



# Turning Pipe Dreams into Reality

**Orange County  
Sanitation District**

Annual Report 2006/07



## Turning Pipe Dreams into Reality

If Orange County government officials had imagined, many decades ago, that one day they would need a highly complex infrastructure to serve more than 2.5 million people, they would have called it a pipe dream. But today, that kind of state-of-art system is exactly what the Orange County Sanitation District has created. With more than 500 miles of sewers and \$6 billion in assets, it's more impressive than anyone ever imagined.

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## Letter from the General Manager

Much of what happens at the Orange County Sanitation District takes place behind the scenes. Or, rather, underground and out of sight. On top of that, the work we do is something that no one ever thinks about. And because we do it right, no one ever has to think about it. So accolades from our constituents — the citizens and businesses of Orange County we serve — are often few and far between. But that's okay with us. With the strong leadership and guidance from our Board of Directors, we take quiet pride in managing and operating one of the county's most important agencies.

It's because of this importance that we remain so committed to protecting the public's health and Orange County's environment — ensuring the county's sewer infrastructure remains as efficient as possible and that its capacity can easily handle today's needs and tomorrow's requirements. We are constantly finding ways to maximize our finite resources and limited space through ingenuity and creative thinking, while reaching out to our community to find new and better ways to serve them.

On the pages that follow, you'll see the results of this commitment to Orange County. At the same time, you'll get a glimpse of an impressive infrastructure that many people never see. Our state-of-the-art systems. Our massive pipe network. Our leading technologies. Our innovative programs. We continue to keep Orange County working and growing, and perhaps most importantly, blissfully ignoring what goes on after they flush.



*James D. Ruth*  
**James D. Ruth**  
General Manager,  
Orange County Sanitation District

## Laying the groundwork for tomorrow's Orange County.

Orange County has come of age. While still growing and innovating, the county offers the maturity and well-developed amenities necessary for communities to truly thrive. Entertainment, leisure time activities, leading business centers, and progressive transportation options work in harmony with efficiently operating utilities, recycling, and landfill operations.

And underneath it all is a network of pipes and pump stations that keep Orange County moving, literally. It's all part of the county's critical sewer infrastructure. As the current aging system nears the end of its lifecycle, the Orange County Sanitation District is hard at work ensuring this important backbone remains strong so Orange County can continue to prosper well into the future.

In achieving this goal, we have initiated projects all over the county planning, building, installing, refurbishing, and upgrading our sewer system according to regulations that require a fully functional secondary system. We have done so all within an ambitious timeframe while making every effort to have as little impact as possible on local traffic and neighborhoods throughout our service area.

The result is a high-performance underground system and nearly unobtrusive above-ground infrastructure. This system keeps sewers flowing so efficiently that residents and customers never even have to think about it and city officials and planners never have to worry about the future.

## Building a foundation for responsible stewardship.

A significant part of our job is to dispose of the community's wastewater. And as gatekeeper of this system, we must do so with as little impact to our environment as possible. Cutting corners on this responsibility isn't even an option because the stakes are so high.



We process more than  
230 million gallons of  
wastewater every day.



**OCSD has nearly 120 capital improvement projects either currently under construction or planned through 2020.**



So, when it comes to releasing some of our treated wastewater into the ocean, we do so with great care. Through our ocean monitoring program we conduct continuous research and monitoring with the help of leading marine experts from the Scripps Institution of Oceanography, the federal government, and prominent universities.

The wastewater journey begins at our Huntington Beach and Fountain Valley facilities and travels five miles out to sea through an underwater pipe. In fact, thanks to safeguards and measures that often go above and beyond regulations, we've been protecting marine life and the ocean environment for more than 30 years.

We ensure that it stays protected by conducting more than 100,000 water sample tests annually, as well as, monitoring sediment, fish, and other marine life in 35 square miles of ocean water off Orange County's coast and almost 15 miles of beach, from Seal Beach to Crystal Cove. Based on our analysis over the past several years of almost 200,000 fish and more than 170,000 invertebrates, we are proven responsible stewards of our ocean. Independent monitoring programs from the U.S. Environmental Protection Agency and California Regional Water Quality Control Board all confirm our findings.

**Closing the circle on providing pure water to the county.**

What began in 1995 as a plan to create a safe, high-quality, drought-proof drinking water system in Orange County has become the largest and one of the most innovative groundwater replenishment systems ever built — one modeled throughout the world, from San Jose to Singapore.

