



## Greenbuild Off-Site Education Session

### Creating Sustainable Water Supplies in the Desert

The City of Peoria Utilities Department would like to offer the attendees of the Greenbuild International Conference & Expo an educational session to discuss the regional water resource issues facing Arizona. The overall session will be entitled “Creating Sustainable Water Supplies in the Desert”, and it consists of the following three programs:

- Water Resource Management – An Ongoing Commitment to Sustainability
- The Role of Water Conservation in a Water Resource Program.
- Planning and Constructing to Convert Peoria’s Wastewater into a Water Resource

All three programs will be presented by City of Peoria staff and will be held at the City of Peoria’s City Hall campus, located at 8401 West Monroe Street. The programs will be able to accommodate a maximum of 50 people. The City Hall campus is located 14 miles from the Phoenix Convention Center, with an estimated one-way travel time of 30 minutes. The primary contact for this educational session will be Shawn Kreuzwiesner, Utilities Engineering Manager, 623-773-7286, [Shawn.Kreuzwiesner@Peoriaaz.gov](mailto:Shawn.Kreuzwiesner@Peoriaaz.gov).

#### **Program A: Water Resource Management – An Ongoing Commitment to Sustainability**

##### **Learning Objectives:**

- Understand the importance of having a diversified water resource portfolio
- Understand Peoria’s water resource portfolio
- Understand how Peoria’s Principles of Sound Water Management work

##### **Summary:**

In November 2007 the Peoria City Council adopted the Principles of Sound Water Management which implements collaborative, innovative water policies to ensure long-term sustainability, economic vitality, and environmentally sound lifestyles in Peoria. Peoria was the *first* city in Arizona to develop and implement such an integrated set of principles governing water management.

The Principles of Sound Water Management comprises 17 policies that demonstrate leadership in the stewardship of our limited water resources while emphasizing the importance of water conservation and a redundant and replenishable water supply, maintaining compliance with state and federal water quality and water management laws, as well as guide long-term planning.

The document is organized by groups of related policies. Regulatory policies set forth how Peoria stays in compliance with Federal and State statutes and rules, how the City will insure safe drinking water and adequate wastewater treatment, and how the City will provide education and assistance to citizens to reduce water usage. Planning policies address water acquisition, water reclamation, infrastructure, and funding. A group of policies governs the City’s relationships with outside entities such as Salt River Project, Central Arizona Project, Maricopa Water District, and private water companies. Water management policies define how the City will do recharge and recovery, insure system redundancy, plan for drought conditions, and influence regional water policy.



## **Greenbuild Off-Site Education Session**

### **Creating Sustainable Water Supplies in the Desert**

#### **Program B: The Role of Water Conservation in a Water Resource Program**

##### **Learning Objectives:**

- Awareness of the importance of Xeriscape in the Sonoran Desert
- The role of a Xeriscape program in water conservation.
- Effectiveness of rebate programs on water conservation

##### **Summary:**

Nature usually knows best. When it comes to landscaping our yards, we can all emulate nature by using xeriscape techniques to create a lush, attractive, and water saving yard. The word xeriscape is a combination of the Greek word "xeros," which means dry, and landscape. Put together, xeriscape means "dry landscape." Xeriscaping does not mean letting a yard go untouched and growing weeds.

Instead, xeriscape takes advantage of naturally occurring, water frugal plants that happen to be extremely attractive. Landscapes can use large amounts of our drinking water. As valuable as drinking water is in the Valley of the Sun, it makes sense to use plants that minimize water use and water waste. Arizona's hot and dry climate causes extremely high evaporation rates. Combine that with the low average rainfall in the Phoenix area and its obvious why xeriscape is the way to go. Xeriscape is not zero-scape (rock/granite only). This type of landscaping works with nature in order to produce a beautiful and sustainable micro environment surrounding homes or businesses.

By applying the seven xeriscape principles to landscaped areas, residents will not only save water but also enjoy the beauty and diversity of native and other water-wise (drought-tolerant) plants. Along with rebates to encourage residents to apply xeriscape landscape techniques, Peoria also has other program to educate and encourage resident of how to reduce their use of the City's precious water resources.

#### **Program C: Planning and Constructing to Convert Wastewater into a Water Resource**

##### **Learning Objectives:**

- Awareness of the planning efforts involved with building a new Water Reclamation Facility
- How the Butler WRF fits into Peoria's water resource portfolio
- Operating success and impact to the community

##### **Summary:**

Since the citizens of Peoria live in an arid desert environment, ensuring the sustainability of long term water resources are critical. The availability of a stable water supply is also intimately connected to Peoria's ability to grow and develop economically. Although currently in the middle of an economic slowdown, Peoria is still expected to grow significantly over the next several decades and water availability will shape that future growth.

Peoria has demonstrated its commitment to ensuring a sustainable future by turning wastewater into a renewable water resource. The Butler Drive Water Reclamation Facility is the single largest capital project in the City's history with a total project cost of \$135 million. The City undertook this immense project to ensure the availability of long term water resources for its citizens.

The facility uses state of the art technology to treat wastewater to the highest quality (A+) standards. At build-out, 13 million gallons per day of treated effluent will be recharged back into the groundwater aquifer to provide a long term, renewable water supply. The treated effluent also replaces the use of potable water for landscape irrigation within Peoria to further extend the City's water resources.

The planning for the Butler Drive WRF took several years. During this period the City actively sought the participation of citizens to ensure they understood the need for the reliable drought –resistant water supply. The City also had to make several critical discussions during both the planning and construction phases of the project to ensure that Peoria obtained jurisdictional control over its water resources at the completion of the project.