

Municipal Authorities' Perspective

Marcellus Shale Natural Gas Wastewater Treatment

PA Senate Environmental Resources and Energy
Committee Hearing

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Introduction

PMAA represents the interests of over 700 municipal authorities across Pennsylvania that provide drinking water, wastewater, solid waste management and other services to over 6 million people.

Many of our member water or wastewater authorities are located in areas where Marcellus Shale gas well development and related activities are, or soon, will be occurring.

Over the past two years, a variety of concerns have come to our attention which we would like to share with the Committee today.



Water Authorities' General Interests and Concerns with Marcellus Shale Activities

Interests

- There is potential added revenue from sale of source water or treated water for gas well fracing

Concerns

- Possible competing interests in surface and ground water supply sources
- Potential for contamination of surface and ground water sources (short-term and longer-term)

NOTE: These concerns should be addressed by ongoing regulatory programs (PA DEP, SRBC, DRBC)

- BUT do these agencies have sufficient resources to do the job based on projected increases in gas well activity ?





Wastewater Authorities' General Interests and Concerns with Marcellus Shale Activities

Interests

- There are potential revenues from either:
 - Accepting and treating gas well wastewater
 - Sale of treated effluent for gas well fracing

Concerns

- Consequences of accepting gas well wastewater
 - Negative impacts on the biological and physical sewage treatment process efficiency
 - Potential contamination of biosolids (i.e. sewage sludge) and impact on beneficial re-use or disposal of this material
 - Some pollutants (TDS, metals, organics) may simply pass-through sewage treatment facilities into streams
 - Possible significant additional nitrogen and phosphorus loadings that must be reduced for Chesapeake Bay protection

Wastewater Authorities' General Interests and Concerns (Continued)

- Some municipal facilities had started to take gas-well wastewater but were told by DEP to stop pending further review
- A few are currently taking, or plan to take, gas-well wastewater (with DEP permission) as a very small % of influent volume (and after some degree of pretreatment for solids, metals and organics reduction)
- Some are still considering benefits and liabilities of taking gas-well wastewater with particular regard to:
 - Protecting integrity and performance level of the wastewater treatment process
 - Ability to comply with current and future effluent limits



PMAA's Additional Concerns

- PA DEP recently proposed a regulation change for control of Total Dissolved Solids (TDS) in various wastewater discharges
 - TDS is a common component of all sewage discharges
 - The proposed TDS effluent limits are very restrictive and potentially very costly to achieve
 - The regulation has potential to impact many existing sewage treatment plants, and will definitely impact those treating Marcellus Shale wastewater
 - Care should be taken to avoid imposing TDS effluent limits unless there is a definite harmful environmental impact
 - DEP has been willing to listen to concerns from various stakeholders, and discussions have been both informative and productive



PMAA's Overall Concern

- Can various program areas within DEP adequately coordinate their efforts to effectively regulate Marcellus Shale well development and production activities?
- Can DEP, likewise, coordinate these environmental protection efforts with other local, state and federal agencies ?
 - County Conservation Districts
 - DCNR
 - EPA
 - DRBC
 - SRBC



Should Operators of Treatment or Pretreatment Facilities for Marcellus Shale Wastewater be Certified (by DEP) ?

Pennsylvania's water and wastewater (sewage) treatment operator certification program has existed for several decades and has provided a significant level of public health and environmental protection.

The governing legislation for this program does not require certification of industrial wastewater treatment system operators. This is presumably due to the wide variation in types of wastewater and associated treatment needs, and difficulty in developing standardized certification standards.



Should Operators of Treatment or Pretreatment Facilities for Marcellus Shale Wastewater be Certified (by DEP) ?

(continued)

MS wastewater (like mining wastewater) has fairly common (but varying) characteristics. It may be advisable for DEP to examine the complexity of the treatment processes needed to comply with the pending regulations and to decide if some sort of operator oversight would be warranted.

However, since DEP has recently suspended parts of the Operator Certification Program, this may be difficult.

