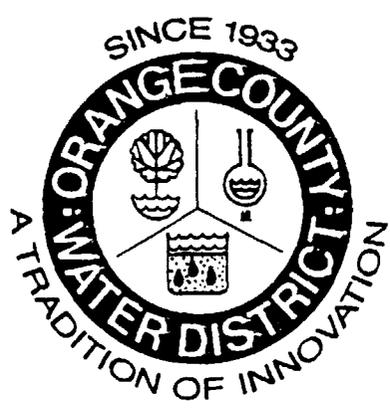


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THE DISTRICT

A PERSPECTIVE ON THE ORANGE COUNTY WATER DISTRICT



January 11, 1994

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THE DISTRICT

Formation and Purpose

The District was formed by a special act of the State of California (the "State") Legislature enacted in 1933 (as subsequently amended, the "Act"). The District is authorized pursuant to the Act to replenish the groundwater basin underlying the District (the "Lower Basin"), to augment and protect the quality of the common water supplies of the District, to manage, regulate and protect the groundwater supplies within the District, and to reclaim, treat, inject, extract, transport and otherwise manage and control water for the beneficial use of persons or property within the District and to improve and protect the quality of the groundwater supplies within the District.

The District encompasses approximately 300 square miles in the County including substantially all of the northwestern half of the County, in which an estimated population of approximately 2,000,000 persons resides. The cities of Anaheim, Santa Ana, Orange, Huntington Beach, Tustin, Westminster, Fullerton, Fountain Valley, Cypress, Yorba Linda, Los Alamitos, Placentia, Villa Park, Stanton, Garden Grove, Buena Park, Seal Beach, La Palma and Costa Mesa are entirely included within the boundaries of the District and portions of the Cities of Irvine and Newport Beach are included within the boundaries of the District.

The District's primary role is to manage the groundwater basin. The District has thus not historically sold or distributed water or serviced water customers on a retail basis. The District now wholesales reclaimed water from the Green Acres Project through select retailers for irrigation and industrial purposes and sells water from groundwater clean-up projects until capital costs are retrieved. See the caption "THE PLAN, THE PROJECT AND FUTURE INDEBTEDNESS - Water Supply Projects – Wastewater Reclamation Projects." Groundwater pumping within the District is undertaken by 21 municipal groundwater producers and 110 private groundwater producers who pay a Replenishment Assessment and, in most cases, an Additional Replenishment Assessment to the District, all as described under the caption "THE DISTRICT - Sources of Revenue".

As more particularly described below under the caption "THE DISTRICT - Water Supply", the District nominates two of the five members to the court-appointed Santa Ana River Watermaster, which monitors both Upper Basin and Lower Basin flows of the Santa Ana River and administers and enforces certain Santa Ana River water rights as between water users within the Upper and Lower Basins. See the caption "THE DISTRICT - Water Supply - Historic Water Supply".

Board of Directors and Management

The District is governed by a 10-member Board of Directors (the "Board"). Three Board members are appointed, one each by the cities of Anaheim, Fullerton and Santa Ana, and the remaining seven Board members are elected from geographic areas of the District other than Anaheim, Fullerton and Santa Ana. The current directors are set forth below:

DIRECTORS

	Expiration of Term	Occupation
Philip L. Anthony, President	11/29/96	Governmental Relations Consultant; former Orange County Supervisor and former City Council Member and Mayor of the City of Westminster.
Kathryn L. Barr, First Vice President	11/25/94	Real Estate Broker; former City Council Member and Mayor of the City of Garden Grove; Director of Garden Grove Sanitation District.
Donn Hall, Second Vice President	11/25/94	Vice President for Water Equipment Manufacturing firm; former City Council Member and Mayor of the City of Costa Mesa.
Wesley M. Bannister	11/29/96	Insurance Broker; former City Council Member and Mayor of the City of Huntington Beach; Director of Metropolitan Water District, OCYMCA and JPIA; former Director of County Sanitation Districts of Orange County and West Orange County Water District.
John V. Fonley	11/29/96	Retired; former City of Orange Water Superintendent.
Daniel E. Griset	Indefinite	Insurance Consultant and Broker; former City Council Member and Mayor of the City of Santa Ana; former Director of County Sanitation Districts of Orange County.
Lawrence P. Kraemer, Jr.	11/25/94	Rancher and Real Estate Developer.
George Osborne	Indefinite	Retired; Executive Director of Santa Ana River Flood Protection Agency; former Director of Orange County Environmental Management Agency; Chief Engineer of Orange County Flood Control District; Orange County Planning Director; member State Water Quality Control Board.
Langdon W. Owen	11/25/94	Water Resources & Financing Consultant; former General Manager of District.
Irv Pickler	Indefinite	Retired; City Council Member of the City of Anaheim; Director of County Sanitation Districts of Orange County; Vice Chairman of Orange County Planning Commission.

Day-to-day operations of the District have been delegated by the Board to the General Manager and other District employees (see following chart). Certain information relating to key employees is set forth below:

William R. Mills Jr., General Manager—Mr. Mills joined the District on September 1, 1987 after more than twenty years in the water resource management field. Mr. Mills began his career in 1962 first with the Los Angeles County Flood Control District and then with the State of California Department of Water Resources. From 1967 to 1984 Mr. Mills was employed by PRC Engineering Inc. in Santa Ana, California, where he worked in a variety of capacities, culminating in his serving as President of the Planning and Development Division. While with PRC Engineering Inc., Mr. Mills acted as a consultant to the District on a variety of matters, including the design of Water Factory 21. From 1984 to 1987 Mr. Mills was an independent consultant and continued consulting with the District.

Mr. Mills graduated from the Colorado School of Mines with a geological engineering degree in 1959 and from Loyola University in Los Angeles, California, with a MS in civil engineering in 1973. Mr. Mills is a Registered Geologist with the State of California and a Registered Civil Engineer with the States of Arizona and California and is an appointed Watermaster for the Santa Ana River. Mr. Mills is a member of the United States Geological Survey Advisory Committee on Water Data for Public Use and a fellow with the American Society of Civil Engineers.

He is chairman or board member of numerous state-wide and national organizations, such as the Association of California Water Agencies, American Desalting Association, American Water Works Association-CA/NEV Section, California Water Resources Association, California Urban Water Agencies, Alliance for Radon Reduction and National Water Research Institute. Additionally, he serves on the American Water Works Association Research Foundation's Research Advisory Committee, is new chair of ACWA's Water Quality Committee (and as such will also be a member of the reorganized ACWA Board of Directors), was recently appointed a chairman of the Ground Water Protection Task Force as part of the Governor's External Review Program of the State Water Resources Control Board. He was founding President of the WaterReuse Association of California (1991-92) and was awarded the Association of California Water Agencies Distinguished Water Leader Award for 1992.

John M. Chaufy, Assistant General Manager – Mr. Chaufy joined the District on November 1, 1987. Mr. Chaufy heads up the Project Development Department and District Operations Group at the District. Mr. Chaufy's career began with the U.S. Army Corps of Engineers as a commissioned officer. In 1977, he joined the firm of Camp Dresser & McKee where he held a variety of positions, including senior project manager, office and cost center manager for the Phoenix, Arizona office. Mr. Chaufy has been involved with the construction of many water and wastewater projects throughout his 21-year career. Mr. Chaufy graduated from Clarkson College of Technology, New York with a BSCE in Civil and Environmental Engineering in 1972 and obtained his Masters of Business Administration from the University of California, Berkeley in 1985. Mr. Chaufy is a Registered Civil Engineer in the states of California and Arizona.

Martin G. Rigby, Associate General Manager/Water Science and Technology – Dr. Rigby joined the District on September 7, 1982. He heads the Water Science and Technology Group, which includes Laboratory Services, Applied Research and Development, and the Health and Regulatory program. Dr. Rigby has received numerous honors, including the prestigious University of California Regents' Dissertation Fellowship, granted for "outstanding doctoral research and potential for future contributions in water resource development." Following completion of his doctorate at the University of California, Irvine, Dr. Rigby has continued to publish extensively, with over forty publications to date on water quality and regulatory topics.

Mary E. Johnson, District Secretary/Director of Administration – Ms. Johnson joined the District on March 26, 1968 and serves as the District Secretary. She heads the Board Secretariat staff in all matters relating to the Board of Directors and is responsible for a variety of administrative functions. Ms. Johnson began her public sector career in 1962 with the Eastern Municipal Water District and later with the San Diego County Water Authority. Prior to entering the public sector, Ms. Johnson was employed with the San Diego Gas and Electric Company, Rohr Aircraft Corporation, and the Law Firm of Altha Conner Wheatley. She attended Multnomah College, Portland, Oregon, and has completed additional coursework in public and general administration. She is an active member of the Association of California Water Agencies Insurance & Safety Committee

Andrew V. Czorny, Treasurer/Finance Director – Mr. Czorny joined the District on December 1, 1987. He heads the Finance Group, which includes the Treasury, Accounting, Purchasing, Information Services, Property Management and Internal Audit Departments. Mr. Czorny began his career in the public sector in 1978 with the University of Montana. Prior to assuming his current position with the District, Mr. Czorny served as Chief Financial Officer for the California State University Long Beach Auxiliaries. Mr. Czorny graduated from the University of Montana with a degree in Finance in 1978 and additionally completed Master's work at California State University Long Beach. Mr. Czorny is an active member of the Government Finance Officers Association, recently receiving the Association's Certificate of Achievement for Excellence in Financial Reporting.

