Water System

Priority	Description	Total Estimated Cost	Appropriated Through FY 2008	Adopted FY 2009	Proposed FY 2010	FY 2011 to 2014 Estimated Cost
1	Fire Protection System Improvements (1019)	36,150,000	16,950,000	4,000,000	3,200,000	12,000,000
2	Meters and Services (1002)	24,094,000	16,494,000	3,000,000	3,200,000	1,400,000
3	Distribution Mains (1001)	44,004,000	24,004,000	3,800,000	3,200,000	13,000,000
4	Cement Lining Program (1005)	2,769,500	2,769,500	0	0	0
5	Miscellaneous Water System Improvements (1006)	7,416,000	4,216,000	700,000	500,000	2,000,000
6	Don Benito/Murray Water Main (1042)	400,000	400,000	0	0	0
7	Water Telemetry and On-Line Water Quality Detectors (1034)	1,878,000	1,578,000	0	100,000	200,000
8	Upgrade Well Pumps, Booster Pumps, Switchgears and Meters (1020)	10,014,000	5,564,000	0	1,400,000	3,050,000
9	Well Collector Pipelines (1044)	12,233,555	4,433,555	1,800,000	0	6,000,000
10	Arroyo Spreading Basins and Intake Structures (1040)	2,200,000	700,000	0	0	1,500,000
11	Sheldon East Reservoir (1023)	885,746	535,746	0	0	350,000
12	Devil's Gate Tunnels (1043)	750,000	750,000	0	0	0
13	Management Information Systems - Water and Power Department (1025)	1,970,000	1,470,000	0	175,000	325,000
14	Water Project Work Management System - Water and Power Department (1045)	900,000	450,000	0	300,000	150,000
15	Reclaimed Water (1013)	12,350,000	11,350,000	0	200,000	800,000
16	Convert Chlorination Stations to Chloramines (1031)	2,499,973	849,973	1,300,000	350,000	0
17	Reservoir Improvements (1037)	8,859,000	5,159,000	0	800,000	2,900,000
18	Water Quality Treatment (1041)	601,000	601,000	0	0	0
19	Interactive Voice Response System (IVR) (1016)	512,149	415,899	0	26,250	70,000
20	Field Service Automation (1012)	453,249	365,749	0	17,500	70,000
21	Geographic Information System - Water and Power Department (1009)	4,305,906	3,732,906	0	137,000	436,000
22	Facility Security Systems (1054)	1,300,000	1,300,000	0	0	0
23	Install Fire Alarm and Sprinkler Systems at the Water and Power Building at the Yards (1055)	70,000	70,000	0	0	0
24	Water and Power Warehouse Modernization (1056)	2,185,000	185,000	0	1,500,000	500,000

Priority	Description	Total Estimated Cost	Appropriated Through FY 2008	Adopted FY 2009	Proposed FY 2010	FY 2011 to 2014 Estimated Cost
25	Customer Information System (1011)	1,657,485	502,485	0	26,250	1,128,750
26	Sunset Perchlorate Treatment Plant (1062)	4,100,000	1,700,000	1,200,000	1,200,000	0
27	Monk Hill Perchlorate Treatment Plant (1063)	5,950,000	4,350,000	1,600,000	0	0
28	Customer Driven Meters and Services (1003)	8,100,000	1,900,000	1,200,000	1,000,000	4,000,000
29	PAX Telephone Equipment Replacement (1064)	50,000	50,000	0	0	0
30	Radio Equipment Replacement (1065)	750,000	300,000	400,000	25,000	25,000
31	New Well Projects (Conjunctive Use) (1021)	18,850,000	4,150,000	300,000	6,000,000	8,400,000
32	Arroyo Seco Bridge B-4 Repair (1066)	670,000	670,000	0	0	0
33	Eaton Canyon Road Repair (1067)	1,481,458	1,481,458	0	0	0
Total		220,410,021	119,448,271	19,300,000	23,357,000	58,304,750

Priority	Project No.	Description	Total Estimated Cost	Appropriated Through FY 2008	Adopted FY 2009	Proposed FY 2010	FY 2011 to 2014 Estimated Cost
1	1019	Fire Protection System Improvements					
		CIC Funding	28,500,000	9,300,000	4,000,000	3,200,000	12,000,000
		Fire Protection Surcharge	100,000	100,000	0	0	0
		Water Fund	7,550,000	7,550,000	0	0	0
		Total	36,150,000	16,950,000	4,000,000	3,200,000	12,000,000

Fire Protection System Improvements

DESCRIPTION: This project provides for the upgrade of the water distribution system, as necessary, to sustain current fire protection requirements. Typical projects include new mains and new fire hydrants.

JUSTIFICATION: This project will ensure adequate water for fire protection in accordance with public safety requirements.

SCHEDULE: In FY 2009, 6.07 miles of main will be installed through projects #1001 and #1019. This work, combined with the 1.93 miles of main scheduled to be installed through project #1044 will help PWP meet the target of 8.0 miles of main specified in the Water Master Plan.

RELATIONSHIP TO GENERAL PLAN: This project is consistent with the Public Facilities Element of the General Plan by helping to ensure adequate water for fire protection.

HISTORY: This is an ongoing project that was created before 1980 and receives funding each year.

Priority	Project No.	Description	Total Estimated Cost	Appropriated Through FY 2008	Adopted FY 2009	Proposed FY 2010	FY 2011 to 2014 Estimated Cost
2	1002	Meters and Services					
		Aid to Construction (Water)	5,270,600	5,270,600	0	0	0
		CIC Funding	17,519,100	9,919,100	3,000,000	3,200,000	1,400,000
		Water Fund	1,304,300	1,304,300	0	0	0
		Total	24,094,000	16,494,000	3,000,000	3,200,000	1,400,000

DESCRIPTION: This project provides for the installation of new water meters and services as required by customers throughout the City. It also includes the replacement of worn-out meters and services as needed. The goal is to replace all old water meters with new automatic meter readers (AMR) in five years. AMR meters will provide an efficient method of collection meter data for billing.

JUSTIFICATION: New meters and services are necessary to meet customer demand and to replace old facilities in order to maintain acceptable service levels to existing customers.

SCHEDULE: Approximately 7,000 water meters will be installed in FY 2009.

RELATIONSHIP TO GENERAL PLAN: This project is consistent with the Public Facilities Element of the General Plan by helping to achieve a high level of maintenance for existing facilities.

HISTORY: This is an ongoing project that was created before 1980 and receives funding each year.

