

DATE ISSUED: February 26, 2001

REPORT NO. 01-044

ATTENTION: Natural Resources and Culture Committee
Agenda of February 28, 2001

SUBJECT: Water Department Capital Improvements Program

REFERENCES: Strategic Plan for Water Supply, adopted August 12, 1997
City Manager's Report 99-32, issued February 22, 1999
City Manager's Report 00-95, issued May 3, 2000
City Manager's Report 00-1447, issued July 19, 2000

SUMMARY

THIS IS AN INFORMATION ITEM ONLY. NO ACTION IS REQUIRED ON THE PART OF THE COMMITTEE OR THE CITY COUNCIL.

BACKGROUND

In August 1997, the City Council approved the *Water Strategic Plan for Water Supply (Strategic Plan)* that included a water resources strategy to meet water demands through 2015, and an associated \$773 million Capital Improvements Program (CIP) to replace, upgrade and expand key water system facilities. The *Strategic Plan* was the result of a year-long planning effort undertaken by a 30-member Public Advisory Group appointed by the Mayor and City Council. At the same time, the City Council approved three annual six-percent water rate increases to fund the initial years of the CIP, and subsequently approved a financing plan to support the program. In August 1998, the City issued an initial \$385 million of bonds for the water CIP.

The eight-year capital program (fiscal years 1999 - 2006), which resulted from the strategic planning effort, was in response to a growing recognition that the City's water infrastructure was in serious need of improvement in order to maintain service reliability as well as ensure adequate treatment, storage and distribution facilities for current and future City needs. Several water facilities were aging and in some cases dilapidated. Additionally, in 1997 the City had been issued a Compliance Order by the State of California Department of Health Services (DHS) requiring improvements to water facilities. The Compliance Order requires that the City provide quarterly progress updates to DHS, and specifies dates for the design, construction and completion of projects. Since securing adequate funding through water rate increases and a bond issuance, the Water Department has met all key DHS Compliance Order milestones.

The Water Department's capital program was initiated in July 1998. This report is a status update of the water CIP highlighting progress to date and providing information on future projects.

DISCUSSION

Within the past few years, a series of highly visible water main breaks underscored the need to modernize many of the aging mains in our water distribution system. Many of these older pipes are made of cast iron and have been in service for nearly 100 years. While cast iron pipes make up only 5-7 percent of the pipe in our system, they account for 60-80 percent of the pipes that experience breaks. As part of the Water Department's Capital Improvements Program, we are replacing 10-12 miles of cast iron water distribution mains every year. Based on the age of the pipe, history of breaks and other factors, the older mains are scheduled for replacement with state-of-the-art materials.

There are approximately 165 miles of cast iron distribution mains left to be replaced. The Department is sensitive to the fact that the water replacement work can be disruptive and inconvenient to the communities that will benefit from the improved infrastructure. Every effort is made to work closely with residents and business owners in the affected communities to lessen the impact of construction. The Water Department also works closely with the Metropolitan Wastewater Department to schedule sewer replacement work at the same time to minimize community disruption.

To adequately plan for these facility improvements, the Department must consider the complex nature of the City's water system and the relationship to its daily operations including sustaining water pressures for the nearly 100 different pressure zones within the city, ensuring adequate fire protection, and maintaining continuous water service to all its customers.

In addition to the water main replacement program described above, water infrastructure improvements (replacements, upgrades and expansions) have begun throughout the City's water system. Our goal is to provide the best possible water service to our customers. While there may be temporary inconveniences during construction, the community benefits significantly from rehabilitated or new water facilities through safer and more reliable water service for decades to come. Through December 2000 the water capital program has expended \$178 million on planning, design and construction of water infrastructure projects. It has:

Met all of requirements of the DHS Compliance Order to date
Initiated replacement of 33 miles of water mains

Completed improvements to:

- Bayview Water Pump Station
- Del Cerro Highlands Pump Station
- Encanto Standpipe Removal
- Joint Lab Standby Emergency Power
- Point Loma Reservoir Upgrade
- La Jolla Country Club Reservoir
- Miramar Pipeline Improvements - Phase II
- Soledad Reservoir
- Telemetry Control System - Phase I
- 65th & Herrick Pump Station

Begun construction on:

- Alvarado Water Treatment Plant - Upgrade and Expansion - Phase I
- Bayview Reservoir Reconstruction
- Black Mountain Reservoir
- Deerfield Water Pump Station
- Encanto Park Pipeline
- Lomita Standpipe Removal
- Mid-City Pipeline
- Ocean View Hills Parkway Pump Station
- Paradise Mesa Standpipe Rehabilitation
- San Carlos Reservoir Rehabilitation
- South San Diego Pipeline No. 2
- Telemetry Control System - Phase II
- Town View Lane Pipeline

Begun design on:

- Adobe Falls Water Pump Station
- Alvarado Water Treatment Plant - Earl Thomas Reservoir Replacement
- Alvarado Water Treatment Plant - Upgrade and Expansion Phase II
- Black Mountain Reclaimed Water Pipeline
- Bonita Pipeline - Phase II
- El Capitan Reservoir Road Improvements
- Friars Road Pump Station
- Miramar Road Pipeline
- Miramar Water Treatment Plant - Upgrade and Expansion
- Otay Water Treatment Plant Upgrade
- Rancho Bernardo Pipeline No. 2
- Various Water Pump Stations throughout the system
- Various Standpipes and Reservoirs throughout the system
- Water Operations Central Facility

In the future, the Water CIP program will continue to replace approximately 10-12 miles of water mains each year, complete the projects listed above, and initiate additional projects to enhance the quality and reliability of the water system. Projects planned for the future include:

- Barrett and Morena Reservoir Outlet Tower Upgrades
- Lakeside Pump Station
- Lower Otay Emergency Outlet
- Miramar Pipeline Improvements - Phases III and IV
- North City Reclamation System
- Otay Raw Water Pump Conversion
- Otay 2nd Pipeline Improvements
- Pacific Beach Reservoir
- Potable Water Storage Recirculation
- Rancho Bernardo Pump Station No. 2

Reservoir Water Quality Improvements
South San Diego Reservoir Upgrade
Tierrasanta Norte Water Pump Station
Torrey Pines Road/La Jolla Blvd Water Main Replacement
Various Standpipes and Reservoirs throughout the system
Water Facility Security Enhancements

The water capital program is now in its third full execution year. To continue the planned program and make progress on replacing, upgrading and expanding integral water system facilities will require significant effort and expense. Additional rate increases and bond issuances are also required. The last of the three previously approved rate increases went into effect in July 1999. The Water Department and the Financial Management Department are currently working to develop a rate proposal to present to the City Council in the near future. The adoption of rate increases is considered essential prior to issuance of additional bonds in order to afford the additional bond debt and demonstrate to the financial community the City's ongoing commitment to its water capital program.

In conclusion, the City has made significant progress in improving its water facilities. However, there remains much work ahead to fulfill the goals of the *Water Strategic Plan* for the reliability and safety of the City's water infrastructure.

Respectfully submitted,

Larry Gardner
Water Department Director

Approved: George I. Loveland
Senior Deputy City Manager

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