A Message from Padre Dam

As a responsible steward of the community, smart planning for a sustainable future is always top of mind. Our Comprehensive Facilities Master Plan (CFMP) is driven by our commitment to continue offering reliable and resilient water systems, while maintaining affordable rates for our customers. Padre Dam provides quality drinking water, recycled water and wastewater management while focusing to balance sound infrastructure investments with financial planning.

CFMP Means Smart Planning for Our Community

- Establishes a Long Range Plan to achieve and maintain infrastructure sustainability for a stronger future
- Provides analysis on existing demands while forecasting future requirements
- Supports smart system replacement and improvements for current and anticipated future customers through 2040
- Develops a Capital Improvement Plan (CIP) that prioritizes investment in your water/wastewater infrastructure
- Enhances collaboration with partner agencies to integrate plans and meet the needs of our community

Our Mission

Provide quality water, recycled water and wastewater management services for our customers in the most cost-effective manner possible, earning customer and community respect.
Padre Dam provides drinking water, recycled water and wastewater services to over 100,000 people. Its service area includes the San Diego suburbs of Santee, El Cajon, Lakeside, Flinn Springs, Harbison Canyon, Blossom Valley, Alpine, Dehesa and Crest.

**Our Service Area**

- Encompasses 73 Square miles
- 390 miles of watermain lines
- 170 miles of wastewater
- 25 miles of recycled water
- 2 million gallons per day of wastewater treatment and water recycling
- 24,000+ active service connections
- Imports 100% of drinking water supply
- $700m+ IN INFRASTRUCTURE
Over the last 20 years we have seen major changes in water consumption and wastewater flow in our community. With the continued rise in the economic vitality and population of our region, the time has come for Padre Dam to plot a course forward that is reflective of the evolving conditions.

A Programmatic Environmental Impact Report (EIR) for the CFMP was prepared and provides an approach with greater flexibility to deal with general environmental issues, cumulative impacts including GHG emissions and impact mitigation measures related to future facility development and operations. By reviewing and clearing the CFMP at a programmatic level, a singular approach can be incorporated for all project-specific environmental documents, eliminating duplicative effort and streamlining the process for evaluating project impacts.

Padre Dam coordinated closely with stakeholder organizations including jurisdictional agencies, water, school and fire districts, Native American Tribes, environmental groups as well as residents and business organizations. Stakeholder engagement along with general public participation resulted in a plan that best serves the dynamic community needs.
Purpose of the CFMP

The CFMP provides long range planning to create infrastructure sustainability for a strong future. The Plan reflects current issues, trends, regulations and analysis, and ultimately provides recommendations for facilities and improvements through the next 25 years. To remain current and relevant, an internal update of the CFMP will be performed every five years with a major update every 10 years.

The goals of the CFMP are to:

- Update system demands and flow forecasts through 2040
- Identify system deficiencies and recommend improvements to meet future demands and flow conditions
- Maintain adequate service during emergency and hazardous events
- Evaluate water supply reliability by analyzing the expansion of Ray Stoyer Water Reclamation Facility (WRF)
- Produce a comprehensive document consistent with other key District plans (Strategic Plan, 5-Year Business Plan & 2015 Urban Water Management Plan)

To see our other plans, visit our website at www.padredam.org.
EVALUATING OUR COMMUNITY’S WATER DEMANDS AND FLOW FORECASTS

Water

Water demand is the quantity of water that is required in order to meet all water needs in the community. Water demand includes water delivered to the system to meet the needs of consumers, water supply for fire fighting and system flushing as well as water required to properly operate the facilities.

Since 2001, annual water use within Padre Dam has ranged from 8,500 to 16,000 acre feet (AF) (2.8 to 5.2 billion gallons) per year. The average annual water consumption during this period has been approximately 13,930 AF (4.5 billion gallons) per year. Annual demand peaked in 2007, but has steadily declined corresponding with statewide drought conditions promoting the need to conserve water resources and depressed economic conditions during that time. The CFMP projected demands for 2040 are anticipated to return back to 2007 levels.

