

# Mike Hightower

Comments start with the definitions and finish with the Produced Water Reuse Section.

20.6.8.7. Definitions. Comments and Suggested changes in definitions -

A. (2) - "Agricultural application" - means the application of domestic or industrial reuse water for cultivating..... BUT "application" is defined in A(4) and "reuse" is defined in T.(4) so it might be more consistent to say

A. (2) - "Agricultural application" - means an application for cultivating.....

A.(4) "Application" means a final disposition of a treated wastewater as it pertains to water reuse. Different uses may have different effluent criteria depending on.....

Unfortunately, 'effluent criteria' is used twice in this definition and once in F.(2) "Fit for Purpose", but is never defined. It probably should be defined.

C. (1-4) - "Class 1a, 1b, 2, and 3 reuse". Reuse is defined broadly in R. (4) as ... a treated wastewater from domestic, industrial, or produced water sources that has ....  
Currently, C.1-4 say only domestic wastewater reuse. Shouldn't the definition apply to all reuse categories, or should it be noted that the definition only applies to domestic waste water reuse. While this Class distinction is currently used for treated domestic wastewater, shouldn't it be expanded to all waste waters per this regulation?

C. (6) - "Commercial application "or industrial application" means the application of domestic or industrial reuse water..... Since 'applications' is defined as treated wastewater wouldn't it more consistent to say -

C.(6) .... means an application in connection with any activity that provides or offers to provide, goods or services.....

D.(5) -"Discharge" - means.....or dumping of a water contaminant....

Unfortunately, contaminant is not defined, but wastewater is. Would it be better to say

D.(5) -"Discharge" - means ..... or dumping of a wastewater..... with reasonable probability that the wastewater may reach ground or surface water.

As noted above, I believe "Effluent Criteria" should be defined. It is used in several places and not defined. My suggestion.

E. (1) - "Effluent criteria" - means the numerical constituent and overall water quality metrics required of an effluent before disposal, transference, or water reuse.

L. (1) - "Land application" - means the application of domestic and industrial reuse water to the ground surface.....

As noted before, application is defined and to be consistent, this should read

L.(1) - Land application" - means application to the ground surface.....

L.(2) - "Livestock application"- means the application of domestic reuse water for the consumption.....

As noted before, application is defined and to be consistent, this should read

L.(2) -"Livestock application" - means application for the consumption of .....

P.(6) - "Pre-treatment" means the reduction,.... of pollutants as in....

Pollutants is not currently defined. But water pollutant is defined. So I would use water pollutant in place of pollutant.

R.(2) "Recycled produced water" means wastewater that is reconditioned...

I think it should read

R.(2) "Recycled produced water" means produced water that is.....

R.(3) "Restoration application or ecological application" means the use of domestic water reuse for the implementation of ecological.....

As noted previously, application is defined and this should be changed to

R.(3) Restoration application or ecological application" means the application for the implementation of ecological.....

T. (1-3) Need to be renumbered.

#### 20.6.8.400. PRODUCED WATER REUSE: Comments.

##### A. Unauthorized applications.

Stating that discharges of untreated produced water to a surface water body is prohibited is logical. Most raw produced water in NM would degrade the surface water body near the discharge point and likely could be toxic.

Prohibiting the discharge of treated produced water to a surface water body and denying surface water discharge as a fit-for-purpose reuse I believe is inappropriate. This position is not substantiated by data from other states who have safely discharged treated produced water to surface water for over 10 years. Current treated produced water quality data in NM suggest treated produced water can meet current NM surface water discharge requirements for both humans and aquatic life. Additionally, both risk and toxicology studies using standard whole effluent toxicity testing show that treated produced water can be safe in surface water discharge.

The current position ignores current data on surface water quality in NM that is often poorer than treated produced water quality, existing waste water discharges that are also poorer than treated produced water quality, and the relative aquatic toxicity of existing waste water discharge compared to treated produced water quality.

It also does not consider the different quality of raw produced water in NM and the relative ease of treatment of produced water in both the Raton and San Juan Basins that could potentially be used to supplement challenges in surface water availability in both basins.

I suggest that wording in (1) for surface water discharges be made similar to the current wording in sections (2) and (3) for discharges to ground water. At least that way both current and emerging data can be presented to the WQCC to enable them to make a decision on whether surface water

discharge of treated produced water is an appropriate fit for purpose reuse application and what the required treatment criteria are.