James A. Van Haun, Executive Assistant to the General Manager – Mr. Van Haun has been with the Orange County Water District since the spring of 1986. He has served as Executive Assistant to the General Manager since Fall 1989. In this capacity he is responsible for the District's Government Relations, Public Affairs and Human Resources functions, as well as conjunctive use programs, Prado Dam water conservation programs and environmental compliance programs. From 1978-1986, Mr. Van Haun was employed by the Municipal Water District of Orange County working directly with the Metropolitan Water District of Southern California. He is a graduate of California State University, Fullerton with a BS degree in Biology.

Clark F. Ide, General Counsel – Mr. Ide joined the District in February 1991 and serves as the District's General Counsel. He began his legal career in 1963 as a Deputy County Counsel for Tulare County. He later served as a Deputy General Counsel for the Metropolitan Water District of Southern California and as a Legal Aid attorney with California Rural Legal Assistance. Thereafter, he was in private practice focusing his practice

on municipal, environmental, land use and public employment labor law and also served as counsel to several municipal entities. Mr. Ide graduated with highest honors from the University of California, Berkeley, with a degree in Economics and completed his legal education at the University of California, Boalt Hall, obtaining an LLB. Mr. Ide is a member of Phi Beta Kappa, an honors fraternity.

Employees

The District currently employs approximately 180 people. Of these employees, approximately 30 people work in general or administrative capacities, approximately 83 people work in project development and finance (including 41 employees involved in water science), approximately 29 people are involved in Lower Basin management, and approximately 38 people in water production. No employees are presently represented by employee associations.

District Operations & Facilities

District facilities currently include its groundwater percolation facilities located in and along the Santa Ana River in the Anaheim area of the County (the "Forebay Operations"), water quality treatment pond system behind Prado Dam, Water Factory 21, a 15 MGD advanced water reclamation facility in Fountain Valley, California ("Water Factory 21"), a laboratory facility utilized for in-house water quality testing located in Fountain Valley, California, the GAP reclamation facility, a 7.5 MGD treatment plant located adjacent to Water Factory 21, wells used for monitoring water quality and the injection of reclaimed water into the Lower Basin, and administration facilities in Fountain Valley, California and Anaheim, California.

Forebay Operations. At the heart of the District's groundwater recharge activity is its Forebay Operations program which employs 19 hydrographers, heavy equipment operators, and facility operation personnel. The District's recharge facilities include deep percolation basins, transfer and conveyance facilities, both basin pump-out and water transfer pump stations, and basin cleaning and associated percolation enhancement operations. Over the past decade the District has constructed over \$25.0 million worth of facilities (exclusive of land purchases) upon their 1,500 acres of land in the Anaheim area. These facilities now have the capacity to recharge the underlying groundwater basin up to 365,000 acre-feet per year. Principal among the recharge facilities are two rubber dams stretching across the Santa Ana River with the capability of transferring up to 1,000 CFS (cubic feet per second) of water to the recharge basins; the deep basin pump-outs can dewater basins and transfer water between basins for a total capacity of 400 CFS; and the District's Santiago Creek recharge facilities are capable of transferring water utilizing a 250 cfs pump facility off the main river system through a 4.5 mile 66-inch pipeline, to another part of the forebay for recharge. District personnel from the Forebay operations work closely with U. S. Army Corps of Engineers in coordinating storm water releases from the Prado Dam facility to optimize groundwater recharge.

Prado Water Conservation and Constructed Wetlands Water Treatment. Working with the U. S. Army Corps of Engineers (COE) the District has finally achieved a permanent

program of water conservation behind the COE's Prado flood control dam. Through the creation of wildlife habitat, the District has been able to store flood waters for slower release during non-storm seasons, thus increasing the groundwater recharge capabilities in the Forebay area. Expansion of this water conservation program in future years will bring an additional 20,000 to 50,000 acre feet per year of additional groundwater recharge.

The District owns approximately 2,150 acres of land in the Prado Basin, located in Riverside County, CA. Within this area lies about 540 acres of constructed wetlands originally developed and utilized for waterfowl hunting but more recently for water treatment. Past agricultural practices of heavy fertilization, current dairy farm storm run-off, and the increased urbanization of the upper Santa Ana River Watershed has given rise to water quality concerns in the river flows received by the District below Prado which are used for groundwater recharge. Nitrogen has increased steadily over the past years. The District rigorously monitors the river flows both above and below Prado and has noticed a better quality water flowing out from the man-made duck ponds than that in the river. Research led to the development of an enhanced duck pond system and increased flows through the pond system with the effluent showing greatly reduced levels of nitrogen and even some heavy metals.

Expansion of the existing wetlands system is underway, and will yield a treatment capability of 250 CFS (approximately 160 mgd) which will enable treatment of current and some future river base flows. The District is currently working on further expansion, including an additional 300 acres of ponds upstream from the existing system which will begin in late 1994.

Water Factory 21. The centerpiece of the District's water reclamation facilities is Water Factory 21. As the nation's first and most advanced wastewater reclamation plant, producing water meeting all drinking water requirements, Water Factory 21 utilizes wastewater from the County Sanitation Districts of Orange County ("CSDOC") facilities in Fountain Valley, California, after CSDOC performs primary and secondary treatment. Water Factory 21 provides tertiary treatment to wastewater processed therein. The Water Factory 21 treatment process includes lime clarification with sludge recalcining, recarbonation, mixed media filtration, activated carbon absorption with carbon regeneration, disinfection, and reverse osmosis demineralization. After treatment, the water is injected by the District into the Lower Basin for groundwater recharge and for protection of the Lower Basin against saltwater intrusion.

Laboratory Facilities. In order to assist groundwater producers with water quality projects and water quality monitoring, the District owns and operates a State and Federally certified analytical water quality laboratory with 16 degreed chemists in Fountain Valley, California. The District originally constructed the laboratory facilities to monitor Water Factory 21. Since it first opened in 1973, this laboratory has grown into the most sophisticated water quality laboratory in the state, monitoring water quality on behalf of all groundwater producers in the District. The laboratory is certified in EPA standard methods for analyses of water and wastewater utilizing 11 gas chromatographs and 2 gas chromatographs/mass spectrometers.

Water Resources Data Collection and Management. To monitor current water resources quality and supply conditions in the basin, the District has installed a network of over 130 monitoring wells throughout the basin, constructed up to 2,000 feet deep and totalling 90,000 feet of cased depth. These wells, together with the several hundred active production wells, injection wells and surface water stations within the basin, comprise almost 1,500 discrete points from which District staff regularly collect water level, quality, and flow data. In 1993, over 20,900 water samples were delivered to and analyzed by the District's Water Quality Laboratory, resulting in 187,000 individual chemical analytical results. To manage and analyze this continually growing volume of data, District staff have spent the last five years developing a computer-based Water Resources Management System (WRMS).

Much more than a sophisticated relational database, WRMS consists of a variety of state-of-the-art CAD- and GIS-based software applications which provide staff with a set of interactive tools to prepare maps, produce graphs, draw geologic cross-sections, enter data, and print tabular reports. The District developed WRMS to streamline complex and redundant data analysis and reporting activities performed by hydrogeologists, engineers, and water quality staff, including the study of sea water intrusion in the Talbert Gap, monthly groundwater storage calculations, water quality enhancement in the Prado Basin, and regulatory compliance (drinking water and waste discharge) monitoring and reporting. To speed water sample chemical analyses and to reduce data entry costs, the District purchased and customized a laboratory information management system software package which digitally tracks the progress of a sample in the lab and then transmits the results into the core WRMS database for use by the District or public. The WRMS database now contains 3,000 well logs, 100,000 water level records and 630,000 water chemistry analyses. Future plans are to continue expanding system capabilities and increase ease of use by utilizing both in-house programmers and outside consultants.

Alamitos and Talbert Sea Water Barriers. The Alamitos Barrier is designed and constructed to protect the groundwater supplies of the west coastal area of Orange County and the Central Basin of Los Angeles County from the intrusion of seawater through the Alamitos Gap. The Alamitos Barrier Project and its facilities are operated and maintained by the Los Angeles County Department of Public Works under the direction of the Joint Management Committee acting on behalf of the Los Angeles County Flood Control District and the Orange County Water District. The 1992-93 budget for the operations and maintenance of the barrier was approximately \$2.3 million. The project facilities, which include injection wells to form a freshwater ridge and extraction wells to form a trough which breaks the landward gradient of intruding seawater, are located near the Los Angeles - Orange County line about two miles inland from the mouth of the San Gabriel River. The Alamitos Barrier consists of approximately 70 multi-depth injection wells and approximately two miles of pipeline which distributes water purchased from the Metropolitan Water District (MWD). Plans to utilize treated reclaimed water in lieu of imported MWD water for injection are currently underway. Approximately 6,000 acre-feet of water is injected by the barrier annually.

The District's Talbert Barrier Project is designed to prevent seawater intrusion into the central coastal portion of the Orange County groundwater basin. The Talbert Barrier

spans the three-mile wide area known as the Talbert Gap, located three miles inland of the mouth of the Santa Ana River. The barrier project includes an advanced wastewater treatment plant (Water Factory 21) and a system of 81 multi-depth injection wells and 7 extraction wells. The system of injection and pumping wells are operated to control hydraulic gradients and mitigate the threat of seawater intrusion. The injection water is a blend of deep well water and tertiary-treated reclaimed water processed at Water Factory 21. The Talbert Barrier injects 15,000 acre-feet of water annually.

Green Acres Water Reclamation Project. GAP is a multi-agency reclamation project that provides tertiary treated wastewater for irrigation of parks, golf courses and green belts within a five-mile radius of Water Factory 21. GAP employs a 7.5 MGD treatment plant to provide coagulation, mixed media filtration and disinfection and distributes the water through a network of pipes.