After all, what's more important than having a reliable supply of drinking water? So we partnered with the Orange County Water District and developed the Groundwater Replenishment (GWR) System. Using leading edge technologies, the GWR System captures partially treated sewer water and purifies it to a level that actually surpasses

bottled water quality. While costs are about the same as importing water from Northern California, we are able to cut the energy necessary to do so in half while also reducing our reliance on external water sources.

Our two agencies invested \$480 million to bring this project to fruition in 2007 — with the help of state and federal agencies and the Metropolitan Water District, which contributed a combined \$177 million to ensure its success.

### Improving workflow to enhance sewer- and cash-flow.

A small construction project might not seem too important when compared to some of our more prominent endeavors. But when you add almost a hundred of these projects to the picture, the overall bottom line can really add up. So, we assembled a Fast Track Team to ensure they receive their due attention. The result? For every 60 or so fast-tracked projects we complete, we're saving about \$3 million.

How do we do it? Our team first looks at what we have — our resources, facilities, and programs — and then at what we need to accomplish. We add in some creative thinking and smart planning and we come up with some highly effective ways to solve traditional challenges and reduce costs.

**Redefine.** Through our efforts, we changed the way projects over \$10 million can be built. Working with the State legislature, we were granted approval to use design-built methods, and now we have the flexibility to complete projects faster with greater creativity while saving money. Those time and cost savings directly affect our bottomline and lessen the pressure to seek rate increases.

**Rethink.** Instead of drawing on more and more energy for new projects or expanding facilities into space we don't even have, we turn to better ways of doing things. For example, we partnered with EnerTech Environmental, Inc. because of their technology to convert biosolids into high-grade renewable fuel, offering significant cost savings over alternative options.



**The GWR System is able to produce up to 70 million gallons of purified water every day.**



OCSD is in the midst of  
a \$2.6 billion capital  
improvement program.





**Our training, leadership and mentoring programs are helping us prepare for the next generation of OCSD's workforce.**

**Reorganize.** We're now leaner and meaner, in a good way. We streamlined our department structure by half, cut our board committees and meeting schedules from eight to four, and adjusted meeting schedules so everyone works more efficiently.

### **Pumping up our people power.**

We have achieved a great deal in the past year because of the expertise, ingenuity, and hard work of our experienced employees. To ensure that we maintain our momentum and a fresh stream of ideas, talent, and leadership, we have designed programs to retain and attract the next generation of skilled employees.

We've created a Succession Management Program (SMP) that helps us forecast growth, attrition, and staffing needs, and creates a roadmap for identifying the right people with the right skills at the right time. As the public sector heads toward potentially higher turnover in the next few years, our SMP program is already hard at work minimizing the impact of the next generation of changes.

After identifying and locating the right caliber employees, our training and mentoring programs ensure they are fully prepared and fit the job at hand. This on-the-job coaching also passes down our best practices and hard-earned skills from our most experienced employees to those who will be tomorrow's most experienced staff members.

### **Making critical connections through outreach.**

Ensuring that Orange County has an efficient and safe, sewer system is serious business — and we treat it that way. But it can also have a lighter side. One that gives us the ability to promote education and give back to the community in fun and meaningful ways.

Take our youth programs, for example. Each summer, we partner with the Municipal Water District of Orange County, Orange County Water District, Irvine Ranch Water District, County of Orange, and National Water Research Institute to host a Water Camp



for students who are interested in science and the environment. Through hands-on activities and interactive lessons, kids gain a better understanding of our water resources, where they come from, and what it takes to move water in and out of the community.

Throughout the year, we host our popular Sewer Science hands-on labs for high school students. Using specially designed tanks, analytical equipment, and student workbooks, participants not only learn about the entire wastewater process, they experience it. Students actively learn during their week-long adventure, creating wastewater, cleaning it through numerous processes, then running it through a panel of safety tests.

Our 1½-hour facility tours are also popular programs that give a wide variety of community groups a stimulating overview of our work throughout the county and teach the importance of wastewater treatment.

Education and outreach extends deep into the community through our biosolids composting program. This year, together with partners Synagro and the South Orange County Water Agency, we developed a compost demonstration site at Mission San Juan Capistrano. The mission's Gardening Angels use the composted biosolids to amend 10 acres of on-site gardens while showcasing the benefits of composting to visitors.



