

Chapter 1 Introduction

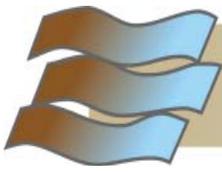
Pima County Wastewater Management Department (PCWMD) operates the Pima County regional wastewater system. The 1979 Intergovernmental Agreement (IGA) integrated the separately operated wastewater systems of the City of Tucson and Pima County into a single system operated by Pima County. The combined Metropolitan Area system, at that time, consisted of the Roger Road Wastewater Treatment Plant (WWTP), the Ina Road Water Pollution Control Facility (WPCF), and the Randolph Park Water Reclamation Facility (WRF), as well as approximately 1,200 miles of collection pipelines. The Roger Road WWTP, originally placed in service by the City of Tucson in 1951, has since been expanded several times to its present 41 million gallons per day (MGD) capacity. The Ina Road WPCF, originally placed in service by Pima County in 1977, is being expanded to 37.5 MGD. The collection system has grown to over 3,300 miles of sewer lines.

The 2006 Pima County Metropolitan Area Facility Plan Update (Facility Plan) addresses the Metropolitan Area which is essentially the area tributary to the treatment facilities at Ina Road WPCF and Roger Road WWTP. The outlying facilities, operated by PCWMD at Marana, Avra Valley, Mount Lemmon, Corona de Tucson, Pima County Fairgrounds and Green Valley, are not tributary to either the Roger Road WWTP or Ina Road WPCF, but will be discussed within the report to provide a comprehensive description of the Department's facilities.

PCWMD annually develops and revises a Five-Year Capital Improvement Program (CIP) which identifies specific planning, design and construction projects to meet the existing and projected facility needs. This CIP is based on a detailed annual review and evaluation by PCWMD staff of the needs for conveyance system rehabilitation and expansion, treatment plant repair/rehabilitation and expansion, and system wide upgrades to meet current regulatory requirements. The Five-Year CIP generally follows the recommendations contained in the Facility Plan. The Facility Plan is the master planning document of PCWMD which periodically examines the status of the system of the Metropolitan Area and then forecasts the projects required to meet predicted expansion, regulatory requirements and rehabilitation needs. This document is the second update of the original Facility Plan initially developed for the Department in 1978 and first updated in 1990.

The 1978 Facility Plan was prepared in accordance with Section 201 of Public Law 92-500, the 1972 version of The Federal Water Pollution Control Act. Public Law 92-500, Section 201 dictated the format and contents of the 1978 Facility Plan. The stated objectives of that Plan were:

- Develop specific sewerage improvement projects to meet all applicable State and Federal requirements and provide the desired level and quality of wastewater service in the most cost effective manner.
- Define the most cost effective regional wastewater management system to meet the short and long term needs of both Pima County and the City of Tucson.



- Develop an economical and orderly staged construction program for future facilities.
- Evaluate the eligibility of the recommended projects for State and Federal grant funding and the capability of the City to fiscally support the sewerage facilities.

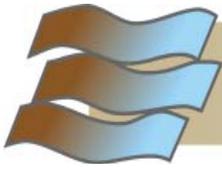
The 1990 Metropolitan Area 201 Facility Plan Update was developed in accordance with Federal facility planning regulations and guidelines contained in the Environmental Protection Agency (EPA) guidance document entitled, Construction Grants, 1985 (CG-85), and the Pima Association of Government's (PAG) Area Wide Wastewater Management Plan Point Source Update for the Metropolitan Basin, and was adopted in 1985. The general goals of that plan were:

- Provide a wastewater management system that is compatible with and protects the environment.
- Promote cost effective wastewater management and environmental benefits.
- Protect surface water and ground water quality, consistent with Federal and State laws and regulations.
- Provide a comprehensive 201 Facility Plan for a long-range planning period that complies with all Federal, State and local laws, ordinances, regulations and requirements and meets the needs of the wastewater management system and the community it serves.

The 2006 Facility Plan is based on the objectives, goals and information contained in its two predecessor documents. However, it will not be limited to the rigid regulatory format of these documents. The completion of the Federal program of grant funding for wastewater projects has alleviated the necessity of following the previous rigid format.

The 2006 Facility Plan presents PCWMD's vision of the Metropolitan Area Wastewater System through the year 2026. The ultimate goal is to effectively serve the health and welfare of residents of Pima County and maintain this valuable asset which has been created over the years by the citizens of Pima County. The Facility Plan is designed to answer the following questions:

- **How will growth affect the system?** Significant population growth is anticipated in the Metropolitan Area over the next 20 years. However, the amount, distribution and timing of growth within the Metropolitan Area will affect extension of the collection system, location of new treatment facilities, and improvements to existing treatment plants.
- **How will future regulatory changes impact the effluent quality requirements and the operations and maintenance of the treatment and conveyance systems?** Federal and State regulations and facility permits are constantly changing and evolving based on local conditions and national/regional initiatives. The Facility Plan discusses these anticipated changes and the potential impacts on the conveyance and treatment operations of the metropolitan system.
- **How can the treatment and conveyance system be continuously rehabilitated?** As wastewater treatment and conveyance infrastructure across the nation has begun to age, the asset management concept has been a primary driver at many wastewater agencies to develop a systematic approach to identifying and rehabilitating the physical facilities. As part of this report, extensive condition assessments were conducted at the major treatment facilities. These evaluations, together with assessments of the conveyance systems, identify treatment and conveyance rehabilitation needs for the next 20 years. In addition, Federal and State Capacity, Management, Operations and Maintenance (CMOM) regulations will place higher demands on inspection, maintenance and replacement/rehabilitation of the conveyance



system as a means of reducing Sanitary Sewer Overflows (SSOs) and odors, while preserving the value and functionality of the assets. Immediate and long-term rehabilitation programs for both conveyance and treatment facilities are included in the Facility Plan.

- **How will the growth, regulatory and rehabilitation requirements be funded?** The financing of wastewater projects can no longer rely on Federal grants to meet a portion of their funding requirements. The use of voter-approved funds for capital projects is very critical in making system improvements in a timely and cost effective manner. Additionally, user and connection fees must reflect the total costs of operation and expansion of the system respectively.

This Facility Plan is organized to present the wastewater system in Pima County; to forecast growth within the Metropolitan Area; to identify the regulatory and institutional issues that impact the collection, treatment and disposal of effluent and biosolids; to describe the current status and proposed future of the conveyance systems; and to identify the proposed short and long-range CIP for the Metropolitan Area over the 20-year planning period.