District Programs

Biotechnology Research Program. This program was established in 1981 for the purpose of facilitating development of emerging biotechnologies to solve groundwater quality and supply problems confronting Orange County. The District has been very successful at securing federal, state and private grants to conduct research into effective, low cost methods of resolving contamination and biofouling problems facing the District. Knowledge generated from the District's R & D efforts is used in the design, development and improvement of existing and new treatment infrastructure, such as reverse osmosis facilities or wastewater treatment processes. Currently the District's 11 degreed microbiologists' research topics include hydrocarbon biodegradation, biological denitrification, color removal and mechanisms of biofouling of reverse osmosis membranes.

Engineering Program. The District's Engineering Program is comprised of 10 degreed engineers with a continuing program separated into two functional groups: engineering planning and design; and construction management. Over the past 7 years this program has administered, designed, and constructed in excess of \$150.0 million in capital improvements, studies, and various reports. The program along with assistance from the operational groups has designed, expanded and/or constructed membrane desalination facilities at Water Factory - 21, Arlington, Tustin, Alamitos, and Irvine totaling over 30.0 mgd of capacity. Assistance is provide to the applied Research Program as projects move from bench scale testing to pilot programs and beyond.

Finance/Information Services Programs. The centerpiece of the Finance/Info Services Group is the multi-million dollar state of the art client-server computing environment and digital communications network. There are six local (fiber optic) and one remote (T-1) bridged token ring segments. The District utilizes an IBM AS 400 as a host computer accessed by over 165 PC workstation users. The AS 400 handles all the treasury, accounting, purchasing, receiving, warehouse inventory, fixed asset, fleet management, preventative maintenance and water assessment applications. The water assessment application was custom written to the accommodate complex groundwater management programs implemented annually by the District in addition to giving field personnel the ability to input water readings into a handheld PC which is later downloaded to the host. The system

also has nine database file servers running applications which include the Water Resource Management System (an extensive database system managed by the Hydrogeology Department), the Records Management System (an image and data capture and retrieval system), the Laboratory Information Management System (a complex laboratory database system used by the Lab and providing information to the W.R.M.S. database and the State Department of Health), the Sample Information Management System (a developing database system utilized by the Health and Regulatory Group in compliance monitoring and it also feeds the W.R.M.S. database), the Network file server (Office Productivity include E-Mail and Calendaring), and the fax and data communications servers. The CAD/CAM applications used by the Engineering Department are maintained on individual high speed high capacity GUI workstations. Similarly the Graphics Art Department utilizes state of the art computer aided design and graphic applications on a series of powerful Apple and IBM computers.

Health and Regulatory Program. This group, made up of 7 degreed professionals, focuses on identification of, research into, and resolution of health and regulatory issues surrounding existing and new OCWD projects, particularly with respect to the spreading or injecting of reclaimed water. This group evaluates proposed federal (Federal Safe Drinking Water Act) and state laws and regulations affecting groundwater quality and treatment to meet drinking water requirements. Active participation in the regulatory review process assures development of protective health and regulatory criteria for groundwater supplies.

Hydrogeology Department. The objectives of the Hydrogeology Department are to define the physical characteristics of the basin aquifers and their interaction with surface water recharge operations and to provide analyses necessary to manage groundwater production, quality, and water levels within the basin. Department staff consists of eight degreed geologists and engineers, each with over five years of highly specialized experience on District programs. Duties and responsibilities are primarily focused on analysis of water quality- and water supply-related issues, including investigation and cleanup of chemical contaminants, monitoring and prevention sea water intrusion, establishment of the annual basin production percentage, and implementation of the in-lieu program. Other duties include assisting groundwater producers with expanding their capacity for conjunctive use of surface and groundwater supplies by siting and constructing new production wells and evaluating their impact on groundwater conditions.

Water Supply

Historic Water Supply. Water used for agricultural and domestic use within the present boundaries of the District historically originated exclusively in the Santa Ana River watershed, an area embracing approximately 2,000 square miles in Orange, Riverside and San Bernardino Counties. The Santa Ana River originates in the San Bernardino Mountains northeast of the City of San Bernardino and flows to the southwest through San Bernardino County to Riverside County. Near the northern Riverside County border, the Santa Ana River flows through a geologic formation known as the Riverside Narrows which acts to confine the river and the groundwater flow beneath the river to a narrow flow. The Santa Ana River then flows from the Riverside Narrows through Riverside County in a southwestern direction, passing into Orange County in the Corona area, flowing through the

Santa Ana Canyon and then onto the coastal plain that constitutes most of the northwestern portion of Orange County.

Early settlers along the Santa Ana River constructed facilities in the Santa Ana Canyon area and the Anaheim area to divert the surface and flood flows of the Santa Ana River, primarily for irrigation purposes. As agricultural and domestic water use along the Santa Ana River increased, farmers, ranchers and municipal and private corporations began pumping water from the groundwater basin underlying the coastal plain of Orange County which was recharged by the sub-surface flow of the Santa Ana River.

In 1941, the United States Army Corps of Engineers (the "Corps") constructed a flood control dam on the Santa Ana River just north of the river's entrance into Santa Ana Canyon ("Prado Dam"). Since Prado Dam was completed, the Corps has operated it primarily as a flood control facility, with certain incidental water conservation activities. (See the caption "THE PLAN, THE PROJECT AND FUTURE INDEBTEDNESS" for a description of certain water conservation and water quality projects proposed for Prado Dam.)

Throughout the first seventy years of this century, Santa Ana River water users above Prado Dam in Riverside and San Bernardino Counties (the "Upper Basin") and in the Lower Basin came increasingly into conflict over water flows in the Santa Ana River. These conflicts led to a series of law suits between various Upper Basin and Lower Basin water users. After creation of the District, the District, on behalf of many Lower Basin water users, became involved in these law suits.

Litigation between Upper Basin and Lower Basin water users culminated in a stipulated judgment entered by the Superior Court for the County of Orange ("Orange County Superior Court") in 1969 (the "1969 Stipulation"), affirming a negotiated settlement of Santa Ana River water rights disputes between the Upper Basin and the Lower Basin, involving over 4,000 parties, of which the principal parties included the District, the Chino Basin Municipal Water District ("Chino Basin MWD"), the San Bernardino Valley Municipal Water District ("San Bernardino Valley MWD") and the Western Municipal Water District of Riverside County ("Western MWD"). Under the 1969 Stipulation, the San Bernardino Valley MWD is obligated to deliver an average annual supply of 15,250 acre-feet of Santa Ana River base flow to the Riverside Narrows (subject to certain adjustments which could reduce such obligated amount but in no event below 12,420 acre-feet annually). San Bernardino Valley MWD's obligation can increase under certain circumstances, if necessary to maintain water quality at Riverside Narrows. Chino Basin MWD and Western MWD are obligated to deliver an average annual supply of 42,000 acre-feet of Santa Ana River base flow to Prado Dam (subject to certain adjustments which could reduce such obligated amount to 34,000 acre-feet annually), and the District is entitled to all storm flows reaching Prado Dam. Chino Basin MWD and Western MWD's obligation can increase under certain circumstances if necessary to maintain water quality at Prado Dam. The 1969 Stipulation also includes other provisions relating to intra-basin exports of water, intra-basin acquisition of water rights, and the reservation of continuing jurisdiction by the Orange County Superior Court.

The 1969 Stipulation by its terms superseded a number of previous water rights determinations relating to the Santa Ana River and created a watermaster for the Santa Ana River (the "Watermaster"). The Watermaster is a committee of five court-appointed members, one each nominated by San Bernardino Valley MWD, Chino Basin MWD and Western MWD and two members nominated by the District. The Watermaster is charged with administration and reporting with respect to the 1969 Stipulation. If the Watermaster, which can act only upon the unanimous vote of its five members, fails to or is unable to make necessary findings or determinations, such questions must be certified by the Watermaster to the Orange County Superior Court for determination.

The 1969 Stipulation did not adjudicate the water rights of individual water users within the Lower Basin or the Upper Basin. The District and other parties to the 1969 Stipulation, however, have been operating in accordance with the 1969 Stipulation since it was approved and entered as a court judgment. The District is not currently involved in, and is unaware of, any material litigation between Santa Ana River water users in the Lower Basin, or between Upper Basin and Lower Basin water users.

Santa Ana River Water Rights. In November 1992, the Orange County Water District filed an application with the State Water Resources Control Board for clarification of OCWD's rights to all of the water flowing down the Santa Ana River. This would include the river's year-round base flow, consisting largely of highly treated recycled wastewater, as well as seasonal storm flows.

The permit sought by OCWD is not intended to limit upstream agencies' conservation or recycling efforts nor their freedom to transfer water within the watershed. But it is intended to prevent the export of water out of the watershed.

The permit would confirm the district's "salvage" rights and formalize its authority to intercept all flows that would otherwise be lost to the Pacific Ocean. It would ensure that the supply of recycled water, which now comprises about 90 percent of the river's non-storm flow, will continue to reach OCWD's groundwater recharge system. This issue is being resolved through regular meetings with the upstream agencies.

Current Water Supply. Water pumped from the Lower Basin currently supplies approximately three quarters of the total supply of water used within the District. The remaining one quarter is imported from outside the Lower Basin, generally purchased indirectly from the Metropolitan Water District of Southern California ("MWD") through the Municipal Water District of Orange County ("MWDOC").

The rights to the water in the OCWD Basin have not been determined. The local production entities have chosen this management strategy as a superior strategy to that of a formal adjudication and restrictive management.

