AMENDMENTS TO THE INDENTURE

The Third Supplement, pursuant to which the 2010 Bonds were issued, includes certain amendments to the Indenture which will become effective upon the earlier to occur of: (i) the first date upon which all of the Outstanding 2003 Bonds and 2007 Bonds have been paid or discharged in accordance with their terms and shall no longer be Outstanding for purposes of the Indenture, or (ii) the first date upon which the City has filed with the Trustee the written consents to the amendments to the Indenture set forth in the Third Supplement of (a) each Credit Provider and the written consent of the Owners of a majority in aggregate amount of Bond Obligation of the Bonds then Outstanding if such Bonds are not secured by a Credit Facility, and (b) the providers of any interest rate swap agreements and any standby bond purchase agreements, other liquidity facilities or other agreements relating to such Bond Obligation then Outstanding to the extent the consent thereof shall be required by the terms of such interest rate swap agreements and any standby bond purchase agreements, other liquidity facilities or other agreements.

As modified, the term "Debt Service" shall mean the amount of principal and interest becoming due and payable on all Bonds and parity Debt; provided, however, that for the purposes of computing Debt Service:

(a) Excluded Principal Payments shall be excluded from such calculation, and Assumed Debt Service shall be included in such calculation;

(b) if the Bonds or Parity Debt are Variable Rate Indebtedness, the interest rate thereon for periods when the actual interest rate cannot yet be determined will be assumed to be equal to the rate that is ninety percent (90%) of the average RBI during the twelve (12) calendar month period immediately preceding the date in which the calculation is made (the "assumed RBI-based rate"');

(c) principal and interest payments on Bonds and Parity Debt will be excluded to the extent such payments are to be paid from amounts on deposit with the Trustee or another fiduciary in escrow specifically therefor and to the extent that such interest payments are to be paid from the proceeds of Bonds or Parity Debt held by the Trustee or another fiduciary as capitalized interest;

(d) in determining the principal amount, payment will (unless a different subsection of this definition applies for purposes of determining principal maturities or amortization) be assumed to be made in accordance with any amortization schedule established for such debt, including any mandatory sinking fund payments or any scheduled redemption or payment of Bonds or Parity Debt on the basis of Accreted Value, and for such purpose, the redemption payment or payment of Accreted Value will be deemed a principal payment and interest that is compounded and paid as Accreted Value will be deemed due on the scheduled redemption or payment date of such Capital Appreciation Indebtedness;

(e) if any interest rate swap agreement is in effect with respect to, and is payable on a parity with, the Bonds or Parity Debt to which it relates, no amounts payable under such interest rate swap agreement will be included in the calculation of Debt Service unless the sum of (i) interest payable on such Bonds or Parity Debt, plus (ii) amounts payable by the City under such interest rate swap agreement, less (iii) amounts receivable by the City under such interest rate swap agreement are greater than the interest payable on the Bonds or Parity Debt to which it relates, then, in such instance, the amount of such payments to be made that exceed the interest to be paid on the Bonds or Parity Debt will be included in such calculation. For such purposes, any

variable interest rate payable by the City with respect to a Series of Bonds and swapped to a fixed rate under any such interest rate swap agreement will be assumed to be equal to the assumed RBI-based rate;

(f) if any Bonds or Parity Debt include an option or an obligation to tender all or a portion of such Bonds or Parity Debt to the City, the Trustee or another fiduciary or agent and require that such Bonds or Parity Debt or portion thereof be purchased if properly presented, then for purposes of determining the amounts of principal and interest due, the options or obligations to tender will be treated as a principal maturity occurring on the first date on which holders or owners thereof may or are required to tender, except that any such option or obligation to tender will be ignored and not treated as a principal maturity, if (1) such Bonds or Parity Debt are rated in one of the two highest long-term Rating Categories by Moody's or by Standard & Poor's or such Bonds or Parity Debt are rated in the highest short-term note or commercial paper Rating Categories by Moody's or by Standard & Poor's, and (2) funds for the purchase price are to be provided by a letter of credit or standby bond purchase agreement and

(g) if interest on any Bonds or Parity Debt is reasonably anticipated to be reimbursed to the City by the United States of America pursuant to Section 54AA of the Code, or any future similar program, then interest payments with respect to such Bonds or Parity Debt shall be reduced by the amount of such interest reasonably anticipated to be paid or reimbursed by the United States of America.

As modified, the term "Other Water Revenues" shall mean all revenues from rates, fees and charges for providing water service to persons and real property and all other fees, rents and charges and other revenues derived by the City from the ownership, operation, use or service of the Water System, including contributions in aid of construction, but not including the CIC Revenues; provided, however, there shall be excluded therefrom any amounts reimbursed to the City by the United States of America pursuant to Section 54AA of the Code or any future similar program.

PASADENA WATER AND POWER

Organization and Management

The City is a charter city of the State. Under the provisions of the California Constitution and Article XIV of the Charter, the City owns and operates both water and electric public utilities for the benefit of its residential and business community. PWP is under the management and control of the City Manager, subject to the powers and duties vested in the City Council, and is supervised by the General Manager who is responsible for design, construction, maintenance and operation of the water and electric utilities. PWP is responsible for the Water System and the City's electric system (the "Electric System").

In addition to the Water System and the Electric System divisions, PWP is organized into five separate business units. This structure allows for a higher level of accountability as well as the creation of individual cost centers and profit centers. This information is used for tracking costs and supplying detailed information in rate design decisions. These business units are briefly described as follows:

General Manager's Office-Customer Relations & Legislative Business Unit – This Unit is part of the General Manager's Office and is responsible for customer relations, regulatory affairs, and strategic planning and long-term resources. This Unit is also responsible for environmental and legislative matters impacting the utility.

Finance, Administration and Customer Service Business Unit – This Unit develops and executes PWP's overall financial strategy and ensures its financial integrity. This Unit is responsible for the financial resources of PWP and for providing relevant information to the operating units for decision making purposes. This Unit plans and oversees the financial aspects, administrative support functions and all cross-functional operations and systems for PWP. The responsibilities of this Unit include the operating budget, capital budget and financing, financial analysis and planning, financial management, administration, billing, call center, meter reading and customer care services, risk management, information systems and technology and materials management.

Power Supply Business Unit – This Unit is responsible for effectively managing PWP's energy portfolio, including power generation, long-term power contracts, short-term electric energy and ancillary services transactions and natural gas procurement to provide competitively-priced energy to PWP's electric customers. This Unit is also responsible for energy scheduling and load dispatch operations to ensure reliable delivery of electricity.

Power Delivery Business Unit – This Unit is responsible for the operation and maintenance of the local power distribution system to provide the safe and reliable delivery of electricity, and provides engineering and construction management services of the local power distribution and is responsible for implementing the Power Master Plan. This Unit is also responsible for the operations and maintenance of the City's fiber optic network.

Water Delivery Business Unit – This Unit is responsible for the procurement, production and delivery of water. This Unit operates and maintains the local water supply resources and distribution system.

The following are biographical summaries of PWP's senior management:

PHYLLIS E. CURRIE, General Manager. Ms. Currie joined PWP in 2001 as General Manager. She previously worked for the City of Los Angeles for 32 years in various capacities. Prior to coming to PWP, she was, and had been for seven years, Chief Financial Officer for the Los Angeles Department of Water and Power ("LADWP") where she managed its financial affairs, including LADWP's joint ventures and partnerships, such as the Southern California Public Power Authority (SCPPA) and the Intermountain Power Agency (IPA) in Utah. She led the development of financial strategies to position LADWP to compete in a deregulated industry. From 1984 to 1992, she was Assistant City Administrative Officer overseeing development of the annual operating and capital budgets, including debt finance. Ms. Currie earned a bachelor of arts degree in Political Science and a master's degree in Business Administration from the University of California at Los Angeles. She also completed the Program for Senior Executives in State and Local Government at the John F. Kennedy School of Government at Harvard University.

ERIC KLINKNER, Assistant General Manager. Mr. Klinkner has been with PWP since 1995. He served as PWP's manager of power resources and Business Unit Director for Power Supply and was appointed to his present position in August 2004. In his current position, he is responsible for regulatory affairs, strategic planning and long-term resource and environmental issues. Mr. Klinkner is also responsible for legislative issues impacting PWP. Mr. Klinkner previously worked at LADWP where he started in power resource planning. He has a master's degree in mechanical engineering from California State University-Northridge and is a state registered professional engineer.

SHARI M. THOMAS, Assistant General Manager for Finance, Administration and Customer Service. Ms. Thomas joined PWP in January 2006. She began her career with the City of Pasadena in 2002 as the Deputy Director of Finance. She previously worked for the City of Riverside for nearly 15

years in various financial positions. Ms. Thomas is currently responsible for financial planning and budgeting, cost of service analysis and rate setting, information technology for PWP and customer service. She completed her bachelor of science degree with majors in Accounting and Finance in Minnesota and has also completed the University of Wisconsin's Advanced Governmental Finance Institute.

GURCHARAN BAWA, Assistant General Manager for Power Supply. Mr. Bawa has been with Pasadena Water and Power for 17 years working in the Power Production field managing regulatory and environmental issues. He most recently has been responsible for evaluating renewable energy resources and incorporating these assets into Pasadena's overall energy resource portfolio. He received his Mechanical Engineering degree from S.V.R. College of Engineering and Technology, Surat, India. He is a licensed Professional Engineer in the State of California.

JOE AWAD, Assistant General Manager for Power Delivery. Mr. Awad joined PWP in July 1998 as the Customer Service Manager. He is currently responsible for managing the power engineering program for capital improvement and maintenance programs at PWP. He worked for 18 years for LADWP in engineering, marketing and customer service functions. Mr. Awad obtained his master's degree in Mechanical Engineering from the University of Michigan and is a Certified Professional Engineer in the State of California.