Priority	Project No.	Description	Total Estimated Cost	Appropriated Through FY 2008	Adopted FY 2009	Proposed FY 2010	FY 2011 to 2014 Estimated Cost
3	1001	Distribution Mains					
	Aid to Construction (Water)		2,784,440	2,784,440	0	0	0
	CIC Funding		32,554,580	12,554,580	3,800,000	3,200,000	13,000,000
	Water Fund		8,664,980	8,664,980	0	0	0
	Total		44,004,000	24,004,000	3,800,000	3,200,000	13,000,000

DESCRIPTION: This project provides for the installation of both new and replacement water distribution mains at various locations throughout the City. New developments will pay for required new mains. When mains are installed anticipating a future development, special connection charges and/or front footage charges are assessed and collected from property developers.

JUSTIFICATION: New distribution mains are required to fulfill increased service demands and capacity needs. Replacement of existing substandard mains will maintain the operating efficiency of the water system.

SCHEDULE: In FY 2009, 6.07 miles will be installed through projects #1001 and #1019. This work, combined with the 1.93 miles of main scheduled to be installed through project #1044 will help PWP meet the target of 8.0 miles of main specified in the Water Master Plan.

RELATIONSHIP TO GENERAL PLAN: This project is consistent with Public Facilities Element of the General Plan by helping to achieve a high level of maintenance for existing facilities.

HISTORY: This is an ongoing project that was created before 1980 and receives funding annually.

Priority	Project No.	Description	Total Estimated Cost	Appropriated Through FY 2008	Adopted FY 2009	Proposed FY 2010	FY 2011 to 2014 Estimated Cost
4	1005	Cement Lining Program					
	CIC Funding		900,000	900,000	0	0	0
	Water Fund		1,869,500	1,869,500	0	0	0
	Total		2,769,500	2,769,500	0	0	0

DESCRIPTION: This project provides for the cement or slip lining of existing distribution mains at various locations throughout the City.

JUSTIFICATION: Cement lining improves the flow characteristics of old, unlined mains and prevents their deterioration. The cost of cement lining to existing water distribution mains is estimated to be 50 percent of the cost of installing new replacement mains. The cement lining process will also extend the life of the main for approximately 30 years.

SCHEDULE: Based on the outcome of a feasibility report, no work is needed at this time.

RELATIONSHIP TO GENERAL PLAN: This project is consistent with the Public Facilities Element of the General Plan by helping to achieve a high level of maintenance for existing facilities.

HISTORY: This is an ongoing project that was created before 1980 and is fully funded.

Priority	Project No.	Description	Total Estimated Cost	Appropriated Through FY 2008	Adopted FY 2009	Proposed FY 2010	FY 2011 to 2014 Estimated Cost
5	1006	Miscellaneous Water System Improvements					
	CIC Funding		5,364,000	2,164,000	700,000	500,000	2,000,000
	Water Fund		2,052,000	2,052,000	0	0	0
	Total		7,416,000	4,216,000	700,000	500,000	2,000,000

DESCRIPTION: This project provides for miscellaneous distribution, purification, pumping plant, reservoir, ground water, gravity water, and general plant improvements to the water system at various locations throughout the City.

JUSTIFICATION: This project is necessary to provide ongoing improvements as required to maintain water quality, improve the security and appearance of physical plants and reservoirs, and maintain adequate health standards.

SCHEDULE: Work will include the annual replacement of gates and valves.

RELATIONSHIP TO GENERAL PLAN: This project is consistent with the Public Facilities Element of the General Plan by helping to ensure an adequate supply of safe potable water for consumption and adequate water for fire protection.

HISTORY: This is an ongoing project that was created before 1980 and receives funding each year.

Priority	Project No.	Description	Total Estimated Cost	Appropriated Through FY 2008	Adopted FY 2009	Proposed FY 2010	FY 2011 to 2014 Estimated Cost
6	1042	Don Benito/Murray Water Main					
	Water Fund		400,000	400,000	0	0	0
	Total		400,000	400,000	0	0	0

DESCRIPTION: This project provides for the design, engineering, and construction of an interconnection facility between Kinneloa Irrigation District and Pasadena's water distribution system at Sierra Madre Villa at Fairpoint Street. The project will also provide for the design and upgrade of the existing interconnection at Ranch Top Road.

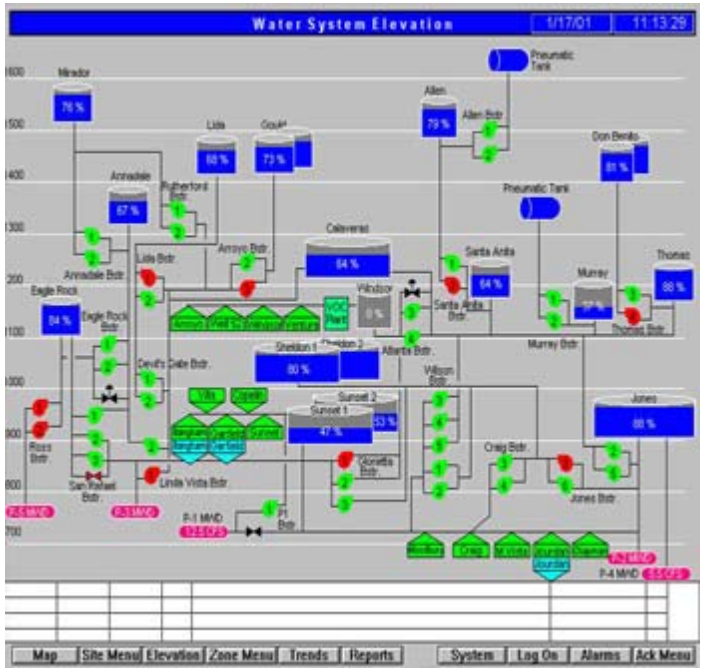
JUSTIFICATION: The Murray Pressure Zone currently operates with inefficient pumping facilities. The proposed interconnection with the Kinneloa Irrigation District at Sierra Madre Villa as well as the proposed upgrade of the Ranch Top Road interconnection will provide the required fire flow and will ensure dependable service to the Murray Pressure Zone.

SCHEDULE: No additional work is scheduled at this time.

RELATIONSHIP TO GENERAL PLAN: This project is consistent with the Public Facilities Element of the General Plan by helping to ensure an adequate supply of safe potable water for consumption and adequate water for fire protection.

HISTORY: This project was created in FY 2005 and is fully funded.

Priority	Project No.	Description	Total Estimated Cost	Appropriated Through FY 2008	Adopted FY 2009	Proposed FY 2010	FY 2011 to 2014 Estimated Cost
7	1034	Water Telemetry and On-Line Water Quality Detectors					
		CIC Funding	1,878,000	1,578,000	0	100,000	200,000
		Total	1,878,000	1,578,000	0	100,000	200,000



DESCRIPTION: This project provides for upgrading the existing Supervisory Control and Data Acquisition (SCADA) system to make it more reliable under normal and major failure conditions.

