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**From:** Stan Kotala [ccwiba@keyconn.net]  
**Sent:** Wednesday, January 06, 2010 7:00 PM  
**To:** EP, RegComments  
**Subject:** 25 PA Code Ch. 95 Wastewater Treatment Requirements

JAN 13 11:11 AM  
INDEPENDENT REGULATORY  
BOARD

## **Juniata Valley Audubon**

### **Comments on Proposed Chapter 95 Regulations**

**Juniata Valley Audubon, a regional conservation organization with 450 members in southcentral Pennsylvania, supports an energy policy that moves us towards the clean energy future. However, we do not support natural gas drilling if it causes harm to the environment.**

At present, drilling for gas in the Marcellus Shale is causing harm to the waters of this Commonwealth because the wastewater produced is discharged untreated into our streams.

The Department of Environmental Protection (DEP) has finally recognized the discharge of untreated wastewater from Marcellus gas wells as an environmental problem. Discharge limits are now being proposed under 25 Pa. Code Chapter 95. The DEP has proposed new regulations for industrial wastewater that is high in total dissolved solids (TDS).

Natural gas drilling operations in the Marcellus Shale uses substances high in TDS for hydrofracturing (fracking) wells. The wastewater that comes back out of wells (flowback fluid) after fracking is also high in TDS. The high levels of TDS in Marcellus wastewater is mostly in the form of salts and can be two to four times saltier than seawater.

There are two sources of wastewater from Marcellus gas wells – flowback water from the fracking process and produced water. Flowback water can contain many contaminants. Frac and flowback fluids can enter streams and rivers intentionally (legally by permit) or accidentally. The result can be a danger to health for all organisms - including humans. It can also make the water unfit for industrial use. According to the United States Geological Survey fact sheet on Marcellus Shale, for gas to flow out of the shale, nearly all of the water injected into the well during the hydrofrac treatment must be recovered and disposed of. In addition to the problem of dealing with large bulk volumes of liquid waste, contaminants in the water may complicate wastewater treatment. Whereas the percentage of chemical additives in a typical hydrofrac fluid is commonly less than 0.5 percent by volume, the quantity of fluid used in these hydrofracs is so large that the additives in a three million gallon hydrofrac job, for example, would result in about 15,000 gallons of chemicals in the waste.

Along with the introduced chemicals, hydrofrac water is in close contact with the rock during stimulation treatment, and when recovered may contain a variety of formation

will be the first in a series of measures taken to ensure responsible gas drilling that does not degrade the environment.

Sincerely,

Stan Kotala, M.D.

Conservation Chair

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