

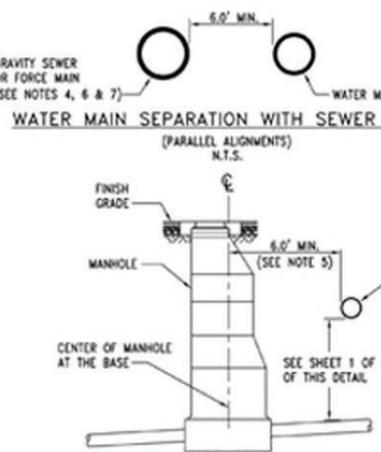
# GROWTH & DEVELOPMENT

## OUR GOAL

*Provide planning and engineering solutions to help ensure safe, efficient and sustainable water reclamation infrastructure for our customers.*



HORIZONTAL SEPARATION



## VISION FOR THE FUTURE

Continuous improvement is the road map for documenting processes, evaluating their strengths and weaknesses, and then mapping a path to improve their quality, efficiency, and effectiveness. The vision of the PCRWRD Growth and Development Business System is to create a highly automated, customer-focused, and streamlined set of planning and engineering processes that seamlessly and cost-effectively support the department's Conveyance and Treatment Divisions and the development community.

Processes that are clearly defined and consistently followed are essential elements of this vision. To this end, process owners and users must fully understand internal and external customer requirements for the timeliness and quality of services. In addition, customers must fully understand and have access to all departmental standards and requirements for building safe, effective, and sustainable infrastructure. Measurable goals for customer satisfaction, timeliness, and quality of processes are necessary for on-going continuous improvement.

Additionally, advancing this vision requires timely and regular forums for two-way communication with development stakeholders to keep them fully informed of current standards and requirements for the construction of sewer infrastructure. These on-going communication forums also will provide an opportunity for customer feedback to ensure the department understands and is responsive to the needs, values and concerns of the development community.

Other priorities for the future include improving the accuracy and reliability of the hydraulic model. This will not only support on-going compliance, but will enhance the department's ability to plan responsibly for growth. A state-of-the-art records management system that is linked to spatial data and made easily accessible to internal and external customers is also a high priority.

## OPPORTUNITIES

### Constant Change

PCRWRD is challenged with the need to continually change its development review processes and to expedite turnaround times in order to meet developer (stakeholder) expectations. Continuous improvement involves measuring all processes including timeliness and quality of service for stakeholders; timeliness is exceptionally critical to the development community. PCRWRD oversees the development of new sewer infrastructure that eventually becomes an asset that is owned and maintained by Pima County. As such, PCRWRD is concerned about balancing quality with speed of review. Simultaneously, the department cannot lose sight of its mandate to protect the environment, the public health and public safety while also meeting its fiduciary responsibility for Pima County assets. Building a streamlined development review process that has clear and logical steps for consistent application is a strategic objective for the PCRWRD Planning and Engineering Division over the next five years.

## Capacity Projections

A well-calibrated hydraulic model is critical to meeting the ever-changing capacity needs of our system. Changing conditions including new sewer connections, changes in population, increased water conservation, implementation of water conservation technologies, drought management, etc. require constant adjustments and modifications to a hydraulic model that will ensure the needs of our stakeholders are met.

# MAJOR PROJECTS AND PROGRAMS

## Regional Planning

The update to the 2006 Metropolitan Facility Plan will incorporate the significant changes of the last eight years. Completion of the update is scheduled for June 2015. Other ongoing regional planning efforts include: Pima County Comprehensive Plan (Pima Prospers), Pima Association of Governments (PAG) Environmental Planning Advisory Committee, PAG Population Technical Advisory Committee, Sahuarita General Plan, and the Sahuarita East Conceptual Area Plan.

