeration basins, disinfection facilities, new chemical facilities, new and refurbished administration facilities, flocculation and sedimentation basins, washwater recovery system and water filters.

3. Otay Water Treatment Plant Upgrade Project.

The Otay WTP supplies one of the City's three major water service areas, providing up to 34 million gallons per day of potable water to customers primarily in the southern reaches of the City. The treatment plant gets its water from the Morena, Barrett and Lower Otay Reservoirs. Plans are currently underway to upgrade and expand the facility to comply with state and federal water quality regulations while improving the efficiency, reliability and capacity of the plant.

The Otay WTP upgrades included constructing of two 7 million-gallon treated water storage reservoirs (clearwells), installing variable frequency drives for two of the raw water pump station's pumps, an emergency chlorine gas vapor scrubber system for the chlorine building, modifying existing filters and constructing a third sedimentation basin, and installing an Ultra-Violet disinfection system and chlorine contactor.

4. Raw Water Reservoirs.

The City averages less than 10 inches of rainfall per year. This limited precipitation recharges the local reservoirs. The Water Department maintains and operates nine local raw water reservoirs with a combined accessible capacity of 382,400 AF.[25] The Lower Otay, Barrett, and Morena Reservoirs (137,700 AF) service the Otay WTP. (*Id.*) El Capitan, San Vicente, Sutherland and Lake Murray Reservoirs (237,500 AF) service the Alvarado WTP, and Miramar

[25] Public Facilities Financing Authority, Sub. Water Revenue Bonds, Series 2002 Oct. 2002, Page 16.

Reservoir (7,200 AF) services the Miramar WTP. (*Id.*) The ninth reservoir, Lake Hodges (33,600 AF), is not connected to the City's water treatment facilities. These facilities maintain minimum storage levels sufficient for approximately 7 months demand at restricted usage levels. (*Id.*)

III. REGULATORY AND COMPLIANCE HISTORY

In 1994, the City of San Diego entered into a compliance agreement with the State of California Department of Health Services ("DHS") with the approval of City Council, after the DHS Drinking Water Field Operations Branch conducted a sanitary survey of the City's water system.[26] This agreement required the City to correct operational deficiencies and begin badly needed capital improvements.[27] The City was notified in January of 1997 that it was not in compliance with this agreement. At that time, the DHS issued a compliance order.[28] The January 1997 Compliance Order was last amended in 2004, and included additional items that were not in the original Compliance Order. (*Id.*) Furthermore, the Safe Drinking Water Act amendments include new drinking water standards that all cities need to comply with by 2011 which directly affect the City's water treatment plants.[29]

Several of these water projects have been delayed due to financial constraints. DHS could decide to impose civil penalties at any time because of the City's inability to meet several DHS Compliance Order dates. (*Id.*) Even through DHS has not imposed such penalties to date, the City remains in jeopardy of significant civil penalties for not meeting DHS timeline completion dates. (*Id.*) DHS may decide to add more projects and facilities to the Compliance Order because of the City's failure to meet the previous dates.[30] Further, DHS may scrutinize the projects in greater detail, resulting in more stringent Compliance Order requirements.

Violation of the DHS Compliance Order may be subject to judicial action, including civil penalties specified in California Health and Safety Code, Section 116725.[31] Section 116725 penalties for violating a schedule of compliance for a primary drinking water standard can go as high as $25,000 per day for each violation; for violating other standards, such as turbidity, the penalties can reach $5,000 per day. There are a number of additional enforcement tools proscribed by law, including mandatory water conservation, litigation and service connection moratoriums.

These additional enforcement tools can be imposed when all other avenues to achieve compliance have failed. A service connection moratorium is a very serious action that would only be taken when absolutely necessary. However, if capital funding to construct the required water treatment and delivery capacity is not obtained in a timely manner, and if the various stages of water conservation cannot satisfactorily meet the City's water needs, then a service connection moratorium could be imposed.

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[26] DHS, January 22, 1997, System No. 3710020 Compliance Order No. 04-14-96CO-022.
[27] Public Facilities Financing Authority, Sub. Water Revenue Bonds, Series 2002 Oct. 2002, Page 20.
[28] DHS, Apr. 27, 2004, System No. 3710020 Amend. #10 to Compliance Order 04-14-96CO-022.
[29] Public Facilities Financing Authority, Sub. Water Revenue Bonds, Series 2002 Oct. 2002, Page 20.
[30] Public Facilities Financing Authority, Sub. Water Revenue Bonds, Series 2002 Oct. 2002, Page 21.
[31] Public Facilities Financing Authority, Sub. Water Revenue Bonds, Series 2002 Oct. 2002, Page 20.

IV. HISTORY OF FUNDING

A. Introduction to Service Fees and Charges.

The City establishes water fees for its water customers based upon the costs incurred by the City to meet customer demand for water. (San Diego Municipal Code [SDMC] §§ 67.0502, 67.0508.) The City also establishes separate water and sewer capacity charges for individuals who want to connect to the City's water and sewer systems and whose connection will cause additional demand to be placed on either the water or sewerage systems. (SDMC §§ 67.0513, 64.0410.) The capacity charges are imposed as a means of recovering all or a portion of the cost of constructing facilities necessitated by this additional demand. (Gov't Code § 66013(a)(3).)

The current water fees are composed of two components: a base fee and a commodity charge. The base fee is determined by the size of a customer's meter, and is charged to the customer regardless of whether the customer uses water. The base fee is based upon the assumption that the utility incurs certain costs in order to be in a position to serve the commodity to the customer upon demand. Those costs are incurred by the utility regardless of whether the customer uses the commodity or not. They include such costs as the general administrative costs of the utility for billing, payment processing, and account management. The size of the customer's connection provides an approximation of the amount of the water the customer conceivably could have delivered to his or her property. The base fee, however, does not fully recover all of the fixed costs associated with the water delivery system.

The commodity charge is a charge for the amount of water consumed. The commodity charge is set at a rate based upon hundred cubic feet ("HCF") of water consumed. Currently, the City has two types of commodity charges: a three-tiered rate for Single-Family Residential ("SFR"), and a single rate for all remaining customers, including multi-family residential, commercial and industrial. The three-tiered rate structure assesses a higher charge per unit of water as the level of consumption increases. *See Brydon v. East Bay Mun. Utility Dist.*, 24 Cal. App. 4th 178, 184 (1994).

In order for a person to be billed by the City for water fees, he or she must file an application with the Water Department to have water service initiated. The person initiating the service does not have to be the owner of the property to which the water is delivered. Regardless of what customer class the person falls in, the customer has a meter from which the City measures the amount of the water consumed. The meter is read by the Water Department to calculate the water fees to be charged to the customer based on his or her customer class.

B. History of Water Rates and Charges.

From 1987 to 1997, the City only increased water rates to reflect increases in the cost of water purchased from the County Water Authority ("CWA").[32] Despite numerous requests, the City Council chose not to adopt water rate increases for the purpose of funding capital projects. (*Id.*) In general, water rates were never increased to fund the water system's infrastructure until the DHS and the EPA forced the issue upon the City Council. By the early 1990s, the water

[32] Public Facilities Financing Authority, Sub. Water Revenue Bonds, Series 1998 Aug. 1998, Page 24.

system was in jeopardy of failing to meet DHS standards and it was not meeting mandates under the Federal Safe Drinking Water Act.

The DHS demanded improvements to the water system and ongoing compliance in order to repair or replace aging pipes, pumps and other infrastructure. Those improvements were designed to reduce the number of pipeline breaks and emergency repairs, improve treatment facilities and reliability, meet EPA requirements for enhanced drinking water treatment systems and expand the reclaimed water distribution system.

In August 1997, the City Council adopted 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 subsequent retail sales in each of such years by 6% over the prior year for the purpose of funding the CIP. There were no rate increases implemented to take effect in Fiscal Years 2001 and 2002. In April 2002, the City Council adopted increases on the water base fee rate and commodity charge, intended to increase revenues from retail sales in each of the next five fiscal years by 6% per year beginning in Fiscal Year 2003. The water rates approved by the City Council are set forth in the table below. [33]

DATE	WATER BASE AND COMMODITY SERVICE RATES
7/01/87	General rates increased 13.2%. Base Fee range $3.12 - $1,338.65; Fire Service range $7.12 - $95.00; Lifeline commodity rates for SFD, 0-10 HCF/Mo. @ $0.869/HCF; 11+ HCF/Mo. @ $1.006/HCF. All other classes, $0.925/HCF.
1/01/88	Lifeline commodity rates for SFD, 0-10 HCF/Mo. @ $0.881/HCF; 11+ HCF/Mo. @ $1.018/HCF. All other classes, $0.937/HCF.
1/01/89	Lifeline commodity rates for SFD, 0-10 HCF/Mo. @ $0.903/HCF; 11+ HCF/Mo. @ $1.041/HCF. All other classes, $0.96/HCF.
1/01/90	Lifeline commodity rates for SFD, 0-10 HCF/Mo. @ $0.938/HCF; 11+ HCF/Mo. @ $1.075/HCF. All other classes, $0.994/HCF.
11/8/91	Lifeline commodity rates for SFD, 0-10 HCF/Mo. @ $1.076/HCF; 11+ HCF/Mo. @ $1.213/HCF. All other classes, $1.132/HCF.
7/01/92	Lifeline commodity rates for SFD, 0-10 HCF/Mo. @ $1.169/HCF; 11+ HCF/Mo. @ $1.306/HCF. All other classes, $1.225/HCF.
7/01/93	Lifeline commodity rates for SFD, 0-10 HCF/Mo. @ $1.285/HCF; 11+ HCF/Mo. @ $1.422/HCF. All other classes, $1.341/HCF.
7/01/94	Lifeline commodity rates for SFD, 0-10 HCF/Mo. @ $1.293/HCF; 11+ HCF/Mo. @ $1.430/HCF. All other classes, $1.349/HCF.
7/01/95	Lifeline commodity rates for SFD, 0-10 HCF/Mo. @ $1.3 79/HCF; 11+ HCF/Mo. @ $1.516/HCF. All other classes, $1.435/HCF.
1/01/97	Lifeline commodity rates for SFD, 0-10 HCF/Mo. @ $1.414/HCF; 11+ HCF/Mo. @ $1.551/HCF. All other classes, $1.47/HCF.
8/12/97	Revenue requirement increased 6%. Increase to be derived solely from the base fee. A 3-tier commodity structure is established for SFD accounts. Base fee range ($4.77 - $2,048.13). Commodity charges: SFD, 0-7 HCF/Mo. @ $1.25; 8-14 HCF/Mo. @ $1.60; 15+ HCF/Mo. @ $1.77. All other classes, $1.47/HCF.
7/1/98	Revenue requirement increased 6%. Increase to be derived solely from the base fee. Base fee range ($6.70 - $2,875.58). Commodity charges remain unchanged.
1/1/99	Base fee range ($7.70 - $3,161.58.) (Result of SDCWA IAC charges.)

[33] Memorandum, Dennis Kahlie, March 2, 1994; August 8, 2005 Revision; all City Council Resolutions and Ordinances referenced therein.

DATE	WATER BASE AND COMMODITY SERVICE RATES
7/1/99	Revenue requirement increased 6%. Increase to be derived solely from the base fee. Base fee range ($9.63 - $3,989.75). Commodity charges increased due to pass thru increases SFD, 0-7 HCF/Mo. @ $1.273; 8-14 HCF/Mo. @ $1.623; 15+ HCF/Mo. @ $1.793. All other classes, $1.493/HCF.
1/20/02	Commodity charges increased due to pass thru increases. SFD, 0-7 HCF/Mo. @ $1.285/HCF; 8-14 HCF/Mo. @ $1.635; 15+ HCF/Mo. @ $1.805. All other classes, $1.505/HCF.
7/1/02	Revenue requirement increased by 6%. 50% of the Increase to be derived from the base fee and 50% derived from the commodity charge. Base fee range (10.68 - $4,258.83). SFD, 0-7 HCF/Mo. @ $1.338/HCF; 8-14 HCF/Mo. @ $1.703; 15+ HCF/Mo. @ $1.880. All other classes, $1.567/HCF.
7/1/03	Revenue requirement increased by 6%. 50% of the Increase to be derived from the base fee and 50% derived from the commodity charge. Base fee range (11.78 - $4,879.48). SFD, 0-7 HCF/Mo. @ $1.395/HCF; 8-14 HCF/Mo. @ $1.775; 15+ HCF/Mo. @ $1.959. All other classes, $1.634/HCF.
1/1/04	Commodity charges increased due to pass thru increases. SFD, 0-7 HCF/Mo. @ $1.425/HCF; 8-14 HCF/Mo. @ $1.805; 15+ HCF/Mo. @ $1.989. All other classes, $1.664/HCF.
7/1/04	Revenue requirement increased by 6%. 50% of the Increase to be derived from the base fee and 50% derived from the commodity charge. Base fee range (13.08 - $5,394.93). SFD, 0-7 HCF/Mo. @ $1.487/HCF; 8-14 HCF/Mo. @ $1.884; 15+ HCF/Mo. @ $2.076. All other classes, $1.737/HCF.
1/1/05	Commodity charges increased due to pass thru increases. SFD, 0-7 HCF/Mo. @ $1.541/HCF; 8-14 HCF/Mo. @ $1.938; 15+ HCF/Mo. @ $2.130. All other classes, $1.791/HCF.
7/1/05	Revenue requirement increased by 6%. 50% of the Increase to be derived from the base fee and 50% derived from the commodity charge. Base fee range (14.31 - $5,903.13). SFD, 0-7 HCF/Mo. @ $1.609/HCF; 8-14 HCF/Mo. @ $2.023; 15+ HCF/Mo. @ $2.223. All other classes, $1.870/HCF.

