

EXECUTIVE SUMMARY
25 PA CODE CHAPTER 95
WASTEWATER TREATMENT REQUIREMENTS

This final rulemaking amends Chapter 95 (relating to wastewater treatment requirements). The final form rulemaking includes the elimination of a redundant provision, and the establishment of new treatment requirements for new and expanding mass loadings of Total Dissolved Solids (TDS).

The proposed rulemaking was published in the *Pennsylvania Bulletin* on November 7, 2009. See 39 Pa.B. 6467 (November 7, 2009). Public comments were accepted until February 12, 2010. In addition, four (4) public hearings were held: December 14, 2009 in Cranberry Township, Butler County; December 15, 2009 in Ebensburg, Cambria County; December 16 in Williamsport, Lycoming County; and December 18, 2009 in Allentown, Lehigh County.

Prior to recommending that the proposed regulation be provided to the Environmental Quality Board, the Water Resources Advisory Committee (WRAC) suggested that further examination be made during the comment period to address two critical areas. WRAC suggested the Department examine the costs of the proposed regulation on the sectors that would be impacted, and the technologies available to treat discharges high in TDS. WRAC created the TDS Stakeholders Subcommittee to work in cooperation with the Department on these issues.

The TDS Stakeholders Subcommittee was tasked with examining the issue of cost and technology, and was to make recommendations to WRAC for submission to the Department in the form of formal comments on the proposed regulation. The subcommittee was made up of members of the various industries impacted as well as members of interested environmental groups. The subcommittee met monthly from August 2009 thru March 2010. During that timeframe various sector groups presented their findings on the impact of the proposed regulations to their industry or sector. The Department worked closely with the TDS Subcommittee and has taken into account the information presented and its recommendations in developing the final rulemaking.

This final form rulemaking protects the Commonwealth's water resources from new and expanded sources of TDS. Most importantly, the rulemaking guarantees that waters of the Commonwealth will not exceed a threshold of 500 mg/l. In doing so, the rulemaking protects drinking water intakes on streams throughout the Commonwealth and aquatic life resources, as well as maintains continued economic viability of the current water users.

This final form rulemaking differs from the proposed rulemaking in several important respects. The differences are direct reflections of concerns raised by industries that would be impacted by this rulemaking. The rulemaking is responsive to these concerns, resulting in an improved rule. The changes to the final form rulemaking are protective of our water resources and are appropriately applied by industrial sector, based on the potential impact of the specific sectors to our receiving streams. While many existing industries throughout the Commonwealth are of concern, the lower concentration and total loading of most of those industries does not necessitate treatment below a 2,000 mg/l threshold. A higher standard of 500 mg/l is being applied specifically to the natural gas sector, based on several factors.

The most significant rationale for this industry standard is the fact that wastewaters resulting from the extraction of natural gas are of much higher concentration and represent higher overall loadings when compared to other industries. In other words, the effluent standard does not dictate the treatment technology. Instead, selection of the treatment technology is driven by the raw extraordinarily high wastewater TDS concentration. Second, treatment technologies are currently available and are being employed in Pennsylvania and other states for the treatment of these wastewaters, in contrast to other industries. Regulatory certainty provided with this final rule will drive investment in and development of new technologies. Third, few other states allow the discharge of these treated wastewaters to their surface waters at all, dispelling any argument that Pennsylvania is creating an economic disadvantage for this industry. Fourth, the expansion of the industry into the Marcellus Shale is new to the Commonwealth, and without TDS controls it could impact existing industries, placing them at an economic disadvantage. The potential for growth for Marcellus gas drilling within this sector is enormous and should that growth be realized, the potential impacts are just as enormous. Finally, this industry has shown an ability to respond appropriately in addressing potential impacts to our natural resources. Options currently exist for other disposal pathways, including non-discharge options, and the creativity of the industry only assures that additional disposal and treatment options will flourish and allow for the continued expansion.

While the intent of both the proposed and final rules is to address new, larger sources of TDS, the proposed rulemaking focused upon controlling new sources of “high-TDS” wastewater through defining these sources in terms of those that were to be regulated (exempting by default those that were not). In order to provide greater clarity to the scope of the regulation, the final rulemaking takes the approach of specifically exempting certain classes of TDS discharges from the application of this rule. This approach is designed to clearly exclude from the scope of this regulation all existing loadings of TDS authorized by the Department prior to the effective date of this regulation, as well as new and expanding TDS sources, which the Department has determined are insignificant from a loading perspective.