JUSTIFICATION: The current SCADA system for the Water Division was implemented in FY 2001. The new system entails computer communication equipment, and instrumentation and controls at remote water division sites. The system provides reliable, accurate, and additional water system data through upgraded telemetry equipment and field instrumentation. It also provides more reliable and expandable service, reduces manual reporting, and allows integration of software programs such as inventory control and maintenance management.

SCHEDULE: In FY 2009, Wi-Fi compatible laptops and necessary infrastructure will be provided. An A/C unit in the meter shop to house servers is also scheduled to be installed.

RELATIONSHIP TO GENERAL PLAN: This project is consistent with the Public Facilities Element of the General Plan by helping to ensure an adequate supply of safe potable water for consumption and adequate water for fire protection.

HISTORY: This project was created and received initial funding FY 1994.

Upgrade Well Pumps, Booster Pumps, Switchgears and Meters

1020

Priority	Project No.	Description	Total Estimated Cost	Appropriated Through FY 2008	Adopted FY 2009	Proposed FY 2010	FY 2011 to 2014 Estimated Cost
8	1020	Upgrade Well Pumps, Booster Pumps, Switchgears and Meters					
	CIC Funding		7,199,800	2,749,800	0	1,400,000	3,050,000
	Federal Funds - NASA		2,500,000	2,500,000	0	0	0
	Water Fund		314,200	314,200	0	0	0
	Total		10,014,000	5,564,000	0	1,400,000	3,050,000

DESCRIPTION: This project provides for the upgrading or replacing of older and less efficient well and booster pumps, and obsolete and outdated switchgears.

JUSTIFICATION: Some of the existing well and booster pumps and meters are old and inefficient. Some of the switchgears are also old and may not meet current codes. Greater operating reliability and efficiencies will be realized by these upgrades.

SCHEDULE: Design and construction of switchgear replacement at Glorieta booster station will take place during FY 2009.

RELATIONSHIP TO GENERAL PLAN: This project is consistent with the Public Facilities Element of the General Plan by helping to maintain a high level of service through more efficient operation of our equipment.

HISTORY: This project was created and received initial funding in FY 1994.

Priority	Project No.	Description	Total Estimated Cost	Appropriated Through FY 2008	Adopted FY 2009	Proposed FY 2010	FY 2011 to 2014 Estimated Cost
9	1044	Well Collector Pipelines					
	CIC Funding		3,500,000	3,500,000	0	0	0
	Metropolitan Water District		7,800,000	0	1,800,000	0	6,000,000
	Water Fund		933,555	933,555	0	0	0
	Total		12,233,555	4,433,555	1,800,000	0	6,000,000

DESCRIPTION: This project is a pipeline system to collect the water from water wells and pipe this water directly to reservoirs. There are two main collector pipelines. The westside collector will convey water flows from Garfield and Villa wells to Sunset Reservoir. The eastside collector will convey water flows from Jourdon, Chapman, Woodbury, Monte Vista, Craig, Twombly and Wadsworth wells to Jones and/or Sheldon East Reservoirs.

JUSTIFICATION: This project will allow the blending of well water, in reservoirs, to meet current and future water quality regulations. Combining the well water flows will make future water treatment of well water more efficient and less costly. Also, this project will eliminate any entrained-air problems from wells.

SCHEDULE: In FY 2009, Phase I construction will take place and 1.93 miles of main will be installed. This work, combined with the 6.07 miles of main installed from projects #1001 and #1019 will help PWP meet the 8.0 miles of main target specified in the Water Master Plan.

RELATIONSHIP TO GENERAL PLAN: This project is consistent with the Public Facilities Element of the General Plan by helping to ensure an adequate supply of safe potable water for consumption.

HISTORY: This project was created and received initial funding in FY 1998.

Priority	Project No.	Description	Total Estimated Cost	Appropriated Through FY 2008	Adopted FY 2009	Proposed FY 2010	FY 2011 to 2014 Estimated Cost
10	1040	Arroyo Spreading Basins and Intake Structures					
	Water Fund		2,200,000	700,000	0	0	1,500,000
	Total		2,200,000	700,000	0	0	1,500,000

DESCRIPTION: This project provides for facilities to increase spreading in the Arroyo Seco. This project has five phases:

Phase 1 (FY 2001): Phase 1 provided for the construction of the Millard Stream weir and intake. The project involved constructing a concrete weir and intake, and installing 350 lineal feet of 12-inch steel main.

Phase 2 (FY 2001): Phase 2 provided for the planning of the surveying, drawings, specifications, and required documents for permits and mitigation efforts. Planning for Phase 3 took place.

Phase 3 (FY 2002): Phase 3 involved the combining of sludge ponds 1 and 2, reconfiguring existing piping infrastructure, and demolishing the existing Los Angeles County Public Works' facilities.

Phase 4: Phase 4 provides for the planning of the Hahamongna Watershed Proposal. The project consists of widening the existing Los Angeles County spreading ponds 1-12 and constructing two to four new spreading basins.

Phase 5: Phase 5 will provide for the constructing of the Hahamongna Watershed Proposal.

JUSTIFICATION: This project will allow the capture and spreading of water runoff in the Arroyo Seco. This additional diversion and storage will allow for better management of local water resources and may help to reduce reliance on expensive imported water.

SCHEDULE: No work is scheduled until FY 2014.

RELATIONSHIP TO GENERAL PLAN: This project is consistent with the Public Facilities Element of the General Plan by helping to ensure an adequate supply of safe potable water for consumption and adequate water for fire protection.

HISTORY: This project was created in FY 1995 and received initial funding in FY 2001.

Priority	Project No.	Description	Total Estimated Cost	Appropriated Through FY 2008	Adopted FY 2009	Proposed FY 2010	FY 2011 to 2014 Estimated Cost
11	1023	Sheldon East Reservoir					
	CIC Funding		885,746	535,746	0	0	350,000
	Total		885,746	535,746	0	0	350,000

Proposed Sheldon East Reservoir Site

DESCRIPTION: This project provides for a new water distribution reservoir to support the east side of the Sheldon pressure zone.

JUSTIFICATION: This project will provide added reliability and security in the operation of the water system on the east side of the City. It will also facilitate the increased use of off-peak power for pumping and thus lower power costs.

SCHEDULE: No work is scheduled until FY 2014.

RELATIONSHIP TO GENERAL PLAN: This project is consistent with the Public Facilities Element of the General Plan by helping to ensure an adequate supply of safe potable water for consumption and adequate water for fire protection.

HISTORY: This project was created in FY 1992 and received initial funding in FY 2007.

Priority	Project No.	Description	Total Estimated Cost	Appropriated Through FY 2008	Adopted FY 2009	Proposed FY 2010	FY 2011 to 2014 Estimated Cost
12	1043	Devil's Gate Tunnels					
	Water Fund		750,000	750,000	0	0	0
	Total		750,000	750,000	0	0	0

Water flow from Devil's Gate Tunnel

DESCRIPTION: This project will rehabilitate the Devil's Gate Tunnels, build a new one-million-gallon capacity operational storage reservoir, and upgrade pumping equipment to maximize the use of surface runoff water through Devil's Gate tunnels for irrigation of Brookside Golf Course.