The cost of groundwater production is significantly less expensive for most major groundwater producers within the District than the cost of treated water received from MWD as demonstrated from the table below for the 1991-92 Fiscal Year:

Groundwater Producer	Cost of MWD Water (Acre-foot)(1)	Cost of Groundwater Production (Acre-foot)
City of Anaheim	\$261.00	\$ 92.33
City of Santa Ana	261.00	105.44
City of Huntington Beach	234.75	77.70
City of Garden Grove	215.53	99.00
City of Fullerton	261.00	106.35
City of Orange	261.23	107.00
Southern California Water Company	263.00	106.00
Mesa Consolidated Water District .	263.00	106.30
City of Westminster	263.00	86.00
Irvine Ranch Water District	263.00	107.51
Yorba Linda Water District	263.00	125.41
City of Fountain Valley	263.00	92.51
City of Buena Park	263.00	86.63
City of Tustin	263.00	114.43

Source: MWDOC and District.

(1) May vary from actual cost because certain groundwater producers purchase a portion of their MWD water as untreated water and/or on a seasonal basis.

Because of this large differential in cost, groundwater producers within the District might elect to pump groundwater from the Lower Basin rather than purchase imported water. However, complete reliance on groundwater supplies would limit the management flexibility of the basin. To control the amount of water supply that is derived from groundwater pumping, each year the District establishes a basin production percentage through a pricing mechanism known as basin equity assessments (the "Basin Equity Assessments").

In April of each year, the Board determines the District-wide groundwater basin production percentage. Based in part upon that determination, the District then establishes groundwater production limitations or requirements for each non-agricultural groundwater producer within its boundaries. Each groundwater producer which produces groundwater in excess of its production limitation is assessed a Basin Equity Assessment levied by the District, based on each acre-foot of groundwater produced by such groundwater producer in excess of its production limitation. Groundwater producers with assigned production limitations less than the basin production percentage are reimbursed for certain amounts by the District from proceeds of the Basin Equity Assessments if their production does not exceed their production limitations.

The District's Board of Directors establishes the basin production percentage each year after evaluating the condition of the groundwater supplies and the near term availability of imported water supplies. The basin production percentage and the BEA thus allow the District to manage both groundwater and imported water supplies within its boundaries.

The District's current basin production percentage is 75%, representing the target set by the District for groundwater production as a percentage of total water supply for each groundwater producer. In addition, in the course of managing the basin, the District may set production requirements above or limitations below the general basin production percentage for particular producers. Set forth below are the current basin production percentage and the current groundwater requirements or limitations. Also listed are the groundwater production amounts for each of the major groundwater producers for the Water Year ended June 30, 1992.

<u>Groundwater Producer</u>	<u>Basin Production Percentage</u>	<u>Groundwater Requirement or Limitation(1)</u>	<u>Groundwater Production (Acre-feet)</u>
City of Anaheim	75%	80%	42,560.3
City of Santa Ana	75	—	25,426.1
City of Huntington Beach	75	—	21,484.0
City of Garden Grove	75	90	20,214.2
City of Fullerton	75	—	22,417.8
City of Orange	75	85	17,252.2
Southern California Water Company	75	—	17,225.9
Mesa Consolidated Water District	75	—	11,554.0
City of Westminster	75	—	10,177.5
Irvine Ranch Water District	75	—	18,185.6
Yorba Linda Water District	75	—	9,106.3
City of Fountain Valley	75	—	7,765.2
City of Buena Park	75	—	7,475.0
City of Tustin	75	—	6,759.9
City of Seal Beach	75	—	3,269.8
Orange County Water District	75	—	8,592.6
City of La Palma	75	—	2,168.3
Serrano Irrigation District	75	—	1,104.3

Source: District.

(1) If other than the basin production percentage.

Lower Basin Storage. It is estimated by the District that the Lower Basin has a current useable capacity of 1,500,000 acre-feet with a total storage capacity estimated at 10,000,000 acre-feet. Useable storage in the Lower Basin, however, has fluctuated widely, ranging from 700,000 acre-feet in 1956 to a substantially full Lower Basin in 1964, 1969 and 1984. These fluctuations have occurred, in large part, because of overdrafting during the 1950's and variations in annual precipitation levels within the Santa Ana River watershed. The difference between full capacity and current levels is referred to as an overdraft. The District currently estimates an overdraft of approximately 275,000 acre-feet.

Although the Lower Basin is in hydraulic continuity with the Pacific Ocean along the County coastline, the Newport Inglewood fault is located adjacent to the coastline and effectively seals the deeper aquifers from seawater intrusion. Nevertheless, the Lower Basin is vulnerable in four coastal geologic gaps (Talbert, Bolsa, Sunset, and Alamitos) created by the ancestral Santa Ana and San Gabriel Rivers. These gaps result in alluvial aquifers of 100 to 200 feet in depth being in hydraulic continuity with the Pacific Ocean.

To counter encroachment, seawater intrusion control facilities were constructed by the District in the Alamitos and Talbert gaps. Since 1956, no significant intrusion of seawater has been observed in either the Bolsa or Sunset gaps. However, studies have indicated that intrusion through these gaps could be expected if a substantial overdraft (1,500,000 acre-feet) of the Lower Basin were to occur. The District's recharge program is expected to prevent a substantial overdraft. If a substantial overdraft were to occur, the District would develop additional seawater intrusion control facilities for the Bolsa and Sunset gaps.

Arlington Desalter. The Arlington Desalter is a 7.0 mgd reverse osmosis groundwater treatment facilities located in Riverside County, CA. The District is currently operating and maintaining the plant in conjunction with the Santa Ana River Water Project Authority (SAWPA: a joint powers agency that the District is a member of) and the Western Municipal Water District. The plant is designed to clean up the Arlington groundwater basin which has been contaminated with high nitrates and DBCP from past agricultural use. Water produced from the desalter will either supplement the District's recharge operations and/or can be used by Western for potable use.

Future Local Water Supplies. The local long term, average annual rainfall in the District varies from about 11 inches along the coast to 30 inches in the higher regions of the Santa Ana Mountains. The District expects to meet future area demands through capture of increasing base and storm flows in the Santa Ana River and expansion of their water reclamation facilities.

The District's primary source of water is the Santa Ana River. Although the 1969 Stipulation provides that the District receives an average annual supply of 42,000 acre-feet of the base flow of the Santa Ana River, the base flow at Prado Dam currently averages approximately 125,000 acre-feet/year, and by the year 2005 the District estimates it will be greater than 200,000 acre-feet/year. These increasing base flows are attributed by the District to the increasing urbanization of the Upper Basin which has increased the use of imported water which is discharged into the Santa Ana River as highly treated wastewater.

The District has recently embarked on a study to construct a joint regional water reclamation program that would pump up to 100 mgd of recycled water from the CSDOC Plant No. 1 in Fountain Valley, up the Santa Ana River along the existing levee through a pipeline to the District's Forebay recharge facilities in Anaheim, where it would percolate into the groundwater basin for groundwater replenishment. The first phase of this project, operational by the year 2000, could result in a 33% reduction in imported water demands by the basin producers.

Imported Water Supply. As a major regional water supplier, the District works directly with the Metropolitan Water District of Southern California in developing and implementing various water supply strategies. A natural linkage exists between Metropolitan Water District, which imports both Colorado River and State Water Project supplies for all of Southern California, and Orange County Water District, which manages an extremely strategic, large groundwater basin. The District purchases water from Metropolitan for groundwater recharge through the Seasonal Storage Program. Additionally, the District

participates with Metropolitan in the Seasonal In-Lieu Program. Both of these complex programs require close coordination to maximize the effectiveness of these water resources strategies. The District takes delivery of Metropolitan water in five different locations throughout the District and through a connection on San Antonio Creek, in the Upper Basin.

Because Orange County is dependent on imported supplies and the Santa Ana River's increased base flows are also dependent on imported water availability, the District is involved in statewide imported water issues through its considerable involvement in the Bay Delta Estuary decisions with the State Water Resources Control Board and the United States Environmental Protection Agency. Through the Water Advisory Committee of Orange County, the District has taken a lead role in legally representing Orange County in the Bay Delta decision-making process. In addition, as a member of the California Urban Water Agencies (CUWA) which is composed of the big 10 urban water agencies in the State, OCWD has served on the technical committee that CUWA has assembled to represent State urban interests in the Bay Delta decisions.

The District is also involved in working with agencies upstream along the Santa Ana River to fully investigate conjunctive use opportunities utilizing local and imported water supplies. These innovative strategies may play significantly in augmenting the imported water supply for the OCWD area and will assist the entire region during times of drought.

MWD has indicated that it faces serious potential water shortages in the future resulting from court decisions affecting its rights to Colorado River water and the fact that the State has not fully completed the State Water Project ("SWP") which conveys water from Northern California to Southern California, as well as from regulatory activities currently underway to establish new water quality standards for the Bay Delta Estuary.

MWD has projected that its future increases in water rates will be substantial because of greater reliance upon more costly SWP water supplies and projected rising costs of the electrical power needed to transport water through the SWP to Southern California when MWD's allotment is reduced from the Colorado River. In addition rates could increase to meet costs associated with compliance with recently promulgated and proposed Federal and State regulations, new system construction and the impact of inflation.

The table below sets forth MWD's current and projected seasonal storage nontreated rates for the next five Water Years:

<u>Water Year</u> <u>(Ending June 30)</u>	<u>Seasonal Storage</u> <u>Nontreated Rate</u> <u>(per acre-foot)</u>
1993-94	\$208
1994-95	261
1995-96	319
1996-97	381
1997-98	392

Source: MWD.

The District does not expect to be materially adversely impacted by such rate increases, however, because of the relatively small amount of water purchased from MWD and because purchases of water from MWD are expected to decline in the future as the flow of the Santa Ana River increases. See the caption "THE DISTRICT – Water Supply – Local Water Supply."

Seasonal Storage Program. The District purchases water from MWD primarily through MWDOC, primarily for groundwater recharge purposes, at MWD's seasonal storage nontreated rates. MWD's seasonal storage program provides nontreated water at discounted rates to agencies able to purchase imported water during winter months for local storage.