C. Ramifications of No Rate Increases.

The proposed Water Department rate increases are necessary in order to meet the requirements of the 1997 DHS Compliance Order, meet mandates under the Federal Safe Drinking Water Act that require the City to rehabilitate or replace deteriorating pipelines, and to replace aging pipes, pumps and other infrastructure to reduce the number of pipeline breaks and emergency repairs.[34]

Just recently, the Water Department needed to repair fourteen burst pipes over a five-day period, bringing to 123 the number of ruptures citywide this year, a 16 percent increase over 2005.[35] The average cost to fix a broken line is approximately $2,500. (*Id.*) The series of requested water rate increases are intended to fix a wide range of water system needs, including increasing the rate at which cast iron pipes are replaced. The city has been replacing an average of 10 miles of iron pipe per year. The proposed rate increase would enable the city to accelerate that to 15 miles per year in 2008 and 20 miles from 2009 to 2011. (*Id.*)

Aging cast iron pipes are more susceptible to breakage due to a corrosive process in which the iron component of the pipe is leached into the soil, leaving the pipe less able to withstand normal water pressure fluctuations and more susceptible to breakage. Crews also experience problems with old, leaking or inoperative valves. When aging facilities fail, the City can be subject to liability for inverse condemnation and attorney fees.

[34] Report to City Council, 12/18/2006 [www.sandiego.gov/breakingnews/pdf/water218nrcouncil.pdf].
[35] Union-Tribune, 12/27/06, *Rash of ruptures has San Diego scrambling to make costly repairs*.

For example, in *Pacific Bell v. City of San Diego,* 81 Cal. App. 4th 596 (2000), Pacific Bell filed an inverse condemnation action against the City to recover damages to its facility that occurred when a corroded cast-iron water pipe servicing a fire hydrant burst and the escaping water flooded the facility. The pipe was owned and maintained by the City and would not have burst had it not been corroded. Pacific Bell alleged that because the City had no preventive maintenance plan to inspect or monitor the effect of corrosion on old cast-iron pipes, a burst pipe resulting in damage to adjoining private property was an inevitable consequence of the City's water delivery system as designed, constructed, and maintained.

The Court of Appeal held that Pacific Bell was entitled to recover on its inverse condemnation claim under the ordinary rule that a public entity is strictly liable for inverse condemnation damages, since the City's water delivery system as deliberately designed and maintained was a substantial cause of the damage. (*Id.*)

However, not just lawsuits are responsible for increased infrastructure costs. Increased costs also result from project deferment. A major component of CIP projects is implementing improvements in the water system efficiency, and savings from these improvements would be lost if the projects were delayed. Project deferment could result in loss of water system reliability and in an increased number of breakdowns. Another major component of CIP projects is implementing improvements in reliability through replacement of aging pipelines, reservoirs, pump stations, and the like.

1. Escalation of Construction Costs.

In 2004, construction industry materials costs rose on the order of 25% by some indices.[36] The steep rise in materials costs contributed to cost increases well above the core rate of inflation. The ENR 20-city Construction Cost Index rose 6.9% for the calendar year 2004. (*Id.*) The ENR First Quarterly Cost Report for 2005 is indicating that annual escalation for 2005 may be 5 to 7%, after forecasting 3.5% for 2005 in January. (*Id.*)

The delay of water and sewer projects will result in a greater number of projects being advertised in FY 2008. The desire to get the CIP programs back on schedule, operational problems compounded by the deferments, and regulatory compliance requirements will drive the need to implement deferred projects as quickly as possible. This could result in contractors becoming overwhelmed with work and in bid prices rising higher. In addition to the greater number of projects to be bid, the deferral of projects in FY 2006 and FY 2007 will have a negative impact on the supply of responsive bidders, as contractors redirect their efforts to other regions and skilled labor leaves town. If only 2-3 bidders respond to publicly bid contracts, the bid results can be 10 to 25% over estimates.

2. Cost of Deferring Design Work.

All designs for deferred projects will need to be reviewed before issuing for bids. If the contract time limit expires before the project is restarted, a procurement process would be required to enter into a new agreement with a new design consultant to carry out the review and

[36] Engineering News Record [http://enr.construction.com/features/conEco/subs/default.asp].

make changes. This typically takes several months to complete. A fair estimate is deferment would increase project design costs by 30-50 percent, translating to about 5 percent of total cost. Many factors affecting the design can change in the 1-2 years between design completion and issuing for bids. These include:

- Code changes. Structural codes typically have the greatest impact if buildings or steel reservoirs are involved. When the City adopted the 1998 California Building Code, many of the earlier-designed CIP projects required extensive redesign due to the more stringent seismic requirements in the 1998 Code.

- Greenbook and City Standard Detail changes. The City recently adopted new editions of the Greenbook and Standard Details, and another change could occur in the next 1-2 years. Many of the deferred CIP projects were designed to the 2000 Greenbook and Standard Details. These designs would need to be updated if the delay was more than 12 to 18 months after adoption of the new standards.

- Scope changes. For various reasons, project scopes change over time. System failures occurring in the interim may require designs to be revised. Rising energy costs may require designs to be altered to be more efficient. Blackouts and power scarcity may require measures to be taken, such as addition of permanent emergency diesel generators at pump stations and other critical facilities.

The cost of delaying the CIP programs for 2 years approximates the cost of the programs themselves for 1 year. These program delays are outside the control of the Water Department.

D. Rate Case.

In 1997, the City Council approved the Water Strategic Plan, an associated eight-year CIP, the issuance of debt for the capital program, and a series of three 6% increases to the water services charge revenues to support the first $385 million of debt.[37] These actions came after a year long planning effort by a citizen advisory group that recognized and documented the need for an intensive effort to upgrade the City's water infrastructure in response to a DHS Compliance Order, new federal drinking water requirements, the need to expand facilities to meet the needs of a growing community, and the need to replace or rehabilitate aging and deteriorating facilities throughout the system. The three rate increases took effect in August 1997, July 1998, and July 1999.[38] The original financing plan had assumed there would be two more rate increases in July of 2000 and 2001, however those increases were not approved. (*Id.*)

To continue the capital program as anticipated, the Water Department needed to return to the bond market. As a precondition to approving further increases, Council requested the completion of a management review and a water cost of service study. The firm of Black & Veatch Corporation completed the Management Review Study in 2001 and it was presented to the Natural Resources and Culture Committee in January 2002.[39]

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[37] Strategic Plan for Water Supply 1997-2015, July 1997, Executive Summary.
[38] Public Facilities Financing Authority, Sub. Water Revenue Bonds, Series 2002 Oct. 2002, Page 27.
[39] Report to City Council, 12/18/2006 [www.sandiego.gov/breakingnews/pdf/water218nrcouncil.pdf].

On April 30, 2002, the City Council adopted Resolution R-296437 approving the increase of water sales revenue by 6% per year each year beginning July 1, 2002, for a period of 5 years through July 1, 2006.[40] This was to be accomplished by increasing the water base fee and commodity charges such that 50% of the increased revenue would be generated from each.[41]

In October 2003, Black & Veatch Corporation completed a Water Cost of Service Study for the City, which recommended adjusting the base charge to better reflect the actual fixed cost incurred by each class of user. (*Id.*) It also recommended offsetting adjustments to the commodity fee to ensure full cost recovery. The Water Department issued another $287 million in bonds in the fall of 2002 to continue the capital program. (Id.) The funding from these bonds was fully expended in the spring of 2006. Since then, the Water Department has been using pay-as-you-go money to continue a scaled down capital program. (*Id.*) The Water Department fell short of keeping up with the DHS Compliance Order and must now perform multiple projects within a shorter time frame to stay current with the Order.

In order to continue the Water Department's capital program and stay current with the DHS Compliance Order, the Department will be requesting 6.5% increases over the next 4 fiscal years for water sales fees and charges. (*Id.*) This will allow the Department to once again get back into the bond market in 2007. The Department also plans to request approval to issue a private placement of $57 million at a favorable 3.9% interest rate and then get back into the public market with a larger offering during the summer of 2007. (*Id.*)

V. PROPOSITION 218 REQUIREMENTS

A. Metered Water Rates Are Subject to Proposition 218.[42]

On November 6, 1996, California voters approved Proposition 218, which amended the California Constitution by adding articles XIIIC and XIIID. Article XIIID, section 6 of the California Constitution enacted requirements for imposing new, or increasing existing, property-related fees and charges, and also imposed limitations on the use of the revenue collected by such means. Article XIIID, section 6(a)(1) established noticing procedures for imposing a new or increasing an existing property-related fee or charge. Until recently, controlling legal authority held that metered (commodity) water rates were not subject to these requirements.

However, in the recent case *Bighorn-Desert View Water Agency v. Virjil,* 39 Cal.4th 205 (2006), the California Supreme Court overruled prior decisional law and held that under Article XIII D, section 6, a public agency's ongoing water delivery (commodity) charges are property-related fees and charges subject to the provisions of Article XIII D. The Court concluded that "once a property owner or resident has paid the connection charges and has become a customer of a public water agency, all charges for water delivery incurred thereafter are charges for a

[40] Memorandum, Dennis Kahlie, March 2, 1994; August 8, 2005 Revision; all City Council Resolutions and Ordinances referenced therein.
[41] Report to City Council, 12/18/2006 [www.sandiego.gov/breakingnews/pdf/water218nrcouncil.pdf].
[42] By analogy, sewer rates (discussed later in this report) are also subject to Proposition 218.

property-related service, whether the charge is calculated on the basis of consumption or is imposed as a fixed monthly fee." (*Id*., at 217.)

Water delivery fees and charges, whether consumption-based charges or fixed monthly fees, are now subject to the provisions of Article XIII D. Once a property owner or resident has paid the connection fee for the water and becomes a customer of the public agency, all charges for water delivery thereafter are property-related fees and charges. The use of the term "water delivery" makes it clear that the Court does not intend the provisions of Article XIII D to be applicable to meter repair, capacity charges, or other one-time service and other water-related charges not associated with the delivery of domestic water.

This section requires that a public agency proposing to impose a new or increase an existing property-related fee or charge must provide written notice by mail to the record owner of each parcel upon which the fee or charge will be imposed. The notice must contain the following information: (1) the amount of the fee or charge; (2) the basis on which the fee or charge was calculated; (3) the reason for the fee or charge; and (4) the date, time, and location the public agency will conduct its public hearing on the proposed fee or charge. (Art. XIIID, § 6(a)(1).) Article XIIID, section 6(a)(2) further requires that the public hearing be held not less than forty-five days after the mailing of the notice. If at the conclusion of the public hearing the public agency receives written protests against the imposition of the proposed fee or charge from a majority of the affected property owners, the fee or charge may not be imposed. (*Id*.)

Article XIIID, section 6(b)(3) also establishes certain requirements that fees not exceed the reasonable cost of providing the service for which the fee or charge is imposed. Section 6(b)(3) provides that "[t]he amount of a fee or charge imposed upon a parcel or person as an incident of property ownership shall not exceed the proportional cost of the service attributable to the parcel." In order to meet the proportional cost of service nexus, public agencies must quantify the cost of services to justify increases in property-related fees or charges.

VI. COST OF SERVICE STUDY

A. Introduction.

A review of the history of the City's water service charges prior to 1997 reveals that the City's "no new taxes or fees policy" prevented the City from properly funding the Water Department's vital infrastructure that supplies San Diegans with safe and reliable water.[43]

Now, with new leaders in place, the City is taking action to establish fiscally responsible funding mechanisms to comply with its responsibilities under state and federal law. In order to accomplish these goals, the City must increase its water base fees and commodity charges. This action will increase water sales revenue by 6.5% effective July 1, 2007, July 1, 2008, July 1, 2009 and July 1, 2010, to ensure continued compliance with federal and state mandates. It will also allow the Water Department to continue to comply with the DHS Compliance Order.[44]

[43] Public Facilities Financing Authority, Sub. Water Revenue Bonds, Series 1998 Aug. 1998, Page 24.
[44] Report to City Council, 12/18/2006 [www.sandiego.gov/breakingnews/pdf/water218nrcouncil.pdf].

The City Council authorized Raftelis Financial Consultants, Inc. ("RFC") to prepare a Cost of Service Study ("Study") on October 24, 2006.[45] The Study is a comprehensive study of water service and rate design that includes a review of revenue requirements, user classifications, cost of service, and the design of a system of user charge alternatives for the City's water service.