JUSTIFICATION: This water supply is available free to the Department and can be used to replace the purchase of more expensive imported water. After a thorough inspection of existing tunnels, rehabilitation costs were greater than expected.

SCHEDULE: Design on the one-million gallon storage reservoir and upgrading of the pumping equipment will begin in FY 2009.

RELATIONSHIP TO GENERAL PLAN: This project is consistent with the Public Facilities Element of the General Plan by helping to maintain a high level of service through more efficient management of resources. It is also consistent with the Conservation Element by encouraging a more efficient utilization of the City's water resources.

HISTORY: This project was created in FY 1996 and fully funded in FY 1998.

Priority	Project No.	Description	Total Estimated Cost	Appropriated Through FY 2008	Adopted FY 2009	Proposed FY 2010	FY 2011 to 2014 Estimated Cost
13	1025	Management Information Systems - Water and Power Department					
	Water Bond		210,000	210,000	0	0	0
	Water Fund		1,760,000	1,260,000	0	175,000	325,000
	Total		1,970,000	1,470,000	0	175,000	325,000

DESCRIPTION: This project provides for the development, upgrade, and maintenance of local area networks (LAN) at each of the four departmental worksites; acquisition of equipment to interconnect substations, water facilities, and existing networks; and integration of all information critical to Water and Power (PWP) operations into the same, nonredundant database. It will further: Install routers and firewalls in the Department's network structure; convert Water and Power documents and drawings to electronic format and collect/validate field data; procure an Automated Data Collection/Bar Coding system for the Warehouse; convert the existing meter and transformer inventory system currently stored on the HP into a client-server application; and clean existing data prior to beginning the conversion process.

JUSTIFICATION: The Department's October 1991 MIS study found that considerable time savings and administrative and operational benefits would accrue if manual procedures were automated and if existing "islands of automation" were integrated. This would eliminate large amounts of data entry and re-entry performed by several groups, resulting in increased productivity and reduced errors. The barcode project will save time and money by automating inventory utilizing hand-held barcode readers and barcodes. These automated systems reduce time and labor required to perform inventory counts and virtually eliminate data entry errors, thus enabling the department to collect inventory accurately and efficiently at a lower cost and with greater integrity. The existing meter and transformer inventory systems are outdated and not serving the department's current needs and they need to be converted to a client-server type application.

SCHEDULE: Procurement of additional hardware and software and additional labor are planned for FY 2009.

RELATIONSHIP TO GENERAL PLAN: This project is consistent with the Public Facilities Element of the General Plan by helping to provide a high level of service through more efficient management of resources.

SPECIAL CONSIDERATION: This project is also shown in the Electric System (Project 3119) and Technology Projects (Project 1025 and 3119) Sections and Summary. The appropriated dollar amount is not included in the Category Summary total for the Technology Projects Section to avoid duplication.

HISTORY: This project was created in FY 1991 and received initial funding in FY 1992.

Water Project Work Management System - Water and Power Department

1045

Priority	Project No.	Description	Total Estimated Cost	Appropriated Through FY 2008	Adopted FY 2009	Proposed FY 2010	FY 2011 to 2014 Estimated Cost
14	1045	Water Project Work Management System - Water and Power Department					
		Water Bond	300,000	300,000	0	0	0
		Water Fund	600,000	150,000	0	300,000	150,000
		Total	900,000	450,000	0	300,000	150,000

DESCRIPTION: This project will provide the department with an automated means of formulating the project breakdowns according to time, cost, material and staff requirements, and scheduling and workflow management. It will also track project performance.

JUSTIFICATION: With the past reduction in Water and Power Department's staff, this system will allow a more streamlined process of project planning, management and tracking, and eliminate lengthy research, calculations, and manual processes previously done by staff. This system will also allow for more effective facilities management.

SCHEDULE: Work on this project will begin after the GIS project has been completed and is operational.

RELATIONSHIP TO THE GENERAL PLAN: This project is consistent with the Public Facilities Element of the General Plan by helping to maintain a high level of public service through more efficient management and greater work productivity.

SPECIAL CONSIDERATION: This project is also shown in the Technology Projects Section and work is being done in conjunction with Project 3140 in the Electric System Section. The appropriated dollar amount is not included in the Category Summary total for the Technology Projects Section to avoid duplication.

HISTORY: This project was created and received initial funding in FY 1999.

Priority	Project No.	Description	Total Estimated Cost	Appropriated Through FY 2008	Adopted FY 2009	Proposed FY 2010	FY 2011 to 2014 Estimated Cost
15	1013	Reclaimed Water					
	CIC Funding		2,450,000	2,450,000	0	0	0
	Water Bond		200,000	200,000	0	0	0
	Water Fund		9,700,000	8,700,000	0	200,000	800,000
	Total		12,350,000	11,350,000	0	200,000	800,000

RECYCLED
WATER
PROGRAM

DESCRIPTION: This project will involve an evaluation of potential reclaimed water sources, determination of use base, and design/construction of facilities to provide and distribute reclaimed water. This includes the cost to participate in the expansion of the City of Glendale's reclaimed water system.

JUSTIFICATION: Future water supplies in Southern California are expected to be limited. Reclaimed water can augment fresh water supplies through its use for golf courses, freeway landscaping, parks, schools, large turf areas, and industrial processes.

SCHEDULE: No work is scheduled for FY 2009.

RELATIONSHIP TO GENERAL PLAN: This project is consistent with the General Plan and would allow the purchase of more economical water for specific use. It will also allow the Department to utilize existing water resources efficiently, and it is consistent with Land Use Element Objective 18 by increasing the efficiency of water use.

HISTORY: This project was created and received initial funding in FY 1993.

Convert Chlorination Stations to Chloramines

1031

Priority	Project No.	Description	Total Estimated Cost	Appropriated Through FY 2008	Adopted FY 2009	Proposed FY 2010	FY 2011 to 2014 Estimated Cost
16	1031	Convert Chlorination Stations to Chloramines					
	CIC Funding		1,870,000	220,000	1,300,000	350,000	0
	Water Fund		629,973	629,973	0	0	0
	Total		2,499,973	849,973	1,300,000	350,000	0

DESCRIPTION: This project provides for the design and installation of chloramine disinfection facilities to replace chlorination stations.

JUSTIFICATION: This project is necessitated by the Disinfection By-Products Rule effective in 2002. Using chloramines as the disinfection agent will reduce disinfection by-products.

SCHEDULE: Installation of chloramination equipment in Phase I of the Cross Town Collector Pipeline is scheduled for FY 2009.