The District purchased water from MWD during the last five Water Years through the producers participating in an in-lieu program or directly for groundwater recharge, as set forth in the following table:

<u>Water Year</u> <u>(Ending June 30)</u>	<u>Amount</u> <u>(acre-feet)</u>
1992-93	70,000.0
1991-92	95,477.9
1990-91	63,106.6
1989-90	61,078.8
1988-89	31,097.2

In-Lieu Program. Depending on water availability and service system demands, MWD occasionally makes a Seasonal Storage Program ("SSP") available to its users. SSP water is meant to replace groundwater pumped and must be qualified for by demonstrating a corresponding decrease in groundwater pumped to qualify for the reduced price MWD seasonal water. MWD retains the option to consider SSP water as already delivered, in times of drought or peak system demand, in which case the user would pump the water from the groundwater basin "in-lieu" of water that would be otherwise delivered by MWD.

Even with the reduced cost offered by MWD, SSP water is still more expensive to the District's producers than groundwater. In order for the in-lieu program to work, the District must subsidize the SSP water so producers are not financially penalized for their

involvement. In return for financial participation in the SSP, the District is assured water remaining in the Lower Basin for no greater cost than if the District had purchased water directly from MWD for direct recharge. District expenditures in connection with the in-lieu program have been \$2,263,848 in Fiscal Year 1991-92 and \$2,704,112 in Fiscal Year 1992-93.

The District has developed in-lieu programs in cooperation with its groundwater producers in 1986, 1988, 1989, 1990, 1991, 1992 and 1993 and may elect to do so again in the future. MWD has announced its intention of making the in-lieu program a permanent program.

Water Quality. In comparison with other groundwater basins in California, the District and local groundwater producers encounter only minimal water quality problems. Aggressive programs have been developed to halt the gradual degradation of the groundwater in the Lower Basin and to remove or treat isolated pockets of groundwater that do not meet drinking water quality standards because a deterioration in groundwater quality can increase costs to purveyors and consumers by reducing access to less costly groundwater supplies, increasing purchases of more expensive imported waters, requiring treatment or additional distribution facilities and damaging household plumbing and appliances. In addition, loss of groundwater due to quality problems reduces the available supply of stored water needed during extended drought periods.

Groundwater quality has been degraded from sources both outside and within the Lower Basin. Mineralized waters have been introduced to the Lower Basin from the Santa Ana River and imported Colorado River water supplied by MWD. Because the Lower Basin is at the terminus of the Santa Ana River watershed, it is the long-term recipient of poor quality waters generated primarily from three upstream sources. The first, and foremost, is secondarily treated wastewater discharged to the Santa Ana River by municipal sewage treatment plants in the Upper Basin. The second is agricultural and dairy waste runoff entering the Santa Ana River in the Upper Basin, which contributes high nitrates and salt concentrations. The third is imported Colorado River water which, although an important supply to the Upper Basin and the Lower Basin, contributes high salt concentrations in wastewater discharged to the Santa Ana River.

Within the Lower Basin, toxic substances from past agricultural, urban and industrial practices have reached the water table in the intake area of the Lower Basin. These Lower Basin discharges have contributed to groundwater quality degradation exceeding drinking water standards in certain portions of the Lower Basin.

To safeguard against future quality degradation and to address the existing isolated quality problems, the District adopted a comprehensive Groundwater Quality Protection Policy in May 1987. The policy establishes eight programs which in combination are designed to protect and enhance water quality. These include water quality monitoring, contaminant cleanup, regulatory agency support, toxic residuals removal, hazardous water management, technical information, public disclosure, and periodic evaluation of overall policy effectiveness.

Prior to 1989, localized water quality degradation in isolated portions of the Lower Basin, primarily due to nitrates, selenium, color, synthetic organic contaminants (such as PCE and TCE), and total dissolved solids (or salts), resulted in the shutdown of 10 wells within the District's boundaries. As a result of the District's aggressive programs to halt the gradual degradation of groundwater quality, since 1989 no wells within the District's boundaries were shutdown due to quality degradation. See the caption "THE PLAN, THE PROJECT AND FUTURE INDEBTEDNESS - Water Quality Projects".

Sources of Revenue

General

Historically, the District's revenues have been derived primarily from the Replenishment Assessment and Additional Replenishment Assessment levied annually and collected semi-annually by the District, the Basin Equity Assessments levied and collected annually by the District, Property Tax Revenue, Investment Income, and Rents and Royalties. The Installment Payments are payable from Net Revenues which include, subject to prior application in accordance with the Installment Purchase Agreement, Property Tax Revenues, proceeds of Replenishment Assessments and Additional Replenishment Assessments, Investment Income, Project Revenues and Rents and Royalties. Installment Payments are not payable from the Basin Equity Assessments. Set forth below is a brief description of each of these revenue sources.

Replenishment Assessments

The District has the authority pursuant to the Act to levy and collect Replenishment Assessments from groundwater producers within its boundaries and to apply the proceeds of the Replenishment Assessments to the replenishment of the groundwater supplies within the District and payment of the costs of the projects and purposes for which the District is organized. The Replenishment Assessments are levied annually, all as described below.

Replenishment Assessment. In February of each year, the District is required by the Act to file a written engineering investigation and report concerning the groundwater supplies of the District. This engineering investigation and report must contain specific information regarding the annual and accumulated overdraft of the Lower Basin, and the amount of water needed to alleviate the overdraft. In March of each year, the District's Board is required by the Act to conduct a noticed public hearing on the groundwater conditions of the Lower Basin and the information contained in the engineering investigation and report, and to make findings and determinations regarding the overdraft in the current and past water years, the projected overdraft for the period commencing July 1 of such year and ending on the following June 30 (each such period being a "Water Year"), the quantity of water that should be purchased by the District in the ensuing Water Year to replenish the District's water supplies, and the amount of money necessary to purchase that quantity of water.

If the Board finds and determines that an overdraft of the Lower Basin, either annual or accumulated, exists, the Board has the authority under the Act to levy a Replenishment

Assessment, at a uniform rate per acre-foot of groundwater production, against all persons operating water producing facilities and producing water during the ensuing Water Year. The Replenishment Assessment is levied by the Board in April of each year, following a noticed public hearing regarding the need, desirability and rate of the proposed Replenishment Assessment.

The amount that may be raised by the Replenishment Assessment cannot exceed an amount of money found to be necessary to purchase sufficient water to replenish the average annual overdraft for the immediate past five Water Years plus an additional amount of water sufficient to eliminate over a period of not less than 10 years nor more than 20 years, the accumulated overdraft, plus an amount of money to pay the costs of initiating, carrying on, and completing any of the powers, projects and purposes for which the District is organized. In the event that the Board determines that no annual or accumulated overdraft of the Lower Basin exists, the District may not have authority to levy the Replenishment Assessment to pay Installment Payments. See, however, "Additional Replenishment Assessment" below

Additional Replenishment Assessment. The Board also has the authority to levy an Additional Replenishment Assessment at a uniform rate per acre-foot of groundwater produced, against all persons operating water producing facilities during the ensuing Water Year for all purposes other than irrigation. The Additional Replenishment Assessment may be levied in such amounts necessary to acquire water and to pay the costs of initiating, carrying on and completing any of the powers, projects and purposes of the District, without respect to the limitations in the Act regarding the alleviation of the annual and accumulated overdraft.

Before levying an Additional Replenishment Assessment, the Board must find and determine, by a vote of eight of its ten members, that an Additional Replenishment Assessment is necessary for the protection of the water supply of the District, and that the amount of the Additional Replenishment Assessment is reasonable. In the event that the Board determines that no annual or accumulated overdraft of the Lower Basin exists, the District would have the authority to levy an Additional Replenishment Assessment to pay the Installment Payments.

Replenishment Assessments. The Replenishment Assessment, the Additional Replenishment Assessment and the total Replenishment Assessments assessed by the District for the four most recent Water Years, the current Water Year and the next Water Year is set forth below:

<u>Water Year</u>	<u>Replenishment Assessment(1)</u>	<u>Additional Replenishment Assessment(2)</u>	<u>Total Replenishment Assessments(3)</u>
1994-95	\$52.25	\$52.25	\$104.50*
1993-94	44.25	44.25	88.50(4)
1992-93	32.50	32.50	65.00(4)
1991-92	24.00	24.00	48.00
1990-91	23.00	22.00	45.00
1989-90	12.00	30.00	42.00

* Projected

Source: District.

- (1) Assessed against all non-exempt groundwater producers.
- (2) Assessed against all non-exempt, non-irrigation groundwater producers.
- (3) Total Replenishment Assessments assessed only against non-exempt, non-irrigation groundwater producers.
- (4) See "THE DISTRICT - Property Tax Revenues" for a discussion of certain credits to the Replenishment Assessments presently contemplated by the District.

Fixed Payment in Lieu of Replenishment Assessments. Although the Replenishment Assessment and Additional Replenishment Assessment are each fixed at a uniform rate per acre-foot of groundwater produced, the District's Board has the discretion under the Act to permit operators of small water producing facilities (with a discharge opening not greater than two inches (2") in diameter and which do not provide water to an area in excess of one acre) to pay a fixed amount during the ensuing Water Year, as determined by the Board, in lieu of the Replenishment Assessment and Additional Replenishment Assessment.

Collection Procedures. Each operator of a water producing facility within the District is required by the Act, on or before January 31 and July 31 of each year, to file with the District a verified statement of the total production of water from that facility for the preceding six (6) month period, and to pay the Replenishment Assessment and Additional Replenishment Assessment levied upon the water produced from that facility. If the water producing facility operator fails to pay the Replenishment Assessment and Additional Replenishment Assessment when due, the District is required to charge interest on the delinquent amount at the rate of one percent for each month that the assessments remain delinquent. In the event that a water producing facility operator fails to file the required statement of water production when due, the District is required, in addition to charging interest for delinquent payment of the Replenishment Assessment and Additional Replenishment Assessments, to assess a penalty of ten percent of the amount thereof found by the District to be due from that operator.