Padre Dam provides water service to a variety of customer types. These include residential, commercial, agricultural, landscape and institutional. **Residential demand is the largest customer class with over 75% of our total demand.** Our only source of drinkable water is imported from San Diego County Water Authority (CWA) and our current average annual demand is 10,200 AF (3.3 billion gallons) per year.

Recycled Water

**Padre Dam provides nearly 900 AF (293 million gallons) per year of recycled water to over 210 customers.** In addition, Santee Lakes Recreational Preserve has been using recycled water from Padre Dam for recreational purposes since the 1960s.

<table>
<thead>
<tr>
<th>Recycled Water Demand Forecast (CONDENSED)</th>
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<tbody>
<tr>
<td><strong>Existing</strong></td>
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<tr>
<td><strong>Future</strong></td>
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Wastewater

Wastewater consists of dry-weather flow and wet-weather flow. Dry-weather flow is primarily made up of flow generated by routine water usage from residential, commercial, business and industrial sectors. It also comes from groundwater infiltration. Wet weather flow includes storm water inflow, trench and/or groundwater infiltration.

Hydraulic Modeling

For the 2015 CFMP, Padre Dam utilized separate hydraulic models to analyze its systems. Each hydraulic model represents the main components of the system such as pipelines, pump stations, storage reservoirs and pressure reducing stations.

A hydraulic model is a mathematical model of a water or sewer system that is used to analyze the system’s hydraulic behavior. Hydraulic modeling analyzes:

- Demands
- Flows
- Forecasts
- Drought
- Water Reliability

By modeling our system we gain a full understanding of its hydraulic behavior. Padre Dam uses the model as a tool to plan infrastructure improvements, develop operations maintenance strategies and proactively manage our system.

### Wastewater Flow Forecast (CONDENSED)

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<tr>
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<th>Flow (mgd)</th>
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<tbody>
<tr>
<td>Existing Flow</td>
<td>4.43</td>
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<tr>
<td>Known Near-Term Increase</td>
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<tr>
<td>Long-Term Increase</td>
<td>0.1</td>
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<tr>
<td><strong>Projected Future Flow</strong></td>
<td><strong>5.53</strong></td>
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WORKING TO DEVELOP SMART INFRASTRUCTURE

By analyzing flow forecasts and hydraulic models, Padre Dam is able to outline improvements and projects that need to be completed to meet future demand. The hydraulic models are able to identify potential areas of improvement, allowing us to determine the best projects to undertake in order to improve what is in place and help meet future demand. Through the analysis performed for the CFMP, projects have been identified to improve our infrastructure, and the CIP outlines and prioritizes these future projects.

Padre Dam strives to meet customers’ needs in the most cost effective manner. Through the development of the CIP, in conjunction with our 5-Year Business Plan, Padre Dam ensures sufficient financial resources are invested to execute identified priority projects. The foundation of the CIP is based on the three R’s:

R ELIABILITY – R ESILIENCY – R ATE PAYER AFFORDABILITY

Objectives of CIP include:

- Ensuring safe, reliable water and sewer facilities
- Refurbishing existing aging facilities
- Compliance with regulatory mandates
- Supporting the Advanced Water Purification Program
- Creating redundancy in water distribution and transmission systems
- Prioritizing critical assets through condition assessment or replacement
The CIP is revisited on an annual basis to update and re-prioritize projects. Lessons learned are incorporated in future project implementation to ensure a smart infrastructure that is both reliable and resilient for our community. To view a list of the key projects that have been determined by the CFMP, visit our website at www.padredam.org.

LOCAL WATER SUPPLY DEVELOPMENT

The Advanced Water Purification Program is a potential new source of water that would be locally controlled, reliable, drought proof and environmentally sound. Padre Dam continues to evaluate and analyze this program, which is projected to provide up to 30 percent of our community’s current drinking water demands by 2025.

Next Steps

Padre Dam is committed to smart planning to help build a sustainable future for our community. Through our flow forecasts and hydraulic modeling, we have determined the best projects that will help meet future needs. These projects and plans will be reviewed on a regular basis to ensure we are on the right track and making the most important improvements in a cost effective manner. Padre Dam will continue to evaluate its system to ensure a strong and sustainable future for current and future generations.