RELATIONSHIP TO GENERAL PLAN: This project is consistent with the Public Facilities Element of the General Plan by helping to assure a safe supply of potable drinking water for consumption.

HISTORY: This project was created and received initial funding in FY 1994.

Priority	Project No.	Description	Total Estimated Cost	Appropriated Through FY 2008	Adopted FY 2009	Proposed FY 2010	FY 2011 to 2014 Estimated Cost
17	1037	Reservoir Improvements					
	CIC Funding		8,859,000	5,159,000	0	800,000	2,900,000
	Total		8,859,000	5,159,000	0	800,000	2,900,000

DESCRIPTION: This project will provide for major repairs and upgrades to the City's 15 existing water tanks and reservoirs. Most of the tanks and reservoirs are over 60 years old. Examples of the repairs and upgrades may include replacement of reservoir roofing, lining the reservoir floor with hypaton liners, and changing old outlet and inlet valves.

JUSTIFICATION: The reservoir repair will improve the reservoir integrity and reduce or eliminate leaks.

SCHEDULE: In FY 2009, construction of Windsor Reservoir will be completed and design of Sheldon Reservoir will begin.

RELATIONSHIP TO GENERAL PLAN: This project is consistent with the Public Facilities Element of the General Plan by helping to achieve a high level of maintenance for existing facilities, and it is also consistent with the Seismic and Safety Element by minimizing losses due to natural disasters.

HISTORY: This project was created and received initial funding in FY 1994.

Priority	Project No.	Description	Total Estimated Cost	Appropriated Through FY 2008	Adopted FY 2009	Proposed FY 2010	FY 2011 to 2014 Estimated Cost
18	1041	Water Quality Treatment					
	CIC Funding		601,000	601,000	0	0	0
	Total		601,000	601,000	0	0	0

DESCRIPTION: This project provides for the design, engineering, and construction of facilities to treat Pasadena area water for increasing contaminant levels (nitrate, perchlorate, etc.).

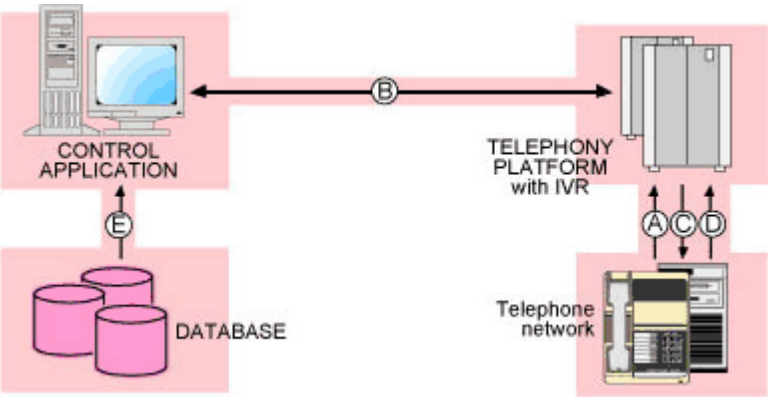
JUSTIFICATION: Pasadena wells are slowly showing increasing contaminant levels and will exceed State maximum contaminant levels in the near future. These facilities will treat the local well water. Local well water is cheaper than imported water.

SCHEDULE: In FY 2009, design of water quality treatment facilities such as a potential perchlorate contamination treatment plant will be provided.

RELATIONSHIP TO GENERAL PLAN: This project is consistent with the Public Facilities Element of the General Plan by helping to ensure an adequate supply of safe potable water for consumption.

HISTORY: This project was created in FY 1996 and fully funded in FY 2006.

Priority	Project No.	Description	Total Estimated Cost	Appropriated Through FY 2008	Adopted FY 2009	Proposed FY 2010	FY 2011 to 2014 Estimated Cost
19	1016	Interactive Voice Response System (IVR)					
	Water Bond		100,000	100,000	0	0	0
	Water Fund		412,149	315,899	0	26,250	70,000
	Total		512,149	415,899	0	26,250	70,000



DESCRIPTION: This project will provide for the Water Division's share of the procurement of the Pasadena Water and Power's portion of an Interactive Voice Response/Interactive Web Response (IVR/IWR) system for the City of Pasadena.

JUSTIFICATION: The new IVR/IWR system will expand service abilities to customers by providing immediate alternatives for automated information access and payments as well as personal assistance via telephone or internet. It is an integral part of Pasadena Water and Power's effort to increase customer service levels while reducing operating costs in a deregulated environment. Integration of IVR/IWR with Orcom will bring call back functionality to the system.

SCHEDULE: Development and implementation for the citywide replacement of the existing IVR/IWR system will continue through FY 2009. Enhancements and changes may begin in FY 2010.

RELATIONSHIP TO GENERAL PLAN: This project is consistent with the Public Facilities Element of the General Plan by helping to maintain a high level of public services, efficient management and greater work productivity.

SPECIAL CONSIDERATION: This project is also shown in the Technology Projects (Project 71207) and Electric System (Project 3026) Sections and Summary. The appropriated dollar amount is not included in the Category Summary total for the Water System Section to avoid duplication.

HISTORY: This project was created and received initial funding in FY 1999.

Priority	Project No.	Description	Total Estimated Cost	Appropriated Through FY 2008	Adopted FY 2009	Proposed FY 2010	FY 2011 to 2014 Estimated Cost
20	1012	Field Service Automation					
	Water Bond		30,000	30,000	0	0	0
	Water Fund		423,249	335,749	0	17,500	70,000
	Total		453,249	365,749	0	17,500	70,000

DESCRIPTION: This project provides for the following upgrades for the Customer Service Field Service Group Meter Readers and Reconnect:

-Automatic Meter Reads (AMR) - Radio Frequency Meter Reading Handheld Devices and drive-by meter reading pilot
-Upgrades of Meter Reading Software - MVRS
-Meter Reading Training Software.

JUSTIFICATION: Upgrades to the Customer Service Meter Reading Operation will reduce the operational costs of meter reading and help improve billing accuracy by enabling the department to obtain accurate reads from the field. AMR water meters are being installed throughout the City. Meter Reading Handheld devices are being upgraded and enabled to read regular water meters and AMR water meters. MVRS Meter Reading Software is being upgraded to accommodate changes in the upload and download of information from the billing system. Meter Reader Training Software will be upgraded to provide meter readers with the latest training tools. Other forms of meter reading such as drive-by and remote reading technology will be investigated for possible pilot programs. Mobile dispatching of service orders will also be investigated for a possible pilot program.

