



Temple University Summit March 18, 2010

They say home is where the heart is, our home is the Delaware River watershed. Here is map; we are located here. The Delaware River a federally designated Wild and Scenic River and is the largest free flowing river east of the Mississippi. The Delaware River Watershed represents less than a half percent of the US land area (13,539 square miles) yet it provides 5% of the US population with water. This includes at least 7 million people in New York City and 8 million people downstream on the Delaware—at least 15 million people. PA comprises the largest land mass in the DR Watershed. That means that everything that happens on the land in PA has a big impact on the water quality of the Delaware River's tributaries and the main stem itself. From the Upper Delaware in Wayne County, south through Pike and Monroe and then on past New Jersey and through the Delaware Estuary and Bay and the State of Delaware, the River's 330 mile journey from the wedding of the East and West branches at the headwaters to the Atlantic Ocean, is defined by its streams and the nature of its watershed. Here in Philadelphia 1.5 million people drink from the Delaware River Watershed waters – 60% from the main stem Delaware, 40% from the Schuylkill River, the Delaware's major tributary and in New Jersey 2.8 million people, roughly 1/3 the population of that state, get their water from the Delaware. This downstream water supply is protected by SPW, a special set of regulations that require that the exceptional water quality of the designated waters not be degraded (from the wedding of the East and West Branches of the Delaware River at Hancock, NY, to Trenton/Morrisville, the longest stretch of anti-degradation waters in the Nation. More on the significance of this in a moment.

The reason we're here today is because that watershed is on the cusp of being redefined. 64% of PA and 36% of the DR Watershed is underlain by Marcellus Shale. That includes Wayne, Pike and Monroe Counties and the upper reaches of the Schuylkill River in PA and Delaware and Sullivan Counties in NY.

Every place shale gas drilling touches - in PA, WV, and Ohio - is being transformed. The sheer scale of natural gas development that is planned in the Marcellus Shale is staggering. It is estimated that at least 200,000 acres of land is already leased out in the Upper Delaware River Watershed for shale gas drilling. And this is only the dawn of gas drilling here; there are no shale gas wells approved yet.

What can we expect shale gas drilling to look like here? Each gas well will have a drilling pad of 3-5 acres or more, a road to get into the site, sometimes a mile or more long because these are often very undeveloped areas, a feeder pipeline to get the gas out to market, a large pit to hold the frack fluids and flowback wastewater, other equipment and tanks, and often a quarry to get the rock to build the road and pad. NY State's Draft Supplemental Environmental Impact Statement says that they expect up to 10 wells to be drilled on each pad. The site is the location of very intense development and industrial activity during the extraction and completion stages. Communities where this is happening are experiencing a change of life from rural farms, country towns and quiet forests to 24/7 lights, noise, diesel fumes, toxic air emissions from the open pits, and an constant parade of trucks carrying chemicals, water, and fuel (1400 truck trips per well per well) over municipal roads. Add to this the not-uncommon occurrence of accidents, fires, emergencies, spills, and leaks in what are often under-equipped municipalities who utilize volunteers and donations to operate.

Compounding this, there are no minimum spacing requirements in PA; the wells are expected to be as close together as possible, with a goal of retrieving as much gas as possible from a company's lease holdings. The industry uses various figures from one well per 25 to 40 acres as optimum in terms of gas production. Also, in the areas where the formation is forecasted to be most prolific, such as in the Upper Delaware River Watershed where the shale layer is the thickest, this will mean more wells in production over a longer period of time, multiplying the potential adverse impacts and the intensity of gas field development.

Close spacing will translate into the leveling and removal of forest and other natural vegetation over large areas transforming what is now in the Upper Delaware broad swaths of forest -

much of its healthy interior forest, a vanishing ecosystem in the United States - and cold, natural trout streams – some in New York where fly fishing was famously born - to urban conditions.

All of these changes will indelibly fragment forests, destroy habitats, and impose new impervious surfaces. This immense land use change will bring with it polluted and increased volumes of stormwater runoff and nonpoint source pollution, degrading receiving streams, wetlands, and the habitats they provide for the life dependent on them. Many of this part of the River's streams are the best we have and are home to wild trout, endangered, threatened and rare species, and provide key wildlife habitat and they provide the clean headwaters we downstream need to dilute all the pollution insults the River receives along its way to our water taps here. In terms of our downstream water quality, the adverse impacts threaten the safety of our water quality and threaten the ability of water treatment facilities to keep up.

Soil compaction, the loss of the natural forest and vegetative cover, the removal of the natural lay of the land, all disrupt the natural sponge that now absorbs precipitation, slows runoff, and recharges groundwater and base flow of these headwater streams. The increased runoff from the converted land will increase flood flows as well because the once recharged precipitation will now run off the compacted land, adding to flood levels downstream. Both PA and New York actually allow the placement of a gas well site within the 100 year floodplain. This in the DR, where we have been experiencing catastrophic flooding in recent years and with global climate change forecasts, we can expect more storms.

But we don't have to accept this picture.

NEED:

DRBC to implement its natural gas-specific regulations that they are developing based on a cumulative analysis of impacts of natural gas development and water resource planning BEFORE any permits are issued by the DRBC for gas extraction in the DR Watershed – SPW requires that the above-standard, the exceptional water quality of the non-tidal river not be degraded, not be diminished—not just that pollution be minimized or avoided. This puts us in a unique position here in the DR Watershed to demand the best, to require the most effective protection possible to prevent any degradation. We have fought too hard and too long on the DR to bring the river back from the brink of death in the last century, restoring it to exceptional water quality and Congressionally recognized outstanding resources to now let gas drilling come along and undo that. All communities, human and nonhuman, that rely on the Delaware River must be protected, including the 15 million people who get their water supply. This cannot be accomplished if permits start being issued by the DRBC, the agency that oversees

the Delaware River Basin, allowing piecemeal approval of natural gas projects without the regulations in place and the study done that the DRBC themselves have determined is needed to protect the water resources of the DR Basin.

Also need: Adoption of PADEP gas drilling (high-TDS) wastewater regulations (Chapter 95)

Adoption of PADEP upgrade of casing and safety rules

Federal FRAC Act – House (H.R. 2766) and the Senate (S. 1215)

Action needed by all of us before drilling starts in our watershed—action alert re. Stone Energy application for a gas well and water withdrawal on the West Branch Lackawaxen River on table out front and sign up for e-activist – comment to DRBC due April 12, more letters needed. Must not allow this to start.

Tracy Carluccio
Deputy Director
DRN
3.18.10