SHAN KWAN, Assistant General Manager for Water Delivery. Mr. Kwan has been with PWP since 1985. Prior to his appointment as Assistant General Manager for Water Delivery, Mr. Kwan was a principal engineer in the Water System. He worked in water distribution, plant and facilities, quality and supply and resource planning. Prior to his employment with PWP, he was a construction inspector for Caltrans. Mr. Kwan holds a bachelor's degree in civil engineering from UCLA and a master's degree in business administration from Claremont Graduate University.

Municipal Services Committee

In 1997, the City Council approved an ordinance creating a standing committee of the City Council known as the Deregulation Committee. In 2001, the responsibilities of the Deregulation Committee were expanded to include other City enterprise services and the Deregulation Committee was re-named the Municipal Services Committee. The purpose of the Municipal Services Committee is to aid the City Council in addressing the multidimensional issues associated with utility deregulation, both electric and water. The Municipal Services Committee provides oversight and input to aid the City administration in focusing its efforts to present clear, cogent recommendations regarding all aspects of deregulation, drawing on the perspective of City management, labor, the community and other interested parties. In addition, it provides a forum to air concerns and viewpoints regarding deregulation, works directly with consultants and City staff to achieve City Council objectives, and serves as the workshop forum for deregulation issues. The Municipal Services Committee is currently composed of two members of the City Council and the Mayor.

THE WATER SYSTEM

General

The Water System has been distributing water to the City's customers since 1912. The area served by the Water System encompasses approximately 26.2 square miles, 3.2 square miles of which lie outside of the incorporated City boundary. Of the total 38,067 water meters, 31,622 meters, or 83.1%, are within the City limits and an additional 6,445 meters, or 16.9%, are outside the City limits. In Fiscal Year 2011, the Water System provided water service to a total population of approximately 161,259 people.

During this period, water sales within the City limits were about 23,725 acre-feet, or 86.3%, while approximately 3,752 acre-feet, or 13.7% of water was sold to customers located outside the City limits. (An acre-foot is the amount of water that will cover one acre to a depth of one foot and equals approximately 326,000 gallons.)

The major facilities of the Water System consist of: (i) 16 groundwater wells (of which eight are active) with a production capacity of 40,000 acre-feet per year, (ii) five imported water connections on the Metropolitan Water District Upper Feeder, (iii) 110 million gallons of treated water storage capacity in 14 storage reservoirs (including the 50 million gallon Morris Jones Reservoir), (iv) 19 booster pumping stations supplying 23 different pressure zones, (v) 17 chlorination stations, (vi) 30 pressure reducing stations, and (vii) approximately 500 miles of transmission and distribution pipelines. Most of the Water System was installed between 1912 and 1965. The vast majority of these pipelines are unlined cast iron pipelines.

Each year, the City Council approves a five-year capital improvement program for the Water System. See "– Capital Improvement Program" below.

The peak water sales month for Fiscal Year 2011 occurred in September 2010, when 3,179 acre-feet or 1,036 million gallons were sold, while March 2011 was the low sales month for the Fiscal Year, when only 1,656 acre-feet or 540 million gallons were sold. The following table sets forth statistical information relating to the Water System during the Fiscal Years shown.

TABLE 2
WATER STATISTICS

	Fiscal Year Ended June 30,				
	2007	**2008**	**2009**	**2010**	**2011[1]**
Population Served Inside City Limits	147,262	148,126	150,185	151,576	138,915
Population Served Outside City Limits	23,687	23,826	24,157	24,381	22,344
Total Population Served	170,949	171,952	174,342	175,957	161,259
Rainfall in inches (October to September)	6.24	20.77	16.09	25.11	28.36
Supply in Acre-Feet					
From MWD Connections	25,309	25,505	22,662	19,721	18,965
From Wells	13,664	11,674	11,867	10,581	10,968
Average Supply	38,973	37,179	34,529	30,302	29,933
Peak Day Distribution (Million Gallons)	47.69	52.19	43.23	39.11	43.20
Average Daily Distribution (Million Gallons)	34.80	33.19	30.81	27.04	26.70

[1] Population data reflects incorporation of 2010 census benchmark. City estimates are produced using the Housing Unit Method (HUM), and are then raked to be consistent with the state and county estimates. Through the raking process, city and unincorporated area estimates are aligned with the more robust state and county estimating models that employ multiple data sets available only at the higher geographic levels. The HUM estimates total and occupied housing units, household size, household population, and group quarters population. Housing units are estimated by adding new construction and annexations; subtracting demolitions and conversions from the 2010 benchmark or a prior year's estimate. The 2010 population estimate for the City based on the 2010 census benchmark would be 136,769.
Source: Pasadena Water and Power Department.

Water Production

The area served by the Water System receives its water supply from three sources; (i) Raymond Basin surface water, (ii) Raymond Basin groundwater wells and (iii) imported water. The sole source of PWP's imported water is The Metropolitan Water District of Southern California ("MWD").

During Fiscal Year 2011, PWP purchased approximately 65% of its water from MWD. It pumped approximately 35% from its wells. The Water System has adequate production and firm purchase capacity to meet its customers' needs. The following table illustrates the total water pumped from Water System wells and the amount of water purchased during the five Fiscal Years shown.

TABLE 3
ANNUAL WATER PRODUCTION
(acre-feet)

	Fiscal Year Ended June 30,				
	2007	**2008**	**2009**	**2010**	**2011**
Purchased from MWD	25,309	25,505	22,662	19,721	18,965
Percentage of Total Supply	64.9%	68.6%	65.6%	65.1%	63.4%
From Water System Wells	13,664	11,674	11,867	10,581	10,968
Percentage of Total Supply	35.1%	31.4%	34.4%	34.9%	36.6%
Total Production	38,973	37,179	34,529	30,302	29,933

Source: Pasadena Water and Power Department.

Current Water Supply

As noted above, there are three existing sources from which PWP obtains water: Raymond Basin groundwater, Raymond Basin surface water, and imported water from MWD. The following discussion details each of these sources.

Raymond Basin

Located in the eastern portion of Los Angeles County, the Raymond Groundwater Basin (the "Raymond Basin") is an alluvial valley that is underlain by deposits of gravel, sand, silt and clay. The Raymond Basin is approximately 40 square miles in area. The basin is bounded on the north by the San Gabriel Mountains, on the south and east by the San Gabriel Valley and on the west by the San Rafael Hills. The San Gabriel Mountains rise to over 10,000 feet in elevation north of the Raymond Basin. The Raymond Basin Management Board acts as the Watermaster. PWP currently utilizes two water supplies within the Raymond Basin. The first is Raymond Basin groundwater, which is pumped directly into the distribution system, and the second is local surface water, which is diverted and spread for groundwater pumping credits.

Raymond Basin Groundwater. Over the last 20 years, Raymond Basin groundwater has accounted for approximately 40% of PWP's total water production. There are currently 16 groundwater production wells (of which eight are active and in production) that can pump water into the PWP distribution system up to the decreed right of 12,807 acre-feet/year. Due to artificial recharge of groundwater by surface water along the Arroyo Seco and at the Eaton Canyon spreading grounds, PWP has increased its annual groundwater extraction rights by an average of 1,900 acre-feet/year since 2000.

The diversion rights and the recapture rights described above are set forth in the Raymond Basin Judgment (the "Judgment"), which adjudicated the groundwater rights in the Raymond Basin.

On September 23, 1937, in an effort to alleviate overdraft conditions in the Raymond Basin, the City initiated proceedings in Superior Court against Alhambra and 29 other major Raymond Basin water users. The result of this suit – the Raymond Basin Judgment – was signed on December 23, 1944. With

this Judgment, the Raymond Basin became the first adjudicated groundwater basin in California. In the Judgment, each pumper is assigned a "present unadjusted right" corresponding to the average amount of water that they pumped in the five years prior to the City's suit. The City's "present unadjusted right" is 12,946 acre-feet/year. Each pumper's "present unadjusted right" is scaled down to create the "decreed right" such that the sum of all pumpers' decreed rights is equal to the estimated safe yield of the basin. In the original Judgment, the safe yield was determined to be 21,900 acre-feet for the entire Raymond Basin. However, according to the first modification of the Judgment on April 29, 1955, the safe yield was increased to 5,290 acre-feet/year in the Eastern Unit and 25,480 acre-feet/year in the Western Unit.

Based on the new safe yield, the City's decreed right was calculated to be 12,807 acre-feet/year from the Western Unit. The City has no water rights in the Eastern Unit. According to the Judgment, each pumper may carry over up to 10% of its unused decreed right from one year to the next. Similarly, each pumper may overextract up to 10% of its decreed right in any given year, provided that this over extraction is made up the following year. The Judgment also limits the capacity of water that may be diverted by Raymond Basin water users from any source contributing groundwater to the Raymond Basin. The City may divert a maximum instantaneous amount of 25.00 cubic feet per second ("cfs") from the Arroyo Seco (including Millard Canyon) as well as a maximum of 8.90 cfs from Eaton Canyon. On January 17, 1974, the second modification to the Judgment was signed. This modification allowed for the spreading of canyon diversions for later recapture, subject to various conditions, including but not limited to the use of a metering device to measure the amount of water diverted and the continuing jurisdiction of the court. Additional costs incurred by the Watermaster in connection with monitoring spreading and recapture are divided proportionally among those diverting water for spreading and recapture. On March 26, 1984, the Judgment was modified and restated, however, the City's entitlements were not adjusted.

The sources of groundwater in Raymond Basin include: (1) percolation of precipitation, (2) percolation of applied water from irrigation, other return flows, and cesspools, (3) subsurface inflow (underflow from adjacent groundwater basins and bedrock areas), (4) artificial recharge via surface water spreading and (5) percolation of water from septic tanks. Currently, the Raymond Basin contains about 1,000,000 acre-feet of groundwater in storage. The general direction of groundwater movement appears to have remained relatively constant since the early 1900s. In general, groundwater levels are relatively higher in the northern half of the Raymond Basin and lower in the southern half than they were historically.