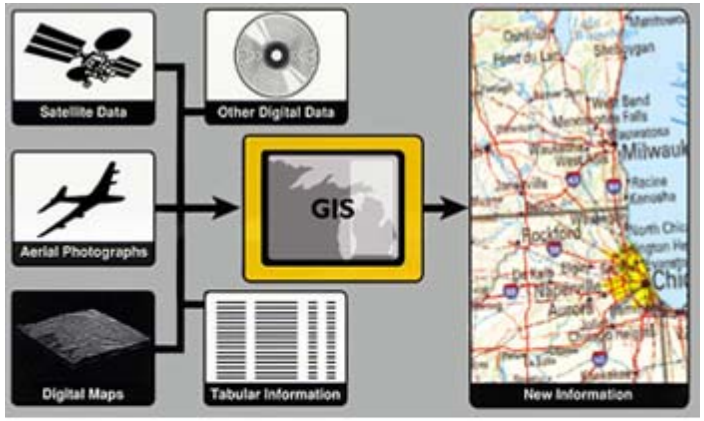
SCHEDULE: Unless otherwise noted, these projects are ongoing:

-AMR meter reading hardware and software are purchased each fiscal year;
-Upgrades to primary MVRS software take place as released from the vendor each year; and
-Meter reading training software will be upgraded.

RELATIONSHIP TO THE GENERAL PLAN: This project is consistent with the Public Facilities Element of the General Plan by helping to maintain a high level of public service through expanded services, efficient management and greater work productivity.

HISTORY: This project was created and received initial funding in FY 2000.

Priority	Project No.	Description	Total Estimated Cost	Appropriated Through FY 2008	Adopted FY 2009	Proposed FY 2010	FY 2011 to 2014 Estimated Cost
21	1009	Geographic Information System - Water and Power Department					
	Water Bond		800,000	800,000	0	0	0
	Water Fund		3,505,906	2,932,906	0	137,000	436,000
	Total		4,305,906	3,732,906	0	137,000	436,000



DESCRIPTION: This project provides for the analysis, development, and procurement of a departmental geographic information system (GIS) for the Water and Power Department. The base map has been completed, followed by application development, hardware procurement and/or procurement of custom, off-the-shelf programs and conversion of utility data.

JUSTIFICATION: The geographic information system will reduce the cost of maintaining manually produced and updated maps and record systems. It will also reduce duplicate record keeping by different sections of the department. In addition, it will provide greater reliability, faster data access, and more efficient processing of information.

SCHEDULE: The PWP GIS Master Plan implementation project will continue through FY 2009. Additional staff training will take place afer implementation. Additional procurement and implementation of hardware, software, and training are planned for FY 2010 through FY 2014.

RELATIONSHIP TO GENERAL PLAN: This project is consistent with the Public Facilities Element of the General Plan by helping to maintain a high level of public service through more efficient management and greater work productivity.

SPECIAL CONSIDERATION: This project is also shown in the Electric System (Project 3005) and Technology Projects Sections. The appropriated dollar amount is not included in the Category Summary total for the Technology Projects Section to avoid duplication.

HISTORY: This project was created before FY 1994 and received initial funding in FY 1994.

Priority	Project No.	Description	Total Estimated Cost	Appropriated Through FY 2008	Adopted FY 2009	Proposed FY 2010	FY 2011 to 2014 Estimated Cost
22	1054	Facility Security Systems					
	CIC Funding		1,300,000	1,300,000	0	0	0
	Total		1,300,000	1,300,000	0	0	0

DESCRIPTION: This project will provide for new security systems and upgrades to existing security systems at all water facilities. These security systems include: new video monitoring systems; electronic keying devices; security lighting; intrusion alarm upgrades; perimeter protection upgrades; and gate entry protection upgrades.

JUSTIFICATION: This project will provide security systems at all water facilities consistent with accepted industry standards. These security systems will reduce the water system's exposure to security breaches.

SCHEDULE: No work is scheduled in FY 2009.

RELATIONSHIP TO THE GENERAL PLAN: This project is consistent with the Public Facilities Element of the General Plan by helping to provide a high level of public service through more efficient management of resources.

HISTORY: This project was created in FY 2003 and fully funded in FY 2007.

Install Fire Alarm and Sprinkler Systems at the Water and Power Building at the Yards

1055

Priority	Project No.	Description	Total Estimated Cost	Appropriated Through FY 2008	Adopted FY 2009	Proposed FY 2010	FY 2011 to 2014 Estimated Cost
23	1055	Install Fire Alarm and Sprinkler Systems at the Water and Power Building at the Yards					
	Water Fund		70,000	70,000	0	0	0
	Total		70,000	70,000	0	0	0

DESCRIPTION: This project provides for the upgrade of existing and the installation of new fire alarms and sprinkler systems at the Water and Power building at the Yards and will bring the building up to health and safety code.

JUSTIFICATION: The Water and Power building is only partially equipped with sprinklers and fire alarms and the systems in place are more than 30 years old. The building houses large numbers of assets in terms of value and quantity. The upgrade and new fire alarm and sprinkler systems will diminish the risk of injuries to employees and potential loss of assets.

SCHEDULE: The project will be included in the Water and Power Warehouse Modernization project (1056).

RELATIONSHIP TO THE GENERAL PLAN: This project is consistent with the Public Facilities Element of the General Plan by providing a safe and secure working environment for employees, and safeguarding the assets of the Utility.

HISTORY: This project was created and fully funded in FY 2003.

Water and Power Warehouse Modernization

1056

Priority	Project No.	Description	Total Estimated Cost	Appropriated Through FY 2008	Adopted FY 2009	Proposed FY 2010	FY 2011 to 2014 Estimated Cost
24	1056	Water and Power Warehouse Modernization					
	Water Fund		2,185,000	185,000	0	1,500,000	500,000
	Total		2,185,000	185,000	0	1,500,000	500,000

DESCRIPTION: This project provides for the modernization of the warehouse including the upgrading of the freight elevator. Included in this plan is the enhancement of the existing fire sprinkler system along with installation of new fire alarms to bring the building up to code. These changes will allow the warehouse to operate with maximum efficiency using a computer inventory tracking system. Racks, shelving, and bin systems will be replaced as needed, or if deemed to be seismically unsafe. Racking and shelving will be a combination of open and closed for maximum space utilization. Grip pallet racks for oversized or heavier-weight items will be installed and current open racks retrofitted for weight-bearing loads. Materials handling equipment including pallet jacks, carts, dollies, basket hampers, coil lifters, etc. will be replaced as needed. Ergonomically correct workstations will also be installed throughout the warehouse. The remaining work involving the modernization of the warehouse is included in the Water and Power Yards Building Renovations and New Operations Facility/EOC project (71142) in the Municipal Building and Facilities Section.

JUSTIFICATION: The warehouse has not had any significant upgrades in approximately 30 years. Racking systems inside the warehouse are inadequate, undersized, and not properly laid out to provide for efficient storage and retrieval of inventory. Exterior racks in the yards are not up to code for heavy loads and are seismically unsafe.