**We connect with thousands of people every year to educate them about the important role we play in the community.**

## OCSD Financial Results

**Our infrastructure success story is just the beginning. Financially, the Orange County Sanitation District is making smart choices that strengthen our ability to achieve our mission and Orange County's ability to continue to prosper.**



The Capital Improvement Program (CIP) is a series of large construction improvements in progress or planned through 2020 that will allow the District to provide an appropriate level of service to our ratepayers. The CIP provides for the management and implementation of these improvements. The outlay for the CIP in FY 2006-07 was \$284.7 million.

Debt Service is the cost of repaying long-term debt. Long-term debt financing allows the District to complete large multi-year capital projects by providing funds not always immediately available. The outlay for debt service in FY 2006-07 was \$123.7 million.

Operating Expenses allocates resources to operate, maintain and manage our sewage collection, treatment and disposal system and any associated administrative or technical requirements. Operating expenses for FY 2006-07 were \$114.1 million.

The District's "AA" Bond Rating is one of the highest for a government agency. To maintain this rating, the District adheres to its 2001 Debt Policy and coverage ratios requirements. This Board-adopted policy serves as a guide in the management of existing debts and in the issuance of future debt.

In FY 2006-07, total revenues increased \$60.2 million, or a 26.8 percent increase over the prior year, primarily due to increases of \$20.6 million in property tax revenue, \$15.6 million in capital facilities capacity charges, \$13.5 million in service charges, and \$11.8 million in investment earnings.

District total expenses increased \$8.9 million, or 4.6 percent primarily due to increases of \$3.5 million in depreciation, and \$6.5 million in operating expenses. The increase in depreciation is due to the recent completion of \$70.5 million in construction project assets that have entered their first year of depreciation. Operating expenses alone increased 6.2 percent over the prior year.

Net assets increased \$100.6 million, or 9.2 percent, to \$1.189 billion in FY 2006-07 over the prior year. Net capital assets increased \$232.0 million, or 17.0 percent, due primarily to the continuing Capital Improvement Program that includes completion of the Groundwater Replenishment System. The Groundwater Replenishment System project was commissioned in Winter 2007. This joint project with the Orange County Water District is the largest water reclamation project in the nation and diverts up to 70 million gallons of water a day from the District's ocean discharge during peak winter storms.

Long-term liabilities decreased \$22.3 million, or 2.8 percent due to annual principal payments and the refunding of existing debt without the issuance of any "new money" financings.

### Looking Ahead

In June 2007, the Board of Directors approved the FY 2007-08 operating budget update. This update amended the second year of the previously adopted two-year budget, and included an operating budget increase over the original budget of \$4.3 million. This increase is mostly attributable to the following major changes:

**Salaries and Benefits**, \$4.0 million – Although staffing was reduced by ten full time equivalents to 634, total personnel costs are to increase \$4.0 million as a result of recently approved collective bargaining agreements, including medical and other benefit cost increases.

**Operating Materials and Supplies**, (\$2.3 million) – The reduction in operating materials and supplies is due to the projected unit decreases on the various chemicals used throughout the plant facilities that are expected to average 10 percent.

