



Reclaimed Water

Gilbert's "Other" Water Resource

The growth of the Town of Gilbert and its location in the Sonoran Desert has presented a challenge to officials planning for efficient use of water resources. The addition of reclaimed water is a valuable component to the Town's overall water portfolio.

I've heard the term 'reclaimed water'. What is this and where does it come from?

As Gilbert's population continues to grow, the demand for clean water also increases. All wastewater in the Town is captured and highly treated so that it can be safely used for irrigation and other non-potable (other than drinking) uses. This recycled or reclaimed water helps reduce demands on our groundwater use by providing an additional water source for our growing community.

What is the Town's position on using reclaimed water? Where is it used?

Since 1986, the town has been using 100 percent of its reclaimed water. Some is delivered directly to reclaimed water users; some is used to recharge, or replenish, water that is pumped from the ground. In 1990 Neely Water Reclamation facility became the first recharge site followed by [The Riparian Preserve](#) which opened in 1999. An added benefit to water recharge is the creation of desert riparian habitat that attracts a variety of wildlife. These fragile riparian areas occur naturally on less than 1 % of the land in Arizona but support more than 60% of the wildlife. Over 140 different species of birds visit the sites in Gilbert throughout the year.

How clean is Gilbert's reclaimed water? How is it treated? Are there any health concerns I should be aware of?

Reclaimed water must meet strict water quality standards as established by the Arizona Department of Environmental Quality. It undergoes state-of-the-art treatment processes, is screened, filtered and chlorinated to meet the highest water standards earning an A+ rating. No health-related problems have been traced to reclaimed water, according to State health and water quality officials.

Where is reclaimed water used?

Approved uses for reclaimed water:

- ◆ Irrigation on golf courses, parks, common areas in homeowner communities, highway medians and other landscaped areas.
- ◆ Aesthetic purposes such as fountains and decorative ponds.
- ◆ Agricultural uses for irrigation such as pasture lands and irrigation at nurseries.
- ◆ Wetlands creation, restoration and enhancement.
- ◆ Industrial uses including plant wash down, processing water and cooling water.

Reclaimed water may not be used for:

- ◆ Human or pet consumption.
- ◆ Cooking, bathing, toilet flushing or other household use.
- ◆ Filling swimming pools, hot tubs or wading pools.
- ◆ Filling of children's water toys or outdoor showers.
- ◆ Connection to any other potable water pipes, wastewater pipes, or reclaimed water pipes that would return reclaimed water back to the system.

Signs are required to identify areas that use reclaimed water. All reclaimed water systems are easily identified by the purple pipes and valve box covers seen throughout the landscape. There are restrictions on the use of reclaimed water, like watering at night when there is less chance of human contact as well as controlling run-off into the streets and preventing standing water.

How can Gilbert continue to build lake communities? Won't we run out of water?

In order for a community to use reclaimed water, it must provide a holding or storage site which may be located above or below ground. Above-ground storage reservoirs look like small lakes or ponds. The Town delivers the reclaimed water to the reservoir. It is then the responsibility of the community to pump it into their distribution system for use on landscaped areas. The level in the reservoirs fluctuates because of the watering demands on the neighboring landscape. With careful management, Gilbert will have adequate future water supplies.

Why are the water ski lakes allowed to have full body contact? Is the water different?

Several of the water ski lakes in the town are filled with recovered water. This is reclaimed water that has been treated and recharged into the upper aquifer. Shallow wells have been drilled to allow recovery of a

portion of this water while the remainder is left for aquifer replenishment. This recovered well water is classified as permissible for full body contact, but would not meet drinking water standards.

What about recharge? Is this different from reclaimed?

A portion of the reclaimed water produced by the town's wastewater system is being used to recharge the shallow water table. The town has constructed 18 recharge ponds on 175+ acres at two locations in the urban area and a third site, measuring up to 70 acres, will help to meet future demand as well. The reclaimed water is allowed to percolate several hundred feet into the aquifer where it is capable of being used again as a future water source.

How extensive is the Town's reclaimed system? Can homeowners use it?

The reclaimed water system encompasses established areas in Gilbert and is expanding into the sections where new growth is taking place. Developers of new communities and businesses are responsible for building the infrastructure needed to connect to the Town's reclaimed backbone system in order to use this water source. There are no plans to serve individual homeowners at this time.

How much reclaimed water is produced on a daily basis?

Over 7.5 million gallons of wastewater is currently treated on a daily basis. This amount will increase with our growing population and the construction of a new treatment plant located in southeast Gilbert.

Is it true that reclaimed water saves drinking water?

In 2003, 796 million gallons of reclaimed water was used in place of drinking water as a source for landscape irrigation. Because less drinking (potable) water is used on landscapes and in industry, reclaimed water has eased the demand on our groundwater and surface water resources. In the peak demand period in summer, reclaimed water saves more than 131 million gallons of drinking water each day!

Do other cities in Arizona use reclaimed water?

Yes. Chandler, Mesa, Phoenix, Scottsdale, Tempe, Peoria and Tucson are all currently using reclaimed water. Some use only a portion of their reclaimed water, others use 100 percent. More cities are recognizing the value in establishing a reclaimed water system as an alternative water source.

My neighbor tells me because our HOA uses reclaimed water, we can use as much as we want. Is this true?

Reclaimed water is a valuable water resource because it reduces demands on groundwater sources making it one of the most significant water conservation tools. Water is a finite resource and none of it should be wasted. All the fresh water that will ever be created is already on the earth's surface or stored underground in aquifers. Once water is applied to a landscape it is not recoverable like the water that goes down your home's drain. However, the wastewater from your home can be captured, treated and used again. All users should treat reclaimed water with the same respect as potable water.

If the Town is trying to save water, why are there a lake, fountain and grass around the Town buildings?

The reservoir located at the Municipal Center was constructed to hold reclaimed water delivered to this site. A fountain keeps the water aerated which prevents stagnation. The water is then pumped into a landscape distribution system to irrigate the plant material surrounding the municipal buildings.

Definitions

Aquifers are underground beds of saturated soil or rock that yield significant quantities of water.

Potable water meets drinking water standards.

Recharge refers to water entering an underground aquifer through faults, fractures or direct absorption.

Reclaimed water is water that has received at least secondary treatment and basic disinfection and is reused after flowing out of a domestic wastewater treatment facility.

Recovered water is water that is pumped out of shallow wells to recover reclaimed water that has been recharged.

Reuse means the deliberate application of reclaimed water for a beneficial purpose.

Treated effluent meets the same standards as reclaimed water.

Wastewater contains unwanted materials from homes, businesses and industries; a mixture of dissolved or suspended substances.

To learn if a community, park, school or business uses reclaimed water, visit the Gilbert water conservation website at <http://www.ci.gilbert.az.us/water>