

# SUSTAINABILITY PILLAR

## VISION FOR THE FUTURE

PCRWRD's vision for being a leader in sustainability involves optimizing processes; recovering and reusing resources from treatment operations; and advancing employee participation in green workplace practices.

Over the next five years, PCRWRD will focus increased efforts on process optimization to reduce chemical and energy consumption and increase energy/resource efficiency. Improving the ability to beneficially recover and reuse treatment byproducts, such as biogas and biosolids, is another priority focus for the future.

The end product of the treatment process (high-quality reclaimed water) is now considered the region's primary, growing renewable water resource. Put to beneficial use in landscaping, aquifer augmentation and environmental enhancement, reclaimed water can help to offset this region's reliance on limited, non-renewable groundwater resources. The Department is committed to advancing Pima County's vision and adopted policies for a sustainable water future through maximizing beneficial use of its reclaimed water resources.

Another key component of the PCRWRD Sustainability Pillar vision is the department's staff. Creating a green culture among employees is a department priority. Over the next five years, PCRWRD will continue to invest in sustainability training and encourage employees to reduce, reuse, and recycle; maximize the use of environmentally friendly products; and create a healthy and pleasant workplace. Such activities advance the goals of the Pima County Board of Supervisors' Resolution on Sustainability (first adopted in May 2007, and again in June 2014). These activities adhere to the 2014 Sustainable Action Plan for Pima County Operations

## OPPORTUNITIES

### Reclaimed Water Use

Although there has been a long history of some reclaimed water being reused in Pima County, for far too long, the discharge of reclaimed water into the Santa Cruz River was considered to be a disposal method for a waste product. However, due to the sustained drought and growing population in the region, reclaimed water is no longer seen as a waste product, but instead is considered a water resource. Since the completion of the ROMP, the improved quality of the treated water produced at PCRWRD facilities has increased opportunities to beneficially reuse this reclaimed water resource. PCRWRD views maximizing reuse and recharge of recycled water produced at our facilities as a critical opportunity. Other Pima County departments including Transportation, Flood Control, Parks & Recreation and Stadium District rely on a cost-effective supply of recycled water for maintaining operations. PCRWRD supports increased use of Pima County's recycled water to replenish the aquifer, sustain environmental restoration projects and irrigate county facilities.

## OUR GOAL

*To minimize chemical and energy consumption in operations, maximize use of renewable water and energy, and maximize resource recovery to benefit the environment and the community.*





## Energy Conservation and Renewable Energy

Energy is a big part of PCRWRD's overall operating costs. Water reclamation facilities and pump stations in particular are highly energy intensive. From 2000 to 2014, most of PCRWRD's wastewater reclamation facilities have been expanded and upgraded to produce a higher quality of reclaimed water. Inevitably, the department's energy demand has increased. (In general, PCRWRD spends over \$6 million in energy costs a year.) However, through the ROMP, old and inefficient facilities and equipment have been replaced or decommissioned. As a result, overall efficiency has increased significantly.

An effective energy management program is critical. Through optimizing treatment and maintenance processes; using solar energy where appropriate; and increasing the use of biogas to offset the energy requirements and greenhouse gas emissions, the department has achieved increased energy efficiency.

## Culture Change

While most employees support efficient use of resources, increased education and positive reinforcement of "green" behaviors can boost staff's motivation to act more sustainably. As employees learn more about the department's green purchasing procedures, recycling efforts, and health and wellness programs, they become motivated to live and work more sustainably. When they receive recognition for their own efforts, that motivation increases.

# MAJOR PROJECTS AND PROGRAMS

## Energy Management/Optimization Program

The purpose of the Energy Management/Optimization Program is to maximize the use of energy resources and energy-related assets, thus reducing both energy costs and consumption. Two major projects scheduled for completion in the next five years include the Facility Energy Audit for all sub-regional facilities and solar energy projects at the Green Valley WRF, Corona de Tucson WRF, and Avra Valley WRF. Procedures for managing utility accounts and monthly energy usage reports for all facilities will also be developed.

## Strategic Plan for Effluent Utilization

A Strategic Plan for Effluent Utilization is being developed. Other water resource management activities to be implemented over the next five years include:

- Addressing the needs for sustainable flows in the Santa Cruz River;
- Offsetting groundwater use with reclaimed water at county facilities where feasible;
- Enhancing, restoring and maintaining riparian areas;
- Replenishing the aquifer and accruing long-term storage credits; and
- Coordinating implementation of the Water and Wastewater Infrastructure Supply and Planning Study Action Plan for Water Sustainability (2011-2015).

## Culture Change: The PCRWRD “Green Team”

PCRWRD has established an award-winning Green Team composed of employees representing every work area throughout the department with a focus on and a commitment to Green Purchasing, Waste Reduction, Communication of green alternatives and practices, Health and Wellness, and Sustainability Training. In the next five years, the Green Team will continue to develop sustainability training programs; foster awareness; recognize waste reduction, reuse and recycling efforts; and evaluate progress through surveys. Additionally, the team will launch new programs such as the “No Styrofoam Campaign”, “Keep Lights Off Program,” and the department’s “Bike Program”.

## BENEFITS

Long-term benefits of the department’s commitment to the Sustainability Pillar Include:

- The development and implementation of a comprehensive sustainability program can increase the uses for reclaimed water;
- The reuse of reclaimed water promotes economic development, social well-being, and environmental protection;
- The water needs of current generations can be met without compromising the ability of future generations to meet their own needs; and
- The availability of high-quality reclaimed water eases the strain on potable water supplies, especially in light of on-going drought and population increases.

## KEY PERFORMANCE INDICATORS

- Reduction of PCRWRD Unit Energy Consumption
- Increase in percentage of the Energy Produced from Renewable Energy Sources
- Increase in percentage of Recycled Print Paper Purchased
- Reduction in the number of Small Purchases (\$250 or less)
- Increase in percentage of Environmentally Friendly Products Purchased

