

Frequently Asked Questions

- 1) **What is reclaimed water?** *Reclaimed water is domestic or municipal wastewater that has been treated to a quality suitable for a beneficial use (sometimes referred to as recycled water or reuse water).*

The same amount of water exists today on Earth as existed 3 billion years ago, and, thanks to the “water cycle” it’s the same water. The “water cycle” describes the continuous movement of water on, above, and below the surface of the earth. As water makes its way from precipitation (rain, snow) falling on the land into lakes, rivers, and oceans, it evaporates into the atmosphere, forming clouds that again produce precipitation that falls to earth and continues the cycle. Through its journey, the water sometimes travels underground within the groundwater or is used by plants, animals, and people. However, it never disappears and eventually will make its way through this cycle again. Water reuse is nothing more than taking water that has already been used and using it again for a beneficial purpose.

- 2) **What is potable reuse?** *Potable reuse refers to the planned use of reclaimed water to augment drinking water supplies.*
- 3) **What is indirect potable reuse?** *Potable reuse projects that include an environmental buffer (such as a river, lake, wetland, or groundwater aquifer) are typically referred to as “indirect” potable reuse projects because the reclaimed water is not delivered directly to the water treatment plant or drinking water distribution system.*
- 4) **What is direct potable reuse?** *In contrast to “indirect” potable reuse, “direct” potable reuse eliminates or significantly minimizes the use of an environmental buffer. Instead, engineered treatment processes are used to purify the reclaimed water so it is safe to drink. Direct potable reuse is typically defined as the introduction of reclaimed water either directly into the potable water system downstream of a water treatment plant or into the raw water supply immediately upstream of a water treatment plant (Metcalf & Eddy, 2007).*
- 5) **Why is water reuse important for Texas?** *The population in Texas is expected to increase 82 percent between 2010 and 2060, ongoing droughts have stressed water supplies in many regions of the state, and increasing challenges are associated with acquiring new surface and groundwater supplies. The [2012 State Water Plan](#) has identified water reuse as a significant water management strategy to support future water needs in the state. Statewide, water reuse comprises over 10 percent of the water management strategies for the year 2060.*
- 6) **Who regulates direct potable reuse in Texas?** *While Texas does not currently have regulations specifically addressing direct potable reuse, the Safe Drinking Water Act protects drinking water quality, ensuring that all water supplies, including those augmented with reclaimed water, are safe for consumption. In this regard, regulations for reuse projects are no less stringent than any other water supply. The Texas Commission on Environmental Quality adopts and enforces drinking water rules for Texas that are at least as stringent as the requirements in the Safe Drinking Water Act.*
- 7) **Has reclaimed water been used to augment potable water supplies in Texas?** *Unplanned or “defacto” indirect potable reuse has been occurring for many years throughout the state. Any time treated wastewater is discharged to a stream or lake and is subsequently diverted at a point downstream for municipal water supply, indirect potable reuse is occurring.*

In recent years, as treated wastewater quality has improved and the value of reclaimed water as a supplemental water supply source has become more widely recognized, a number of planned indirect potable reuse projects to augment surface water have been planned or implemented. Water providers in the Dallas/Fort Worth area and El Paso have taken the lead in this area. Click on the

following links for information on three existing indirect potable reuse projects in Texas: [El Paso Water Utilities](#), [North Texas Municipal Water District](#), and [Tarrant Regional Water District](#).

- 8) **Why is the TWDB studying direct potable reuse?** *Interest in the direct potable use of reclaimed water continues to grow in Texas, particularly under the recent drought conditions. In response to this interest, the TWDB has allocated a portion of its priority research funding to support the development of a resource document that will provide scientific and technical information related to the implementation of direct potable reuse projects in Texas.*
- 9) **What are the goals of the TWDB project?** *The primary goal of this study is to prepare a resource document that will identify safe and practical approaches applicable to Texas and provide advice on how utilities can plan and implement direct potable reuse projects.*
- 10) **If my water provider is involved in this project, does it mean that they are planning to develop a direct potable reuse project?** *No. Some of the water providers that are involved in this project may be interested in direct potable reuse, but all of the water providers are committed to protecting public health and support the development of a resource document that will provide scientific and technical information related to the implementation of direct potable reuse projects in Texas.*
- 11) **When will the TWDB project be completed?** *The project is scheduled to be completed in Spring of 2015.*
- 12) **Will the TWDB project be developing regulations for direct potable reuse?** *This project **does not** develop regulations or guidelines for direct potable reuse in Texas. This project develops a resource document that aims to assist water providers as they plan and consider the viability of a direct potable reuse project for their systems. For situations where direct potable reuse may be a viable water management strategy, the implementation approach will vary from one project to another and will require a great deal of planning and study.*
- 13) **Are there any direct potable reuse projects in operation today?** *Other than one case in the 1950's in Chanute, Kansas during an emergency drought (Metzler et al., 1958), this practice has not been adopted by or approved for any water system in the United States until very recently. The Colorado River Municipal Water District recently implemented a project to capture treated municipal effluent from the City of Big Spring, and provide additional advanced treatment prior to blending into their raw surface water delivery system. The final regulatory approval of the Colorado River Municipal Water District's Big Spring Raw Water Production Facility occurred in April 2013. Other water providers (not associated with this research study) are currently planning for the potential implementation of direct potable reuse projects in the state. The only other existing project in the world, which started in 1968, is located in Windhoek, Namibia. The impetus for the Windhoek project was the region's limited water availability due to climate.*

References:

Metcalf & Eddy, 2007, *Water reuse issues, technologies, and applications*. New York, NY: McGraw Hill.

Metzler, D.F., Culp, R.L., Stoltenberg, H.A., Woodward, R.L., Walton, G., Chang, S.L., Clarke, N.A., Palmer, C.M., and Middleton, F.M., 1958, —Emergency use of recycled water from potable supply at Chanute, Kansas, *Journal American Water Works Association* 50:1021-60.