In addition, based on Stakeholder comments received during a comprehensive public participation process, the final rulemaking adopts a combination of recommended approaches for addressing these larger loadings of TDS. This combination of approaches includes an industrial sector-based regulation along with a watershed-based analysis. The sector-based piece focuses on the Oil and Gas Industry, promoting the reuse of natural gas well flow back and the treatment of wastewater. Treatment for wastewater that is not recycled or disposed in an approved underground injection well must be performed at a Centralized Wastewater Treatment facility (CWT) to the standards contained in the proposed regulation. This approach sets treatment requirements for natural gas well wastewaters based on available, proven treatment technologies for this industry and takes cost into consideration. These requirements will assure that any threat of water pollution from this rapidly growing industry is prevented in accordance with the mandate of the Clean Streams Law.

The Department has reviewed all of the comments received and has determined that a sector-by-sector approach to controlling TDS is appropriate. High-TDS wastewaters from different industries present different treatment challenges. Based on the need for regulation of a rapidly expanding industry which generates wastewaters with extraordinarily high levels of TDS and chlorides, the readily available proven treatment technologies for this wastewater, the low costs associated with

treatment, and the overwhelming public comment in favor of a standard for this industry, the proposed regulation has refined its original focus on treatment for oil and gas wastewaters. The final regulation now contains more specific treatment requirements for wastewater generated from all natural gas drilling activities.

The final regulation continues to prohibit any discharge of wastewater from natural gas well activities into waters of the Commonwealth except as authorized by § 95.10(b), and requires that such wastewater be treated at Centralized Waste Treatment facilities (CWTs). The final rule retains the CWT discharge limits for TDS, sulfates, chlorides, barium and strontium contained in the proposed rule. In response to comments, the final regulation adds a provision regarding reuse of flowback or production fluids from natural gas wells, and specifies that deep well injection of wastewater from natural gas wells must comply with 25 Pa. Code § 78.18.

The Department agrees with the comments that were received by various industries pointing out that the proposed rule is a one-size-fits-all approach that may not be appropriate. The final rulemaking addresses this issue by establishing an effluent standard for sectors (other than natural gas well operations) at 2,000 mg/l, and allows a variance from this standard under certain conditions specific to the watershed in which the discharge is located. This approach is consistent with the federal regulatory approach that separates technology-based, end-of-pipe requirements by industry sectors. This approach further accounts for economic impacts by distinguishing between new and existing sources of pollution, recognizing that new sources can plan their operations factoring in the regulatory requirements for wastewater treatment.

In summary, the final rulemaking establishes a watershed based approach that allows for use of assimilative capacity where available. Further, it provides watershed monitoring of the TDS loadings in watersheds statewide, and only imposes effluent limits on dischargers when the loading within the water body is nearing the limit of assimilative capacity. The final rulemaking establishes sector-based effluent standards for the natural gas industry, and requires recycle and reuse of fluids captured in the initial stages of well development. Wastewater that cannot be reused must be transported to treatment facilities that provide treatment to appropriate standards.

This final rulemaking was presented to the WRAC on April 14, 2010. During this discussion, WRAC members sought further clarification on the watershed approach, the impact on conventional gas drillers and the mandatory recycling provision within the proposed regulation. Clarification was provided by the Department, summarizing the intent of the watershed based approach. This included an explanation of what was deemed an existing discharge and further clarification that only the additional load above baseline would be subject to the rule should the total loading be more than the 5,000 pounds in mass loading the Department has determined to be de minimis.

Discussion on the impacts to the oil and gas industry, particularly the conventional well drillers was also significant. The Department clarified its intent that existing centralized wastewater treatment facilities, in particular those that treat conventional drilling wastewater, are considered as existing facilities and as such, can continue to accept oil and gas wastewater at levels currently approved. Finally, discussion focused on the provision within the regulation that would require the recycling or reuse of oil and gas wastewater that contained concentrations of less than 30,000 mg/l TDS. WRAC members noted that this will negatively impact both conventional and Marcellus drillers and should

be revised or removed from the regulation. Specifically, the implementation date of the regulation and the subsequent impact that would have on the industry should the recycling provision remain was noted.

The Department agreed to continue working to address the concerns of WRAC members and the stakeholders they represent, including further examination of the implementation date. With the expected continued efforts of the department noted, WRAC concurred unanimously to move the revised regulation forward to the EQB. The motion that carried was:

“WRAC appreciates all of the Department's efforts to respond to our comments and improve the regulation. WRAC believes that the current draft of the regulation is substantially improved over the draft we reviewed in July of 2009, and we understand that additional improvements will be made based on our comments today. Although some of the individual WRAC members continue to have significant concerns about the regulation and whether it should proceed without an advance notice of final rulemaking, in light of the progress and efforts made to date and in light of the department's desire to proceed with the regulation, the consensus of the Committee is that the regulation should proceed for final consideration by the EQB.”