SCHEDULE: This project is being implemented as part of the "Water and Power Yards Building Renovations and New Operations Facility/EOC" (71142) under the Municipal Buildings and Facilities Section.

RELATIONSHIP TO THE GENERAL PLAN: This project is consistent with the Public Facilities Element of the General Plan by helping to maintain a high level of service through efficient warehouse management and greater work productivity. It also provides a safe and secure working environment for employees.

HISTORY: This project was created and received intial funding in FY 2003.

Priority	Project No.	Description	Total Estimated Cost	Appropriated Through FY 2008	Adopted FY 2009	Proposed FY 2010	FY 2011 to 2014 Estimated Cost
25	1011	Customer Information System					
	Water Bond		20,000	20,000	0	0	0
	Water Fund		1,637,485	482,485	0	26,250	1,128,750
	Total		1,657,485	502,485	0	26,250	1,128,750

DESCRIPTION: The Customer Information System (CIS) provides for customer billing for Water, Power, Refuse, and Sewer Services. One CIS system software upgrade was completed in FY 2003, another in FY 2007, and a third scheduled to be completed in FY 2009. System enhancements and upgrades are planned to add functionality to CIS to enable the system to interface with MVRS meter-reading software to read AMR and Probe Meters; bill and read interval data of large customers using MV90 xi Commercial Customer Remote Meter Reading; bill and read interval data of selected residential, small and medium meters for the load research project; investigate the use of Mobile Dispatching of Service Orders in conjunction with the Field Service Automation program; provide interface meter information to the GIS project; pilot new payment methods such as balance billing, preferred pay date, direct credit card payment; pilot enhanced interfaces with IWR to allow customers to start/stop service, change address, request service, and update account information all through the Pasadena Water and Power website.

JUSTIFICATION: The CIS Billing System reduces operational cost by maintaining a central data base of customer records and billing information. As the system matures, system upgrades and enhancements will be made. Interfaces with other systems will be made to maintain or enhance the capabilities of the system, support billing, meter reading, meter shops, GIS, and provide customers with the highest level of service.

SCHEDULE: Unless otherwise noted, these projects are ongoing:

-CIS System upgrade will be installed when released;
-Major CIS upgrade to next generation (scheduled for FY 2011);
-MV90 xi interface with CIS will be complete in FY 2009;
-Mobile Data Dispatching will be investigated with a possible pilot program in FY 2009;
-MVRS interface with CIS incorporating read type and additional functionality will be completed in FY 2009; and
-IVR/IWR functionality is dependent on the ITSD IVR/IWR Project (71207).

RELATIONSHIP TO THE GENERAL PLAN: This project is consistent with the Public Facilities Element of the General Plan by helping maintain a high level of public service through expanded services, efficient management and greater work productivity.

HISTORY: This project was created and received initial funding in FY 2000.

Priority	Project No.	Description	Total Estimated Cost	Appropriated Through FY 2008	Adopted FY 2009	Proposed FY 2010	FY 2011 to 2014 Estimated Cost
26	1062	Sunset Perchlorate Treatment Plant					
	CIC Funding		500,000	500,000	0	0	0
	Federal Funds - EPA		2,800,000	400,000	1,200,000	1,200,000	0
	Water Fund		800,000	800,000	0	0	0
	Total		4,100,000	1,700,000	1,200,000	1,200,000	0

DESCRIPTION: This project provides for the design and construction of a perchlorate treatment system for the Sunset Reservoir wells. Initially the plant will treat Bangham, Copelin and Sunset wells. Garfield and Villa wells may not need treatment depending on State Department of Health Services restrictions on blending and future maximum contaminate level requirements. The Sunset Reservoir wells were shut down in January 2002 when the State lowered its action level for perchlorate.

JUSTIFICATION: Treating the Sunset Reservoir wells is essential to control the spread of the perchlorate contamination plume in the groundwater. With treatment the City can resume using its local water resources instead of relying on expensive imported water supplies.

SCHEDULE: Design of the treatment plant and purchase of the treatment equipment will occur in FY 2009, pending the outcome of the ongoing volatile organic compound investigation associated with the Sunset Reservoir.

RELATIONSHIP TO GENERAL PLAN: This project is consistent with the Public Facilities Element Objective 1 by providing a high level of public service at minimum cost. The project is also consistent with Objective 2 by providing a more efficient utilization of public facilities. In addition, the project is consistent with Objective 5 by providing a high level of maintenance of existing facilities.

HISTORY: This project was created and received initial funding in FY 2005.

Priority	Project No.	Description	Total Estimated Cost	Appropriated Through FY 2008	Adopted FY 2009	Proposed FY 2010	FY 2011 to 2014 Estimated Cost
27	1063	Monk Hill Perchlorate Treatment Plant					
	Federal Funds - NASA		5,950,000	4,350,000	1,600,000	0	0
	Total		5,950,000	4,350,000	1,600,000	0	0

DESCRIPTION: This project provides for the design and construction of a perchlorate treatment system for the Monk Hill wells. The plant will treat Arroyo, Well 52, Windsor and Ventura wells. Perchlorate was first detected June 1997, and by January 2002 all four wells were shut down when the State lowered its action level for perchlorate.

JUSTIFICATION: Treating the Monk Hill wells will help control the spread of the perchlorate contamination plume in the groundwater. With treatment the City can resume using its local water resources instead of relying on expensive imported water supplies. The responsible parties will pay the cost of this groundwater treatment process.

SCHEDULE: The project design, equipment purchase, and construction will be completed in FY 2009.

RELATIONSHIP TO GENERAL PLAN: This project is consistent with the Public Facilities Element Objective 1 by providing a high level of public service at minimum cost. The project is also consistent with Objective 2 by providing a more efficient utilization of public facilities. In addition, the project is consistent with Objective 5 by providing a high level of maintenance of existing facilities.

HISTORY: This project was created and received initial funding in FY 2006.

Priority	Project No.	Description	Total Estimated Cost	Appropriated Through FY 2008	Adopted FY 2009	Proposed FY 2010	FY 2011 to 2014 Estimated Cost
28	1003	Customer Driven Meters and Services					
		Aid to Construction (Water)	8,100,000	1,900,000	1,200,000	1,000,000	4,000,000
		Total	8,100,000	1,900,000	1,200,000	1,000,000	4,000,000

DESCRIPTION: This project provides for the installation of new water meters, services, and mains as requested by customers and developers throughout the City. It also includes new fire hydrants and other requirements from the Fire Department for new building/development projects.

JUSTIFICATION: Meeting customer and developer requests for new meters and services is an important priority in providing water service. Work is done in conjunction with the Fire Department requirements.

SCHEDULE: PWP will install mains, meters, and services for customers upon request and at customers' expense.