## New Development Planning

Current conveyance capacity augmentation studies include the Southeast Interceptor Study and Design, the Aerospace Corridor Sewer Study and the UA Future Growth Analysis. Additionally, stakeholder workshops and meetings will be conducted to ensure requirements are understood and areas of new development are identified.

## Development Capacity Tracking

The tracking of development capacity is achieved through the Wastewater Capacity Program (WCP). Once the hydraulic model is calibrated, the WCP will be updated.

## Hydraulic Modeling

The hydraulic model provides critical capacity assessment which is required by ADEQ for planning purposes. The model is currently being calibrated and should be completed by December 2014. This is the third round of calibration since 2006. The first calibration was finalized in 2008 and relied on Transportation Analysis Zone data. The second calibration occurred in 2012 and relied on water data.

## System Flow Metering

Between 2008 and 2010, the flow metering section underwent a comprehensive evaluation by an outside consultant. New Operations and Maintenance procedures were developed for metering equipment and Quality Assurance/Quality Control procedures for the flow data were established. The current calibration will use the refined flow data for the first time. The flow metering section is now fully staffed, and it is anticipated that meters will be deployed in Green Valley during the fall of 2014 in preparation for a calibration effort of this system in early 2015. In addition, the Kino Inflow/Infiltration study area will continue to be assessed to determine the





effectiveness of manhole inserts in preventing excessive infiltration of rainwater into the sanitary sewerage conveyance system.

### **Continuous Improvement**

In 2014, development processes were defined and evaluated, and opportunities for improvement were identified. These efforts have provided a foundation for the implementation of process improvements over the next five years to decrease review times and increase customer satisfaction. Internal and external stakeholders will enjoy the benefits of the department's continuous process improvement activities, and will encourage ongoing efforts in this area.

### **Connection Fee Collection**

This process was changed dramatically in 2012, and a more defined, transparent process is being honed as additional changes are implemented as needed.

### **Design Standards**

In December 2012, the Planning and Engineering Division produced the Standard Specifications and Details for Construction and the Engineering Design Standards. A committee of staff and external stakeholders is participating in the annual update of the manual. The newest update will be completed by June 2015 and will include formatting standards for development-financed sewer plans as well as other minor improvements to PCRWRD standards.

### **Inspection of Construction**

The Field Engineering Section provides inspection services for private development and utility-funded construction projects. This section also provides construction management services in conjunction with the CIP project management personnel. By January 2015, the Field Engineering Section anticipates completion of at least two internal training programs to educate and promote consistency among the inspection staff. Inspection services will also be expanded to water reclamation facility projects while maintaining our level of service to our existing customers.

### **Engineering Evaluations**

Recently, PCRWRD engineers and planners have prepared numerous assessments and analyses including pump station assessments, design variance reviews, low flow sewer studies, and possible sewer alignments. Engineering and Planning will continue to support all aspects of PCRWRD operations and new development.

### **Records Management**

The initiation of an electronic Document Management System (eDMS) using digitized PCRWRD Treatment and Conveyance documents has completed Phase I implementation. The scope of documents included in Phase I were Treatment and Conveyance construction as-builts, surveys, and real property records. Phase II of this project is currently underway and will include additional document integration for ROMP construction as-builts and sewer connection cards.

## Geographic Information Systems Mapping Support

Several Geographic Information Systems (GIS) products have undergone initial development to support PCRWRD Capital Improvement Project, Engineering Service Unit, and the Development Liaison Unit sections. A web-based map project (ArcOnline) has been developed to indicate the status and location of CIP and Job Order Contract (JOC) work. These PCRWRD CIP/JOC layers are combined with project data from other jurisdictions' transportation departments CIP project data. This data will be used by Utility Coordination staff to cross reference and coordinate multi-agency CIP activities.

