



**LEGAL ISSUES REGARDING THE
REUSE OF WASTEWATER**

LOWER RIO GRANDE VALLEY
**16TH ANNUAL WATER QUALITY MANAGEMENT &
PLANNING CONFERENCE**

**APRIL 9-12, 2014
SOUTH PADRE ISLAND, TEXAS**

**Emily Rogers
Bickerstaff Heath Delgado Acosta LLP
3711 South MoPac Expressway
Building One, Suite 300
Austin, Texas 78746**

REUSE - DEFINITIONS

- Direct reuse is using treated wastewater directly from the wastewater treatment plant for some end use, like irrigating fields, or for a water supply for drinking water source.
- Indirect reuse is using treated wastewater that has been discharged into a receiving stream and diverted downstream for use.



DIRECT REUSE – NON-POTABLE USES

TCEQ's Chapter 210 Rules

- Chapter 210 allows wastewater producers and providers to obtain authorizations from the TCEQ to provide treated wastewater to users for non-potable uses.
- The treated wastewater must meet certain water quality requirements in order to be used as reclaimed water.



DIRECT REUSE – NON-POTABLE USES

- Type 1 Reclaimed Water Use
 - Use of reclaimed water where contact between humans and the reclaimed water is likely.
 - Typical Uses:
 - Residential Irrigation
 - Urban Parks, Golf Courses, Athletic Fields
 - Fire Protection
 - Edible Food Crop Irrigation
 - Impoundments with wading and fishing
 - Toilets
 - Quality:
 - BOD₅ or CBOD₅ – 5 mg/l
 - Fecal / *E. Coli* – 20 CFU/100 ml for 30 day geometric mean; 75 CFU/100 ml for max grab sample
 - Turbidity – 3 NTU
 - *Enterococci* – 4 CFU/100 ml 30 day geometric mean; 9 CFU/100 ml for max grab sample



DIRECT REUSE – NON-POTABLE USES

○ Type 2 Reclaimed Water

- Use of reclaimed water where contact between humans and the reclaimed water is unlikely.
- Typical Uses:
 - Irrigation of sod farms, silviculture, where human access is limited
 - Food Crop Irrigation where water won't come into contact with edible portion
 - Irrigation of animal feed (other than for milking animals)
 - Soil compaction
 - Cooling towers
- Quality:
 - BOD₅ – 20 mg/l; CBOD₅ – 15 mg/l
 - Fecal / *E. Coli* – 200 CFU/100 ml for 30 day geometric mean; 800 CFU/100 ml for max grab sample
 - *Enterococci* – 35 CFU/100 ml 30 day geometric mean; 89 CFU/100 ml for max grab sample



DIRECT REUSE – NON-POTABLE USES

- Notification of TCEQ
- Responsibilities of a Producer, Provider, and a User
 - Reclaimed water use agreement and ordinances
 - Liability of a Producer, Provider, and a User
 - Design requirements



DIRECT REUSE – POTABLE REUSE

TCEQ Drinking Water Standards

- TCEQ's 30 TAC Chp. 210 rules do not contemplate direct potable reuse. To date, TCEQ does not have specific rules regarding direct potable reuse.
- Direct potable reuse projects are considered by the TCEQ on a case-by-case basis under TCEQ 30 TAC Chp. 290, subchp. D and F rules.
- TCEQ must approve of the drinking water source and the Safe Drinking Water Act promotes the use of the best quality water above other water sources. § 290.41.
- Reclaimed water will require a complete physical and chemical analysis, and may require additional treatment before the water may be used as a drinking water source.



DIRECT REUSE – POTABLE REUSE

Other Considerations:

- Industrial wastewater discharge permit may be required. TEX. WATER CODE § 26.121.
- Pretreatment requirements
- Public Perception
- Environmental Concerns

Project Examples in Texas:

- Colorado River Municipal Water District Reuse Project for Big Spring, TX
 - Direct raw water blending operation – online April 2013
- City of Wichita Falls Emergency Reuse Project
 - Pipes treated effluent to the treatment plant, treats it, and blends it with raw water, and treats it again – in construction
- City of Brownwood, TX Direct Reuse Project
 - Demonstration Project



INDIRECT REUSE

- Indirect reuse of wastewater is available for any type of use – irrigation, municipal, industrial, etc.
- Like with direct potable reuse, the TCEQ may require additional analysis and treatment for water in a receiving stream whose primary sources is wastewater.
- To divert water from a state water course, even wastewater discharged from the water provider's wastewater treatment plant, a bed and banks authorization is required and a state water right might be required.
 - Wastewater originating from a privately-owned groundwater source or from a source outside the basin, the water supplier will need a bed and banks permit from the TCEQ. TEX. WATER CODE § 11.042. These permits are issued by the Water Availability Team at the TCEQ.
 - Special conditions might be included to protect existing water rights that were granted based on the use and availability of return flows.
 - Special conditions may be included to protect instream uses and freshwater inflows to bays and estuaries.



INDIRECT REUSE

- Wastewater originating from surface water sources will likely require both a surface water right and a bed and banks permit from the TCEQ.
- The water quality of the discharge water may not degrade the water quality of the stream.

Other Considerations:

- Reliance on other's wastewater. TCEQ will consider the water to be interruptible because it is being directly reused by the original producer.
- Special considerations for indirect reuse of wastewater in the Rio Grande Valley.
 - Water availability
 - Treaty with Mexico





**LEGAL ISSUES REGARDING THE
REUSE OF WASTEWATER**

LOWER RIO GRANDE VALLEY
**16TH ANNUAL WATER QUALITY MANAGEMENT &
PLANNING CONFERENCE**

**APRIL 9-12, 2014
SOUTH PADRE ISLAND, TEXAS**

**Emily Rogers
Bickerstaff Heath Delgado Acosta LLP
3711 South MoPac Expressway
Building One, Suite 300
Austin, Texas 78746**