Natural Gas Well Activity in the Susquehanna Basin
Geographic Location

- Appalachian Basin Province
  - NY to PA, OH, MD, WV and VA
  - Trending northeast, spans a distance of approximately 600 linear miles, and 54,000 square miles
  - 72 percent of the Susquehanna River Basin is underlain by the Marcellus Shale
(2) The Commission may deny an application, limit or condition an approval to ensure that the withdrawal will not cause significant adverse impacts to the water resources of the basin. The Commission may consider, without imitation, the following in its consideration of adverse impacts: Lowering of groundwater or stream flow levels; rendering competing supplies unreliable; affecting other water uses; causing water quality degradation that may be injurious to any existing or potential water use; affecting fish, wildlife or other living resources or their habitat; causing permanent loss of aquifer storage capacity; or affecting low flow of perennial or intermittent streams.
Affecting fish, wildlife or other living resources or their habitat
Affecting low flow of perennial or intermittent streams

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<th></th>
<th>ADF</th>
<th>August Mean Flow</th>
<th>Q7-10</th>
<th>10% Q7-10</th>
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APPROVAL BY RULE (ABR) FOR NATURAL GAS PAD LOCATIONS
under 18CFR§806.22(f) in the Susquehanna River Basin,
September 7, 2009

Pending Application (65)
Approved Gas Pad (178)
Maximum Approved Daily Consumptive Use

Maximum Approved Daily Consumptive Use (in mgd)

- Water Supply
- Power Generation
- Recreation
- Gas Drilling
- Manufacturing
- Other
- Mining
- Education

Current Estimate
Proposed Deployment of a Remote Water Quality Monitoring Network

in the Susquehanna River Basin

August 17, 2009

Watersheds of interest:
- Apalachin Creek
- Bowman Creek
- Canisteo River
- Cattaraugus Creek
- Cayuta Creek
- Chemung River
- Chocorua Creek
- Cohocton River
- Cowanesque River
- Kettle Creek
- Larrys Creek
- Loyalsock Creek
- Lycoming Creek
- Mehoopany Creek
- Meshoppen Creek
- Young Womans Creek

NEW YORK
PENNSYLVANIA

Map showing the proposed deployment of a remote water quality monitoring network in the Susquehanna River Basin, with specific watersheds identified.
Remote water quality monitoring

- Temperature
- pH
- Conductance
- Dissolved oxygen
- Turbidity
- Water depth

**Network Design** — A total of thirty (30) stations will be established in the Pennsylvania and New York portions of the Susquehanna Basin. The stations will measure the following parameters continuously: temperature, pH, conductance, dissolved oxygen, and turbidity. In addition, water depths will be recorded to establish a relationship with stream flows. These data will enable water resource agencies, water users, and the public to make informed decisions regarding management and use of the resource.
Natural Gas Well Activity in the Susquehanna Basin

Michael Brownell
Chief, Water Resources Management
Telephone: (717) 238-0423
E-mail: mbrownell@srbc.net