The focus of the Study was on the City's retail water service and capacity charges. The specific objective of the Study was to develop cost of service rates that charge customers in proportion to the cost of serving them and to ensure capacity charges are sufficient for the expansion of the system. The results of the Study suggest changes to user classifications, cost allocation and capacity charges which will serve to increase equity in the apportionment of costs beginning in Fiscal Year 2008.[46]

"Cost of service" is a methodical process by which revenue requirements are used to generate a system of fair and equitable costs in proportion to the service received for each user class. (*Id.*) The cost of service allocation conducted in this study are based on the base-extra capacity method endorsed by the American Water Works Assocaition ("AWWA"), a nationally recognized industry group. Under the base-extra capacity method, revenue requirements are allocated to the different user classes proportionate to their use of the water sytem. (*Id.*)

1. User/Usage Characteristics.

The Water Department has various types of customers, which include Single Family Residential ("SFR"), Other Domestic ("Multi-Family"), Commercial, Industrial, Temporary Construction and Irrigation. (*Id.*) SFR comprise the bulk of customers with approximately 80% of all meters. Multi-Family account for more than 10% of the meters. Commercial, Industrial, Temporary Construction and Irrigation make up the remaining 10% of accounts, but account for approximately 40% of the usage. (*Id.*)

2. Revenue.

The Water Department's principal source of revenues is from water rates. (*Id.*) The total FY 2008 revenue requirements from retail users (generated by totaling O&M, debt service, and cash-financed capital projects and deducting any revenue from other non-rate sources), is estimated to be $287.4 million. (*Id.*) Of this, approximately $219.8 million are operating costs. The remaining $67.6 million are capital-related costs associated with debt service and cash financed capital projects. The primary sources of funding for capital projects include water capacity fees, bond proceeds, grants, loans, pay-as-you-go revenues and interest earnings. (*Id.*)

The City estimates overall annual water Operation and Maintenance ("O&M") expenditures in the range of $279 - $308.2 million during the study period from FY 2008 through FY 2011. (*Id.*) This includes water purchase costs ranging from $120 to $124 million for the same period. Existing debt service on outstanding revenue bonds requires annual payments

[45] Water Cost of Service Rate Study Final Report, Raftelis Financial Cons., 12/14/2006.
[46] Water Cost of Service Rate Study Final Report, Pgs. 1-3, 1-4, Raftelis Financial Cons., 12/14/2006.

in the range of $52 to $56 million. In addition, the City is expected to issue additional debt of $538 million in FY 2008 and FY 2010 combined, which will add $25 million in annual debt service by FY 2011. (*Id.*) The proceeds from the revenue bonds will help finance the Water CIP costs.

Additionally, consistent with industry cost of service principles and accepted rate setting methodologies, the City is proposing to refine its water rates by reallocating charges to more accurately reflect costs of service. Proposed changes include increasing the number of customer classes, lowering overall cost recovery from fixed monthly charges, and increasing overall cost recovery based on the amount of water used. These changes may increase or decrease customers' bills, depending on the customers' class and the amount of water consumed.

Commodity Rate (HCF = Hundred Cubic Feet; SFR = Single Family Residential)

Proposed* Customer Class	HCF	FY 2007 Existing $/HCF	FY 2008 Proposed $/HCF	FY 2009 Proposed $/HCF	FY 2010 Proposed $/HCF	FY 2011 Proposed $/HCF
SFR	0-7	1.731	2.262	2.409	2.566	2.732
	8-14	2.163	2.461	2.621	2.791	2.973
	Over 14	2.372	2.775	2.955	3.147	3.352
Other Domestic		2.003	2.461	2.621	2.791	2.973
Commercial & Industrial		2.003	2.357	2.510	2.673	2.847
Temporary Construction & Irrigation		2.003	2.524	2.688	2.863	3.049

*Currently there are two Customer Classes: SFR and Other.

These new revenue demands have been offset through increased efficiencies in the operation and maintenance of both systems over the past few years. The improved efficiencies have effectively lowered the level of potential rate increases. Improved efficiencies helped the water system by keeping an additional 3% need off first year rate proposals.[47] Higher rates would have also been necessary in subsequent years without continuing efficiency measures. At the Mayor's direction, an independent board will be appointed to oversee a new annual accounting review process similar to the one conducted by MHM earlier this year.

3. Current System Expenditures.

For sound financial operation of the City's water system, the revenues generated must be sufficient to meet the revenue requirements or cash obligations of the system. Revenue requirements include water purchase costs, O&M expenses, CIP expenditures, principal and interest payments on existing debt, and other obligations. Water purchases vary from $120 million to $124 million in 2008 through 2011. Water purchase costs are forecast to increase at an average of 0.9 percent compared to an anticipated 4 percent average increase in other operating costs, due to conservation efforts and the reclaimed water program, which have partially offset the demand for additional water supplies. (*Id.*)

[47] Water Cost of Service Rate Study Final Report, Pgs. 5-2, 5-3, Raftelis Financial Cons., 12/14/2006.

O&M expenditures include the cost of operating and maintaining water supply, treatment, storage, and distribution facilities. O&M expenses also include the normal costs of providing technical services such as laboratory services and other administrative costs of the water system such as meter reading and billings, which are met from operating revenues as they are incurred. The comprehensive forecasted annual O&M expenditures for the study are based upon the City's budgeted FY 2007 expenditures, adjusted for changes since the budget was developed and for anticipated changes in operations and the effect of inflation in future years. (*Id.*) The City conservatively uses an inflationary factor of four percent in projecting all O&M expenditures, except for salaries and wages.

4. Current Rate Design.

The City's water rates, effective as of July 1, 2006, include fixed service charges and water commodity rates. The fixed service charges are consistent across all user classes and vary by meter size. Service charges range from $15.87 per month for a ¾ inch meter, which is typically used by SFR customers, to $6,514.14 per month for a 16 inch meter used by large industrial or wholesale customers.[48]

The typical SFR user has a 5/8 inch or 3/4 inch meter and pays $15.87 per month. Customers with larger demands need larger meters.[49] Larger meters are more expensive to maintain and replace, so under AWWA methodology larger meters are charged higher monthly service charges. The City's current service schedule shows larger meters being charged significantly more than smaller meters when compared to the AWWA methodology as determined by the ratios of the meter capacities. (*Id.*)

Monthly Base Service Charge

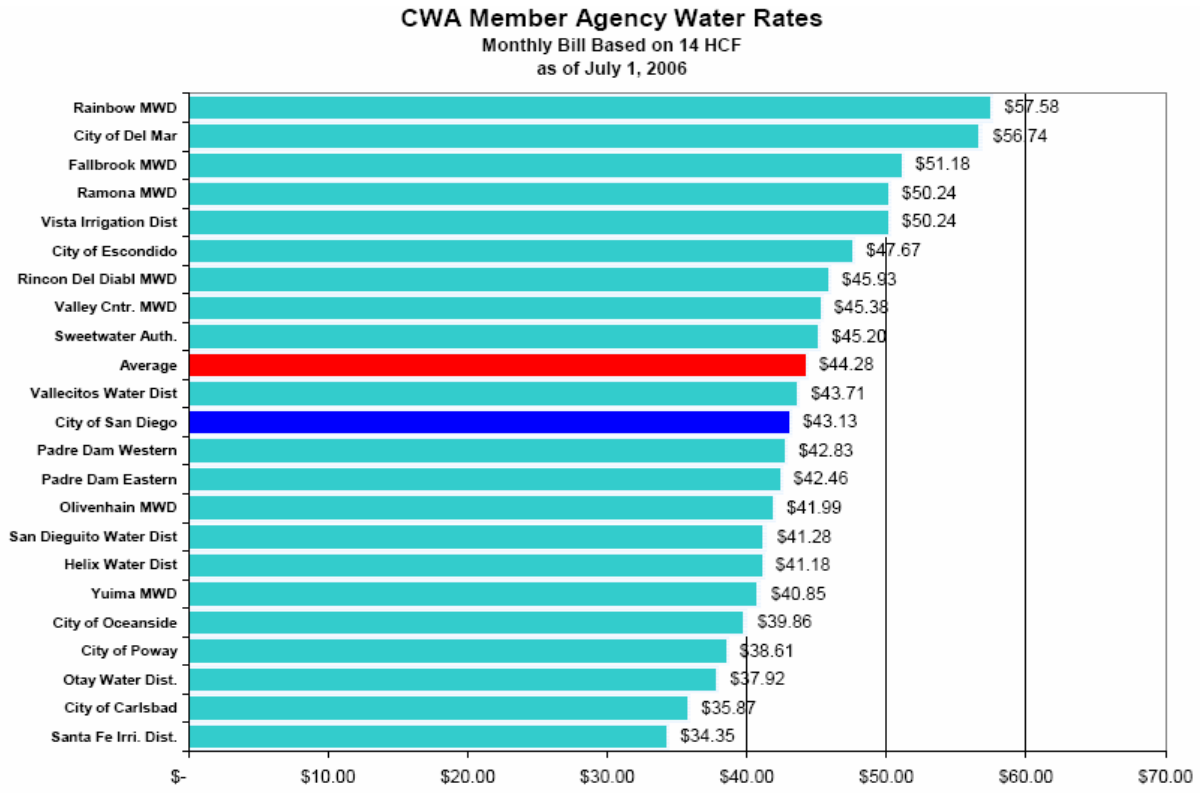
Meter Size	Existing FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Inches	Existing $/month	Proposed $/month	Proposed $/month	Proposed $/month	Proposed $/month
5/8	15.87	15.18	16.17	17.22	18.34
¾	15.87	15.18	16.17	17.22	18.34
1	17.11	22.17	23.61	25.15	26.78
1 ½	75.41	38.13	40.61	43.25	46.06
2	116.24	58.09	61.87	65.89	70.17
3	414.73	104.98	111.80	119.07	126.81
4	692.00	171.83	183.00	194.89	207.56
6	1,542.72	337.46	359.39	382.76	407.63
8	2,081.78	537.01	571.92	609.09	648.68
10	2,793.63	770.49	820.57	873.91	930.71
12	3,892.44	1,435.00	1,528.28	1,627.61	1,733.41
16	6,514.14	2,499.62	2662.10	2,835.13	3,019.42

The City currently has separate commodity rates for SFR customers, while the remaining retail customers are billed under the same uniform commodity rate. SFR customers are billed on a three-block increasing rate structure, as the rate for each unit of consumption within each block

[48] Water Cost of Service Rate Study Final Report, Pgs. 3-6, Raftelis Financial Cons., 12/14/2006.
[49] Water Cost of Service Rate Study Final Report, Pgs. 3-7, Raftelis Financial Cons., 12/14/2006.

increases as customers move from block 1 through to block 3. All other retail customers are charged a uniform rate of $2.003 per HCF for all consumption. (*Id.*)

The following chart shows a comparison of the monthly bills for SFR customers using 14 HCF of water for the City and surrounding agencies.[50] The chart reflects the City's current rates, which are below the average for the region.



5. Study Recommendations.

The Study recommends the City consider changes which include modifications of user classification, and cost allocations. The justification for creating new user classes is to track costs and design separate rates for these customers as a means of increasing equity among two classes of ratepayers. Residential customers, including SFR and Other Domestic are estimated to have similar peaking characteristics. However, since only SFR rates are tiered, they are separated into SFR and other Domestic classes. Commercial and Industrial cutomers are estimated to have similar peaking characteristics and can be included into another class because they have lower peaking characteristics than residential customers. (*Id.*)

The main objective of the Study is to present options that will result in a proportionate allocation of costs to all user classes in proportion to the costs of serving these customers. Under the proposed COS-based rates, most large volume SFR users will receive higher bills, while most low volume users will experience a reduction in monthly bills. (*Id.*) Higher volume SFR users

[50] Water Cost of Service Rate Study Final Report, Pgs. 1-5 - 1-11, Raftelis Financial Cons., 12/14/2006.

will experience these increases due to the higher usage rates that accompany and offset reduced service charges. At the same time, COS rates will encourage conservation and provide low-volume users with material rate relief.

B. Rate Structure.

Rate structures should be designed in such a way as to ensure that users pay only their proportionate share of costs. In addition, rate structures should be easy to understand, simple to administer, and comply with regulatory requirements. The RFC review of the 2007 rate structures determined they were equitable and there are no suggested changes to the 2007 rate structuring approach for any of the City's user classes, which incorporates both a fixed charge in the form of a service charge and a variable charge in the form of a commodity rate. (*Id.*) The annual revenues required from each user class will be recovered through a combination of a fixed monthly service charge and variable commodity rate.

1. Service Charges.

A service charge is a cost recovery mechanism that is generally included in the rate structure to recover meter, customer and fire hydrant related costs, and which provides a stable source of revenue independent of water consumption. Therefore, customer costs related to meter reading, billing, and fire hydrants are recovered through the service charge.

Customer related costs are fixed expenditures that relate to operational support activities including accounting, water billing, customer service, and administrative and technical support. The customer related costs are essentially common-to-all costs that are independent of user class characteristics. A service charge provides a mechanism for recovering a portion of the fixed costs and ensures a stable source of user revenues for the utility. The City's customer related costs for FY 2008 are estimated at $63.7 million.[51]

Once the costs are known, they are divided by the number of units of service associated with those costs to determine annual unit costs. Meters and Services are associated with equivalent meters to reflect the fact that Meters and Service costs are higher for larger meters. Billing and Collecting are associated with accounts because they are similar for all customers.