The following factors contribute to PWP's annual groundwater supply: (1) PWP's decreed right of 12,807 acre-feet/year, (2) any carryovers from the previous year, (3) water rights leased from other Raymond Basin agencies, (4) spreading credits from the current year or prior year, (5) surplus water from MWD injected/added to long-term storage, and (6) water pumped from long-term storage. The following factors reduce PWP's annual groundwater supply: (a) any over extractions from the previous year that must be made up, (b) water that will be carried over to the next year, (c) water rights that are leased to other Raymond Basin pumpers and (d) water that is deposited into PWP's storage account. PWP's total annual groundwater production is equal to the total contributions less the total reductions.

The Raymond Basin is an adjudicated basin, and for this reason, PWP's decreed water right is not affected by annual rainfall conditions. The sum of all water that is pumped from the Raymond Basin (excluding water pumped from individual storage accounts or as a result of spreading or injection credits), is regulated so as not to exceed the hydrologically determined safe yield of the basin of 30,622 acre-feet/year, which is stipulated in the Judgment. This results in a high degree of reliability for Raymond Basin groundwater. Groundwater supply reliability is further increased by the presence of PWP's long-term storage accounts within the Raymond Basin. On October 7, 1992 and March 10, 1993, long-term storage policies were adopted within the Raymond Basin, and the basin storage capacity was determined.

A storage volume of 96,500 acre-feet was allocated to the Raymond Basin pumpers. PWP's share of the storage volume is 38,500 acre-feet. On an as needed basis, PWP leases storage volume from other Raymond Basin pumpers to meet its groundwater storage needs in the Raymond Basin. As of June 30, 2011, PWP has 26,102 acre-feet of water in storage in the Raymond Basin. Also, under a cooperative storage agreement with MWD, PWP has stored an additional 19,469 acre-feet of water in storage for MWD. This water is available to PWP during drought and emergencies at MWD's call.

In September 2011, the City Council approved authority for the General Manager to contract with neighboring water agencies to pump a portion of PWP's excess stored water during periods when PWP is unable to pump all of the water stored under PWP's decreed rights within the Raymond Basin. This action will not impact PWP's long-term pumping or storage rights. The right to sell excess water is both economically and environmentally advantageous, as it would provide value for the water in storage, rather than potentially losing it. Revenues from such sales would help offset a portion of PWP's purchased water costs while enabling another Raymond Basin member to use the water beneficially.

Raymond Basin Surface Water. The principal streams in the service area include the Arroyo Seco, Eaton Wash and the Santa Anita Wash. According to the Judgment, PWP is entitled to divert an instantaneous capacity of up to 25.00 cfs of surface water in the Arroyo Seco (including Millard Canyon) and up to 8.90 cfs of surface water in Eaton Canyon. The Arroyo Seco source accounts for less than 5% of the City's total water supply, depending on rainfall in a particular year. Surface water diversions from the Arroyo Seco have historically been used in two ways: (1) water has been treated for direct supply into PWP's distribution system, and (2) water has been diverted by PWP to the spreading grounds owned by PWP and operated until 1998 by the Los Angeles County Department of Public Works ("LACDPW") in exchange for groundwater pumping credits. In 1970, PWP constructed the 5-million gallons per day John L. Behner Water Treatment Plant ("Behner Water Treatment Plant"), which is located directly east of Jet Propulsion Laboratories ("JPL") in the Arroyo Seco Canyon. The treatment plant was shut down in June 1993 as a result of water quality regulations imposed pursuant to the Surface Water Treatment Rule. See "– Environmental Regulation" below. The feasibility of upgrading this plant was evaluated in a June 1995 study funded by the American Water Works Association Research Foundation, PWP and other local surface water purveyors. However, no attempt to bring the Behner Water Treatment Plant back on-line has been made.

Until June 1993, a portion of the Arroyo Seco water that was diverted by PWP was treated at the Behner Water Treatment Plant, while the remainder of the diverted water was sent to spreading grounds. Since July 1993, all water that has been diverted by PWP in the Arroyo Seco has been sent to the spreading grounds. The Arroyo Seco spreading basins consist of 14 basins that have an approximate gross area of 24 acres, and a wetted area of 13.5 acres. The spreading basins were constructed in approximately 1948 on City-owned land that was leased to LACDPW. LACDPW operated and maintained the spreading basins on behalf of all Raymond Basin members. However, in 1998, PWP assumed the responsibility of operating and maintaining these spreading basins. Due to past precedence established by LACDPW, which spread surface water for the benefit of the Raymond Basin, the Raymond Basin Management Board mandated that PWP could no longer receive full credit for spreading surface water in the Arroyo Seco, even though PWP absorbs all costs to maintain and operate the spreading basins. As a result of this mandate, a spreading methodology was developed in which the amount of water that is determined to be "spread" by PWP in the Arroyo Seco is approximately 60% of the water diverted.

In Eaton Canyon, PWP measures the water flowing down the canyon, which is spread naturally in the streambed behind the dam. This water, up to 8.90 cfs, is reported to the Raymond Basin Management Board as water that is diverted by PWP. PWP gets 80% credit for the amount of water "spread" as per the

Judgment. Under current operations, PWP spreads all of its surface water diversions to receive spreading credits. No surface water directly supplies the PWP distribution system.

Surface water supply is highly variable, as it is entirely dependent on the amount of rainfall during the year.

Raymond Basin Management Board. The City obtains its groundwater from the Raymond Basin. Under the Judgment, a court of law determined the parties who have the right to extract water and the timing and amount of such pumping based on a "safe yield" concept. There are fifteen entities that are allowed to pump from the Raymond Basin. PWP has the largest entitlement, with up to 42% of the total adjudicated rights. As a party holding a "decreed right" of 1,000 acre-feet/year or more, PWP appoints one member to the eleven-member Raymond Basin Management Board. All costs of enforcing the Judgment are assumed by all water users in the Raymond Basin in proportion to their respective "decreed right."

PWP has taken an active role in securing greater local control of the management of the Raymond Basin. Prior to 1984, the administration of the Raymond Basin was under the authority of the State Department of Water Resources as Watermaster. During that time, the Raymond Basin Management Board (the "Management Board") only acted in an advisory capacity to the Watermaster. In 1984, the Judgment was amended to appoint the Management Board as Watermaster. The Management Board is comprised of representatives appointed by the producers within the Raymond Basin. The Management Board is responsible for overseeing the implementation of the adjudicated provisions. One of the most significant powers conferred on the Management Board in the 1984 amendments was the authority to approve plans for storage of native and imported water in the Raymond Basin.

The Judgment has been amended several times over the years with PWP taking the lead in securing consensus for the amendments among the producers. Each amendment has given the producers more flexibility in the management of the Raymond Basin. The Raymond Basin is now well positioned to participate in expanded groundwater storage programs, which should enhance the value and security of the groundwater resource. The Management Board, in cooperation with PWP and MWD, has recently completed a major study of the storage resources of the Raymond Basin. As a result of this study, significantly larger amounts of water have been and will be stored in the Raymond Basin in the future. Increased storage will enable all basin producers to better meet seasonal demand variations as well as provide reserves against periods of drought.

The Metropolitan Water District of Southern California

The following information has been obtained from MWD and sources that the City and PWP believe to be reliable, but the City and PWP take no responsibility for the accuracy or completeness hereof.

MWD is a public agency organized in 1928 by vote of the electorates of several Southern California cities, including the City, following adoption of the original Metropolitan Water District Act (the "MWD Act") by the California Legislature. MWD is not subject to regulation by the California Public Utilities Commission, although its enabling statute is subject to amendment by the California Legislature. MWD currently has full authority to set rates and policies as necessary to provide a dependable water supply to Southern California. MWD provides nearly between 40% and 60% in any given year of the water used in its service area, which consists of approximately 5,200 square miles in portions of Los Angeles, Orange, Riverside, San Bernardino, San Diego and Ventura Counties. MWD serves a population of almost 19 million people.

MWD is governed by a 37-member Board of Directors consisting of at least one representative from each of the 26 member public agencies, including the City, that comprise the MWD. Each member public agency is entitled to have at least one representative on the Board, plus an additional representative for each full 5% of its assessed valuation of property in MWD's service area. Accordingly, from time to time, the Board may have more than 37 members. Representation and voting rights are based upon each agency's assessed valuation.

MWD Water Supply. MWD's two primary sources of water are the State Water Project and the Colorado River.

The State Water Project is owned by the State and operated by the State Department of Water Resources ("DWR"). The State Water Project transports water available from the San Francisco Bay/Sacramento-San Joaquin Delta (the "Bay/Delta") to Southern California via the California Aqueduct. MWD contracted with DWR in the 1960s (as amended, the "State Water Contract") for a share of the State Water Project water (approximately 46%). The State Water Contract, under a 100% allocation, provides MWD 1,911,500 acre-feet of water. Deliveries from the State Water Project to MWD over the past nine years (2002 through 2010), including water from water transfer, groundwater banking and exchange programs described below, varied from a low of 908,000 acre-feet in calendar year 2009 to a high of 1,800,000 acre-feet in 2004. For calendar year 2010, DWR's allocation to State Water Project contractors was 50% of contracted amounts, reflecting pumping restrictions due to biological opinions for Delta smelt and Chinook salmon, late spring storms, a return to normal precipitation and reservoir levels and above-normal Sierra snowpack. For MWD, the 2010 allocation provided 955,750 acre-feet. In 2010, MWD took delivery of 1,129,062 acre-feet to its service area plus approximately 175,000 acre-feet of net deliveries to storage in its Central Valley groundwater storage programs. This includes State Water Project supplies from water transfers and exchanges delivered through the California Aqueduct.