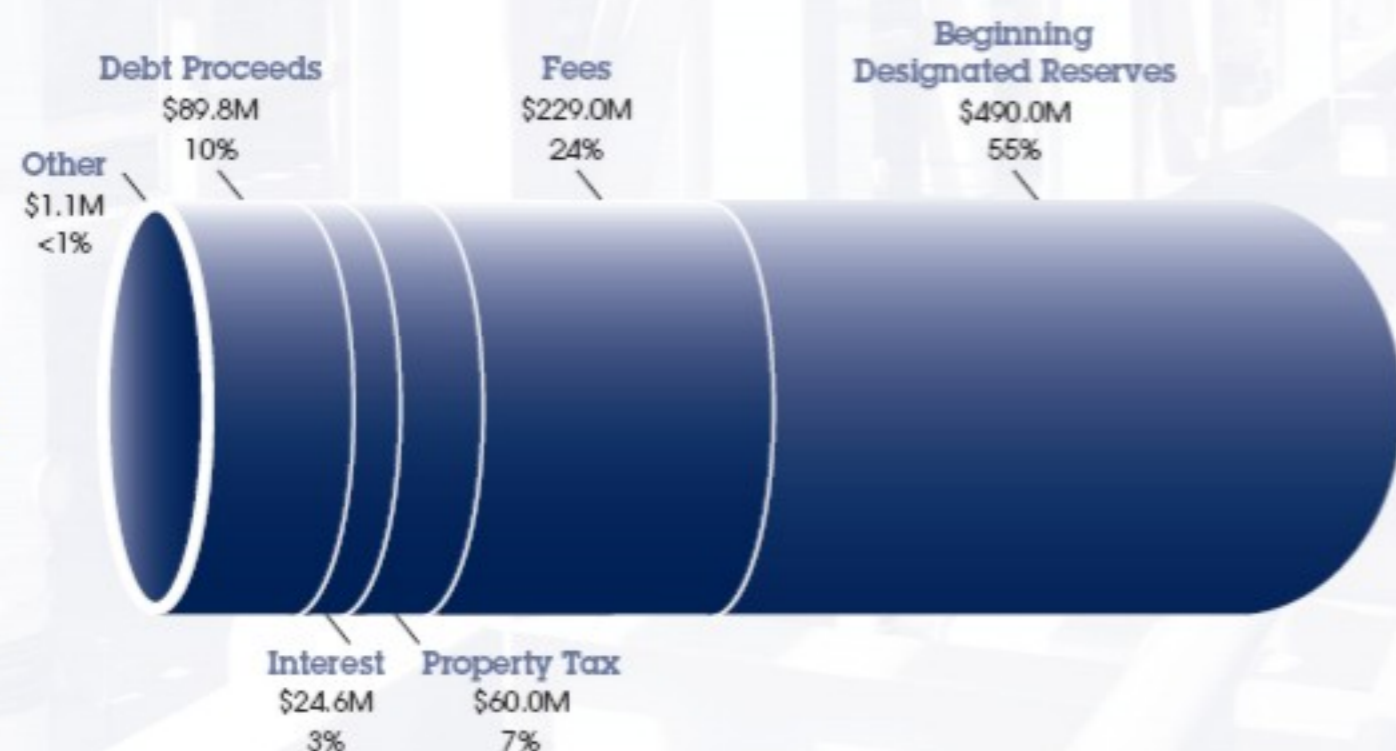
**Contractual Services**, \$3.5 million – The major component of this category is biosolids removal and transportation costs. These costs continue to increase as acceptable locations for biosolids disposal become less accessible.

**Utilities**, \$0.8 million – Despite reductions identified in natural gas utilization, total utility cost will increase due to rising electricity cost.

**Cost Allocation**, \$(2.5 million) – Increase in cost allocation charges out to the capital improvement program due to the creation of the Facilities Engineering Project Management Division and the concentration of capital project work performed by the employees transferred to this division from the Operations and Maintenance Department.

In total, the approved FY 2007-08 updated budget included operating, capital, and debt service outlays of \$513.2 million, or a 12.5 percent increase over the prior year. This overall increase is comprised of a \$9.4 million, or 6.9 percent increase in the operating budget, a \$10.9 million, or 20.0 percent increase in debt service requirements, and a \$36.6 million or 13.8 percent increase in cash outlays for construction projects.

Where the money comes from



Where the money goes



## Board of Directors Fiscal Year 2006/07

**James M. Ferryman**  
Chair, Board of Directors  
Costa Mesa Sanitary District

**Doug Davert**  
Vice Chair, Board of Directors  
City of Tustin

**Harry Sidhu**  
City of Anaheim

**Roy Moore**  
City of Brea

**Patsy Marshall**  
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**Phil Luebben**  
City of Cypress

**Larry Crandall**  
City of Fountain Valley

**Don Bankhead**  
City of Fullerton

**Bill Dalton**  
City of Garden Grove

**Cathy Green**  
City of Huntington Beach

**Steven Choi**  
City of Irvine

**Steve Anderson**  
City of La Habra

**Mark Waldman**  
City of La Palma

**Ken Parker**  
City of Los Alamitos

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**David Shawver**  
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**Richard Freschi**  
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**Jim Winder**  
City of Yorba Linda

**Joy L. Neugebauer**  
Midway City  
Sanitation District

**Darryl Miller**  
Irvine Ranch Water District

**Chris Norby**  
Orange County  
Board of Supervisors

## OCSD Officials

**James D. Ruth**  
General Manager

**Robert P. Ghirelli**  
Assistant General Manager

**Nicholas J. Arhontes**  
Director of Operations  
and Maintenance

**James D. Herberg**  
Director of Engineering

**Edward M. Torres**  
Director of Technical Services

**Lorenzo Tyner**  
Director of Finance and  
Administrative Services





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