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INDEPENDENT REGULATORY  
REVIEW COMMISSION

Here are my comments.

1 No frack water treated or untreated should go into our streams.

2 The Commonwealth and its citizens have a right to know and the drilling companies have an obligation to tell us what they are putting into the ground when they perform hydro fract activities regardless of whether the chemicals are corporate secrets.

3 Marcellus "frackwater" must be monitored via a chain of responsibility (cradle to grave) of signed paperwork documenting the origin, use, flowback, transportation, treatment and disposal of all frackwater fluids. This monitoring must include all fluids (aqueous and air) and solids origination in the frackwater.

- **The standard for Total Dissolved Solids (TDS) should be stated as a daily maximum, not a monthly average.** In addition, there should be a minimum requirement that all discharges not cause background in-stream concentrations of TDS to rise above 133% of background levels (the Delaware River Basin Commission standard).
  - **DEP's proposed definition of large TDS sources is good.** Do not change it. That proposed regulation is a good means to prevent impairment and regulation of TDS prior to having to utilize a TMDL process. The only suggestion would be to clearly state the 2,000 mg/L concentration threshold as a daily maximum. That daily maximum should not be allowed to be circumvented by dilution.
  - **All large TDS sources should be covered by the standard.** New sources and new discharges at existing sources should be covered immediately. Existing sources of large TDS discharges should be eventually covered through the NPDES permit renewal process. How TDS will be measured and reported by dischargers should also be clarified.
  - **DEP has not proposed standards** for a number of contaminants that are frequently found in Marcellus wastewater. DEP should add discharge standards for bromides, arsenic, benzene, radium, magnesium and Volatile Organic Compounds. Many of these contaminants are toxic to humans and aquatic life and are very difficult for drinking water systems to remove.
  - **Due to the highly varying toxicity** of both TDS discharges and especially Marcellus wastewater, **Whole Effluent Toxicity (WET) testing** should be required utilizing both an acute and chronic toxicity standard.
  - **We need these regulations to be in place as soon as possible** to protect aquatic life and drinking water sources. DEP should stop issuing more drilling permits, which increase existing wastewater loads in Pennsylvania streams, until Chapter 95 revisions are in place. DEP should also stop allowing existing or proposed wastewater plants to discharge TDS at levels above the standards established in these Chapter 95 revisions. The effective date should not be extended to accommodate the time frame necessary for a new facility to acquire all necessary permits (such as those for air quality).
  - **Wastewater Reuse:** DEP needs to ensure that all aspects of the generation of Marcellus wastewater are regulated. Currently there is little oversight over the reuse of Marcellus wastewater and whether in fact this is a waste disposal method as opposed to closed loop water recycling.
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