For calendar year 2011, DWR's initial allocation estimate to State Water Project contractors was set at 25% of contracted amounts. The 2011 allocation was adjusted upwards, most recently on April 20, 2011 to 80% of contracted amounts, reflecting significantly above-normal precipitation over the entire Sierra Nevada range and accumulating snowpack to levels of 185% of normal and greater. For MWD, the revised allocation is 1,529,200 acre-feet. In addition, wet weather conditions enabled MWD to take delivery of 181,594 acre-feet of interruptible water supplies in excess of its 2011 allocation.

Management of the availability of State Water Project supplies through water marketing and groundwater banking plays an important role in meeting California water needs. MWD is participating in groundwater banking programs, including the Arvin-Edison/MWD Water Management Program, the Semitropic/MWD Groundwater Storage and Exchange Program and the California Aqueduct Dry-Year

Transfer Program. MWD also has been negotiating, and will continue to pursue, water purchase, storage and exchange programs with other agencies in the Sacramento and San Joaquin Valleys. These programs involve the storage of both State Water Project supplies and water purchased from other sources to enhance MWD's dry-year supplies and the exchange of normal year supplies to enhance MWD's water reliability and water quality, in view of dry conditions and potential impacts from recent Endangered Species Act litigation.

The State Water Resources Control Board ("SWRCB") is the agency responsible for setting water quality standards and administering water rights throughout California. Decisions of the SWRCB can affect the availability of water to MWD and other users of State Water Project water. The SWRCB exercises its regulatory authority over the Bay/Delta by means of public proceedings leading to regulations and decisions. These include the Bay/Delta Water Quality Control Plan ("WQCP"), which establishes the water quality standards and proposed flow regime of the estuary, and water rights decisions, which assign responsibility for implementing the objectives of the WQCP to users throughout the system by adjusting their respective water rights. The SWRCB is required by law to periodically review its WQCP to ensure that it meets the changing needs of this complex system.

To obtain its Colorado River supply, MWD has a permanent service contract with the United States Secretary of the Interior for delivery of water via the Colorado River Aqueduct. California is apportioned the use of 4.4 million acre-feet of water from the Colorado River each year plus one-half of any surplus that may be available for use collectively in Arizona, California and Nevada. In addition, California has historically been allowed to use Colorado River water apportioned to but not used by Arizona and Nevada. Under the priority system that governs the distribution of Colorado River water made available to California, MWD holds the fourth priority right to 550,000 acre-feet per year. This is the last priority within California's basic apportionment of 4.4 million acre-feet. In addition, MWD holds the fifth priority right to 662,000 acre-feet of water, which is in excess of California's basic apportionment. Until 2003, MWD had been able to take full advantage of its fifth priority right entitlement as a result of the availability of surplus water and unused water. However, Arizona and Nevada increased their use of water from the Colorado River, significantly reducing unused apportionment available for California since 2002. In addition, a severe drought in the Colorado River Basin reduced storage in system reservoirs, such that MWD stopped taking surplus deliveries in 2003 in an effort to mitigate the effects of the drought. Prior to 2003, MWD could divert over 1.2 million acre-feet in any year, but since that time, MWD's net diversions of Colorado River water have been limited to a low of nearly 633,000 acre-feet in 2006 and a high of approximately 1,105,232 acre-feet in 2009. Average annual net deliveries for 2003 through 2010 were approximately 849,500 acre-feet, with annual volumes dependent primarily on programs to augment supplies, including transfers of conserved water from agriculture. MWD projects that its available Colorado River supply will be about 900,000 acre-feet in 2011, of which approximately 700,000 acre-feet will be delivered through the Colorado River Aqueduct and 200,000 acre-feet of intentionally created surplus water will be stored in Lake Mead. See "– Risks to Water Supply" below.

MWD has taken steps to augment its share of Colorado River water through agreements with other agencies that have rights to use such water. MWD has entered into agreements with the Imperial Irrigation District, Central Arizona Water Conservation District and Palo Verde Irrigation District and is seeking additional agreements with other agencies to reduce their diversions from the Colorado River, thereby augmenting MWD's available supply.

In January 2001, the Secretary of the Interior adopted guidelines (the "Interim Surplus Guidelines") for use through 2016 in determining if there is surplus Colorado River water available for use in California, Arizona and Nevada. The purpose of the Interim Surplus Guidelines is to provide a greater degree of predictability with respect to the availability and quantity of surplus water through 2016.

The Interim Surplus Guidelines were amended in 2007, with the new Guidelines extending through 2026. The Interim Surplus Guidelines contain a series of benchmarks for reductions in agricultural use of Colorado River water within California by set dates.

Under the Interim Surplus Guidelines, MWD initially expected to divert up to 1.25 million acre-feet of Colorado River water annually under foreseeable runoff and reservoir storage scenarios from 2004 through 2016. However, an extended drought in the Colorado River Basin reduced these initial expectations. From 2000 to 2004, snowpack and runoff in the Colorado River Basin were well below average. Although runoff was slightly above average in 2005 and 2008, average annual runoff from 2000 through 2010 was 69% of normal, representing the driest eleven-year period on record. Precipitation over the Colorado River Basin from October 2010 through April 2011 was significantly above normal. Upper Colorado River Basin snowpack measured on May 1, 2011 was 150% of normal with accumulations at the highest level on record and the April-July runoff measuring 163% of normal. MWD's estimated 2011 Colorado River supply is about 900,000 acre-feet. MWD has projected its ultimate 2011 diversions will be approximately 700,000 acre-feet, and expects to store up to 200,000 acre-feet of intentionally-created surplus water in Lake Mead.

The Southern Nevada Water Authority ("SNWA") and MWD entered into an Agreement Relating to Implementation of Interim Colorado River Surplus Guidelines on May 16, 2002, in which SNWA and MWD agreed on the allocation of unused Arizona apportionment and on the priority of SNWA for interstate banking in Arizona. SNWA and MWD entered into a storage and interstate release agreement on October 21, 2004. Under this program, Nevada can request MWD to store unused Nevada apportionment of Colorado River water in California. The amount of water stored through 2009 under this agreement was 70,000 acre-feet. In subsequent years, Nevada may request recovery of this stored water. As part of a recently executed amendment, it is expected that Nevada will not request return of this water until 2022. The stored water provides flexibility to MWD for blending Colorado River water with State Water Project water and improves near-term water supply reliability.

MWD's storage capacity, which includes reservoirs, conjunctive use and other groundwater storage programs within MWD's service area and groundwater and surface storage accounts delivered through the State Water Project or Colorado River Aqueduct, is approximately 5.54 million acre-feet. In 2011, approximately 626,000 acre-feet of stored water is emergency storage that is reserved for use in the event of supply interruptions from earthquakes or similar emergencies, as well as extended drought. MWD's ability to replenish water storage, both in the local groundwater basins and in surface storage and banking programs, has been limited by Bay-Delta pumping restrictions and Endangered Species Act considerations. MWD replenishes its storage accounts when imported supplies exceed demands. Effective storage management is dependent on having sufficient years of excess supplies to store water so that it can be used during times of shortage. Historically, excess supplies have been available in about seven of every ten years. MWD forecasts that, with anticipated supply reductions from the State Water Project due to pumping restrictions, it will need to draw down on storage in about seven of ten years and will be able to replenish storage in about three years out of ten. This reduction in available supplies extends the time required for storage to recover from drawdowns and could require MWD to implement its Water Supply Allocation Plan (described below) during extended dry periods.

From 2007 to 2009, MWD drew down approximately one million acre-feet of its stored water to meet regional demands. As of January 1, 2011, MWD had 2.29 million acre-feet of water in storage, including emergency storage. As a result of increased State Water Project supplies and reduced demands in 2010 and 2011, MWD is rebuilding its storage after several years of withdrawals. If current supply and demand trends continue, MWD anticipates storing an additional 600,000 to 800,000 acre-feet in 2011. This could bring total storage in 2011 up to approximately 3.1 million acre-feet, which would be the highest end-of-year total reserves in MWD's history.

Reliability of MWD Water Supply to Meet with City Requirements. MWD faces a number of challenges in providing a reliable and high quality water supply for southern California. These include, among others: (1) population growth within the service area; (2) increased competition for low-cost water supplies; (3) variable weather conditions; and (4) increased environmental regulations. In April 2008, MWD staff began working with MWD's member agencies on a Five-Year Supply Plan to identify specific resource and conservation actions over a five year period, in order to manage water deliveries under continued drought conditions and court-ordered restrictions.

MWD's current approach to managing water shortages has evolved from its experiences during the droughts of 1976-77 and 1987-92 into the Water Surplus and Drought Management Plan ("WSDM Plan"). The WSDM Plan splits resource actions into two major categories: Surplus Actions and Shortage Actions. The Surplus Actions store surplus water, first inside then outside the region. The Shortage Actions of the WSDM Plan are split into three subcategories: Shortage, Severe Shortage and Extreme Shortage. Each category has associated actions that could be taken as a part of the response to prevailing shortage conditions. Conservation and water efficiency programs are part of MWD's resource management strategy through all categories.

MWD's plan for allocation of water supplies in the event of shortage (the "MWD Water Supply Allocation Plan") allocates MWD's water supplies among its member agencies, based on the principles contained in the WSDM Plan, to reduce water use and drawdowns from water storage reserves. The Water Supply Allocation Plan was approved by the Board in February 2008. The Water Supply Allocation Plan provides a formula for equitable distribution of available supplies in case of extreme water shortages within MWD's service area. On April 14, 2009, MWD's Board adopted a resolution declaring a regional water shortage and implementing the Water Supply Allocation Plan, effective July 1, 2009. The MWD Board set the "Regional Shortage Level" at Water Supply Allocation Plan Level 2, which required reduction of regional water use by approximately 10% and resulted in a total allocation of about 2.09 million acre-feet of MWD water in Fiscal Year 2009-10. On April 13, 2010, the MWD Board adopted a resolution recognizing the continuing regional water shortage and again setting the Regional Shortage Level at Water Supply Allocation Plan Level 2, which sustained the prior year's regional water use reduction of approximately 10%. Due to improved hydrologic and storage conditions, on April 12, 2011, the Board terminated implementation of the 2010-11 Water Supply Allocation Plan, restoring imported water deliveries to member agencies without risk of allocation penalties.

