Ground Water Monitoring and TMDL Development in support of Source Water Protection for the Octoraro Creek in Pennsylvania

Joe Lee & Arianne Proctor
Pennsylvania Department of Environmental Protection

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207 Sackett Building

ABSTRACT

The Octoraro Creek is a tributary to the Susquehanna River and the Chesapeake Bay. It flows from Pennsylvania to Maryland and its eastern watershed divide is the divide between the Delaware and Susquehanna Rivers. The major land cover for the watershed is agriculture. The Octoraro Creek serves as the water source for two community water systems. Over time, these water sources have been used less and less due to increasing periods of nitrate concentration in the creek in excess of 10 mg/L. The community water systems allege that nitrate concentrations in ground water base flow is the major contributor to periods of high nitrate concentrations in the streams. Use of alternative sources for the water suppliers dramatically increases production costs.

BIOGRAPHICAL SKETCH

Joe Lee is a hydrogeologist and Chief of the Source Protection Section for the Division of Watershed Protection in the Department of Environmental Protection for the Commonwealth of Pennsylvania. He received his BS degree in geology and has completed course work for a master of Environmental Pollution Control from the Pennsylvania State University. He is a licensed professional geologist in the Commonwealth of Pennsylvania. His present area of work is in the development and oversight of the Source Water Assessment and Protection Program, all ground water programs for which the Commonwealth has primacy under the Safe Drinking Water Act including the Wellhead Protection Program and the Ground Water Protection Program. In addition, he developed and supervises the geographic information system (GIS) for the Safe Drinking Water Program. Mr. Lee presently serves on the Board of Directors of the Ground Water Protection Council.