Delinquencies in payment of Replenishment Assessments have been quite infrequent as shown in the table set forth below:

<u>Fiscal Year</u>	<u>Total Replenishment Assessments</u>	<u>Total Delinquent Replenishment Assessments</u>	<u>Delinquency Rate</u>
1992-93	\$15,909,662	\$22,900	.144%
1991-92	13,145,741	26,747	.203
1990-91	11,375,283	21,582	.190
1989-90	11,103,375	28,038	.253
1988-89	10,561,431	28,039	.266
1987-88	8,521,810	9,789	.115

Source: District.

Exemptions. The Act provides that any water producing facility which is not producing groundwater from a zone replenished by the Santa Ana River or its tributaries will be excluded from the payment of the Replenishment Assessments and the Additional Replenishment Assessments and Basin Equity Assessments, in accordance with the procedures set forth in the Act. Any water producing facility producing water within the boundaries of the District may be exempted from the production limitations and restrictions, the payment of the Replenishment Assessments, and/or the payment of the Basin Equity Assessments, if the Board determines in accordance with the Act that the water produced from that facility is unsuitable for domestic or agricultural purposes. In addition, any water producing facility producing water within the boundaries of the District may be exempted from the production limitations and restrictions and/or the payment of the Basin Equity Assessments, if the District's Board determines in accordance with the Act that the water produced from that facility will have a beneficial effect upon the quality of the water supplies of the District.

The following table sets forth, for the five Water Years prior to the 1993-94 Water Year, the number of groundwater producing facilities registered with the District, the number of groundwater producing facilities operating under either exemption described above, the total quantity of groundwater produced within the District, and the quantity of groundwater produced by production facilities exempted as described above:

	<u>1988-89</u>	<u>1989-90</u>	<u>1990-91</u>	<u>1991-92</u>	<u>1992-93</u>
Total Production Facilities	790	785	780	776	780
Exempt Production Facilities	29	30	30	30	30
Total Groundwater Production (acre-feet)	260,644.3	275,077.1	266,744.5	271,223.9	295,000
Exempt Groundwater Production (acre-feet)	4,582.1	3,595.3	1819.4	1,690.6	1,500

* Projected

Source: District.

Any exemption ordered by the Board based on unsuitability or beneficial effect may subsequently be revoked if the Board finds and determines, after the conduct of a noticed public hearing, that with the respect to the unsuitability exemption the quality of water from the exempted water producing facility has become suitable for domestic or irrigation purposes, or that the production of such water will have an adverse effect on the groundwater supplies of the District; or that with respect to the beneficial effect exemption, the production of water from the exempted facility no longer has a beneficial effect on the quality of the water supplies of the District.

Enforcement Powers. The District is authorized to bring suit against any operator of a water producing facility within the District's boundaries for the collection of any delinquent Replenishment Assessment or Additional Replenishment Assessment, and any penalties and accrued interest on such delinquencies. As part of such a lawsuit, and upon giving mailed notice to each person known to be an operator of or user or consumer of water from the water producing facility, the District is authorized to seek the provisional remedy of an attachment against the property of the delinquent water producing facility operator, and/or the appointment of a receiver to collect revenues generated directly or indirectly by the operation of the water production facility. In addition, the Act allows the Orange County Superior Court to grant provisional injunctive relief against any operator of a water producing facility within the District boundaries and to restrain and prohibit the operation of the water producing facility if the operator is delinquent in the payment of any Replenishment Assessments.

Property Tax Revenues

Pursuant to the Act, the Board of Supervisors of the County is required to levy a "general assessment" on assessable property within the boundaries of the District sufficient to raise the amounts determined each year by the District Board to be necessary for the initiated or authorized purposes of the District. These provisions, however, have largely been superseded by the passage by the California electorate in June of 1978 of Article XIII A of the California Constitution (commonly known as "Proposition 13"), and by the legislation subsequently enacted by the California Legislature to implement Article XIII A. As a result of Article XIII A and its implementing legislation, the District receives as proceeds of the "general assessment" a share of the one percent (1%) ad valorem property tax collected by the County from assessable property within the boundaries of the District. On September 30, 1992, the Board increased the Replenishment Assessment by \$5 per acre-foot, the Additional Replenishment Assessment by \$5 per acre-foot and the Fixed Payments in lieu of Replenishment Assessments by \$10 per acre-foot to offset the proposed tax shift of the District's share of ad valorem property tax imposed by the State Legislature in its 1992-93 Budget Bill. As a result of a subsequent exemption from the proposed tax shift of the ad valorem property tax, the District is presently contemplating providing a credit for the period January 1, 1993 through June 30, 1993 of \$5 per acre-foot against both the Replenishment Assessment and the Additional Replenishment Assessment, and \$10 per acre-foot against the Fixed Payments in lieu of Replenishment Assessments. In addition, in the event the District receives its full share of the ad valorem property tax for the State's 1993-94 fiscal year, the Board is contemplating providing a \$21 per acre-foot credit against Replenishment Assessments in January 1994, which reflects the \$10 per acre-foot increase effective January

1, 1993 and the \$11 per acre-foot increase effective July 1, 1993. Although the 1993-94 State Budget does not reallocate the District's share of the countywide one percent (1%) ad valorem tax for the State's 1993-94 fiscal year, the District has not included such amounts in its projections of revenues for any period after the District's 1993-94 fiscal year. For District projections of property tax collections and Replenishment Assessments, see discussion set forth under the caption "THE DISTRICT – Projected Operating Results and Debt Service Coverage".

The table below sets forth the assessed value of property within the District and the amount of Property Tax Revenue received by the District in each of the last five Fiscal Years.

	<u>Assessed Value</u>	<u>Property Tax Revenue</u>
1992-93	\$97,826,760,749	\$8,728,517
1991-92	93,246,650,750	8,582,330
1990-91	87,205,038,905	8,040,000
1989-90	80,382,200,154	7,344,000
1988-89	72,371,595,117	6,357,986

Source: County.

The provisions of California statutory law prescribing the method of levying, assessing, equalizing and collecting taxes, including the sale of property for delinquency, and the duties of the county officers with respect to such activities, are, unless in conflict with specific provisions of the Act, incorporated by reference into the Act.

Project Revenues

The District has established programs for the repayment of all or a portion of the costs of certain projects from payments made to the District for the water or services ultimately provided by such projects. The portion of a project's costs that the District may recoup in this manner varies from project to project. The aggregate annual revenue from such payments that the District has received in recent years is set forth herein in the table summarizing the District's historic operating results. See "Historic Replenishment Assessments and Operating Results - Historic Operating Results" below. The aggregate annual revenue from such payments that the District expects to receive during the next five years is set forth herein in the table summarizing the District's projected operating results. See "Projected Operating Results and Debt Service Coverage" below.

Other Revenue

Investment Income. Historically, substantially all revenues of the District were deposited with the Orange County Treasury, as permitted by the Act. Investment of these revenues is directed by the District's Treasurer/Finance Director in accordance with an investment policy annually approved by the Board. Current District policy is to invest all Revenues in accordance with Section 53601 of the California Government Code.

Rents and Royalties. As of the end of the 1992-93 Fiscal Year, the District owned 3,672 net acres of land, acquired through purchase, eminent domain and assignment. 1,472 acres of District land are located within the District's boundaries in the County, and approximately 2,200 acres of District land are outside of the District boundaries, principally in the vicinity of Prado Dam in Riverside County, California. Approximately 1,400 of the District landholdings are part of the Forebay Operations and are used for groundwater replenishment purposes, the construction, maintenance and operation of water spreading facilities and appurtenant facilities, administrative and reclamation facilities, well sites, and for uses otherwise related to water supply and water quality purposes.

Of the total 3,672 acres of District lands, some 1,854 acres are presently under lease, permit or other form of instrument to a variety of individuals and business entities for commercial, recreational and other uses consistent with the District's water supply purposes. These leases, permits and rights vary in term from month-to-month to 10 years, and are subject to termination by the District upon notice ranging from 30 days to 1 year. The rents and royalties charged by the District for the use of these properties vary as a function of the location of the property, the term of the lease, permit or other instrument, and the use being put to the property by the lessee, permittee or other holder of a right in the property.

In addition to the rents and royalties described above, the District also receives a variety of contract revenues and other receipts and revenues for the use or purchase of facilities owned, operated or financed by the District.

Financial Statements

The audited financial statements of the District for the Fiscal Year ending February 28, 1993, are set forth in their entirety in Appendix A attached hereto. The audited financial statements, including the footnotes thereto, should be reviewed in their entirety.

Historic Replenishment Assessments and Operating Results

Historic Replenishment Assessments

The District annually levies the Replenishment Assessment and Additional Replenishment Assessment in accordance with and subject to the limitations of the Act. See "THE DISTRICT - Sources of Revenue - Replenishment Assessments". Except for such limitations, the Replenishment Assessment and Additional Replenishment Assessment are not currently limited by federal, state or local statutes, regulations or rules, and are not currently subject to voter approval or the approval of any governmental agency or body.

Set forth below is the total proceeds of the Replenishment Assessments for the five most recent Fiscal Years.

Replenishment Assessments⁽¹⁾

<u>Fiscal Year</u>	<u>Total Replenishment Assessments</u>
1988-89	\$10,561,431
1989-90	11,103,375
1990-91	11,375,283
1991-92	13,145,741
1992-93	15,909,662

Source: District.

(1) Includes Replenishment Assessment and Additional Replenishment Assessment.

