

DATE ISSUED: May 1, 2003

REPORT NO. 03-093

ATTENTION: Land Use & Housing Committee  
Agenda of May 7, 2003

SUBJECT: Water Supply and Impacts on Land Use/Growth

REFERENCE: City of San Diego Long-Range Water Resources Plan (2002-2030)  
Adopted December 9, 2002

### SUMMARY

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

### BACKGROUND

The City of San Diego has a current population of nearly 1.3 million. Population forecasts developed for the City's Strategic Framework Element and Action Plan assume that the population will continue to increase. Will water be available for projected growth? What are we doing now to prepare for the future? This report will discuss the City of San Diego's current and projected water demands, the status of our water supply infrastructure, the City's long-range water planning, Metropolitan Water District of Southern California (MWD) and the San Diego County Water Authority (CWA) water supply efforts, compliance with Senate Bill 610 and Senate Bill 221 for new developments, and City of San Diego water planning department coordination.

### DISCUSSION

#### **Current and Projected Water Demands:**

The City of San Diego's Long-Range Water Resources Plan (2002-2030), adopted by City Council on December 9, 2002, uses the San Diego Association of Governments (SANDAG) City population projections of over 1.9 million City residents by the year 2030. This

population growth will translate into water demands increasing from 244,000 acre-feet per year (218 million gallons per day) in calendar year 2000 to approximately 252,000 acre-feet per year (225 million gallons per day) in 2010, and 297,000 acre-feet per year (265 million gallons per day) by 2030, under normal weather conditions. Without water conservation and under dry weather conditions, water demands could be as high as 287,000 acre-feet per year (256 million gallons per day) in 2010, and 350,000 acre-feet per year (313 million gallons per day) in the year 2030.

### **Water Supply Infrastructure Status:**

From inception, July 1, 1998, to date, the Water Department's Capital Improvements Program has completed 45 projects for a total cost of \$212.5 million. In addition, 67 miles of cast iron pipe have been replaced and approximately 142 miles remain outstanding for future replacement. During this time, two separate bond issuances occurred. The first bond issuance was approved by City Council on June 29, 1998 and \$385 million in bonds were issued on August 4, 1998. Approval of the second bond issuance occurred on September 18, 2002 and \$286.9 million in bonds were issued on October 8, 2002, of which \$86.3 million was used to refinance a portion of the first bond issuance.

Currently, the Water Department's CIP Program Management Division is managing 84 projects. Of the 84 projects, 61 projects are scheduled for completion by June 30, 2007 for an estimated cost of \$442.2 million. At the completion of this phase of the Capital Improvements Program, water treatment plant capacity will have increased from 294 million gallons per day to 455 million gallons per day. Transmission pipeline capacity and redundancy within the water system will have been greatly enhanced. In addition to the above projects, there are 46 new projects that have already been identified for future phases of the Capital Improvements Program. A map showing the Water Department's Capital Improvements Program is attached for reference (Attachment No. 1).

Subsequently, 69 of the 100 Department of Health Services Compliance Orders (Department of Health Services Compliance Order No. 04-14-96-022) have currently been satisfied and all remaining compliance orders are on schedule for completion.

The City is actively pursuing Proposition 50 funding. Several contacts with State Legislators have already been made. Based upon the City's own internal calculations, the fair share allocation of the total \$3.4 billion bond monies available, \$73 million should be allocated directly to the City. The City will continue to actively pursue this funding opportunity for future Water Department projects.

### **The City's Long Range Water Planning:**

As adopted, the Long-Range Water Resources Plan (Water Resources Plan) provides the City with a "roadmap" for developing water supply alternatives, thereby reducing the City's dependence upon imported water, diversifying water supply options, and increasing control over local water supply development. Between now and 2010, the Water Department is working on implementing the first phase of the Water Resources Plan focusing on

conservation, reclamation, groundwater storage, groundwater desalination, and water transfers.

Phase I - Through Year 2010		
Resource	Status	Goal (acre-feet)
Conservation	Ongoing	32,000
Reclamation	Ongoing	15,000
Groundwater Storage	New	20,000
Groundwater Desalination	New	10,000
Water Transfers	New	5,000

The development of the Water Resources Plan was part of the continuing effort by the Water Department, carrying forward from August 12, 1997, when the City Council adopted the *Strategic Plan for Water Supply* that included a water resources strategy to meet future water demands through 2015; identified a Capital Improvements Program (CIP) to upgrade, replace and expand key water system facilities; and approved a water rate increase to fund the initial years of the CIP. Beginning in calendar year 1999, the Water Department identified work for updating the water resources strategy through the year 2030.