2. Commodity Rate.

The commodity rate is the rate developed for each user class that will recover the City's variable volume related costs. (*Id.*) The annual estimated FY 2008 revenues required, less annual cost based service charge revenues, are the revenues that must be recovered with a commodity rate. Annual service charge revenues for each user class for FY 2008 are estimated based on the forecast number of meters by size in a given class and the COS based monthly service charges. (*Id.*) The portion of revenues to be recovered through commodity rates is then determined by deducting the annual service charge revenues from the user class's FY 2008 cost of service.

[51] Water Cost of Service Rate Study Final Report, Pgs. 3-6, 3-7, Raftelis Financial Cons., 12/14/2006.

COS based commodity rates are developed for each user class based on the principle of maintaining inter-class and intra-class revenue neutrality and equity. (*Id.*) This means that each user class would only pay its assigned share of costs of service, and that each member of each class would only pay his or her fair share of user class costs. Commodity rates are designed to only recover revenues that are not recovered through the service charge.

The water commodity rate for each user class is computed based on the user class' annual usage revenues required and the estimated annual volume of water usage. The user classes can be sorted into groups with similar peaking characteristics, resulting in a uniform water commodity rate that is the same within the group. Due to similar usage characteristics, residential customers are grouped together, commercial and industrial are grouped together, and construction and irrigation are grouped together. (*Id.*)

The City currently differentiates between SFR and all other classes for rate design. To encourage conservation, SFR rates are tiered. (*Id.*) Many agencies across the state use such a structure to encourage conservation. Tiered rates are more practical to implement for the SFR class because this class is a fairly homogenous class. Since the small users do not put as much demand on the system, the first tier usage is provided a lower rate by discounting a part of the capital costs associated with peaking. The second tier is based on the COS rate and the third tier is designed to recover the remainder of the revenues from this class. (*Id.*)

C. Impact Analysis.

By using the proposed COS rates, residential customers using less than 5 HCF per month would receive a reduction in bills compared with what the City rates would be in 2008 if the existing rate structure was retained.[52] This means that the effect of reducing the service charge is greater than the effect of the increased commodity rate for customers using less than 5 units of water. It also means that many residential users will receive higher bills under the COS rates than the City rates. Under COS based rates, water bills for SFR customers using 25 HCF (approximately 2 times the average) would be 6.8 percent greater than with the City rates. (*Id.*)

As is the case with residential users, large volume commercial and industrial users will receive higher bills under the COS rates compared to the City rates. However, the reduction in meter charges will benefit low volume users. Customers with large meters will see a noticeable reduction in their meter charges that will partially offset higher commodity rates.

VII. USE OF FUNDS FOR FUTURE PROJECTS

A. Audit of Water Department Services.

The City retained the independent audit firm of Mayer Hoffman McCann P.C. ("MHM") to demonstrate to the citizens of San Diego that the funds being raised and spent to support the Water Department were being properly used.[53] MHM was able to confirm the calculation of the

[52] Water Cost of Service Rate Study Final Report, Page 7-6, Raftelis Financial Cons., 12/14/2006.
[53] Mayer Hoffman McCann P.C. Audit Report, August 7, 2006, Page 4.

revenue generated by each increase and to reasonably test the expenditures associated with these increases. The results illustrated that the revenues generated from the series of rate increases were appropriately expended. (*Id.*)

In addition, the Water Department has a Bid to Goal program and is actively participating in the Mayor's Business Process Re-engineering ("BPR") effort.[54] The Bid to Goal program is an effort in which an outside consultant conducts a study to determine how much a private company can provide the services for and then the Water Department must meet or beat that bid to achieve the Goal. The Water Department has already realized significant savings from efficiencies realized by the Bid to Goal program. (*Id.*)

The Water Department is presently unable to obtain additional public financing. As a result, current plans for capital expenditures in FY 2006 and FY 2007 have been reduced by stopping the award of new contracts and placing project designs on hold. Currently, 46 projects are being deferred through FY 2007. (*Id.*) The Department planned to issue bonds in September 2005 for continuing the CIP through FY 2006 and FY 2007. However, with the existing rate structure, the Department would have to borrow $140 million to fund 70% of approximately $100 million in yearly expenditures for FY 2006 and FY 2007. (*Id.*)

B. Projects Funded by Rate Increase.

In the future, the Water CIP program will continue to replace approximately 10-20 miles of water mains each year and initiate additional projects to enhance the quality and reliability of the water system. (*Id.*) The CIP is to be funded through a combination of system revenues and bond financing. The CIP budget included in the 2007 annual budget report is $512,825,516, and the capital improvement expenses from 2007-2011 in the rate model totals $646,946,000. (*Id.*)

The City of San Diego is mid-way through a multi-year CIP to meet the regulatory requirements and upgrade its water infrastructure. The Water Department has completed 22 of the 31 projects in the DHS Compliance Order, and has made significant progress towards meeting the 2011 requirements of the Safe Drinking Water Act. (*Id.*) Unfortunately, the City of San Diego was prevented from borrowing capital funds through the normal financial markets. The Water Department's inability to access the capital markets has significantly limited the Water Department's FY 2006 and FY 2007 CIP. (*Id.*)

In fiscal years 2008 through 2011, the Water Department plans to expend approximately $585 million for capital improvement projects. (*Id.*) These funds will be used to continue many projects that have been delayed, such as upgrading and expanding the Alvarado, Miramar, and Otay Water Treatment Plants, the replacement of the Otay 2nd Transmission Pipeline, and the replacement of approximately 75 miles of cast iron water mains. (*Id.*) The following capital projects are scheduled to move forward as part of the rate restructuring and future bond issuance:

[54] Report to City Council, 12/18/2006 [www.sandiego.gov/breakingnews/pdf/water218nrcouncil.pdf].

TITLE	FY2008	FY2009	FY2010	FY2011	TOTAL
DHS REQUIRED PROJECTS					
AA – Water Main Replacements(CI)	$30,402,174	$31,711,888	$44,994,560	$46,794,342	$153.9M
Alvarado WTP Ph 4 Ozone	4,800,000	24,000,000	37,000,000	0	65.8M
Miramar Water Treatment Plant - Contract A	2,558,531	0	0	0	2.6M
Miramar WTP Contract B - Floc/Sedimentation Basins	39,321,560	24,230,448	7,493,429	66,918	71.1M
Miramar WTP Contract C - Ozone Equip/Install	16,520,629	9,497,542	2,601,906	30,296	28.7M
Otay 2nd Pipeline - Cast Iron Replacement Phase	5,802,270	8,349,317	795,569	30,860	15.0M
Rancho Bernardo Reservoir Rehabilitation	6,717,043	0	0	0	6.7M
Rancho Penasquitos Pump Station	6,817,316	3,611,653	0	0	10.4M
Subtotal	**$112,939,523**	**$101,400,848**	**$92,885,464**	**$46,922,416**	**$354.1M**
DHS RELATED PROJECTS					
La Jolla Shores Dr. 16" Water Main Repl.	$127,207	$0	$0	$626,557	$0.8M
Harbor Drive Cast Iron Pipeline	77,337	185,294	258,682	216,634	0.7M
Alvarado WTP Ph 3 Rehab Floc/Sed Basins	1,737,443	12,434,959	5,582,208	0	19.8M
Alvarado WTP Ph 5 Sitework	0	0	0	58,377	0.1M
Alvarado WTP - SDFCF 12	0	500,000	2,000,000	2,000,000	4.5M
Miramar WTP SDFCF 24, 25, 26	307,517	2,419,911	971,555	68,771	3.8M
Miramar WTP Contract D - Landscape & Sitework	41,932	114,385	3,427,242	1,178,248	4.8M
Otay WTP Upgrades Phase 1	11,792,663	6,750,358	374,950	0	18.9M
Otay WTP Upgrades Phase 2 (CLO2)	2,000,000	7,300,000	5,000,000	1,000,000	15.3M
Otay 2nd Pipeline - North Encanto Replacement	1,322,767	6,347,815	274,275	0	7.9M
AA - Pooled Contingencies - Water	5,751,250	5,708,946	2,627,047	2,587,750	16.7M
AA - Air Valve Adjustments	0	600,001	600,001	0	1.2M
Lower Otay Reservoir - Emer Outlet Impr	31,198	570,955	2,515,541	2,626,056	5.7M
CIP Program Management	4,000,000	4,000,000	4,000,000	4,000,000	16.0M
Lindbergh Field 16-inch Cast Iron Replacement	0	0	91,414	121,401	0.2M
Subtotal	**$27,189,314**	**$46,932,624**	**$27,722,915**	**$14,483,794**	**$116.3M**
CALTRANS PROJECTS					
AA - Freeway Relocations	$50,000	$50,000	$50,000	$50,000	$0.2M
CALTRANS-Carroll Canyon Bridge	2,000,000	0	0	0	2.0M
Subtotal	**$2,061,977**	**$50,000**	**$50,000**	**$50,000**	**$2.2M**
GRANT FUNDED PROJECTS					
CWA Flow Control & Pump Station 17 (SD 17)	$859,752	$5,424,557	$8,779,942	$0	$15.1M
Fault Crossing Retrofits to Large Pipelines	43,607	990,272	0	0	1.0M
Landslide/Liquefaction Pipeline Mitigation	2,346,657	0	0	0	2.3M
Water Dept. Security Upgrades	67,660	69,569	34,097	0	0.2M
Water Dept. Security Upgrades - Miramar	100,000	0	0	0	0.1M
Water Dept. Security Upgrades - Regulators	300,000	400,000	0	0	0.7M
Water Dept. Security Upgrades - Reservoirs & Dams	600,000	600,000	100,000	100,000	1.4M
Water Dept. Security Upgrades - Encl PS	1,000,000	1,000,000	200,000	200,000	2.4M
Water Dept. Sec Upgrades - Tank Standpipe Res	1,000,000	500,000	200,000	200,000	1.9M
Subtotal	**$6,317,676**	**$8,984,398**	**$9,314,039**	**$500,000**	**$25.1M**
OPERATIONAL REQUIRED PROJECTS					
El Capitan Pipeline No. 2	$0	$0	$0	$7,723,300	7.7M

El Monte Pipeline No. 2	0	0	0	8,126,530	8.1
Kearny Mesa Pipeline Upgrade	0	0	0	566,562	0.6M
Miramar Service Area Improvements	0	0	0	5,000,000	5.0M
Alvarado Service Area Improvements	0	0	0	5,000,000	5.0M
Otay Service Area Improvements	0	0	0	5,000,000	5.0M
Kensington Pressure Regulator	0	0	0	140,112	0.1M
AA – Water Pump Station Rehabilitations	500,004	500,004	500,004	500,004	2.0M
Tierrasanta (Villa Dominique) Pump Station	0	0	25,314	207,695	0.2M
AA - Standpipes and Reservoirs	500,004	500,004	500,004	500,004	2.0M
Otay 2nd Pipeline - Cathodic Protect Otay Ranch	13,071	37,752	220,445	154,568	0.4M
AA - Corrosion Control	104,005	108,161	112,486	116,988	0.4M
Barrett Reservoir Outlet Tower Upgrade	919,488	43,548	0	0	1.0M
El Capitan Reservoir Rd Improvements	0	0	0	3,269,832	3.3M
AA – Meter Boxes	500,000	500,000	500,000	500,000	2.0M
Pomerado Park Reservoir Upgrade	0	0	0	70,192	0.1M
Catalina Standpipe Renovation	0	291,189	2,738,824	49,819	3.1M
Annual Allocation - Pressure Reduction Facility	50,000	100,000	200,000	500,000	0.9M
AA – Dams and Reservoirs	250,000	250,000	250,000	250,000	1.0M
San Carlos Reservoir Interior Enhancement	0	37,530	537,534	2,851	0.6M
Lake Hodges Dam Modification	15,538	126,363	72,933	93,039	0.3M
South County Raw Water Reservoir Intertie Study	779,998	0	0	0	0.8M
Subtotal	**$3,632,108**	**$2,494,551**	**$5,657,544**	**$37,862,185**	**$49.6M**
LONG RANGE WATER SUPPLY PROJECTS					
San Pascual Brackish Grdwtr Desal Demo Ph III	$1,436,212	$1,090,186	$4,734	$0	$2.5M
San Pasqual Groundwater Desalination	0	0	6,991,307	20,672,316	27.7M
Subtotal	**$1,451,485**	**$1,090,186**	**$6,996,041**	**$20,672,316**	**$30.2M**
EPA - 50% BENEFICIAL REUSE					
AA - Pooled Contingencies - RWDS	$500,000	$500,000	$500,000	$500,000	$2.0M
AA - Reclaimed Water Extension	500,000	500,000	500,000	500,000	2.0M
Pacific Highlands RWP (Participation agreement)	1,502,796	0	0	0	1.5M
Camino Del Sur RW Project- E&CP Road Improvement	772,823	0	0	0	0.8M
Camino Del Sur RW P/L- Participation Agreement	733,655	756,971	0	0	1.5M
Subtotal	**$4,009,274**	**$1,756,971**	**$1,000,000**	**$1,000,000**	**$7.8M**
PROJECTED CAPITAL IMPROVEMENT PROGRAM	**$157,601,357**	**$162,709,578**	**$143,626,003**	**$121,490,711**	**$585.2M**

New customers will benefit from capacity created by expansion projects. These projects will be funded by capacity charges and bond proceeds. Capacity charge revenues will range from $14.3 to $14.4 million over the study period of FY 2008 through FY 2011 at increased capacity fee levels. There are a number of assumptions associated with capital project costs, including inflation and construction bid estimates which may change over time. Any changes to the CIP will be brought before the City Council for its review and approval.