Historic Operating Results

The following table is a summary of the District's historic operating results for Fiscal Years ending in February 1989 through 1993. This table should be read in conjunction with the District's most recent audited financial statements, which are attached hereto as Appendix A.

HISTORIC OPERATING RESULTS⁽¹⁾

	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>
Revenues					
Replenishment Assessments ⁽²⁾	\$10,561,431	\$11,103,375	\$11,375,283	\$13,145,741	\$15,909,662
Project Revenues ⁽³⁾	0	0	0	2,852,000	3,387,000
Rent & Royalty Income	489,671	465,000	389,000	376,767	364,257
Interest Earnings	4,939,995	5,242,556	5,569,869	4,908,922	4,184,935
District Share of County 1% Property Tax	<u>6,357,986</u>	<u>7,344,000</u>	<u>8,040,000</u>	<u>8,582,330</u>	<u>8,728,517</u>
Total Revenues	\$22,349,083	\$24,154,931	\$25,374,152	\$29,865,760	\$32,574,371
Total O&M Expenses⁽⁴⁾	\$12,713,686	\$14,200,000	\$16,434,000	\$18,837,000	\$18,054,003
Net Revenues	\$ 9,635,397	\$ 9,954,931	\$ 8,940,152	\$11,028,760	\$14,520,368
Senior Lien Debt Service	\$ 0	\$ 0	\$ 3,419,020	\$ 5,387,530	\$ 8,172,355
Senior Coverage	N/A	N/A	2.61	2.05	1.78
Junior Lien Debt Service	\$ 0	\$ 0	\$ 0	\$ 0	\$ 10,000
Total Debt Service	\$ 0	\$ 0	\$ 3,419,020	\$ 5,387,530	\$ 8,182,355
Balance Available for Water Purchases, Capital Projects and Other District Purposes	\$ 9,635,397	\$ 9,954,931	\$ 5,521,131	\$ 5,641,230	\$ 6,338,013

Source: District.

(1) Fiscal Years beginning March 1 and ending the last day of February in indicated year.

(2) Includes Replenishment Assessments and Additional Replenishment Assessments (See "THE DISTRICT - Sources of Revenue - Replenishment Assessments").

(3) See description of project revenues set forth under the caption "THE DISTRICT - Sources of Revenue - Project Revenues."

(4) Includes salaries, supplies and general O&M.

Projected Operating Results and Debt Service Coverage

District Reserve Policy

In May 1989, the Board of the District formally approved a multi-purpose reserve policy (the "Reserve Policy"). Pursuant to the Reserve Policy, the District has reaffirmed or created six separate reserve accounts and approved reserve levels with respect to each. The accounts and the currently approved reserve levels are described below. The District may alter its Reserve Policy in the future.

General Fund. The District's General Fund is used to finance operations and maintenance expenditures and can be used to purchase supplemental water. The General Fund's reserve and contingency is set each year so as not to exceed the amount of 15% of the General Fund program plus a contingency of \$3,000,000.

These reserves and contingencies are intended to be drawn upon to pay unanticipated Operating Costs. The approved General Fund Reserve level for Fiscal Year

1993-94 is \$5,888,850. This amount may fluctuate from year-to-year and is limited in amount by the Act. As of February 28, 1993, the District had \$5,008,000 on deposit in the General Reserve.

Water Reserves Fund (Capital Projects). The Water Reserves Fund can expense capital projects, the acquisition of real property, and the purchase of supplemental water. The Water Reserves Fund Reserve can be drawn upon to finance capital project expenditures and major replacements in advance of or in lieu of long-term financing. The target approved level of the Water Reserves Fund Reserve is \$30,000,000. As of February 28, 1993, the District had \$36,735,000 on deposit in the Water Reserves Fund.

Toxic Cleanup Account. The District has continued the Toxic Cleanup Account. The Toxic Cleanup Account may be drawn upon to advance moneys to clean up toxic waste which affects water quality in the Lower Basin, prior to the determination of parties responsible therefor. The approved level of the Toxic Cleanup Account is \$4,000,000. As of February 28, 1993, the District had \$4,000,000 on deposit in the Toxic Cleanup Account.

Replenishment Fund. The District has established a Replenishment Fund for the purchase of supplemental water. The Replenishment Fund Reserve is intended to be drawn upon to purchase water to refill the Lower Basin in the event that the District determines that inexpensive water is available therefor or that changes in the Lower Basin require rapid refilling. The approved Replenishment Fund Reserve level is \$20,000,000. As of February 28, 1993, the District had \$15,055,000 on deposit in the Replenishment Fund.

Capital Replacement Reserve Account. The District has established a Capital Replacement Reserve Account. The Capital Replacement Reserve Account is to be used for anticipated major capital item replacement expenditures and the approved level is currently set in the amount of \$5,000,000. As of February 28, 1993, the District had \$3,000,000 on deposit in the Capital Replacement Reserve Account.

Replenishment Assessment Stabilization Account. The District has established a Replenishment Assessment Stabilization Account. The Replenishment Assessment Stabilization Account is intended to be used to mitigate increases in the Replenishment Assessments in future years, if and when such actions are determined to be undertaken by the District. The Replenishment Assessment Stabilization Account is currently unfunded and is expected to be funded from future years' Revenues in excess of District expenses.

Projected Operating Results and Debt Service Coverage

The following table projects the District's operating results and debt service coverage for Fiscal Years ending in February 1994 through 1998.

PROJECTED OPERATING RESULTS⁽¹⁾

	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>
Revenues					
Replenishment Assessments ⁽²⁾ . . .	\$19,762,500	\$28,395,996	\$36,454,472	\$39,020,940	\$41,351,106
Project Revenues ⁽³⁾	3,988,000	2,383,000	4,970,000	8,697,000	7,762,000
Rent & Royalty Income	500,000	500,000	500,000	500,000	500,000
Interest Earnings ⁽⁴⁾	3,989,614	3,999,824	4,614,088	5,264,963	5,512,461
District Share of County 1% Property Tax	<u>9,000,000</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total Revenues	\$37,240,114	\$35,278,820	\$46,538,560	\$53,482,903	\$55,125,567
Total O&M Expenses⁽⁵⁾	\$19,080,000	\$20,225,000	\$21,438,000	\$22,725,000	\$24,088,000
Net Revenues	\$18,160,114	\$15,053,820	\$25,100,560	\$30,757,903	\$31,037,567
Senior Lien Debt Service ⁽⁶⁾	\$ 5,474,044	\$ 7,588,339	\$10,557,492	\$13,254,378	\$13,246,349
Senior Coverage	3.32	1.98	2.38	2.32	2.34
Junior Lien Debt Service ⁽⁷⁾	\$ 4,205,805	\$ 4,310,528	\$ 4,776,713	\$ 5,738,335	\$ 8,006,482
Total Debt Service	\$ 9,679,849	\$11,898,867	\$15,334,205	\$18,992,713	\$21,252,831
Balance Available for Water Purchases, Capital Projects and Other District Purposes	\$ 8,480,265	\$ 3,154,953	\$ 9,766,355	\$11,765,190	\$ 9,784,736

Source: District.

- (1) Fiscal Years beginning March 1 and ending the last day of February in indicated year.
- (2) Includes Replenishment Assessments and Additional Replenishment Assessments (See "THE DISTRICT – Sources of Revenue – Replenishment Assessments").
- (3) See description of project revenues set forth under the caption "THE DISTRICT - Sources of Revenue - Project Revenues."
- (4) The District projects to match the amount of its invested Reserves with its Variable Rate (Subordinate) obligations. The projections above assume an investment rate 2% greater than the floating rate.
- (5) Includes salaries, supplies and general O&M. Indicated are the expenses budgeted for Fiscal Year 1993-94 and the expenses projected for subsequent years assuming 6% inflation.
- (6) The projections account for capitalization of a portion of the interest through August 15, 1994, with respect to the portion of the proceeds of the Certificates allocable to the 1993 Project.
- (7) Includes an approximately \$23 million variable rate financing in Fiscal Year 1995-96, with 18 months of capitalized interest, and a total of approximately \$32 million of State low interest loans and the District's maximum obligation under the SAWPA agreement.

THE PLAN, THE PROJECT AND FUTURE INDEBTEDNESS

OVERVIEW

The District has prepared and periodically revises a Groundwater Management Plan (the "Plan") that provides a framework for District operations and future capital projects. The Plan's capital projects can be organized into three broad, and sometimes overlapping, categories, i.e., water supply projects, water quality projects and management projects. The Plan prioritizes projects, for budgeting purposes, into two classes, i.e., baseline projects and potential projects. Baseline projects are projects that the District has determined to be critical for meeting the Plan's major goals. Potential projects are projects which the District believes may play an important future role but for which technical or financial feasibility, water production yield, or funding have not yet been determined.

The District will use approximately \$57 million of the Certificate proceeds to finance a variety of capital improvements projects identified in the Plan or to provide additional funding for projects partially funded by proceeds from the 1990 Certificates and the 1989 Certificates (the "1993 Project"). The District will reimburse approximately \$17 million of prior expenditures and fund future expenditures for completed projects, works in progress and new projects that comprise the 1993 Project. The estimated amount of Certificate proceeds the District plans to allocate towards past or future expenditures on the 1993 Project's constituent improvements are set forth in the following table:

Capital Improvements

Projected Expenditures
from Certificate Proceeds

Prado Dam Water Conservation and Water Quality	\$ 2,205,000
Santa Ana River Interceptor Line	3,650,000
Forebay Improvements	9,441,000
Alamitos Injection Well and Reclamation	147,000
Talbert Wells	778,000
Water Factory 21 Improvements and Expansion	3,209,000
Biological Denitrification Plant	775,000
Arlington, Irvine and Tustin Desalters	12,303,000
Vapor-Phase Biodegradation Project	463,000
SAR Health	600,000
Monitoring Wells	3,484,000
Conjunctive Use Wells	9,327,000
Administration Building	106,000
Green Acres Project Construction	5,487,000
Computerized Water Resources Management System	254,000
Bloomfield Well	174,000
Miscellaneous Improvements	373,000
Capitalized Labor Expenses	1,354,000
Equipment	<u>3,289,000</u>
<hr/> Estimated Total 1993 Project	\$57,419,000

The District has applied the proceeds from their previous debt issuances (1989, 1990 and 1993) to fund a variety of capital improvements projects outlined below. These projects include facilities designed to increase Lower Basin water supplies, to protect and enhance water quality and to improve Lower Basin management.