Real property documents will be used to develop a GIS layer indicating the location of easements which correspond to or are dedicated to PCRWRD. Two GIS layers are also under development to indicate and correlate the locations of parcel property rezonings and sewer capacity request allocations for the purpose of planning support

## The Seven-Step Model for Continuous Improvement

The Seven-Step Model for Continuous Improvement is a tool for ensuring quality assurance in all development processes. This methodology will be applied on an on-going basis. Focus will be placed on the assessment of newly developed and existing processes; assurance that the processes are being implemented and improved; and that established metrics are providing meaningful information and measurements. Monitoring of Metrics will take place on a regular basis.

## Process and System Improvement Plans

Plans for process and system improvements will be developed and implemented in the Engineering Division.

## Land and Permit Management Project

The Land and Permit Project is a public works software integration project being led by ITD and Development Services. All PCRWRD development-related processes will be represented in the software. Staff is now involved in an 18-month development process to convert our work processes into a more efficient electronic tool.

## Ordinance Revisions and Updates

Ordinances will be revised and updated as needed to meet the changing needs of the development community and the community at large.

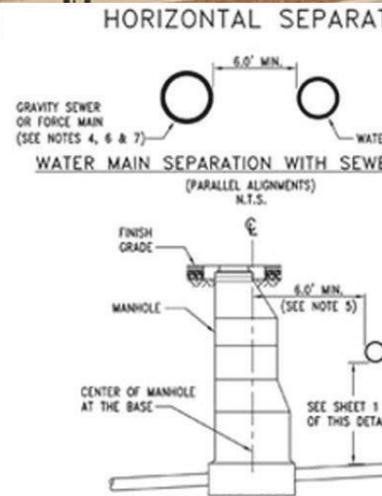
## BENEFITS

- Enhancement of the department's functions;
- Increased efficiency of employees' efforts; and
- Increased resources to launch new programs and projects.

## KEY PERFORMANCE INDICATORS

- Connection Fee Revenue
- Average Review Times for Preliminary Sewer Layout, Type III Capacity, and Sewer Improvement Plan
- Reduction of Red Cloud\* total count

*\*Business opportunity*



# GROWTH & DEVELOPMENT MILESTONES

PROJECT/PROGRAM	FY 2014/15	FY 2015/16	FY 2016/17	FY 2017/18	FY 2018/19
<b>SYSTEM GROWTH PLANNING</b> <ul style="list-style-type: none"> <li>Regional Growth Planning</li> <li>New Development Planning</li> <li>Development Capacity Tracking</li> <li>Hydraulic Modeling</li> <li>System Flow Metering</li> </ul>	Master Plan Update Completed Southeast Interceptor Study Completed	Hydraulic Model Calibration Completed			
<b>NEW DEVELOPMENT MANAGEMENT</b> <ul style="list-style-type: none"> <li>Fee Ordinance Update Project</li> <li>Land and Permit Management (LPM) Project</li> </ul>	Fee Study Completed (Raffelis) for Fee Ordinance Update	Public Input Process Completed for Fee Ordinance Update LPM Conversion Completed	Fee Ordinance Update Completed		
<b>SEWERAGE ENGINEERING</b> <ul style="list-style-type: none"> <li>Standards Development</li> <li>Inspection Services</li> <li>Engineering Services</li> </ul>	Design Manual Updated		Inspection Program Expanded to Treatment		
<b>GIS MAPS AND RECORDS</b> <ul style="list-style-type: none"> <li>Records Management</li> <li>GIS Support</li> </ul>	Launch eDMS Phase I; Prepare for eDMS Phase II				
<b>CONTINUOUS IMPROVEMENT</b>	Streamline Development Capacity Tracking	95% of Process Control and Boundary Issues Resolved	Red Cloud Resolution (on-going)		
	Annual Verifications Conducted for All Processes				
	Regular Monitoring of Metrics Established	New Process Improvement Plans Developed			
	Release and Control All Processes	Implement Land and Permit Management	Process Maps Updated		
	Evaluate Maps Relative to Each Pillar and Update Red Clouds, Metrics, Process Improvement Plans	Streamline System			