Delivery within a member agency of more than its allocated amount of MWD supplies will subject the member agency to a penalty of one to four times MWD's full service rate for untreated Tier 2 water, depending on how much the member agency's water use for the twelve-month period beginning on July 1 exceeds its allocated amount. Any penalties collected may be rebated to the member agency that paid them to fund water management projects.

The MWD Act provides a preferential entitlement for the purchase of water by each of the MWD member agencies. This preferential right is based on the ratio of all payments made to MWD by each agency compared to total payments made by all member agencies on tax assessments and otherwise, except purchases of water, toward the capital cost and operating expenses of MWD. Historically MWD has not used this criterion in allocating water. The MWD Act provides that water surplus to MWD's needs for domestic and municipal uses may be sold for other beneficial uses.

MWD Scheduling and Operations. MWD member agencies request water from MWD at various delivery points within MWD's system and pay for such water at uniform rates established by the MWD Board for each class of service. No member is required to purchase water from MWD, but all member agencies are required to pay readiness-to-serve charges (as described below) whether or not they purchase water from MWD. The current rate structure provides for a member agency's agreement to

purchase water from MWD by means of a voluntary purchase order. In consideration of executing its purchase order, the member agency is entitled to purchase a greater amount of water at the lower "Tier 1 Water Supply Rate", as described under " – MWD Rates" below. Under each purchase order, a member agency agrees to purchase, over the ten-year term of the contract, an amount of water equal to at least 60% of its highest firm demand for MWD water in any Fiscal Year from 1989-90 through 2001-02 multiplied by ten, which requirement PWP has met. MWD Member agencies are allowed to vary their purchases from year to year, but a member agency will be obligated to pay for the full amount committed under the purchase order, even if it does not take its full purchase order commitment by the end of the ten-year period. MWD and its member agencies have begun discussing terms for potential renewals or replacements of purchase orders after the existing purchase orders expire on December 31, 2012. Any renewals or replacements would be subject to approval by MWD and the governing bodies of the respective member agencies.

Water is delivered to the member agencies on demand and is metered at the point of delivery. Member agencies are billed monthly and a late charge of 1% of the delinquent payment is assessed for delinquent payments not exceeding five business days. A late charge of 2% of the amount of the delinquent payment is charged for a payment that is delinquent for more than five business days for each month or portion of a month that the payment remains delinquent. MWD has the authority to suspend service to any agency delinquent for more than 30 days. Delinquencies have been rare; in such instances late charges have been collected. No service has been suspended because of delinquencies.

MWD Rates. MWD water rates are established by majority vote of the MWD board in March of each year, after a public hearing held in February. Rates are not subject to regulation by any local, state or federal agency. Under the MWD Act, MWD must, so far as practicable, fix such rates for water as will result in revenue which, together with revenue from any water standby or availability of service charge or assessment, will pay the operating expenses of MWD, provide for repairs and maintenance, provide for payment of the purchase price or other charges for property or services or other rights acquired by MWD and provide for the payment of the interest and principal of the bonded debt of MWD.

MWD's current rate structure became effective in January 2003. In October 2002, PWP entered into a voluntary purchase order contract with MWD, whereby PWP will be able to purchase up to 90% of its "initial base demand" at the "Tier 1" rate. The "initial base demand" is defined as the maximum firm demand (not including water delivered for in-lieu groundwater storage programs) for MWD water experienced since Fiscal Year 1989. PWP estimates its "initial base demand" to be 23,520 acre-feet/year. This means that with the purchase order contract, PWP may currently purchase up to 21,170 acre-feet/year of water at the Tier 1 rate. In the future, "base demand" is defined as either the agency's "initial base demand" or the rolling 10-year average of firm demands for MWD water, whichever is higher. Any water purchased from MWD in excess of 90% of the "base demand" must be purchased at the higher Tier 2 rate.

The following table summarizes water rates under MWD's current rate structure. This table includes rates effective January 1, 2011. As indicated in the footnotes to the table below, in early 2010, MWD's Board approved two rate increases of 7.5% each to then 2010 rates, the first of which rate increase is reflected in the 2011 rates. The next increase will become effective January 1, 2012.

TABLE 4
MWD WATER RATES
(Dollars per Acre-Foot)

	2011 Rates[1]	
	Tier 1	Tier 2

Supply Rate	$104	$280
Delta Supply Surcharge	51	--
System Access Rate	204	204
Water Stewardship Rate	41	41
System Power Rate	127	127
Untreated Full Service	$527	$652
Treatment Surcharge	217	217
Treated Full Service	$744	$869

Source: MWD.

(1) Rates effective January 1, 2011 through December 31, 2011. In early 2010, MWD's Board approved two rate increases of 7.5% each to then 2010 rates. The next increase will become effective January 1, 2012.

The Tier 1 and Tier 2 Water Supply Rates are designed to recover MWD's water supply costs. The Tier 2 Supply Rate is designed to reflect MWD's costs of acquiring new supplies. MWD member agencies are charged the Tier 1 or Tier 2 Water Supply Rate for water purchases, as described above.

The System Access Rate is intended to recover a portion of the costs associated with the conveyance and distribution system, including capital, operating and maintenance costs. All users (including member agencies and third-party wheeling entities of the MWD system) pay the System Access Rate.

The Water Stewardship Rate is charged on a dollar per acre-foot basis to collect revenues to support MWD's financial commitment to conservation, water recycling, groundwater recovery and other water management programs approved by MWD's Board. The Water Stewardship Rate is charged for every acre-foot of water conveyed by MWD.

The System Power Rate is charged on a dollar per acre-foot basis to recover the cost of power necessary to pump water from the State Water Project and Colorado River through the conveyance and distribution system for MWD's member agencies. The System Power Rate is charged for all MWD supplies. Entities wheeling water will continue to pay the actual cost of power to convey water on the State Water Project, the Colorado River Aqueduct or the MWD distribution system, whichever is applicable.

MWD charges a treatment surcharge on a dollar per acre-foot basis for treated deliveries. The treatment surcharge is set to recover the cost of providing treated water service, including capital and operating cost.

The Delta Supply Surcharge is applicable to (among other rates) all Tier 1 untreated and treated water rates and reflects the additional supply costs that MWD faces along with other costs due to the pumping restrictions on the State Water Project.

Additional charges for the availability of MWD's water are: the Readiness-to-Serve Charge and the Capacity Charge.

The Readiness-to-Serve Charge is a variable annual charge of approximately $80 million that is divided proportionally among all agencies that receive water from MWD. This money is used by MWD to recover costs associated with standby and peak conveyance capacity and system emergency storage capacity. Currently, PWP's share of MWD's annual Readiness-to-Serve Charge is about 1%.

The Capacity Charge is a fixed annual charge, which is based on the capacity that is requested by the member agency. This charge will be used by MWD to recover the cost of providing peak capacity within the distribution system. Effective January 1, 2010, the capacity charge was $7,200/ per cfs of maximum daily flow. The Capacity Charge is scheduled to increase to $7,400 per cfs effective January 1, 2012.

Future Sources of Water Supply and/or Reliability

Based on projected demand and the estimated supply from the Raymond Basin groundwater and surface water and imported Tier 1 MWD water, PWP may need to purchase additional higher priced Tier 2 MWD water to meet projected demand. See "Risks to Water Supply" below. Additional potential future water sources such as those outlined below, could help decrease the amount of Tier 2 MWD water that PWP may need to purchase.

Pasadena Groundwater Storage Program. The Pasadena Groundwater Storage Program is a conjunctive use program between MWD and PWP. The goal of the program is to improve the reliability of water supply to PWP and surrounding water agencies and reduce dependence on imported MWD water deliveries during periods of drought and emergency conditions. The program would store up to 66,000 acre-feet of imported MWD water in the Raymond Basin when imported water supply is plentiful. The water could then be extracted at a rate up to 22,000 acre-feet per year when imported supplies are limited due to a drought or emergency. This program is currently on hold.

Micro-filtration Plant. Historically, a portion of the surface water diverted from the Arroyo Seco was treated by the Behner Water Treatment Plant. However, the Behner Water Treatment Plant does not comply with the Surface Water Treatment Rule. See " – Environmental Regulation" below. For this reason, a new plant utilizing micro-filtration ("MF") technology would need to be constructed at the Behner Water Treatment Plant to treat the Arroyo Seco surface water diversions. Based on a review of the historical production records of the Behner Water Treatment Plant and stream flow data, the average amount of surface water that would be treated by a new MF plant would be approximately 1,150 acre-feet/year. An economic feasibility study must be performed before plans for the treatment plant upgrade go forward.

Recycled Water. In April 1993, PWP entered into an agreement with the City of Glendale to purchase up to 6,000 acre-feet/year of recycled water through 2018. The built out recycled water project will provide approximately 2,000 acre-feet per year of recycled water for landscape irrigation and industrial uses. This project will be implemented in three phases. The first phase will deliver approximately 900 acre-feet per year of recycled water to the west side of the City to serve the Brookside Park and Golf Course, Annandale Golf Course, 210 Freeway – Caltrans, Upper and Lower Arroyo Parks and Defenders Parkway. The second phase will deliver approximately 700 acre-feet per year of recycled water to the south side of the City and the third phase will deliver approximately 400 acre-feet per year of recycled water to the north side of the City.