PROPOSED WASTEWATER RATE STRUCTURE

I. HISTORY OF THE WASTEWATER SYSTEM[55]

A. The Early Days.

The first public sewer in San Diego was constructed in 1885 along "D" Street (now Broadway) in downtown San Diego. It was a simple 8-inch clay pipe that conveyed raw sewage into San Diego Bay. Later that year, another pipe was constructed, and the year after, several more. Gradually, the sewer system expanded outward. Ordinances were passed requiring residents to connect to the system or face fines and imprisonment.

Responding to a growing tourism industry in the 1920s, the City began installing settling tanks along the coast to capture solids in the raw sewage while allowing the liquid to flow into the ocean. Settling tanks were installed in Ocean Beach, Pacific Beach, La Jolla and Downtown. Much of the sewage, however, continued to be discharged into San Diego Bay without any treatment.

By the 1930s, San Diego Bay was showing the effects of continuous discharge of untreated sewage. Nine of nearly two dozen outfalls in the San Diego region discharged five million gallons of sewage per day directly into the bay. The Navy complained its ships were being corroded by hydrogen sulfide in the sewage. Nonetheless, a proposal to construct a wastewater reclamation plant at the corner of 32nd Street and a new golf course at Balboa Park was rejected by the public over concerns about odors. Another treatment plant near San Diego State University was designed, but never constructed. By the end of the 1930s, the tourism industry was in decline due to severe pollution of the ocean.

In 1940, with the assistance of the Navy, the decision was made to build a primary treatment plant on Navy property at Harbor Drive and 32nd Street. The City's sewer system was upgraded and redirected to send sewage to the new treatment plant and away from the various outfalls that sent raw sewage into the bay and ocean for decades. The Navy helped secure federal funding, and City residents approved the issuance of a $2 million bond for the new plant and sewer system upgrades. In a further effort to reduce pollution, the City began offering neighboring communities the opportunity to send their sewage to San Diego for treatment for a set price. Construction of the new 32nd Street Sewage Treatment Plant was completed in 1943, and had a capacity of treating up to 14 million gallons of sewage per day. The new plant cost $986,500.

After three years, the plant could not handle the increased flow from a local population growing rapidly after the end of World War II. Sewage had to be moved through the plant before it was completely treated. Pollution became so severe near the plant that the water could no longer support fish or animal life. Construction started again in 1946 to expand the plant to handle 40 million gallons of sewage per day. The plant was renamed the Bayside Treatment

[55] Jon Jamieson, *Raw Sewage to Reclaimed Water, the History of Sewerage Systems in the Metropolitan San Diego – Tijuana Region*, Nimbus Press 2002.

Plant when the expansion was completed in 1950 (shown below). The upgrade cost $2,711,110 and paid for by the City. By the time the expansion was completed, however, the flow through the plant was already nearing capacity.

Responding to a request from the recently created Regional Water Quality Control Board, the County of San Diego issued a regional study on wastewater issues in 1952. The report recommended replacing the Bayside Treatment Plant with a new plant either on Sunset Cliffs or in the Midway Area, or keeping the Bayside Treatment Plant and diverting sewage from the northern part of the City to a new plant in the Midway Area. The City rejected these three alternatives and instead moved forward with a plan for a new treatment plant on the west side of Point Loma. The City attempted to issue $16 million in bonds for the Point Loma project, but it was defeated by the voters in 1954. One of the concerns expressed by the voters was decreased property values resulting from a treatment plant in their neighborhood.

The City continued to study alternative locations for a new regional treatment system. The City considered locations in the Tijuana River Valley, Ocean Beach, something closer to the tip of Point Loma, and even upgrading the Bayside Treatment Plant to a higher, "secondary" treatment level. In the meantime, conditions in San Diego Bay had deteriorated to the point that the County Department of Health quarantined the entire bay as unfit for human contact. At significant expense, the City began treating the effluent at the Bayside Treatment Plant with chlorine to reduce bacterial and coliform counts.

By 1958, the Bayside Treatment Plant was operating beyond its design capacity. The City built 45 acres of ponds in Pacific Beach to offload and treat sewage heading for the Bayside Treatment Plant. This offloaded sewage was discharged into Mission Bay. Another 6 acres of ponds was constructed near NAS Miramar, which discharged into Rose Canyon Creek. These ponds generated a lot of complaints from surrounding residents over odors, mosquitoes, and pollution in Mission Bay.

The City commissioned a third study for a regional treatment system in 1958. One plan called for a treatment plant in Point Loma and one in Imperial Beach with the sewage flow split between them. Another plan had just one treatment plant in south Imperial Beach. The third plan recommended one treatment plant on the west side of Point Loma. The City Council decided to adopt the third plan because of the central location and deep ocean floor, which was preferable for discharging treated sewage. It was also unlikely there would ever be any residential development near the Point Loma site due to its isolated location and steep cliffs.

In the meantime, the problems with the existing sewer system were reaching crisis levels. The Bayside Treatment Plant, designed to treat 40 million gallons per day, was seeing nearly 50 million gallons of sewage per day. San Diego Bay was as polluted as ever, increasing the rate of corrosion of Navy ships. Older sewer lines needed replacement. Others were surcharging and overflowing from too much sewage, particularly in the Old Town area.

B. The Move to Point Loma.

The proposed Point Loma Wastewater Treatment Plant and the interceptor sewers and pump stations to transport sewage there, was collectively named the Metro System. The plan for the Metro System was to eventually convey and treat up to 234 million gallons of sewage per day by the year 2000, the estimated needs of the region by that time. The plant was designed to treat sewage to primary level. At the time, secondary treatment and chlorination were considered unnecessary due to the depth and length of the ocean outfall combined with good mixing currents. In 1960, the voters approved a bond issuance of $42.5 million for construction of the Metro System.

Construction of the Metro System started in earnest in 1962. Construction commenced on the Point Loma Wastewater Treatment Plant, the interceptor sewers,[56] two major new pump stations,[57] a new ocean outfall pipe,[58] and site preparation for a new sludge processing facility on Fiesta Island. On September 14, 1963, the Metro System officially went into operation. The total cost of the Metro System was $52 million – nearly $10 million over budget. Imperial Beach, Chula Vista, the Spring Valley Sanitation District, and El Cajon abandoned their old treatment plants to tie into the new Metro System. Other cities tied into the Metro System later.

In 1975, the City completed upgrades at the Point Loma Wastewater Treatment Plant (shown at right, current), expanding capacity to 132 million gallons of sewage per day. By that time, the plant had already reached its maximum capacity of 88 million gallons per day. The upgrades were completed with federal funding secured by the City a few years before. The capacity of the plant was expanded again in 1982, to 176 million gallons per day, and once more in

[56] Two large (42-inch to 96-inch) diameter backbone sewers know as the North Metro Interceptor and the South Metro Interceptor, transporting sewage from the northern and southern sections of the City, respectively.
[57] Pump Station No. 1, located near the site of the old Bayside Treatment Plant, and Pump Station No. 2, located just west of Lindbergh Field airport.
[58] As initially constructed, the Point Loma Ocean Outfall was a 108-inch concrete pipe 11,450 feet long extending under the ocean from the treatment plant. In 1993, it was extended to its current length of 4.5 miles.

1987, to 240 million gallons per day. Today, the plant has the capacity to treat up to 240 million gallons of sewage per day to advanced primary levels, and is receiving an average of 175 million gallons per day.

II. FEDERAL AND STATE REGULATION

A. The Clean Water Act and Waivers.

In 1972, Congress passed the Federal Clean Water Act. The regulatory requirements are administered by the United States Environmental Protection Agency ("EPA") through the California State Water Resources Control Board ("SWRCB") and its local Regional Water Quality Control Board ("RWQCB"). The regulations of these agencies deal primarily with the quality of the effluent discharged from the City's wastewater treatment plants, the safe disposal of sewage sludge, and prevention of unauthorized discharges. One of the requirements of the Act mandated that all municipal wastewater treatment plants be upgraded to secondary treatment by 1977. The City received its first National Pollution Discharge Elimination System ("NPDES") permit for the Point Loma Wastewater Treatment Plant from the RWQCB in 1974. This permit only required treatment to primary level, insofar as the requirement for secondary treatment did not apply until 1977.

The City issued a report in 1977 that concluded that second treatment at the Point Loma Wastewater Treatment Plant was unnecessary. The report relied on the results of ocean monitoring in the vicinity of the plant that indicated there were no adverse effects on the marine environment. The report recommended pursuing an exemption from secondary treatment requirements. Through the efforts of hundreds of cities, including San Diego, Congress amended the Clean Water Act later that year to allow municipalities to apply for a waiver from secondary treatment, known as a section 301(h) waiver.

The City submitted its first waiver application in 1979. The waiver asked that the City be allowed to comply with the State Ocean Plan standards, which only required sewage be treated to "advanced" primary level. While the waiver application was pending, the City started upgrading the treatment process at the Point Loma Wastewater Treatment Plant to meet advanced primary requirements. The EPA tentatively approved the City's application in 1981. The City was directed to continue operating under the existing waiver until a public hearing could be held on the current application. At a joint hearing of the SWRCB and the EPA in 1982, it was determined that further study was needed before granting the application.[59]

The City filed a new waiver application in 1983. The new application used a higher projected discharge rate of 185 million gallons per day. This was due in part to 13 million gallons of sewage per day being diverted into the Metro System from the Tijuana River to help alleviate pollution near the border.

[59] The biggest opponent of the waiver application was Kelco Industries, who was concerned that advanced primary treatment could harm the kelp, which it harvests for commercial purposes.

In 1986, the EPA denied both the City's 1979 and 1983 waiver applications. The EPA's decision was based, in part, on what it perceived at the City's inability to stay in compliance with the 1983 revision to the State Ocean Plan standards.[60] The EPA gave the City two weeks to decide whether it was going to submit a revised waiver application. The City Council voted to submit another waiver application on November 3, 1986.[61] After public hearings on December 15, 1986 and February 17, 1987, however, the City Council changed its mind and directed the City to forgo a waiver application and proceed to implement secondary treatment at the Point Loma Wastewater Treatment Plant.[62]

B. Litigation Regarding Secondary Treatment.

The Clean Water Act set a deadline of July 1, 1988 to either have implemented secondary treatment or to have obtained a waiver. The City had accomplished neither. As a result, on July 27, 1988, the EPA sued the City for violating the Clean Water Act.[63] The Sierra Club intervened in the lawsuit in 1989.[64] The State also issued a cease and desist order to the City for failing to meet secondary treatment standards under the Clean Water Act and the bacteriological standards in the State Ocean Plan.[65]

On January 30, 1990, the City signed a proposed consent decree with the EPA and the State, committing the City to implement secondary treatment and the Point Loma Wastewater Treatment Plant. In addition, the proposed consent decree required construction of a new secondary treatment plant in the South Bay area of the City and six new water reclamation plants throughout the City, relocation of the sludge processing center off of Fiesta Island, and implementation of steps to reduce the number of sewer spills from the collection system. The estimated cost of compliance was $2.4 billion, or roughly an extra $360 per household per year through 1994.

In February and March of 1991, Judge Brewster held hearings to determine whether the proposed consent decree was in the best interest of the public. The Sierra Club opposed entry of the proposed consent decree, arguing that building a new treatment plant was unnecessary because secondary treatment standards could be met using experimental "physical-chemical" treatment methods at the existing Point Loma plant.[66] The Sierra Club also objected because the proposed consent decree did not contain water conservation measures, or provide for the distribution and actual re-use of reclaimed water generated by the proposed water reclamation plants.[67] On June 18, 1991, Judge Brewster decided to defer approval of the proposed consent

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[60] The new standards required increased solids removal and higher bacteriological standards by 1988.
[61] City Council Resolution No. R-266973.
[62] City Council meeting minutes of February 17, 1987, item no. S402.
[63] Case No. Civ. 88-1101-B (POR), United States District Court, Southern District of California.
[64] Case No. Civ. 88-1101-B (POR), Order Granting Motion to Intervene by Sierra Club, filed September 20, 1989.
[65] RWQCB Cease and Desist Order No. 87-113.
[66] Case No. Civ. 88-1101-B (POR), Order Granting Plaintiff-Intervenor Sierra Club's Motion for Attorney's Fees filed June 30, 1998, at p. 2.
[67] *Id*.

decree pending the City conducting additional investigation and testing of treatment alternatives at the Point Loma Wastewater Treatment Plant.[68]

While the proposed consent decree was still awaiting Court approval, the City Council reversed course and directed the City to renegotiate the proposed consent decree to allow the Point Loma Wastewater Treatment Plant to remain at advanced primary treatment level.[69] Consistent with this new direction, the City opposed entry of the proposed consent decree while the EPA and the State argued for approval. After thirteen days of additional evidentiary hearings, Judge Brewster rejected the proposed consent decree on March 31, 1994, as not being in the public interest.[70] Judge Brewster concluded the proposed consent decree "over-builds, wastes money and wastes water."[71]

Instead, the Court entered an Interim Order on August 26, 1994.[72] The Interim Order required the City to complete certain upgrades at the Point Loma Wastewater Treatment Plant, and to make improvements to specified sewer pipes and pump stations to help reduce sewage spills. The Interim Order also required the City to construct the North City Water Reclamation Plant, and the Metropolitan Biosolids Center to replace the sludge processing facility on Fiesta Island. Pending a final order of the Court regarding secondary treatment, the Interim Order also imposed effluent limits on solids and COD from the Point Loma Wastewater Treatment Plant.