During this planning process, the importance of having a flexible and adaptive water resources strategy was recognized, given the uncertainty of technology, price of imported water, and availability of funding for local projects. Therefore, the recommended approach for the Water Resources Plan was to implement it in phases. As the program matures and factors such as changing technology, water markets, water management in California and other factors become identified, Phase II additional water resource elements will be examined to determine their feasibility for implementation.

Phase II - Additional by Year 2020					
Option A - Quality Strategy		Option B – Market Strategy		Option C- Storage Strategy	
Resource	Goal (acre-feet)	Resource	Goal (acre-feet)	Resource	Goal (acre-feet)
Conservation	4,000	Conservation	4,000	Conservation	4,000
Groundwater Desalination	10,000	Marine Transport	10,000	Groundwater Storage	20,000
Ocean Desalination	10,000	Water Transfers	10,000		

## **Metropolitan Water District of Southern California (MWD) and San Diego County Water Authority (CWA) Water Highlights:**

The distribution and management of Colorado River water is governed by a complex body of laws, court decrees, compacts, agreements, regulations, and an international treaty collectively known as the “Law of the River.” MWD’s entitlement is established by the fourth and fifth priorities of California’s Seven Party Agreement. These priorities provide 550,000 acre-feet per year and 662,000 acre-feet per year, respectively. In addition, MWD holds a surplus water contract for delivery of 180,000 acre-feet per year. The physical capacity of the Colorado River Aqueduct is slightly over 1.3 million acre-feet per year, based upon pumping capacity of 1,800 cubic feet per second. MWD’s long-held objective is to maximize the availability of Colorado River water, up to the maximum capacity of the Colorado River Aqueduct, subject to environmental, contractual, legal, political, financial, and institutional constraints.

Imperial Irrigation District (IID), Coachella Valley Irrigation District (CVID), MWD and CWA are negotiating a Quantification Settlement Agreement (QSA) to budget their portions of California’s 4.4 million-acre feet per year allotment of Colorado River water. The QSA would provide a framework for conservation measures, environmental mitigation, and water transfers for a period of up to 75 years. Last month, each agency agreed to the QSA settlement terms. However, the final QSA is contingent upon: the dismissal of the legal action of *IID v. United States of America*; the reinstatement of the special surplus water provisions in the Interim Surplus Guidelines; the resolution of the overrun payback issue; and the allocation of Proposition 50 funds. Upon the successful signing of the QSA, CWA would begin an initial 45-year term of minimum annual water transfer amounts of 130,000 to 200,000 acre-feet from IID at an estimated cost of approximately \$258 per acre-foot.

As of January 2003, the 800,000 acre-foot Diamond Valley Reservoir is full and is fully operational, and the facility is being operated in accordance with MWD’s operating criteria.

CWA’s Capital Improvement Program has budgeted approximately \$827 million for the Emergency Storage Project (ESP). ESP will establish an additional 90,000 acre-feet of water storage supplies for use in CWA’s service area in times of water supply deficiencies and will upgrade existing conveyance systems to meet current seismic standards. ESP is comprised of four phases and 16 projects. CWA is currently in Phase 1 and construction activities are on schedule and within budget. The first phase will continue through Spring 2004. It includes the Olivenhain Dam, Olivenhain Pipelines and Olivenhain Pump Station projects. Construction for the second phase of ESP consists of the San Vicente Pump Station, San Vicente/Moreno Lakeside Pipeline Interconnect Pipeline, and San Vicente to Second Aqueduct Pipeline and is scheduled from 2004 to 2008. The third phase will be constructed from 2006 through 2008 and the fourth phase will occur from 2008 through 2010. A map showing CWA’s Capital Improvement Program is attached for reference (Attachment No. 2).

The Notice of Preparation for CWA’s Regional Water Facilities Master Plan Program Environmental Impact Report (PEIR) was issued on February 10, 2003. This PEIR will discuss three supply alternatives: Alternative 1) construction of a pipeline from the north to

obtain additional water from MWD; Alternative 2) development of an additional supply from the west through seawater desalination, known as the Carlsbad ocean desalination plant; and Alternative 3) construction of a new pipeline from the east to deliver water from the Colorado River. The draft PEIR is scheduled for public review in August 2003 and certification by December 2003.

**Senate Bill 610 and Senate Bill 221:**

Senate Bill 610 requires that a water assessment be furnished as part of the environmental documentation if a new development project is subject to the California Environmental Quality Act (CEQA). Senate Bill 221 requires that prior to the approval of a new development project, written verification of a sufficient water supply must be provided. Both Senate Bill 610 and Senate Bill 221 amended California state law effective January 1, 2002. By law, Senate Bill 610 and Senate Bill 221 only apply if a project is of sufficient size (500 or more residential dwelling units, shopping centers employing 1,000 or more persons or having more than 500,000 square feet of office space, etc.).