Other potential future sources of water supply include:

(1) intercepting and collecting surface water below the stream bed in Eaton Canyon;

(2) increasing the groundwater recharge capacity in the Arroyo by reconfiguration of existing spreading facilities and construction of new facilities in the Hahamonga Park area; and/or

(3) extending the recycled water pipeline to JPL with a diversion pipeline to the spreading facilities in the Arroyo to utilize more of PWP's 6,000 acre-feet/year right.

Water Integrated Resource Plan. In September 2009, PWP initiated the process to develop a Water Integrated Resources Plan (WIRP). The WIRP is a 25-year water supply plan that establishes a framework for future investment in water supply and conservation programs to reliably meet the projected needs of its water customers. The WIRP was the basis of the 2010 Urban Water Management Plan that was adopted in June 2011. In addition, the WIRP provides an achievable, long-term strategy to meet current and future water needs. The goals of the WIRP are to sustainably and cost-effectively address local and regional water supply and demand issues, reflect community values, and adapt to changing conditions. The Final WIRP document was completed and adopted by the City Council in January 2011. Development of an implementation plan is currently underway that will include proposed funding sources and schedules for capital investment and contract approvals.

Water Conservation Programs

Approximately 65% of the water that PWS delivers to customers is purchased from MWD. In recent years, prolonged droughts and environmental flow restrictions have triggered MWD to impose allocation limits to its member agencies for the first time since 1991. Future reliability of imported water will continue to face uncertainties from climate change, environmental regulations, and droughts.

To address potential long term water supply challenges, PWP adopted a Comprehensive Water Conservation Plan in 2009. In addition to the Comprehensive Water Conservation Plan, PWP has taken a proactive step to lead as a model water agency by developing a Water Integrated Resources Plan (WIRP). The plan provides a long term multi-pronged approach for achieving water conservation targets through the year 2035.

The WIRP provides an overall water resources strategy, the WIRP is a source document for Pasadena's 2010 Urban Water Management Plan (UWMP). Both the WIRP and 2010 UWMP indicate how Pasadena will meet the new Water Conservation Act of 2009, also known as California's "20x2020" plan, requiring statewide per capita water use be reduced by 20 percent by the year 2020.

Included in PWP's Water Conservation Plan of 2009 and the WIRP are the following steps:

- New ordinances to promote sustainable practices such as efficient landscaping
- An extensive array of water conservation workshops and online instructional videos for improving water efficiency

PWP is also implementing the following programs as part of this plan:

- Offering residential customers enhanced incentives for high efficiency clothes washers, weather based irrigation controllers and a turf replacement program. Th e commercial programs include rebates for cooling tower conductivity controllers, high efficiency toilets and urinals, air cooled ice machines and central control irrigation controllers.
- Offering landscaping and irrigation audits to both residential and commercial customers, which includes a water budget based on California's statewide landscape irrigation efficiency model.

Pasadena signed the Urban Environmental Accords ("UEA") agreement in 2005, targeting a 10% reduction in per capita water use by 2015. The UEA base usage is 38,416 acre-feet, the goal is 34,575 acre-feet. Water consumption in Fiscal Year 2011 was 30,116, 22% below the 2005 base year.

Risks to Water Supply

PWP's water supply is affected by many factors, including annual rainfall precipitation, production patterns, recharge trends and the percentage allocation of PWP's sources of water supply. Sustained drought conditions or continued low water levels could adversely affect PWP's water supply and could impact operational expenses of the Water System or demand for water services. There is no guarantee that PWP's sources of water supply will remain constant throughout the period the 2011A Bonds are outstanding. However, regional and local water storage programs are designed to mitigate the potential effects of lower water levels in the Raymond Basin.

The City's water supply is highly dependent on the reliability of imported water from MWD. Imported water accounted for approximately 65% of the City's water supply in Fiscal Year 2011. See "WATER SUPPLY – The Metropolitan Water District of Southern California" above.

The City has stored more than 40,000 acre-feet of water in the Raymond Basin. This amount of stored water is in addition to the City's annual pumping entitlement and is equal to approximately two years' imported water supply. The City is also looking into developing alternative sources of supply such as recycled water. See "– Future Sources of Water Supply and/or Reliability" above.

Water Quality

For the past 20 years, PWP has consistently complied with all material federal and State regulations. PWP collects water samples on a regular basis from all sources of supply, reservoirs and 43 locations throughout the distribution system. General mineral, general physical, bacteriological, volatile organic chemicals ("VOCs"), total trihalomethanes ("THMs"), perchlorate, nitrate, ammonia, nitrite, fluoride and metals analyses are performed in PWP's State certified Water Chemistry Laboratory. The Water System's State certified Water Chemistry Laboratory, the Pasadena Health Department and contract laboratories perform over 25,000 chemical and bacteriological analyses of water samples. The chemical analyses include tests for pesticides, herbicides, radiochemicals, organic, inorganic and mineral compounds.

PWP's 2010 Annual Water Quality Report indicated that in calendar year 2010 water delivered by PWP met all State and federal water quality standards.

The quality of water in the Raymond Basin, the source of approximately 35% of the City's total supply, is generally good. The Raymond Basin has not suffered from the widespread contamination evident in some of Southern California's groundwater basins. In some portions of the Raymond Basin, the presence of nitrates requires blending of some sources to meet drinking water quality standards. There is some contamination from VOCs in scattered parts of the Raymond Basin, as well as contamination from perchlorate. See "Perchlorate Contamination" below.

The most notable VOCs contamination is in the vicinity of JPL located in the northwest part of the City's service area adjacent to the Arroyo Seco Stream, a major recharge area for the Raymond Basin. Contamination in this area had resulted in the inability to operate several wells. Four of the contaminated wells belong to the City and have historically supplied approximately 30% of the City's annual groundwater supply. In early 1990, the City and California Institute of Technology (Caltech) reached an agreement whereby Caltech paid for the construction of a treatment plant to remove the VOCs

contamination from the City's four contaminated wells. The agreement also provided for Caltech to pay all of the operating costs of the treatment plant. The treatment method for the plant is air stripping with activated carbon off-gas air pollution control. This treatment results in no contamination being released to the atmosphere, but does require the periodic removal of contaminated carbon. Responsibility for the construction and handling of the contaminated carbon, lies with Calgon Carbon Corporation as the City's contractor. The treatment plant was completed and all four wells were returned to full production in September 1990; however, all four wells were subsequently taken out of service due to perchlorate contamination. During the term of the agreement, JPL is to conduct additional investigations to determine more precisely the extent, origin and remediation required to address the contamination. NASA recently released the results of their study to determine if perchlorate in the Sunset Wells is associated with the migration of perchlorate from the JPL facility. NASA's conclusion is the perchlorate is from other sources. The study conclusions are being review by the City and various regulatory agencies (*i.e.*, EPA, DHS, etc.). See "Perchlorate Contamination" below.

The total supply of MWD water imported by PWP is treated at MWD's Weymouth Water Treatment Plant. Water quality data for the Weymouth Water Treatment Plant reported in MWD's annual Water Quality Report for 2010 shows no objectionable water quality characteristics.

The primary water quality concern for Arroyo Seco surface water is the lack of protection of the Arroyo Seco watershed area. Because of numerous hikers, native animals and the possibility of people dumping materials, it is very difficult to ensure that the watershed will remain free from contamination.

Perchlorate Contamination

As of 2002, eight of PWP's sixteen groundwater wells had been removed from service due to levels of perchlorate above the action level designated by DHS. Recent testing indicates that some of the remaining active wells have trace levels of perchlorate but are below the action level. Perchlorate is generally recognized as a compound of solid rocket and missile propellant and a common waste by-product from the production and use of solid rocket fuel. PWP's groundwater wells are most vulnerable to contamination from automobile gas stations, repair shops and body shops, dry cleaners, underground storage tanks and military installations.

Caltech is believed to be responsible for the perchlorate contamination in one of the two areas. Caltech has accepted liability for such contamination in the Arroyo Seco area. The City has an agreement with Caltech for remediation. The agreement which became effective on January 23, 2006 is a funding agreement whereby NASA reimburses the City for the procurement, operations, and maintenance of a proposed 7,000 gallons per minute perchlorate and VOC treatment plant. NASA, Caltech's administrator of the agreement, provides technical assistance and services and groundwater monitoring. The annual amount to be reimbursed by NASA is about $3.5 million, with conditions to permit for future escalated expenses should the cost of operating and maintaining the treatment plant increase. See "– Environmental Regulation," "– Water Quality" and "– Capital Improvement Program."

In March 2009, the City began construction on a 7,000 gallons per minute perchlorate and VOC treatment plant, the Monk Hill Groundwater Treatment Plant. The plant was completed and commenced operation in March 2011. The plant treats the four contaminated wells in the Arroyo Seco area near JPL. The plant is designed to remove perchlorate from the extracted groundwater by passing the contaminated water through ion exchange tanks system which is made up of four pairs of steel tanks containing 12,000 to 16,000 pounds of plastic beads call resin, and then passing the water through carbon filter system, made up of five pairs of steel tanks containing about 40,000 pounds of charcoal-like carbon particles to remove VOCs.

Environmental Regulation

The Water System is subject to continuing extensive environmental regulation at both the State and federal level. The following are some of the rules and regulations applicable to the Water System.

Groundwater Rule. The United States Environmental Protection Agency (the "EPA") published the Groundwater Rule on November 8, 2006. The Groundwater Rule is to provide increased protection against microbial pathogens in water systems that use groundwater.

Perchlorate. The California Department of Public Health Services ("CDPH") has established a perchlorate Maximum Contaminate Level ("MCL") of 6 parts per billion (ppb) effective October 2007. Some of the City wells are affected by this perchlorate MCL. See " – Perchlorate Contamination" above for a discussion of the eight of PWP's sixteen groundwater wells which have been removed from service due to levels of perchlorate above the action level established by CDPH.