Located near the intersection of Miramar Road and I-805, the North City Water Reclamation Plant (shown at right) went into operation on April 24, 1997. The plant was design to convert up to 30 million gallons of wastewater per day into irrigation quality water. The total cost of the plant was about $150 million. Unfortunately, the distribution system for the reclaimed water does not reach enough customers to utilize the full capacity of the plant. Much of the sewage is treated only to secondary standards and sent to the Point Loma Wastewater Treatment Plant for discharge into the ocean.

The Metropolitan Biosolids Center, located on Navy property

[68] Case No. Civ. 88-1101-B (POR), Memorandum Decision Deferring Approval of the Proposed Partial Consent Decree, filed June 18, 1991.
[69] City Council special meeting minutes of April 27, 1992, item no. 801.
[70] Case No. Civ. 88-1101-B (POR), Memorandum Decision and Order Rejecting Proposed Partial Consent Decree.
[71] *Id*. at p. 21.
[72] Case No. Civ. 88-1101-B (POR), Interim Order, filed August 26, 1994.

adjacent to the Miramar Landfill, started operation on February 20, 1998 (shown below). Sludge generated at the Point Loma Wastewater Treatment Plant is pumped to the Metropolitan Biosolids Center through a lengthy pipeline constructed solely for that purpose. The new facility allowed the City to dismantle its sludge processing facility on Fiesta Island and turn the area into parkland.

The Court entered a Stipulated Final Order in the case on December 13, 1996, requiring that the City continue to implement measures to reduce sewer spills, and to complete the projects in the Interim Order.[73] The Stipulated Final Order did not address secondary treatment at the Point Loma Wastewater Treatment Plant due to intervening federal legislation.

C. The Ocean Pollution Reduction Act

The Ocean Pollution Reduction Act ("OPRA") was enacted on October 31, 1994.[74] The legislation was drafted and supported by the City and the other parties to the 1988 litigation.[75] Sponsored by Representative Bob Filner,[76] the bill was introduced on October 5, 1994, and flew through both houses of Congress without objection. President Clinton signed the bill on Halloween.

OPRA gave the City a new, 180 day window to re-apply for a waiver from secondary treatment standards even though it had missed the previous deadline of July 1, 1988.[77] As a condition of receiving a waiver, however, the City had to construct 45 million gallons per day in reclaimed water capacity by January 1, 2010, and operate the Point Loma Wastewater Treatment Plant to remove at least 58% of the COD and 80% of the total suspended solids from the sewage prior to discharge in the ocean.[78] The City was also obligated to reduce the amount of suspended solids discharged "during the period of the modification."[79] The City resubmitted its waiver

[73] Case No. Civ. 88-1101-B (POR), Stipulated Final Order for Injunctive Relief, filed December 13, 1996.
[74] Public Law No. 103-431 (October 31, 1994), codified at 33 U.S.C. § 1311(j)(5).
[75] Case No. Civ. 88-1101-B (POR), Order Granting Plaintiff-Intervenor Sierra Club's Motion for Attorney's Fees, filed June 30, 1998, at p. 5.
[76] The bill was also co-sponsored by Representatives Randy "Duke" Cunningham and Lynn Schenk.
[77] 33 U.S.C. § 1311(j)(5)(A).
[78] 33 U.S.C. § 1311(j)(5)(B) and (C).
[79] An application under OPRA must "result in a reduction in the quantity of suspended solids discharged by the applicant into the marine environment during the period of the modification." 33 U.S.C. § 1311(j)(5)(B)(ii).

application with modifications consistent with OPRA. The application and waiver from secondary treatment requirements was granted on December 12, 1995, for a five year period.

To meet OPRA's requirement of attaining 45 million gallons per day in reclaimed water capacity, the City started construction of the South Bay Water Reclamation Plant in 1998 (shown below). Originally contemplated to only treat 7 million gallons per day, the City changed the design to increase capacity to 15 million gallons per day. The increased capacity in combination with the 30 million gallons per day available at the North City Water Reclamation Plant achieved a total of 45 million gallons per day in reclaimed water capacity, meeting the requirements of OPRA several years early.

As the deadline for filing an application to renew the waiver approached in 2000, the City sought clarification from the EPA over whether OPRA applied to the next waiver application. The City interpreted OPRA as a "one-time re-opener," meaning that all subsequent waiver applications were to be submitted under the same procedures as any other municipality. If not, then the City needed clarification on the EPA's interpretation of OPRA's provision regarding reduction of suspended solids. The existing waiver contained limits of 15,000 metric tons of solids per year for the first four years, and 13,600 metric tons in the final year of the waiver. There was some confusion as to whether a subsequent waiver under OPRA required a suspended solids limit below 13,600 metric tons in the first year and less each year thereafter, or if the total solids discharged during the subsequent waiver period simply needed to be less than the prior five year waiver period. The City needed clarification to determine what standards it needed to meet in its application.

On March 2, 2000, the City initiated litigation against the EPA in District Court, seeking a judicial interpretation as to whether OPRA applied to the next waiver application.[80] The City asked for an order extending the deadline to file the application while the question was resolved, while the EPA sought to dismiss the case. The case was transferred to Judge Brewster, who handled the 1988 litigation between the EPA and the City. On July 20, 2000, Judge Brewster granted the City's request to extend the application deadline and denied the EPA's motion to dismiss. The EPA appealed Judge Brewster's denial of the motion to dismiss.

[80] *City of San Diego v. Browner*, United States District Court Case No. 00-CV-00436-B.

The EPA prevailed in its appeal to the Ninth Circuit Court of Appeals.[81] On March 13, 2001, the Ninth Circuit ruled that Judge Brewster and the District Court did not have jurisdiction to hear the case because the EPA had not taken "final agency action" on the issue of whether OPRA applied. The Ninth Circuit reversed Judge Brewster's order, but delayed the effective date of its order for 30 days, allowing the City time to submit its waiver application.

The City applied for a second waiver on April 11, 2001. The City submitted its application assuming OPRA applied, consistent with the EPA's interpretation. On February 11, 2002, the EPA and RWQCB staffs issued a proposed modified permit granting the City's application with little change.

Pursuant to the Federal Coastal Zone Management Act of 1972, the EPA cannot issue the permit without review by the California Coastal Commission ("CCC") for a determination that the permit is consistent with the California Coastal Management Program ("CCMP"). Such a determination is known as a Consistency Certification. The CCC held a public hearing on the City's waiver application on March 5, 2002. The EPA and CCC staffs recommended the Consistency Certification be issued. However, the CCC voted to postpone its decision in order to review the testimony from the joint EPA and RWQCB hearing scheduled for March 13, 2002.

The EPA and RWQCB held a joint public hearing on March 13, 2002, after a 30 day comment period. At the end of the hearing, the public comment period was closed. On April 5, 2002, the EPA and RWQCB staffs issued their responses to the written and oral comments which continued to indicate their support for approval of the proposed permit.

The CCC reopened the hearing on the City's request for a Consistency Certification on April 8, 2002. The City, the CCC staff and the EPA all took the position that the proposed permit was consistent with the CCMP. A number of the Commissioners expressed concern that the City was not planning to modify the Point Loma Wastewater Treatment Plant to provide secondary treatment. By a vote of six to one, with five members absent, the CCC voted against its staff recommendation and objected to the Consistency Certification. No specific findings were adopted by the CCC as to how the proposed NPDES permit was inconsistent with the CCMP.

In conjunction with its vote, the CCC identified three conditions which, if agreed to by the City, could result in a favorable vote in the future. The three conditions were (1) that there be "meaningful reductions" to the permit's proposed annual mass emission limits, (2) that the ocean monitoring program prescribed by the EPA be expanded and also incorporate remote sensing, and (3) that the City commit to reusing specific quantities of reclaimed water. These conditions were reiterated in a letter of objection from the CCC to the City dated April 10, 2002. That letter also noted that findings in support of the CCC's decision would be presented to the CCC in May, and adopted at a future hearing.

On April 10, 2002, the RWQCB convened to discuss and consider the proposed permit. No additional public comment was allowed. The RWQCB acknowledged the prior action of the CCC and the fact that the EPA cannot act on the waiver until the CCC had determined

[81] *City of San Diego v. Whitman*, 242 F. 3d 1097 (9th Cir., 2001).

consistency. The RWQCB voted to grant the waiver provided the proposed NPDES permit be amended to reflect that the mass emission limit of 15,000 metric tons for each of the first four years be reduced by 6.7%, to 13,995 metric tons per year, but keeping the fifth year limit of 13,599 metric tons as proposed in the permit. The RWQCB also voted to direct its executive branch to report back on the City's actual reuse of reclaimed water annually, the City's efforts to make monitoring data readily accessible to the public, and the adequacy of the City's monitoring program, including deep ocean monitoring, with the thought of amending the permit later if the City's progress in any of these areas is considered inadequate.

On April 16, 2002, the California Environmental Protection Agency ("CEPA") issued a letter scolding the CCC for denying the City's request for a Consistency Certification. CEPA called the CCC's decision a "serious error" that exceeded its authority by touching on matters beyond the location and appearance of treatment plants. The letter concluded that the CCC's "hasty rejection of this consistency certification was clearly aimed at influencing the regional boards' permit decision rather than assuring that renewal of the waiver is consistent with the CCMP." CEPA recommended the CCC reconsider the City's request. As a result of the letter, the CCC issued the Consistency Certification on September 9, 2002.

The City appealed the RWQCB's amendment to the proposed NPDES permit that reduced the limit on suspended solids from 15,000 metric tons to 13,995 metric tons. The City argued there was no evidence in the record of the proceeding that the reduction was necessary for water quality purposes. The SWRCB agreed and granted the City's appeal on August 15, 2002.[82] The SWRCB restored the limit of 15,000 metric tons per year for the first four years of the NPDES permit. The EPA and the RWQCB then issued the NPDES permit to the City on September 13, 2002.

Even after the SWRCB decision, the litigation did not end. On October 16, 2002, the City and a coalition of environmental groups known as the San Diego Bay Council[83] ("Bay Council") filed separate petitions with the federal Environmental Appeals Board ("EAB") challenging EPA's interpretation of OPRA. Both sides were concerned that EPA's interpretation of OPRA would become binding precedent for subsequent waivers if the current NPDES permit was not challenged. The City believed OPRA no longer applied. Like the EPA, the Bay Council believed OPRA applied to all subsequent waivers, but unlike the EPA, the Bay Council also believed that the limit on suspended solids had to be reduced every year. The proceeding was stayed from November 13, 2002, to March 22, 2004, while the City and the Bay Council explored a joint resolution of their appeals.

The negotiations between the City and the Bay Council ultimately yielded a settlement. The City agreed to evaluate an improved ocean monitoring program,[84] to conduct a pilot test of biological aerated filter technology as a possible method to attain secondary treatment at the Point Loma Wastewater Treatment Plant,[85] and to study an expanded water reuse program,

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[82] SWRCB Order No. WQO 2002-0013.
[83] The coalition consists of San Diego Baykeeper, the Surfrider Foundation, and the Sierra Club.
[84] City Council Resolution No. R-298435.
[85] City Council Resolution No. R-298644.

including but not limited to recycling wastewater into potable water.[86] The Bay Council agreed to collaborate with the City in reviewing and evaluating the results of the studies. The EPA agreed to add language to the NPDES permit preserving the rights of any party to address the applicability of OPRA to the City's future NPDES permits. The EAB granted the parties' joint stipulation to withdraw the appeals on March 29, 2004.

The City's current NPDES permit expires on June 15, 2008.[87] An application for another waiver from secondary treatment standards is due in December, 2007. Whether OPRA applies to that application is still an open question, likely to be litigated again. This year, the City Council will have to decide whether to submit another waiver application, pursue secondary treatment, or both. The cost of implementing secondary treatment standards at the Point Loma Wastewater Treatment Plant is not included in the proposed wastewater rate increase.

III. HISTORY OF WASTEWATER RATES

In 1956, the City began charging residents for sewer service. Previously, sewer operations and maintenance had been paid from the City's general fund. The sewer rates approved by the City Council are set forth in the table below.[88] The first sewer rate was a variable fee based on the average monthly consumption of water in units of hundred cubic feet (1 "hcf" = 748 gallons). The City soon switched to a flat fee per month, regardless of water consumption. In 1993, the City adopted a combination of a flat (or base) fee per month plus a variable fee based on the lowest water usage during a winter month.