RELATIONSHIP TO GENERAL PLAN: This project is consistent with the Public Facilities Element of the General Plan by helping to provide a high level of service and greater work productivity by using available technology.

HISTORY: This project was created and received initial funding in FY 2007.

Priority	Project No.	Description	Total Estimated Cost	Appropriated Through FY 2008	Adopted FY 2009	Proposed FY 2010	FY 2011 to 2014 Estimated Cost
29	1064	PAX Telephone Equipment Replacement					
	Water Fund		50,000	50,000	0	0	0
	Total		50,000	50,000	0	0	0

DESCRIPTION: This project provides for the research, analysis, procurement, and implementation of new digital PAX telephone equipment for private communication links between PWP facilities.

JUSTIFICATION: The existing analog PAX telephone equipment is antiquated and does not support fiber connection to PWP facilities. Therefore, the department plans to replace the existing equipment with digital telephone equipment that utilizes fiber connectivity.

SCHEDULE: The project is awaiting the completion of fiber connectivity throughout PWP facilities.

RELATIONSHIP TO GENERAL PLAN: This project is consistent with the Public Facilities Element of the General Plan by helping to provide a high level of service and greater work productivity by using available technology.

HISTORY: This project was created and fully funded in FY 2007.

Priority	Project No.	Description	Total Estimated Cost	Appropriated Through FY 2008	Adopted FY 2009	Proposed FY 2010	FY 2011 to 2014 Estimated Cost
30	1065	Radio Equipment Replacement					
	Water Bond		250,000	250,000	0	0	0
	Water Fund		500,000	50,000	400,000	25,000	25,000
	Total		750,000	300,000	400,000	25,000	25,000

DESCRIPTION: This project provides for the research, analysis, procurement, and implementation of new digital radio equipment for field operations. This project will also look into incorporating mobile data terminal technology or vehicle locator devices for department vehicles.

JUSTIFICATION: The existing radio equipment does not conform to the upcoming FCC rule requirements. Therefore, PWP plans to replace existing equipment with digital radio equipment that conforms to the new requirements.

SCHEDULE: Construction of infrastructure, additional radio procurement, and additional labor for installation and configuration are scheduled for FY 2009.

RELATIONSHIP TO GENERAL PLAN: This project is consistent with Objective 4 of the Public Facilities Element of the General Plan by helping to provide a high level of service and greater work productivity by using available technology.

HISTORY: This project was created and received initial funding in FY 2007.

Priority	Project No.	Description	Total Estimated Cost	Appropriated Through FY 2008	Adopted FY 2009	Proposed FY 2010	FY 2011 to 2014 Estimated Cost
31	1021	New Well Projects (Conjunctive Use)					
	Metropolitan Water District		14,700,000	0	300,000	6,000,000	8,400,000
	Water Bond		1,640,000	1,640,000	0	0	0
	Water Fund		2,510,000	2,510,000	0	0	0
	Total		18,850,000	4,150,000	300,000	6,000,000	8,400,000

DESCRIPTION: This project will provide capital facilities to include aquifer storage and recovery wells, wellhead treatment (perchlorate and nitrates), and an interconnection between Pasadena and the Foothill Metropolitan Water District (MWD). Wells will recharge the ground water basin and in turn recover the stored water. Additional groundwater wells will be installed after the Pasadena Groundwater Storage Program is finalized.

JUSTIFICATION: Economies of scale will be realized from more efficient use of the available storage space in the underlying groundwater basin, and at the same time improve the reliability of water supplies during droughts.

SCHEDULE: Design of Conjunctive Use project will take place in FY 2009 with construction scheduled for FY 2010 - 2013.

RELATIONSHIP TO GENERAL PLAN: This project is consistent with the Public Facilities Element of the General Plan by helping to maintain a high level of service through more efficient management of resources. It is also consistent with the Conservation element by encouraging a more efficient utilization of the City's water resources.

OPERATING BUDGET IMPACT: The wells will permit greater purchases of MWD water at reduced rates. The result will be a reduction in annual operating expenses.

HISTORY: This project was created and received initial funding in FY 1992.

Arroyo Seco Bridge B-4 Repair
1066

Priority	Project No.	Description	Total Estimated Cost	Appropriated Through FY 2008	Adopted FY 2009	Proposed FY 2010	FY 2011 to 2014 Estimated Cost
32	1066	Arroyo Seco Bridge B-4 Repair					
	Water Fund		670,000	670,000	0	0	0
	Total		670,000	670,000	0	0	0

DESCRIPTION: This project provides for the repair of the Arroyo Seco Bridge B-4 located approximately 0.75 mile north of JPL in the Arroyo Seco. The bridge is over 60 years old and is owned and maintained by Pasadena Water and Power. It is mainly used by hikers, bikers, Fish and Game, and the U.S. Fire Service (USFS). The bridge was damaged in the 2005 winter rainstorms.

JUSTIFICATION: The bridge is owned by the City of Pasadena and has been badly damaged by winter rainstorms causing increased water and debris flow down the Arroyo Seco. The bridge is currently closed to public vehicle access and only open to emergency vehicles from City of Pasadena, Los Angeles County Fire, USFS, and Fish and Game. Hikers and bikers still utilize this road and bridge.

SCHEDULE: Construction is scheduled for FY 2009 pending approval from the California Department of Fish and Game.

RELATIONSHIP TO THE GENERAL PLAN: This project is consistent with the Safety Element, Goal F-1 by minimizing injury, loss of life, property damage, and economic and social disruption caused by flood and inundation hazards.

HISTORY: This project was created and received initial funding in FY 2007.

Priority	Project No.	Description	Total Estimated Cost	Appropriated Through FY 2008	Adopted FY 2009	Proposed FY 2010	FY 2011 to 2014 Estimated Cost
33	1067	Eaton Canyon Road Repair					
	Federal Emergency Management Agency		1,481,458	1,481,458	0	0	0
	Total		1,481,458	1,481,458	0	0	0

DESCRIPTION: This project provides for the repair of a portion (about 0.5 mile) of Mount Wilson Toll Road within the City of Pasadena boundary, and debris cleanup from the large landslide in Eaton Canyon. Work will be completed by Los Angeles County Fire Department, the main user of the road.

JUSTIFICATION: The road is owned by the City of Pasadena and a large landslide has closed off access needed by emergency vehicles and Los Angeles County Fire personnel, making the road very dangerous for public use.

SCHEDULE: Project is on hold pending role/responsibility clarification from the County.

RELATIONSHIP TO THE GENERAL PLAN: This project is consistent with the Safety Element of the General Plan by helping to ensure that grading and construction operations are necessary to correct for unstable soils, soil erosion, landsliding and flooding debris, and /or mudflows in the hillside area. Goal G-1: Minimize the risk to life or limb and property damage resulting from soil and slope instability.

HISTORY: This project was created FY 2007 and fully funded in FY 2008.