# The One Percent Obfuscation 

by David J. Cyr

The lubricious voices advocating for shale gas drilling often assure inattentive listeners that all the chemicals used in a fracking procedure combined only amount to a very small quantity... only about "one percent" of the fluids used.

But $1 \%$ of what volume?
The Susquehanna River Basin Commission has stated that, "The fracturing process uses an average of 2 to 9 million gallons of fresh water per well."

One percent of 2 to 9 million gallons would be 20,000 to 90,000 gallons of toxic chemicals... per well.

To ever possibly tear that advertised 14 years worth of whole nation gas supply from the Marcellus Shale there would need be tens of thousands of wells drilled in each of the states under which that deposit lays (New York, Pennsylvania, Ohio and West Virginia), with the total combined drilling likely resulting in hundreds of thousands of high volume high pressure hydrofracture operations.

That tiny, just 1 percent additive of chemical cocktail would amount to from 200 to 900 million gallons of toxic chemicals added to the fairly large lake volume sized quantity of water abused for every 10,000 wells drilled.

That 200 to 900 million gallons of toxic chemicals added to water per 10,000 wells would transform the clean water taken by the drillers into approximately 20 to 90 billion (with a "B") gallons of hazardous waste per 10,000 wells drilled.

100,000 wells drilled would produce 200 to 900 billion gallons of hazardous waste... enough to fill to the brim between 3,222 and 14,497 Exxon Valdez class tankers with hazardous waste.

A tiny portion of a truly enormous volume is not an inconsiderable quantity... especially when it is highly toxic, water soluble, and volatile.