Surface Water Treatment Rules. In 1989, the EPA published a surface water treatment rule which required all water systems to provide treatment to ensure at least 99.9% removal and/or inactivation of *giardia lamblia* cysts and at least 99.99% removal and/or inactivation of viruses (the "Surface Water Treatment Rule"). In 1998, the EPA published the Interim Enhanced Surface Water Treatment Rule (the "Interim Rule"), which added, among other things, the requirement of a 99% reduction in *cryptosporidium* for surface water systems that filter. The Interim Rule applies to water systems using surface water and/or groundwater under the direct influence of surface water, and which serve more than 10,000 people.

In addition to the above regulations, the EPA also regulates metals, organic compounds, nitrate, trihalomethane (disinfectant/disinfection by-products), radionuclides, radon, arsenic, nitrosodiumethylamine and total chromium. The EPA regulations set out a MCL for each organic chemical. The regulations also require that a water utility using treatment to comply with an MCL collect monthly samples of the treated water at a location prior to the distribution system. If results in the treated water exceed the MCL the water utility must resample the treated water to confirm the results and report the result to CDPH within 48 hours of confirmation.

Future Regulation. Water utilities are subject to continuing environmental regulation. Federal, state and local standards and procedures which regulate water utilities are subject to change. These changes may arise from continuing legislative, regulatory and judicial action regarding such standards and procedures. Consequently, there is no assurance that any City facility will remain subject to the regulations currently in effect or will always be in compliance with future regulations. An inability to comply with environmental standards could result in additional capital expenditures to comply, reduced operating levels or the complete shutdown of individual water facilities not in compliance. See "– Capital Improvement Program" and "– Perchlorate Contamination" below.

If the federal government, acting through the EPA or additional legislation, or the State imposed stricter treatment standards, PWP's expenses could increase and rates and charges would be required to be increased to offset those expenses.

Seismic Considerations

The areas in and surrounding the City-owned water facilities, like those in much of the State, may be subject to unpredictable seismic activity. The Water System's facilities are not located near any known active fault lines. An occurrence of severe seismic activity in the area of the Water System's facilities could result in substantial damage to and interference with the City's water supply. The City

does not currently carry earthquake insurance. See APPENDIX A – "THE CITY OF PASADENA – Insurance" herein. In the event of significant earthquake damage to the Water System and/or the City's service area, there can be no assurance that Pledged Revenues would be sufficient to pay the principal of and interest on any outstanding 2011A Bonds.

The Water System Master Plan has recommended that seismic analyses be conducted for all 14 reservoirs in the Water System constructed before 1972. The capital improvement plan for the Water System calls for any necessary improvements to the reservoirs to be completed by Fiscal Year 2016.

Capital Improvement Program

In 2001, the City engaged Montgomery Watson Harza (the "Consultant") to evaluate the existing Water System and to develop a capital improvement program for the Water System. In June 2002, the Consultant delivered a report on the Water System and an 18-year plan for capital improvements to the Water System (the "Water System Master Plan").

The Consultant determined that an investment of approximately $234 million over the 18 years of the plan would be required to address existing deficiencies and to adequately and reliably produce and distribute water. Of this amount, the study called for PWP to fund $204 million of the identified improvements and for others to fund the remaining amount of approximately $30 million for perchlorate treatment. The City currently has a commitment from NASA to fund the full anticipated cost of perchlorate treatment in the Arroyo Seco area. See "– Perchlorate Contamination."

In developing the funding requirements for the proposed Water System Master Plan capital improvement program and the cost of service study, staff conducted an analysis to determine a financial structure that supports the needed capital investments and minimizes the rate impacts on water customers. Staff also examined the impact of various levels of debt financing for the capital improvement program. Based on this financial analysis, staff intends to use a funding mix of revenue bond financing and cash from rates on a 65%:35% basis.

In 2003, the City issued the 2003 Bonds that refunded its outstanding 1993 Water Revenue Bonds, prepaid its obligation with the Financing Authority for Resource Efficiency of California (FARECal) and provided $22 million to finance the first phase of the Water System Master Plan and an additional $1 million to finance the initial phase of the water reclamation program.

In August 2007, the City Council approved an increase to the Capital improvement Charge (CIC) in order to support the debt service and operating and maintenance expenses for the Water System. Through the CIC, the City has imposed water user charge increases four times totaling approximately $0.65 per billing unit. Based on water consumption for Fiscal Year 2011 and the current rate, the CIC generated approximately $7.6 million. The CIC revenues are specifically dedicated to fund the proposed Water System Master Plan water system improvements. See "SECURITY AND SOURCES OF PAYMENT FOR THE 2011A BONDS – Capital Improvements Charge Account."

The City issued the 2007 Bonds and the 2010 Bonds to continue the implementation of its Water System Master Plan.

Each year the City Council approves a five-year capital improvement program ("CIP") for the Water System. The last CIP for the Water System was approved in June 2011. The CIP for Fiscal Years 2012-2016 identified approximately $84.7 million in projects for the Water System. The following table lists the expected capital requirements over the current and next four Fiscal Years.

TABLE 5
WATER SYSTEM CAPITAL REQUIREMENTS
(In Thousands)

Fiscal Year	Capital Requirements
2012	$20,208
2013	18,668
2014	14,469
2015	18,230
2016	13,168

Source: Pasadena Water and Power Department.

The CIP for the Water System includes the design and construction of a recycled water distribution facility, installation of replacement water mains, meters and services, replacement of chlorine stations with chloramines disinfection facilities for water quality and treatment and seismic retrofits for reservoirs and other key facilities.

Water Sales

The following table shows historical production and sales information for the Water System.

TABLE 6
HISTORICAL PRODUCTION AND SALES DATA
(In Thousands of Billing Units)

	Fiscal Year Ended June 30,				
	2007	2008	2009	2010	2011
Total Production	16,977	16,195	15,029	13,199	13,039
Water Sold	16,088	15,390	14,574[1]	12,504[1]	11,969[1]
Water System Losses	889	805	455	695	1,070[2]
Number of Services	37,457	37,783	37,602	37,586	38,067

Billing Unit = 100 Cubic Feet.
[1] Declines reflect implementation of conservation measures and the effects of current economic conditions.
[2] 392 Billing Units were used for testing of the new water treatment plant.
Source: Pasadena Water and Power Department.

As shown in the table below, customers inside the City's boundary (including municipal and other customers) consumed approximately 85% of the volume of water sold by the Water System in Fiscal Year 2011. Receipts from customers within the City limits (including municipal and other customers) represent approximately 85% of the revenues collected by the Water System in Fiscal Year 2011. Each meter is considered a separate customer.

TABLE 7
WATER SALES VOLUME AND REVENUE

	Fiscal Year Ended June 30,				
	2007	**2008**	**2009**	**2010**	**2011**
Volume (000's Billing Units)					
Inside City Limits	13,340	12,765	12,059	10,434	10,003
Outside City Limits	2,293	2,179	2,071	1,744	1,633
Municipal and Other	455	445	444	326	333
Total	16,088	15,389	14,574	12,504	11,969
Revenue (000's Dollars)					
Inside City Limits	$21,563	$20,752	$20,880	$26,731	$30,388
Outside City Limits	4,928	4,742	4,747	5,524	6,089
Municipal and Other	13,451	14,066	17,469	11,225	10,660
Total	$39,942	$39,560	$43,096	$43,480	$47,137

Billing Unit = 100 Cubic Feet.
Source: Pasadena Water and Power Department.

Largest Customers

The ten largest customers of the Water System for the Fiscal Year ended June 30, 2011 are listed in the table below.

TABLE 8
TEN LARGEST CUSTOMERS
(Billing Units)

Customer	Percent of Total Operating Revenues
CalTech/JPL	2.56%
American Golf (Brookside)	1.38
Annandale Golf Club	1.04
Douglas Colliflower (Golf)	0.85
Rose Bowl Operating Co.	0.72
Huntington Memorial Hospital	0.41
Dept. of Transportation/Caltrans	0.33
City of Pasadena Steam Power Plant	0.32
Paseo Colorado Holdings	0.30
Pasadena City College	0.28
Total	8.19%

Billing Unit = 100 Cubic Feet.
Source: Pasadena Water and Power Department.

Rate Structure

The Charter provides that the City Council shall set water rates by ordinance. Such rates are not subject to approval by any other body or agency, but under Article XIIID of the California Constitution are subject to a majority protest procedure of property owners subject to the rates. The Rate Ordinance sets rates and charges for Water System customers. Water rates charged to customers are comprised of the commodity rates, a monthly distribution and customer charge, a capital improvement charge and may include a purchased water adjustment charge.

Under the City's Water Ordinance, Chapter 13.20 of the Pasadena Municipal Code, costs associated with water projected to be purchased from MWD are passed through to customers via the First Block, Second Block and Third Block commodity rates. The commodity rates are re-set from time to time to recover all costs associated with the purchase and distribution of MWD water. In order to accommodate changes in MWD's rates, water delivered under commodity rates is subject to an automatic adjustment, the purchased water adjustment charge, which tracks changes in MWD's prices occurring since the last change in rates.

The City's current rate structure is an inverted block structure. Water usage rates are higher for higher levels of consumption. The rates also have seasonal and inside City limits/outside City limits price differentials, with higher water rates in the summer and in areas outside the City limits.

The water commodity rate structure was amended in June 2009 to include, in addition to the First Block, Second Block and Third Block commodity rates, two additional higher priced blocks (Blocks 4 and 5) to further encourage water conservation and provide the necessary price signals required to achieve the desired water conservation objectives of reducing water demands by 10%. In addition, the water rate

structure was amended to recover higher costs of purchased water in excess of the City's water allocation from MWD, including the cost of higher penalty rates, in the event that the City exceeded its water allocation level.