As new development projects are submitted to the Development Services Department for processing, compliance with Senate Bill 610 and Senate Bill 221 at the City level is being addressed through the City's CEQA process. During the CEQA process, requirements for sufficient water capacity and distribution are identified and if any deficiencies are noted, the developer is required to build new water infrastructure to satisfy Water Department standards. These requirements are then noted as "a condition of development" within the approved project.

Compliance with the regional water assessment and sufficient water supply requirements are addressed and deemed satisfied by the Water Code, Section 10915 provided that certain conditions are met. MWD and CWA are addressing these conditions through their adopted Urban Water Management Plans (UWMP). MWD recently issued an update to their 2000 Regional UWMP for compliance with Senate Bill 221 and Senate Bill 610. In their report, MWD identifies two main challenges facing future water resources: reduced Colorado River deliveries, and water quality constraints. Additionally, MWD listed the following opportunities for water resources: Diamond Valley Reservoir is full; re-operation of storage and transfer programs; enhanced conservation programs; and development of additional local resources.

In accordance with the Urban Water Management Planning Act, the City of San Diego, CWA, and MWD submit UWMP to the California Department of Water Resources (DWR) every five years. A component of the UWMP includes projected water use for the next 20 years. Therefore, as UWMP are submitted to the DWR, the City's projected water use is rolled-up into CWA water use projections, which in turn are rolled-up into MWD water use projections.

Several cities and water agencies throughout San Diego County and California were surveyed regarding their involvement and action plan for compliance with Senate Bill 610

and Senate Bill 221. The results of the survey have been summarized and are shown on Table 1 (Attachment No. 3).

**City of San Diego Water Planning Department Coordination:**

The City of San Diego's land use plans, development processing and permit issuance, and water supply are administered by the Planning Department, the Development Services Department, and the Water Department, respectively. The Planning Department is responsible for the City of San Diego's land use plans, including the Progress Guide and General Plan and its associated community plans. The State of California requires jurisdictions to comprehensively assess water conservation and use in the Conservation Element of the general plan. The State General Plan Guidelines suggest that local jurisdictions include in their Conservation Elements an assessment of local and regional water supply and the related plans of special districts and other agencies, an analysis of the existing land use and zoning within said boundaries and the approximate intensity of water consumption. The Guidelines also suggest an inventory of existing and future water supply sources for domestic, commercial, industrial, and agricultural uses, and an assessment of existing and projected demands upon water supply sources, in conjunction with water suppliers. State law does not mandate the guidelines however; they provide a framework for jurisdictions to consider when developing their general plan elements.

The City Council adopted the Strategic Framework Element and its associated documents on October 22, 2002. The Strategic Framework Element is the first step in a comprehensive update to the 1979 Progress Guide and General Plan. The Strategic Framework Element includes a broad strategy for San Diego's growth and development and includes recommendations for updating the Conservation Element. The Conservation Element update is in progress and will involve technical assistance and policy coordination from the following Departments: Planning, Development Services, Water, Metropolitan Wastewater, and General Services (Storm Water Program). The San Diego Association of Governments and the San Diego County Water Authority are also key participating agencies in this process. The water component of the Conservation Element update will tie closely with other elements of the Progress Guide and General Plan, most notably Land Use and Public Facilities and Services.

Coordination with the Development Services Department will occur as projects are submitted and go through the City's development review process.

CONCLUSION

The overall outlook of water supply for the City of San Diego is promising. As described in this report, the San Diego County Water Authority and Metropolitan Water District of Southern California are taking steps in their specific areas to ensure that water supply to the San Diego region continues to meet current and future demands.

The Water Department's Capital Improvements Program will enhance water treatment, storage, and distribution throughout the City, and its Long-Range Water Resources Plan creates a road map for developing water supply specific to the City's needs.

The Planning, Development Services, and Water Departments are all working together to ensure that the City's water supply planning efforts are consistent with existing and future land use. The Water Department will continue to have a flexible water planning approach that can adapt to changes as the future becomes more defined.

Respectfully submitted,

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Larry Gardner  
Water Department Director

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Approved: Richard G. Mendes  
Utilities General Manager

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Attachments: [1. The Water Department's Capital Improvements Program map](#)  
[2. CWA's Capital Improvement Program map](#)  
[3. Senate Bill 610 and Senate Bill 221 Survey Results](#)