

## Energy, Agriculture, and Environment in Rural New York

### **Abstract**

For several years, Congress has been funding research on water quality in the Susquehanna River basin in New York. Until 2009, these ear-marked funds supported the Agricultural Ecology Program (AEP), with a primary goal of examining how agriculture affects water quality in the Susquehanna, the major source of nutrient pollution to the highly impaired Chesapeake Bay. For 2010, the program was redefined and broadened to include energy systems as these interact with agriculture and environment, and the geographic focus was expanded to include the Finger Lakes region as well. The central goal of the re-named Agricultural, Energy, and Environment Program (AEEP) is to understand the interaction of energy and agriculture as these affect environmental quality in the rural environments of New York State in the 21st Century.

The Program continues research that supports the efforts of the State of New York in complying with targets of reducing the State's contribution to nutrient pollution of Chesapeake Bay, as required by the Clean Water Act and Presidential order. The expansion to more explicitly consider the interactions of agriculture with energy is driven by two recent trends: 1) the exponential increase in the production of biofuels and use of agricultural lands for biofuel production over the past few years; and 2) the proposal by the State of New York that large parts of the State, including all of the Susquehanna River basin, be opened up for gas development using hydraulic fracturing. It simply is not possible to evaluate the sources and sinks of nutrients and sediments in the upper Susquehanna River basin, and to develop improved approaches for reducing these, without considering the effects of biofuel production and hydraulic fracturing for natural gas. Although the primary focus has remained on water quality, it important to also consider the interacting effects of energy and agriculture on emissions of greenhouse gases. Optimum management of the rural environment demands a holistic approach that broadly considers environmental consequences.

Future funding is uncertain, given the November 2 elections. Nonetheless, this lunch will provide an opportunity for interested faculty, staff, and students to discuss specific research ideas related to the AEEP. The purpose is to help define the specific future use of ear-marked funds, if any, and to explore common interests which could perhaps be supported with other sources of funding."