In June 2010, the water commodity rate structure was further modified to reduce Block 4 rates and to eliminate Block 5 rates in response to favorable conservation efforts by City's customers and based on the City's reassessment of MWD's program and pricing scheme. Additionally, in June 2010, in response to MWD's approved January 2011 and January 2012 rate increases, the City also approved increases to its purchased water adjustment charge which were implemented in October 2010 and October 2011.

In June 2009, the City also approved increases to its distribution and customer charge over a three-year period. The first increase was implemented in July 2009 and it added approximately $3.0 million to the distribution and customer charge revenue in Fiscal Year 2010. The second increase was implemented in July 2010 and it generated an additional $2.9 million in distribution and customer charge revenue in Fiscal Year 2011. The third increase was implemented in July 2011 and it is expected to add an additional $3.7 million to the distribution and customer charge revenue in Fiscal Year 2012.

The following chart outlines the current water rate structure for the City. Area A includes all areas inside the City limits and Area B includes all areas outside the City limits. A customer is charged First Block rates for initial quantity consumed, Second Block rates over initial quantity, and Third Block rates for any excess over First and Second Block quantities.

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TABLE 9
RATE STRUCTURE

COMMODITY RATES FOR ALL WATER DELIVERED (PER 100 CUBIC FEET) [1]

		April 1-September 30	October 1-March 31	
Area A	First Block	$1.12537	First Block	$1.09885
	Second Block	2.71851	Second Block	2.64559
	Third Block	3.21921	Third Block	3.13171
	Fourth Block	3.97026	Fourth Block	3.86089
Area B	First Block	$1.35296	First Block	$1.31981
	Second Block	3.34438	Second Block	3.25323
	Third Block	3.97026	Third Block	3.86088
	Fourth Block	4.90908	Fourth Block	4.77236

FIRST, SECOND, AND THIRD BLOCK ALLOCATIONS [2]

Size of Meter (Inches)	Volume of First Block Allocation	Volume of Second Block Allocation	Volume of Third Block Allocation
5/8", 3/4"	0-8	9-24	25-34
1"	0-12	13-40	41-60
1-1/2"	0-22	23-86	87-132
2"	0-48	49-188	189-290
3"	0-116	117-500	501-860
4"	0-225	226-1,000	1,001-1,800
6"	0-500	501-5,600	5,601-8,800
8"	0-500	501-5,600	5,601-10,000
10", 12"	0-500	501-24,000	24,001-32,000

MONTHLY DISTRIBUTION AND CUSTOMER CHARGE FOR SERVICE [3]

Meter Size (Inches) Area A		Meter Size (Inches) Area B	
5/8" and 3/4"	$ 17.51	5/8" and 3/4"	$ 21.79
1"	33.25	1"	41.38
1 1/2"	68.41	1 1/2"	84.85
2"	157.66	2"	196.21
3"	385.08	3"	479.32
4"	592.13	4"	737.76
6"	912.95	6"	1,135.69
8"	1,485.83	8"	1,849.92
10"	1,933.60	10"	12,407.46
12"	2,192.38	12"	2,727.77

[1] The rates include 21.5¢ per 100 cubic feet of purchased water adjustment charge effective October 1, 2011.
[2] In Units of 100 cubic feet.
[3] Includes fire protection service.
Sources: Pasadena Water and Power Department; Pasadena Municipal Code.

In 2003, the CIC was added to water rates to recover the capital improvement costs of the Water System. The current effective CIC rates (approved in August 2007) are shown in the table below.

TABLE 10
CAPITAL IMPROVEMENTS CHARGE
(per 100 Cubic Feet)

	April 1-September 30	October 1-March 31
Area A	$0.62429	$0.58896
Area B	$0.84274	$0.79504

Source: Pasadena Water and Power Department; Pasadena Municipal Code.

The following table shows average residential monthly billing information for the last four Fiscal Years.

TABLE 11
AVERAGE RESIDENTIAL BILLING INFORMATION

	Fiscal Year Ended June 30,			
	2008	2009	2010[1]	2011
Residential Billing Units Sold (100 Cubic Feet)	8,523,032	8,168,089	8,623,678	8,256,004
Total Billing Units Sold (Water System)	15,389,894	14,576,707	12,503,665	11,969,030
Residential as a Percent of Total Water System	55.4%	56.0%	69.0%	69.0%
Revenues From Residential Sales	$21,720,775	$23,628,258	$23,876,934	$25,961,354
Total (Water System)	$39,559,565	$43,095,822	$43,480,017	$46,719,826
Residential as a Percent of Total Water System	54.9%	54.8%	54.9%	55.6%
Number of Residential Customers	30,722	32,205	32,562	32,283
Total (Water System)	37,522	37,602	37,586	37,321
Residential as a Percent of Total Water System	82.0%	85.6%	86.6%	86.5%
Average Residential Monthly Billing Unit	23.10	21.10	22.07	21.30
Average Residential Bill	$58.82	$61.14	$61.11	$67.02

[1] Data has been revised to reflect correct residential allocations.
Source: Pasadena Water and Power Department.

Billing and Collection Procedures

Billing and collection services for all water services are provided by PWP and the City's Finance Department. Most residential and certain commercial water customers are billed bimonthly for electric and/or water service; most large commercial users are billed monthly for electric and water service. The City prepares a single bill for electric, water, refuse and sewer collection services. Payments received for the billed period are credited first to the oldest charges, then to current charges for each service in the order stated.

The City's policy is that utility bills are due when rendered and delinquent after 30 days. Any amount over $25 and outstanding after 30 days from actual billing date, is assessed a 3% delinquent penalty charge. Lifeline customers are exempted. A 48-hour notice of termination is generated approximately 45 days after the actual billing date and is mailed to the service address. If payment is not received and the delinquent amount due is more than $100 and the customer has both electric and water service, the water service is interrupted. Should the bill not be paid within a week, the electric service is also interrupted. The total bill plus all reconnection charges must be paid to resume service. If after both water service and electric service have been shut off, the bill remains unpaid, the meters are checked twice to insure that they have not been turned back on or tampered with, then the account is closed. After 90 days, the account is written off by the PWP Collection Department and sent to the City Finance Department for collection.

TABLE 12
HISTORICAL CUSTOMER BAD DEBT
($ in Thousands)

	Fiscal Year Ended June 30,				
	2007	**2008**	**2009**	**2010**	**2011**
Bad Debt Written Off	$ 152	$ 144	$ 112	$ 127	$ 173
Total Operating Revenue	$39,943	$39,560	$43,096	$43,480	$43,137
Bad Debt as a Percent of Operating Revenue	0.38%	0.36%	0.26%	0.29%	0.37%

Source: Pasadena Water and Power Department.

Basis of Financial Reporting

The City's financial statements are prepared in accordance with generally accepted accounting principles for municipal governments. Financial statements of the Water System are prepared on the accrual basis of accounting. Financial statements for the Water System for the Fiscal Year ended June 30, 2011 are included as APPENDIX B – "AUDITED FINANCIAL STATEMENTS OF PASADENA WATER AND POWER ENTERPRISE FUNDS FOR THE FISCAL YEAR ENDED JUNE 30, 2011." See also "AUDITED FINANCIAL STATEMENTS."

All revenues of the Water System are generated by charges and other activities of the Water System. The Water System does not receive funds from the City or any tax revenues. All revenues generated by the Water System are deposited into the Water Fund as required by the Charter. See "SECURITY AND SOURCES OF PAYMENT FOR THE 2011A BONDS – The Water Fund." Labor costs for personnel working in both the Water System and the Electric System are allocated on the basis of time worked for each division.

Employees

For Fiscal Year 2012, the City has budgeted approximately 125 full time employees (FTE) for the Water System. All Water System employees are represented either by the International Brotherhood of Electrical Workers, International Union of Operating Engineers, the American Federation of State and Municipal Employees, the Pasadena Association of Clerical and Technical Employees or Pasadena Management Association in all matters pertaining to wages, benefits and working conditions. The current arrangements with these unions and/or associations, which are in the form of either a contract or a memorandum of understanding, expire by their respective terms on various dates through 2012, at which time each is expected to be subject to renegotiation. See APPENDIX A – "THE CITY OF PASADENA – Employee Relations."

The Water System's permanent employees are all covered by the California Public Employees Retirement System ("PERS"), administered by the State, to which contributions are made by both the City and the employees. PERS determines the actuarial methods and assumptions used with respect to assets administered by PERS (including the City's Plan assets) and makes the investment decisions with respect to such assets. For a description of such actuarial methods and assumptions (including the smoothing conventions used by PERS when setting employer contribution rates) and investments, see the comprehensive annual financial report of PERS available on its website at www.calpers.ca.gov. As of June 30, 2009 (the latest available information), the actuarial staff of PERS reported an unfunded liability of $125.0 million for the City's miscellaneous employees as compared to an unfunded liability of $59.0 million the previous year. As of June 30, 2009, the City reported that its PERS obligation with respect to the City's miscellaneous employees was 82.9% funded. The City expects that its unfunded liability for PERS has increased since June 30, 2009.

The City provides a subsidy to retirees of the City that are members of PERS (as well as members of the Pasadena Fire and Police Pension System) toward the purchase of medical insurance from PERS. Benefit provisions are established and amended through negotiations between the City and the respective unions. As of June 30, 2010, the City reported its unfunded actuarial accrued liability for these post-retirement benefits of $30.8 million. The City funds these benefits on a "pay-as-you-go" basis.

See "APPENDIX A – THE CITY OF PASADENA – Employee Relations" and – Post-Retirement Medical Benefits."

Insurance

The insurable property and facilities of the Water System are covered under the City's general insurance policies. The City does not carry earthquake insurance on its water facilities. For additional information on the City's insurance, see "APPENDIX A – THE CITY OF PASADENA – Insurance."

Historical Operating Results and Cash Flows

The following table presents the historical operating results and cash flows for the Water System for the last five Fiscal Years.

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