

## **RESOLUTIONS**

### **WV/PA MONONGAHELA AREA WATERSHEDS COMPACT**

[ADOPTED AUGUST 17, SEPTEMBER 22, AND OCTOBER 26, 2010]

We recognize the value of mineral extraction, including coal, oil, gas and water, in the Monongahela basin and adjoining areas, when conducted responsibly. But, the current and projected levels of Marcellus shale drilling for natural gas production and the manner in which it is being conducted poses very serious problems for most all of West Virginia and Pennsylvania.

#### **RESOLUTIONS, FIRST WV-PA WATERSHED MEETING, AUGUST 17, 2010**

1. The West Virginia and Pennsylvania DEPs must enact commensurate and enforceable standards and rules/regulations and adequate penalties to protect regional water resources from potential hazards caused by mineral extraction and oil and gas drilling, including but not limited to sedimentation, water withdrawal, organic and inorganic chemicals and thermal effects.
2. The West Virginia and Pennsylvania DEPs must hire an additional and adequate number of inspectors and other staff to effectively monitor and enforce regulations governing mining and the oil and gas well industries.
3. The Upper Monongahela watershed groups advocate that closed-loop systems for containment of blowback water be required at all new construction gas well drilling sites rather than the open pit system of containment.
4. If open pits exist or are absolutely necessary, these should provide sufficient natural or geosynthetic protection to both contain the blowback water and to prevent its percolation into the soil or groundwater beneath the pit should the containment liner become ruptured. Further, we advocate the usage of regulations typically found in state dam safety statutes in order to ensure that blowback pits are properly sited and constructed, and that emergency contact/notification procedures are implemented when an accident involving the release of blowback water occurs.

#### **RESOLUTIONS, SECOND WV-PA WATERSHED MEETING, SEPTEMBER 22, 2010**

5. West Virginia and Pennsylvania rivers and streams frequently experience very low flows because of reduced rainfall. At these critically low flows, water withdrawals for Marcellus Shale gas well activities threaten aquatic life in many streams. And, more generally, the waters of both States must be shared among the diverse uses from agriculture to industry to recreation to domestic use. This includes both surface and sub-surface water resources. Therefore, the withdrawal of water from any source for high volume applications as Marcellus Shale drilling, fracking or other operations must be regulated and require permits from an appropriate State agency.
6. The Program Review in the Office of Oil and Gas of the WV DEP is clearly useful with a projected Final Report date of December 2010. However, this Review of oil and gas exploration and production activities in West Virginia is inadequate in and of itself. The issues and problems of this industry sector are huge and diverse and they directly involve many other agencies of State government; and, these problems are interrelated to the other extractive industries. A state-wide review

is urgently needed, one that is directed from the Office of the Governor. And, a Special Session of the WV Legislature would appear to be called for to address these problems and issues that include the protection of our water, air and land as well as our roads, our scenic values and quality of life. Each extractive activity should be responsible for the cost of all the environmental and socio-economic impacts resulting from its activities, taking into account both short and long-term impacts.

7. The issues and problems affecting WV and PA as a result of the current and projected levels of activity for coal mining and natural gas production are of an inter-state or national character. Here in northern WV and southwestern PA we have many such operations that cross state lines. One major issue is the drinking water for approximately one million people in southwestern Pennsylvania that comes from the Monongahela River, which drains most of northcentral WV. This and the other streams will likely increase in their total loads of pollutants. Therefore, the US Environmental Protection Agency in conjunction with the US Army Corps of Engineers, the US Geological Survey and other federal agencies should prepare a "guidance document" and respond quickly to the water and aqueous waste problems of the extractive industries now affecting New York, Pennsylvania, West Virginia and other States.

8. An Interagency Task Force study within the United States government is needed to examine the existing problems posed by the extractive industries in the United States. This would aim to establish a viable long range Planning Office that can anticipate many of the problems such as those posed by Marcellus Shale gas exploration and production. The focus would be on environment impacts and socio-economic dislocations such as public infrastructure damages and domestic disturbance problems.

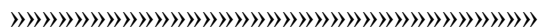
#### **RESOLUTIONS, THIRD WV-PA WATERSHED MEETING, OCTOBER 26, 2010**

9. A crisis now exists in the Monongahela River basin represented by the high total dissolved solids (TDS) content of this River and many of its tributaries. This problem manifests itself in its most extreme condition during the late summer months each year when precipitation is scarce and stream flows are low. However, elevated TDS conditions continue year-round in many of the major feeder streams and intermittently in the main stem, i.e. the Monongahela River itself. The proliferation of coal mining operations and natural gas drilling operations is continuing and involve substantial water withdrawals as well as diverse additions of concentrated liquids to the local streams. Therefore, we call upon state and federal government officials to recognize the crisis at hand in the face of the current boom in mining and drilling operations within the watersheds of this Basin and to respond with timely actions to meet this crisis as soon as is possible.

10. A comprehensive search is proposed for alternative supplies of raw water for industrial usage, to include a survey of mine pool water sources that could potentially benefit coal mining, oil well recovery and natural gas drilling operations. Given the need to utilize surface water flows for municipal and other current uses, other sources of raw water are needed to perform coal mining or cleaning operations, oil well stimulation operations, natural gas well fracking operations, and other possible industrial applications. The utilization of some of the mine pool sources may well be feasible, thus justifying a comprehensive search at this time. Projections for water supply needs into the future and related projections of source availabilities should be performed. (It is imperative that this search take into account the related recent studies of the existing mine pools, that environmental impacts be fully analyzed, that a record-keeping system be devised to track the withdrawals and usage of such groundwater supplies, and that a comprehensive management plan be implemented for the long-term utilization of groundwater supplies.)

11. The continuous monitoring of our surface and subsurface water supplies is necessary to ensure that the quality and quantity are adequate to meet residential, commercial, industrial, agricultural and recreational uses. The current efforts directed toward the development of such a monitoring system in the Monongahela River watershed should be integrated and coordinated in order to both avoid duplication of effort and to maximize the amount of data collected as to parameters monitored, frequency monitored, and accuracy of the results. Ideally, such a monitoring system will both facilitate a quick response for unacceptable water quality detection, and identify the source of the offending pollution. Additionally, a comprehensive data-base of monitoring results with public access can provide short-term results for users and governmental regulation as well as long-term results for evaluation and planning.

12. The WV/PA Monongahela Area Watersheds Compact herewith endorses and promotes the adoption and implementation of the new Water Quality Standards of the WV Department of Environmental Protection including a 500 mg/L in-stream standard for all the streams of West Virginia. This proposed standard was developed by the State after a systematic study and after public hearings have taken place. The US EPA has determined that 250 mg/L of chloride results in foul tastes in water supplies, that 250 mg/L of sulfate results in laxative action in drinking water, that loadings of calcium and magnesium result in hard water as well as scale formation in hot-water tanks, pipes, valves, fittings and the like, that TDS in the 250 to 500 mg/L is sufficiently high to promote electro-chemical corrosion in piping systems, and that high TDS can be detrimental to the health of individuals affected by sodium, chloride. or other species present at elevated concentrations. Therefore, an in-stream standard of 500 mg/l. is necessary for the protection of public water supplies as well as to limit the many adverse effects associated with the public uses of water in our region and the regions downstream in Pennsylvania and in the Ohio valley of West Virginia.



NOTE: These meetings were organized and conducted by the representatives of various watershed and conservation groups in cooperation with the Upper Monongahela River Association ([www.uppermon.org](http://www.uppermon.org)).