

Status of Georgia Water Reuse

EPD has developed “Guidelines for Water Reclamation and Urban Water Reuse” (1992, updated 2002) that regulate the reuse of water for unrestricted irrigation. They are available at http://www.gaepd.org/Files_PDF/techguide/wpb/reuse.pdf

For the purposes of these guidelines,

- “Reuse” is defined as “the use of reclaimed water as a substitute for other water sources for the beneficial irrigation of areas that may be accessible to the public. This includes areas such as golf courses, residential and commercial landscaping, parks, athletic fields, roadway medians, and landscape impoundments”.
- “Reclaimed water” is defined as “wastewater that has received treatment to urban water reuse standards, meets the treatment criteria specified in these guidelines, and is utilized at a reuse area or is sent to a designated user for reuse”.

These definitions are restrictive in order to limit the application of the Guidelines. However, reuse can be more broadly defined as the use of a wastewater as a substitute for another generally higher quality water source. Reuse in this sense could include municipal wastewater, industrial wastewater, and stormwater.

Georgia has approximately 88 MGD (million gallons per day) of reuse capacity, although significantly less is reused at this time. According to the US EPA Reuse Guidelines (2004), 28 states have unrestricted access reuse programs. Florida and California have extensive programs with a combined total of over 900 MGD of water currently reused.

Uses of Reuse Water

While certain Georgia regulations restrict reuse to a more limited use, reuse can be broadly defined to include a variety of uses. Some additional uses include:

- Industrial Use
- Concrete
- Cooling Towers
- Pulp & Paper
- Agricultural Irrigation
- Landscape Irrigation
- Residential Irrigation
- Vehicle Washing
- Dust Control
- Cleaning of Roads & Work Areas
- Flushing/Testing of Sewers
- Wetlands Restoration
- Aesthetic Features (ponds, fountains, etc.)
- Groundwater Recharge

In addition to providing a source of water where other sources maybe limited, the use of reclaimed water can also limit pollutant loads to streams that would otherwise have to assimilate the remaining pollutants in the discharged water. In some regions, return to streams, even with the pollutant load, may be a preferable use of reclaimed water due to downstream needs.

Health and Safety

Reclaimed water is treated to a level where health risks are minimized. According to the EPA Reuse Guidelines, there have been no confirmed cases of the transmission of infectious diseases based on reclaimed water use where such use is in compliance with applicable regulations.

However, reclaimed water is not considered safe for drinking. Appropriate “cross-connection” controls are required to ensure that potable water is not confused with reclaimed water. In most cases, the quality of reclaimed water is such that it is difficult to differentiate between potable and reclaimed water just by looking at it. Industry-standard Pantone purple 522 identification indicates reclaimed water. Signage identifying the reclaimed water is also required.

Costs

The cost of reuse systems, like other major capital improvements, is highly variable. The Reuse TAC gathered cost information from some members. Costs are as follows:

- Savannah President’s Street ~ \$9/gal total; ~\$65/foot of distribution line
- Fowler WRF in Forsyth Co. ~ \$13.5/gal (including distribution)
- Fulton County – Cauley Creek ~\$150/foot distribution line
- Gwinnett County F.Wayne Hill ~ \$10/gal (treatment capital costs only)

Regulatory Implementation

No additional legislation is required at this time. Georgia has used reclaimed water successfully for over 10-years. Reclaimed water is regulated through DNR Rules and Guidelines. Specific compliance with the reuse permit is the requirement of the permittee and may require local ordinances, depending on the type of reuse proposed. User agreements with “designated users” of reclaimed water are required along with appropriate education programs.