Date	Rate for Single Family Residences
August 2, 1956	$0.12 per hcf
July 1, 1958	$1.10 per month
April 1, 1960	$1.50 per month
January 1, 1967	$2.15 per month
June 24, 1977	$2.50 per month
July 1, 1978	$3.00 per month
November 1, 1979	$4.50 per month
July 1, 1982	$5.50 per month
July 1, 1983	$6.33 per month
March 1, 1984	$6.49 per month

[86] City Council Resolution No. R-298781.
[87] The EPA filed a Notice of Stay of Permit Terms on May 16, 2003, effectively extending the expiration date of the NPDES permit.
[88] Memorandum by Dennis Kahlie dated March 2, 1994; City Council Resolution Nos. R-256294, R-258791, R-260134, R-260807, R-263423, R-268775, R-275941, R-278769, R-280815, R-286427, R-287892, R-291210, R-295587, R-299322; City Manager's Report No. 04-112

Date	Rate for Single Family Residences	
July 1, 1984	$7.00 per month	
July 1, 1985	$8.00 per month	
July 1, 1987	$12.80 per month	
July 1, 1990	$18.50 per month	
July 1, 1991	$19.24 per month	
July 1, 1992	$20.39 per month	
	Base Fee	Variable Fee
July 1, 1993	$6.00 per month	$2.01 per hcf
October 1, 1996	$7.14 per month	$2.27 per hcf
July 1, 1997	$7.57 per month	$2.38 per hcf
March 20, 1999	$7.95 per month	$2.71 per hcf
March 1, 2000	$8.35 per month	$2.64 per hcf
March 1, 2001	$8.77 per month	$2.86 per hcf
March 1, 2002	$9.43 per month	$3.28 per hcf
March 1, 2003	$10.14 per month	$3.31 per hcf
March 1, 2004	$10.90 per month	$3.63 per hcf
October 1, 2004	$10.53 per month	$2.56 per hcf
March 1, 2005	$11.32 per month	$2.89 per hcf

In 1996, the City started adopting sewer rate increases expressed as a percentage increase in revenue, rather than specifying the actual rate for single family residences. Therefore, the base and variable fees set forth in the table from 1996 onward reflect the effect the increases approved by the City Council had on sewer rates for single family residences, and other minor adjustments.

Effective October 1, 2004, the City revised its rate structure to include a chemical oxygen demand ("COD") organics parameter in its cost allocation methodology.[89] This was a requirement of various grants and loans received by the City in the 1990s. Incorporating a COD component in the City's rate structure resulted in lower sewer fees for single family residences and a corresponding increase to other customer classes.

[89] City Manager's Report No. 04-112; City Council Resolution No. R-299322.

IV. LEGAL REQUIREMENTS OF WASTEWATER RATES

A. General Requirements.

Like water rates discussed above, sewer rates are subject to the requirements of Proposition 218. Revenue generated from sewer rates cannot exceed the cost of providing sewer service, the revenue can only be used to provide sewer service, and the fee charged to any person or parcel must be proportionate to the cost of providing the service to that parcel.

The City is subject to additional regulatory requirements as a condition of Clean Water Act grants and loans.[90] The City is required to implement a revenue program approved by the SWRCB, to ensure adequate funds for operation, maintenance, and replacement of the wastewater system.[91] Costs must be allocated among treatment parameters (flow, suspended solids, and biological oxygen demand ("BOD" or, alternatively, "chemical oxygen demand" or "COD")) in proportion to the percentage of costs that these parameters represent.[92] These parameters form the basis of the costs attributable to each type of sewer user, ultimately reflected in each user's sewer bill.

The City must also comply with State requirements found in the Porter-Cologne Water Quality Control Act of 1969. The purpose of the Porter-Cologne Act is to develop facilities to reclaim wastewater to supplement existing water supplies to meet the people's water needs. The State Department of Health Services is tasked with establishing statewide reclamation criteria to protect public health.

B. Shames Litigation.

On June 16, 2004, consumer advocate Michael Shames filed a class action lawsuit against the City alleging that the City's sewer rate structure violated Proposition 218.[93] Specifically, Shames alleges that single family residential customers were paying disproportionately high rates because the City failed to timely incorporate COD treatment parameters into its rate structure. The reasons why a COD component is necessary, and the reasons for the City's delay, are described in detail in the City Attorney's Wastewater Interim Report No. 1. The City incorporated a COD component into its rate structure effective October 1, 2004, [94] but Shames' lawsuit seeks reimbursement for past overcharges. The City's motion to dismiss the case was denied.

On December 6, 2006, the City Council approved a tentative settlement of the Shames case. If approved by the Court, the proposed settlement will refund $40 million (less plaintiff's attorney's fees) to single family residential customers over a four year period. Sewer revenues must be raised to fund the proposed settlement in order to avoid taking funds necessary for the operation and maintenance of the sewer system. The rate increase associated with the Shames

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[90] *See, eg*. SWRCB Agreement No. 01-809-550-0, Exhibit A – Scope of Work, Section 8.
[91] SWRCB Revenue Guidelines, Section 1-1 A (March 1998 Revision).
[92] *Id*. at Section 1-4 A.
[93] *Shames v. City of San Diego*, San Diego Superior Court Case No. GIC 831539.
[94] City Council Resolution No. R-299322.

settlement is set forth separately in the notice of rate increases to be mailed to customers and property owners.

C. Sewer Spills Litigation.[95]

On March 29, 2001, San Diego Baykeeper and the Surfrider Foundation (collectively, "Baykeeper") filed a lawsuit in federal court against the City seeking redress for spills from the City's sewer system under the Clean Water Act.[96] To its complaint, Baykeeper attached a 64 page list of beach closures occurring from April 1997 to March 2001, allegedly caused by sewer spills. Baykeeper asked the Court to order the City to comply with the Clean Water Act, to appoint a receiver over the Metropolitan Wastewater Department to assure compliance, and for the City to pay penalties of $27,500 per day for each violation.[97]

On July 9, 2003, the EPA filed a similar lawsuit against the City, seeking injunctive relief and penalties for past sewage spills.[98] The EPA had previously issued a Finding of Violation and Order to the City regarding sewage spills on April 5, 2002. The State, through the RWQCB, joined the fray on July 11, 2003 by filing its own lawsuit against the City over sewage spills.[99] All three cases were consolidated into one proceeding.

The City agreed to settle the litigation with the RWQCB in April, 2004. The City paid $1.2 million in penalties to the State in full settlement of all sewage spills occurring prior to October 1, 2004. The penalties were divided between cash payments and supplemental environmental projects in lieu of payments:

Recipient / Designation	Amount
SWRCB Cleanup and Abatement Fund	$200,000
To measure pollutant input to San Diego Bay from Chollas Creek	$260,000
San Diego River Conservancy	$240,000
Regional Harbor Monitoring Program	$500,000
TOTAL	$1,200,000

The litigation with the EPA and Baykeeper was stayed, with the approval of the Court, to allow the parties to negotiate a settlement. After approximately two years of court-supervised

[95] Though this litigation unrelated to the sewer rate structure, it is set forth here because the proposed settlement will have a significant impact on sewer rates.
[96] *San Diego Baykeeper, et al. v. City of San Diego*, United States District Court, Southern District of California, Case No. 01-CV-0550B.
[97] Case No. 01-CV-0550B, Complaint at pp. 24-25.
[98] *United States of America v. City of San Diego*, United States District Court, Southern District of California, Case No. 03-CV-1349K.
[99] *People v. City of San Diego*, United States District Court, Southern District of California, Case No. 03-CV-1381J.

negotiation, the City, EPA and Baykeeper tentatively agreed on a settlement, referred as a final consent decree. By that time, however, the City was under investigation by the Securities Exchange Commission for inadequate disclosure of the pension fund deficit, effectively preventing the City from obtaining public financing for sewer system improvements.

Unable to commit to the capital improvements required by the proposed final consent decree without access to public financing, the parties agreed to submit a partial consent decree to the Court for approval. The partial consent decree was a one year commitment by the City to implement measures to reduce sewage spills (the same measures in the proposed final consent decree) and to complete specified capital improvement projects that were within the City's budget at that time.

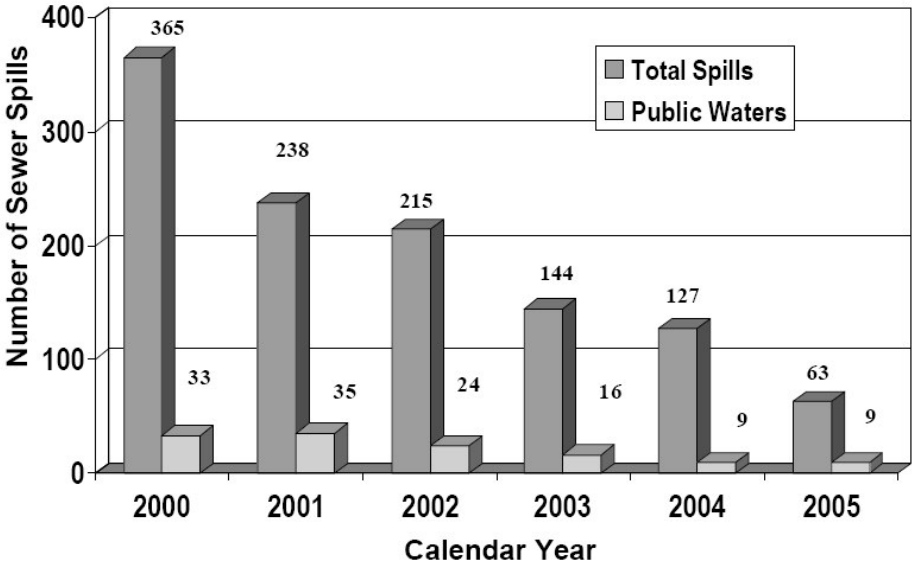
The measures in the partial consent decree intended to reduce sewer spills included:

- Having City crews available 24/7 to respond to sewage spills
- Operating a flow metering alarm system in the sewer system to detect and notify the City of sewage spills
- Cleaning at least 1,500 miles of sewer pipe each year
- Inspecting at least 40 miles of sewer pipe each year using closed-circuit television
- Educating the public that fats, oil, and grease can cause sewage spills if regularly disposed of into the sewer system
- Studying sewers located in canyons for possible relocation out of environmentally sensitive areas and conduct annual visual inspections
- Securing and inspect sewer manholes to prevent vandalism

The capital improvement projects in the partial consent decree included:

- Upgrades to 9 sewer pump stations
- Completion of two trunk sewer projects
- Repair or replacement of 30 miles of sewer lines

The City started implementing measures to reduce spills in 2002, when the EPA issued an administrative order to the City to take action to reduce sewage spills. The chart below provided by the Wastewater Department shows the number of sewage spills has declined since these measures were implemented.



The partial consent decree expired on June 30, 2006. The City anticipated being able to obtain financing for capital improvement projects by that date and to enter into the final consent decree. The City completed the work required by the partial consent decree, but still could not obtain financing due to the ongoing SEC investigation and the lack of audited financial reports.

The City, EPA, and Baykeeper agreed to enter into a second partial consent decree pending an improvement in the City's financial situation. The second partial consent decree mirrors the first, requiring the City to continue to implement the measures to reduce sewage spills, and to repair or replace an additional 30 miles of sewer pipe, including two more trunk sewers. The second partial consent decree expires on June 30, 2007.

The Court and the other parties have indicated the City must be in a position to enter into the final consent decree and settle the litigation prior to June 30, 2007. The final consent decree obligates the City to continue the same measures to reduce sewage spills, to upgrade numerous sewer pump stations, and to repair or replace an additional 250 miles of sewer pipe by July 1, 2013. The cost to comply with the final consent decree is roughly estimated to be $50 million per year for operations and maintenance, and $163 million per year in capital improvement projects. If the City is not prepared to enter into the final consent decree by June 30, 2007, the stay of litigation will likely be lifted and the case will proceed to trial.

V. WASTEWATER CAPITAL IMPROVEMENT PROGRAM

The City conducts its wastewater facility planning based on a ten year "rolling" capital improvement program ("CIP").[100] The City is obligated to maintain the wastewater system in

[100] A description of the projects set forth in this section will be made available as a separate exhibit, courtesy of the Metropolitan Wastewater Department.

good repair and working order at all times.[101] Failure to do so risks immediate repayment of the entire amount of outstanding sewer revenue bonds.[102]

Many sewer facilities require upgrades or repair an ongoing basis as the need arises. These are classified as "annual allocations." There may be several separate projects within each annual allocation, with the most critical projects to be initiated first. The information regarding the annual allocations in the table below was compiled with the assistance of the Metropolitan Wastewater Department. The budget information is provided for the four year period covered by the proposed sewer rate increase, and for the ten year rolling CIP budget. Nearly all the annual allocation funds are forecast to be spent on sewer pipeline rehabilitation and replacement (highlighted in the table below), consistent with the proposed final consent decree in the sewer spills litigation described above.