WATER SUPPLY PROJECTS

The District is currently studying a variety of options to increase water supplies available to the Lower Basin, including increasing the basin production percentage (the amount of groundwater each producer is requested to pump, expressed as a percentage of total pumpage), enlarging the capacity of existing recharge facilities, and increasing wastewater reclamation. Set forth below are brief descriptions of some completed and uncompleted District baseline water supply projects which are included in the Project:

Wastewater Reclamation Projects. The District is expanding Water Factory 21 to triple its reverse osmosis ("RO") plant capacity from 5 MGD to 15 MGD. The District has been operating a pilot project evaluating pretreatment and has applied for a State revolving low-interest loan. The District is also incurring expenditures at Water Factory 21 for five water quality monitoring wells, raw materials, Talbert Barrier repairs, emission source testing

and compliance, data acquisition and instrumentation upgrades and microtox/mutatox, radioisotope tracer and TOC characterization studies.

The District, working with other agencies, has completed Phase I of the Green Acres water reclamation project ("GAP"), including construction of a 7.5 MGD wastewater treatment plant and the main transmission lines. The District is designing and constructing additional user connections. The District has also applied to the State for a low-interest loan to construct Phase II of GAP.

Prado Dam Conservation Project. The District and the U.S. Army Corps of Engineers (the "Corps") have been cooperating in a jointly-funded study for a formalized water conservation plan at Prado Dam. The District, along with the Corps, completed their studies in Fiscal Year 1993-94. A Memorandum of Agreement has been signed that will provide for increasing water conservation and storage capabilities by raising the water level from 495 to 505 feet.

The Prado Duck Pond Enhancement Project entails the design and construction of modifications to the District's existing constructed wetlands pond system in the Prado Basin. The recent modifications to the system have increased the treatment capacity of the ponds while enhancing the natural nitrogen removal effectiveness and operational flexibility. The District is planning to add an additional 300 acres of water treatment ponds to the existing 430 acre system.

WATER QUALITY PROJECTS

The District is undertaking projects to protect the water quality of the Santa Ana River, to remove excess minerals and contaminants from groundwater and to resolve problems posed by certain pollutants and contaminants. Set forth below are brief descriptions of some completed and future District baseline water quality projects:

Monitoring Wells and Treatment Wells. The District has completed construction of four deep monitoring wells to investigate nitrate concentration in the basin and one deep monitoring well and approximately ten shallow monitoring wells to investigate volatile organic compound contamination in the Anaheim Forebay. The District has also completed constructing two medium-depth monitoring wells near Talbert Barrier to evaluate seawater intrusion and the health effects of recycled water from Water Factory 21; two shallow monitoring wells in GAP's project service area; and five monitoring wells and four injection wells in Alamitos to stop intrusion between wells and around the well field.

The District has investigated TCE contamination in the Irvine area and constructed a pump-out project to remove TCE-contaminated groundwater from area wells. The District has also conducted eight volatile organic compounds ("VOCs") removal projects in the forebay.

Desalting Facilities. The District is designing and constructing desalting facilities in North Tustin and the El Toro-Irvine area. The Tustin facilities will include well improvements, a well water collection pipeline, a desalting plant, product water delivery

facilities and a brine disposal main. The Irvine desalter will include extraction wells and a treatment facility. The District is also making a variety of structural and process equipment improvements to its Arlington desalter. The Western Municipal Water District is designing a pump station and pipeline to deliver water from the Arlington desalter for domestic use in the Riverside area.

Nitrate Cleanup Facilities. The District has completed and is currently testing a wellhead treatment project in the city of Tustin that employs two treatment methods, reverse osmosis and ion exchange. The District has proposed construction of additional treatment plants for Irvine, Westminster, Tustin, Garden Grove, Yorba Linda, and Fullerton, which will use the treatment method that proves to be more cost effective at the Tustin plant. The District has designed and is now constructing a 50-gpm pilot biological denitrification system for a municipal wellhead in Garden Grove.

Color Removal Pilot Project. The District has constructed a 20-gpm pilot biofiltration system associated with one of Mesa Consolidated Water District's ("MCWD") major supply wells for evaluation of the system's removal of colored organic molecules from groundwater. A full-scale biofiltration system (> 1000-gpm) will now be incorporated as a post-treatment unit process on MCWD's ozonated wells. The District is also conducting additional pilot testing of nanofiltration membranes for color removal.

Additional Research Programs. The District is involved in a three-year joint research project with the Center for Interfacial Microbial Process Engineering at Montana State University (co-funded by the National Water Research Institute (the "NWRI")), evaluating the effectiveness of vapor-phase bioreactors for on-site destruction of VOCs in groundwater. The District is also engaged in a three-year research program conducted primarily at the University of California, Irvine (also co-funded by the NWRI), determining assimilable organic carbon ("AOC") levels in the Orange County groundwater basin and evaluating the role of AOC in microbial pathogen survival and regrowth potential in the basin.

WATER MANAGEMENT PROJECTS

The District is undertaking several programs to improve Lower Basin management. These programs are designed to expand the usable capacity of the Lower Basin, reduce underflow losses to areas outside the District, reduce public agency well field interference, improve management of the pumping pattern of the Lower Basin and gain a better understanding of the hydrodynamics of the Lower Basin. Set forth below are brief descriptions of some completed and uncompleted District baseline water management projects which are included in the Project:

Projects Expanding Usable Capacity of the Lower Basin. The District is reconstructing and reactivating seawater extraction wells to halt the landward migration of seawater through the Talbert Gap. The District also plans to install additional seawater intrusion wells for gaps not currently protected and to reach a cooperative agreement with MWD for expanded production capacity.

Conjunctive Use Wells. The District is financing, at reduced interest rates, the Construction of fifteen to twenty additional large municipal wells in a variety of locations, including sites in Irvine Ranch, Serrano, Santa Ana, Tustin, Yorba Linda and the MCWD for expanded production capacity.

District Forebay Improvements. The District has constructed a bypass pipeline to divert water around the Anaheim Lake. The District has constructed a Pump-out facility to dewater the Warner Basin complex for cleaning and is designing a bypass pipeline to divert water around the Warner Basin when the complex is decommissioned for cleaning. The District has constructed two rubber dams on the Santa Ana River at the Imperial Highway and Five Coves Basins to divert flows into the off-river system.

District Facilities Improvements. The District has prepared a master plan for the Fountain Valley site that includes the expansion of the Water Factory 21 and GAP facilities, construction of a fuel island and warehouse dock and construction of a laboratory and maintenance facility. The District is also engaged in a comprehensive upgrade of its computer system.

Other Basin Management Projects. The District is currently undertaking a variety of additional basin management projects, including a well field management project designed to integrate pumping between various municipal groundwater producers. The District is also making a variety of additional improvements to their forebay facilities.

POTENTIAL PROJECTS

The Plan has identified a variety of potential projects which could increase the amount of groundwater within the District, renovate existing groundwater which cannot be fully utilized because of water quality concerns, and contribute to better Lower Basin management. These projects have not been included in the Plan as baseline projects, however, because their technical or financial feasibility has not been determined, because agreements with potential project participants have not been reached or because the District has not at this time determined to undertake the projects. Set forth below are brief descriptions of some potential projects identified in the Plan which the District may in the future determine to undertake as a part of the Project:

Chino Desalter. A number of desalting facilities are needed in the Chino Basin; however, the technical and financial feasibility of these facilities and the nature of the District's involvement, if any, in the facilities has not been determined at this time.

Cooperative Management of Upper Basin Supplies. The Plan describes several potential projects for cooperative management of water supplies in the Lower Basin and cooperative projects above Prado Dam, including the proposed Western Riverside Regional Treatment Facilities, in which the District may participate in the construction of a storage reservoir project. No decision has been made by the District as to the nature of its involvement, if any, in these projects.

Off-Channel Storage. The District has been studying the development of off-channel storage below Prado Dam and in the Santa Ana Canyon. The District believes certain of these potential projects could be technically and economically feasible but has not determined to undertake any of these projects at this time.

Water Reclamation Projects. Preliminary planning studies were completed for the Phase II expansion of GAP which would extend the project into Newport Beach and further into Huntington Beach. The District is presently studying modifications to the Alamitos Barrier Project and a water reclamation project to treat up to 100 mgd of wastewater and transmit it up to their Forebay recharge operations for recharge. Comprehensive health effect studies may be needed before the latter two projects can be implemented.

Selenium Cleanup Facilities. The District is currently studying the technical and economic feasibility of constructing two plants to remove selenium from groundwater in the Fullerton and Irvine areas. These facilities could be combined with nitrate removal facilities.

Additional Seawater Intrusion Control Facilities. The District may consider the construction of additional seawater intrusion facilities to protect groundwater storage space from saltwater intrusion along the Pacific coast.

Irvine Lake-Santiago Creek Pipeline. The District is currently exploring the feasibility of importing water via the existing Santiago Lateral to Irvine Lake and then to the Santiago Creek recharge facilities through a new pipeline.