RE: Hydrogeologic Justification for Banning Hydraulic Fracturing throughout New York State and the Delaware River Basin

Senator Avella and Members of the Senate:

My name is Paul Rubin, president of HydroQuest. I am here today with Dr. Beinkafner of Mid-Hudson Geosciences. HydroQuest and Mid-Hudson Geosciences, two professional hydrogeologic consulting firms, hereby provide detailed written testimony on behalf of the Delaware Riverkeeper Network in support of draft NYS legislation designed to protect New York State’s groundwater and freshwater resources. We provide hydrogeologic justification for banning hydraulic fracturing throughout New York State and the Delaware River Basin, part of which is in NYS.

Today’s gas field technology is not capable of isolating our freshwater aquifers from gas field contaminants. The durability and mechanical properties of gas well sealant materials, primarily cement and steel, are not sufficiently advanced such that freshwater aquifers will be safely protected for even as long as 100 years, much less the hundreds of thousands of years required. Upward hydraulic gradients in failed wellbores and along fractures will provide contaminant pathways. In addition, gas production wells placed within seismically active regions where ground shaking/motion will damage the integrity of cement seals will significantly increase the risk of contaminant dispersal upward into overlying aquifers.

For this reason, there are no hydrofracking procedures which can assure protection of our finite and valuable water resources now or into the future. As a result, toxic and carcinogenic contaminants are already and will continue to move with our groundwater flow systems to our most prolific valley bottom aquifers and rivers. The enormous magnitude of planned gas well installations (i.e., thousands) will result in large-scale and widespread water contamination that cannot be remediated. As aptly stated by Cyla Allison, Ph.D. of the Eight Rivers Council, WV: “The damage may not show up for years, the ruination of our water may at first be invisible and in the end irreparable.”

The only viable means of protecting our groundwater and surface water resources now and for future generations is to immediately institute a New York State and Delaware River watershed ban on hydraulic fracturing. Perhaps sometime in the future alternate sealant technologies and non-toxic means of fracturing geologic formations will be developed. Only at that time should consideration be given to permitting hydraulic fracturing for gas and oil extraction. At this time, the only justifiable and scientifically defensible means of protecting New York State’s water resources is by enacting S4220A-2011 which prohibits the use of hydraulic fracturing in the extraction of oil and gas. On behalf of the Delaware Riverkeeper, we implore the Senate and legislature to protect the water resources of the State of New York.