CIP #	CIP TITLE (ANNUAL ALLOCATIONS)	BUDGET FY08-FY11	BUDGET FY08-FY17
40-933.0	MWWD TRUNK SEWERS	$12,473,294	$36,669,320
41-926.0	METROPOLITAN SYSTEM PUMP STATIONS	$1,935,631	$4,466,275
41-927.0	PS 64, 65, PENASQUITOS & E. MISSION GORGE	$1,826,170	$4,344,020
42-913.0	METRO BIOSOLIDS CENTER	$2,919,844	$8,183,581
42-926.0	NORTH CITY WATER RECLAMATION PLANT	$1,745,037	$1,859,888
44-001.0	SEWER MAIN REPLACEMENTS	$140,851,400	$393,255,259
45-932.0	SOUTH BAY WATER RECLAMATION PLANT	$741,303	$2,731,228
45-956.0	METRO OPERATIONS CENTER	$528,373	$1,535,036
45-966.0	METRO FACILITIES CONTROL SYSTEM UPGRADE	$11,129,150	$13,205,547
45-975.0	DEVELOPER PROJECTS	$2,296,487	$6,492,903
46-050.0	PIPELINE REHABILITATION	$105,184,822	$226,548,788
46-106.0	SEWER PUMP STATION RESTORATIONS	$7,997,374	$7,997,374
46-119.0	PT. LOMA TREATMENT PLANT & RELATED FACILITIES	$3,223,272	$12,638,935
46-194.0	TRUNK SEWER REHABILITATIONS	$72,697,326	$188,561,801
46-206.0	ACCELERATED PROJECTS	$2,224,973	$2,224,973
46-505.0	UNSCHEDULED PROJECTS	$4,592,976	$12,985,806
NEW	MUNI FACILITIES CONTROL SYSTEMS UPGRADE	$749,858	$1,529,709

[101] Master Installment Purchase Agreement between the City of San Diego and Public Facilities Financing Authority of the City of San Diego dated September 1, 1993, ("Sewer Bond Covenants"), § 6.07.
[102] Sewer Bond Covenants, § 8.01.

Other sewer projects are tracked individually. These projects are improvements specifically identified in the CIP program as at least starting the design phase in the next ten years.

CIP #	CIP TITLE	PROJECT BUDGET	ANTICIPATED COMPLETION
40-930.0	OTAY MESA TRUNK SEWER	$28,687,249	DECEMBER 2009
40-931.0	SOUTH MISSION VALLEY TRUNK SEWER	$14,776,240	MAY 2010
41-929.0	PUMP STATION UPGRADES	$20,639,463	JUNE 2013
41-933.0	PS 2 SCREENS	$10,985,694	JUNE 2019
41-936.0	PS 64 ELECTRICAL UPGRADE	$239,200	JUNE 2008
41-939.0	PS 84 UPGRADE & PS 62 ABANDONMENT	$2,054,080	TBD
41-940.0	PS 64 FIBER OPTIC NETWORK	$1,484,565	JUNE 2009
41-942.0	NCWRP - SLUDGE PUMP STATION UPGRADE	$467,717	JULY 2010
41-944.0	NCWRP - EFFLUENT PUMP STATION UPGRADE	$865,151	AUGUST 2009
42-933.0	NCWRP - ULTRAFILTRATION AND EDR UPGRADE	$11,130,215	JULY 2015
45-915.0	PS 2 ONSITE STANDBY POWER	$9,193,012	JUNE 2009
45-982.0	MBC CENTRATE COLLECTION UPGRADES	$2,929,489	JULY 2015
45-940.0	WET WEATHER STORAGE FACILITY	$124,717,160	JUNE 2019
45-943.0	POINT LOMA - GRIT PROCESSING IMPROVEMENTS	$46,188,399	TBD
45-961.0	SOUTH METRO SEWER REHAB., PHASE IIIB	$11,407,727	JUNE 2014
45-964.0	NORTH CITY RAW SLUDGE / POINT LOMA CATHODIC PROTECTION	$552,499	JANUARY 2008
45-965.0	EM&TS LABORATORY BOAT DOCK	$2,434,253	TBD
45-981.0	MBC STANDBY CENTRIFUGE FEED FACILITIES	$1,676,852	MAY 2010
45-983.0	MBC DEWATERING CENTRIFUGE REPLACEMENT	$5,084,815	FEBRUARY 2013
45-984.0	MBC BIOSOLIDS STORAGE SILOS	$9,223,925	JANUARY 2011
45-988.0	MBC WASTEWATER FORCEMAIN EXTENSION	$1,345,168	SEPTEMBER 2009
45-989.0	MBC ODOR CONTROL FACILITY UPGRADES	$5,622,908	FEBRUARY 2010
45-990.0	MBC STORM DRAINAGE UPGRADES	$4,459,637	OCTOBER 2014
45-991.0	MBC SWITCHGEAR RECONFIGURATION	$2,236,066	MARCH 2010
46-169.0	EAST MISSION GORGE FORCE MAIN REHAB.	$6,934,363	JUNE 2012
46-195.6	EAST POINT LOMA TRUNK SEWER	$21,028,998	APRIL 2010
46-195.8	MIRAMAR ROAD TRUNK SEWER	$5,173,965	NOVEMBER 2007
46-196.6	BALBOA TRUNK SEWER	$11,942,780	OCTOBER 2010
46-196.9	MONTEZUMA TRUNK SEWER	$3,525,324	AUGUST 2011
46-197.6	USIU TRUNK SEWER	$7,116,756	AUGUST 2011

CIP #	CIP TITLE	PROJECT BUDGET	ANTICIPATED COMPLETION
46-197.9	LAKE MURRAY IN CANYON TRUNK SEWER	$15,611,395	APRIL 2010
46-205.0	HARBOR DRIVE TRUNK SEWER	$23,138,826	NOVEMBER 2013
46-602.6	PS 79 UPGRADE	$5,202,463	JUNE 2008

VI. PROPOSED WASTEWATER RATE ADJUSTMENTS

In 2001, the City Council approved four incremental sewer rate increases of 7.5% through March 1, 2005. At that time, the City projected additional rate increases would be necessary through the year 2010.[103] The projected rate increases at that time were:

2006	2007	2008	2009	2010
6.5%	5%	5%	5%	5%

Based on the City's current projected cost to provide sewer services while meeting the requirements of the proposed final consent decree and the Shames litigation, the City proposes incremental sewer rate increases over the next four years, applied to all customer classes:

Rate Component	May 1, 2007	May 1, 2008	May 1, 2009	May 1, 2010
General	8.75%	8.75%	7.00%	7.00%
Shames Settlement	3.05%	3.05%	0.60%	0.50%
Total	11.80%	11.80%	7.60%	7.50%

This proposed revenue increase, exclusive of the proposed Shames settlement, appears consistent with the revenue projections of 2001 considering that the proposed rate increase for 2006 was not imposed and especially in light of the additional costs associated with the proposed final consent decree. The City retained the services of Berryman & Henigar, Inc. to develop this rate case based on the financing plan developed by the City. The accounting firm of Mayer Hoffman McCann reviewed the financing plan and indicated the proposed rates were reasonably supported.[104]

The apportionment of sewer rates among sewer customers is addressed by the Wastewater Cost of Service Rate Study conducted by Raftelis Financial Consultants. This report will be presented to the City Council on January 8, 2006 and is also available on the Metropolitan Wastewater Department's website. The purpose of the report is to ensure that the cost of providing sewer service is fairly apportioned among all customers based on their relative

[103] City Manager's Report No. 01-209.
[104] Report to City Council No. 07-006; *Independent Accountant's Report on Agreed-Upon Procedures Applied to Proposed Wastewater Rate Increases*, Mayer Hoffman McCann P.C., November 17, 2006.

load or burden on the system; the proportionality requirement of Proposition 218. The study also concludes that the City's proposed rate structure complies with State revenue program guidelines, as required by the City's outstanding Clean Water Act grants and loans.[105]

The study recommends some changes to the City's sewer rate structure that could have a significant impact on customers' sewer bills in addition to the rate increase proposed above. Current rates assume that all the water used in the winter month of lowest usage is a good measure of the volume of wastewater generated by a home on a monthly basis,[106] as that is generally when there is the least use of water outdoors. This figure is also capped at 14 hcf because those who use more water generally use it for irrigation or other outdoor use. The study recommends, consistent with guidance from the SWRCB, that the cap be raised to 20 hcf and the return to sewer assumption be changed to 95% of water used in the winter month of lowest usage. These recommended adjustments significantly affect the rates of single family residential customers, as shown in Table 8-9 of the study:

Table 8-9: Sample SFR Rate Impacts

Metered Water (hcf)	Existing Base $/bill	Existing Rate $/hcf of water	Existing Bill $	Proposed Base $/bill	Proposed Rate $/hcf of water	Proposed Bill $	Change %
0	11.32	2.889	11.32	12.31	2.890	12.31	8.7%
2			17.10			18.09	5.8%
4			22.88			23.87	4.3%
6			28.65			29.65	3.5%
8			34.43			35.43	2.9%
9*			37.32			38.32	2.7%
10			40.21			41.21	2.5%
20			51.77			70.11	35.4%
30			51.77			70.11	35.4%
50			51.77			70.11	35.4%

* Average SFR Customer

Customers who use 20 hcf of water or more per month will see a 35% increase in their sewer bill. This adjustment, however, is mandated by the purpose of Proposition 218 of having each customer pay his or her proportionate share of the cost of sewer service. Other single family residential customers will realize some relief from the proposed sewer rate increase because they use less water.

The study also uses updated costs and loadings of treatment parameters using current data. This results in a significant increase to the COD component of the rate structure, which primarily affects commercial and industrial users, as shown by the study:

[105] 2006 Wastewater Cost of Service Rate Study, § 6.1.

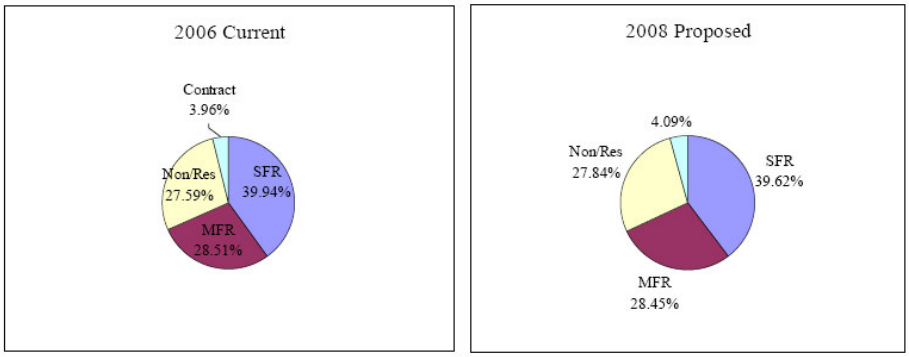
[106] The courts have recognized that sewer service charges based upon water consumption, such as is used by the City, are valid. *Apartment Association of Los Angeles County, Inc. v. City of Los Angeles*, 75 Cal. App. 3d 13, 17-18 (1977).

Table 8-11: Sample Commercial/Industrial Rate Impacts

		Current	Proposed	Change
Base	$ per account	$11.32	$12.31	8.7%
Flow	$/hcf of wwater	$2.7534	$3.0257	9.9%
TSS	$/lb	$0.4294	$0.4431	3.2%
COD	$/lb	$0.1544	$0.1801	16.6%

Overall, however, the study concludes that the revenue received from the various customer classes remains almost the same as the current rate structure:

Figure 8-1 Relative Revenue Generation Under Current and Proposed Rates



This confirms that the proposed revenue increase is affecting all customer classes proportionately, consistent with the requirements of Proposition 218.

It is important to note that additional rate increases, not being proposed now, will likely be necessary in years 2011 and 2012 to complete the capital improvement projects required by the proposed final consent decree. The proposed rate adjustments are for four years, while the final consent decree lasts for six years. Historically, the City has proposed rate increases in four year increments because beyond that time it becomes difficult to forecast what the sewer system costs may be. As noted above in the discussion of water rates, construction costs have increased dramatically over the last few years, and have become difficult to predict. By 2011, though, it is possible that additional rate increases will be offset in part by the expiration of the proposed rate increase associated with the Shames settlement, which also lasts four years.

CONCLUSION

On Friday, January 5, 2007, a 12-inch cast iron water main burst in downtown San Diego, closing down part of "A" Street starting at Fourth Street and part of Fifth Street at "B" Street.[107] The water flooded the underground parking lot of the Bank of America Plaza building on B Street. (*Id.*) San Diego Water Department crews were forced to shut the water off and dig a 15 by 6 foot hole in the road to get to the pipe, which was installed in 1951. (*Id.*) This one water main break disrupted traffic along two busy downtown streets, left businesses without water service for hours and caused the central branch of a major bank to close due to water damage. Despite the quick response and hard work of Water Department crews, this break caused serious problems for morning commuters.

A similar pipe failure on Monday, January 1, 2007 closed a lane of I-5 for almost two days. On Christmas Day the City experienced six water main breaks, five of which were due to failures in old cast iron pipes. Over the past five years the City has endured more than 600 water main breaks and 633 sewer line breaks.

These recent events are representative of the problems the City is facing with its deteriorating infrastructure. The images of repeated infrastructure failures witnessed by San Diegans in local news reports over the past several months will become commonplace if the proposed rate increases are not approved.

The answer to San Diego's infrastructure problems is clear. To be "America's Finest City," the City of San Diego must invest in its infrastructure to provide San Diegans with safe, reliable water and sewer service that will meet state and federal DHS and EPA mandates. This shared goal can only be achieved by approving the proposed adjustments in water and sewer rates that will fully fund the City's Capital Improvements Program. The water and wastewater cost of service studies propose rate structures that comply with legal requirements and State guidelines. Proposition 218 prohibits the City from using the revenue for anything but water and sewer services. The City must act now to repair our infrastructure or continue to face disrupted utility service, endless litigation, potential fines and penalties from regulatory agencies, and "band-aid" repairs that do little to solve the problem.

[107] Union-Tribune, 01/05/07, *Water main bursts in downtown, closing lanes.*