



5735 Kellogg Avenue  
Cincinnati, Ohio 45230  
513-231-7719  
www.orsanco.org



Association of Clean Water Administrators  
1221 Connecticut Avenue, N.W. 2<sup>nd</sup> Floor  
Washington, DC 20036  
202-756-0600  
www.acwa-us.org

---

**March 25, 2013**

**Testimony of Peter A. Tennant, P.E.**

**Executive Director, Ohio River Valley Water Sanitation  
Commission (ORSANCO)**

**United States House of Representatives**

**Committee on Transportation and Infrastructure  
Subcommittee on Water Resources and Environment**

**Regarding**

**The Role of Trading in Achieving Water Quality Objectives**

Good afternoon, Chairman Gibbs, Ranking Member Bishop, and Members of the Subcommittee, My name is Peter Tennant; I am the Executive Director of the Ohio River Valley Water Sanitation Commission, commonly known as ORSANCO. ORSANCO is an interstate commission that carries out a compact signed by eight states – Illinois, Indiana, Kentucky, New York, Ohio, Pennsylvania, Virginia and West Virginia – with approval by the United States Congress and participation by the federal government. Since its inception in 1948, ORSANCO has worked with its member states and appropriate federal agencies to improve and protect the water quality of the waters of the Ohio River Basin. I am also a member of the Association of Clean Water Administrators and currently serve as the chair of ACWA’s State, Regional and Other NPDES Issues Work Group.

Many successes have been achieved in restoring the water quality of the Ohio River and its tributaries. All of those successes have been achieved through collaboration among states, federal agencies, local utilities, industries, and others. ORSANCO has benefitted from outstanding partnerships that cross boundaries to pursue a shared mission to keep our waters clean.

As with other waters in the US, the emphasis in the Ohio River Basin for the first few decades of ORSANCO's existence was on achieving adequate treatment of sewage and industrial wastes. As the goals regarding waste treatment were reached, however, we learned that there were other problems that needed to be addressed. Runoff from city streets and from farmland carried certain pollutants that led to problems in the receiving waters. This type of pollution did not lend itself to the collect and treat approaches that had worked for sewage and industrial waste. New approaches were clearly needed.

In 1997, the Mississippi River – Gulf of Mexico Watershed Nutrient Task Force was established to address a zone of hypoxia – frequently referred to as a dead zone – in the northern Gulf of Mexico. That problem is caused by nutrients that are transported to the Gulf by the Mississippi and Atchafalaya Rivers. Since the Ohio River contributes a significant portion of the nutrient loading to the Mississippi River, it was necessary for nutrient reduction efforts to include the Ohio River Basin. One approach to nutrient reduction that was identified was water quality trading. In 2003, a report by the World Resources Institute identified the Ohio River Basin as a sub basin of the Mississippi in which trading might be successfully applied.

The basic concept of water quality trading is that where two sources of a pollutant have very different costs to reduce that pollutant, the source with the higher reduction cost might pay the source with the lower cost to provide additional reduction. In the case of nutrients, treatment to reduce levels in sewage and industrial waste can be expensive, whereas reduction of levels in runoff from farms can be achieved at lower cost through best management practices. In order for the concept to work, there has to be a mix of source types such that loadings from those with lower removal costs (referred to as credit sellers) are equal to or exceed loadings from those with higher costs (credit buyers). The Ohio River Basin was singled out as a potential site for trading in large part because of the ratio of sellers to buyers.

One of the services that ORSANCO provides to its member states is to provide a platform for trying out new approaches. Over the years a number of methods for monitoring water quality, treating wastewater, analyzing water samples, and communicating results have been field tested on the Ohio River. Water quality trading was first brought to the Commission's attention in 2001. Trading programs were being discussed in the Chesapeake Bay watershed; Pennsylvania and Virginia are member states of ORSANCO that also lie partially within the Bay watershed and were part of those discussions. Ohio was investigating

the use of trading as part of watershed management approaches. When the use of trading on a large scale, interstate basis in the Ohio River Basin was proposed, it was agreed by the member states that ORSANCO would investigate this potential tool and its use in reducing nutrient loadings. A series of meetings were held in 2003 through 2005 involving state and federal environmental, agricultural and conservation agencies. While interest in water quality trading was evident, action toward establishing a basin-wide program was stymied by the lack of a driver. Efforts to develop numerical nutrient criteria for the Mississippi River and its tributaries have been unsuccessful to date. The lack of numeric criteria means that nutrient limits are not included in dischargers' NPDES permits, and they therefore do not have a regulatory incentive to reduce their loads.

Meanwhile, the Electric Power Research Institute (EPRI) was also looking into trading as a possible means for its member utilities to address future nutrient reduction requirements. In 2007, EPRI approached ORSANCO as a potential collaborator in the development of an interstate water quality trading program for the Ohio River Basin. The member states of ORSANCO were impressed by the project envisioned by EPRI, as well as the project team that had been assembled, and agreed to participate. The project team currently includes:

- American Farmland Trust
- Electric Power Research Institute
- Troutman Sanders, LLP
- Markit Environmental Registry
- Ohio Farm Bureau
- Ohio River Valley Water Sanitation Commission
- University of California at Santa Barbara

I encourage you to visit the project web site – [www.wqt.epri.com](http://www.wqt.epri.com) – to find more information on the project. Suffice it to say that the approach to this project has been extremely thorough and that all aspects have been carefully planned, extensively discussed and carried out collaboratively. In 2012, the project reached a milestone when the directors of state environmental and agricultural agencies for the states of Indiana, Kentucky and Ohio signed a plan to carry out pilot trades among nutrient generators in the three states. Earlier this month, the first pilot trades were announced at an event in Cincinnati. Three electric

utilities – American Electric Power, Duke Energy, and Hoosier Energy – purchased 9000 nutrient credits. Those credits were purchased on a stewardship basis; the companies have agreed to retire the associated nutrient and ecosystem benefits.

We at ORSANCO are very encouraged by the progress made through this project. It appears to be a win-win situation for the participants. For the point source discharger, trading can present a lower cost alternative to treatment for nutrient reduction. For a farmer, trading can mean a new source of revenue, enabling the farm to operate more efficiently. Other speakers will provide more on the perspective of point sources and agriculture; I would like to focus the remainder of my remarks on the benefits of the trading project to the participating states and to ORSANCO.

The most obvious benefit of the trading project is the attainment of nutrient reduction at a reduced cost. A colleague of mine has estimated that the reductions represented by the credits purchased in these transactions are equivalent to the elimination of nutrient discharges from two medium size municipalities. This reduction is certainly a benefit to the environment, and its achievement at a reduced cost is a benefit to our overall effort to reduce nutrient. Perhaps less obvious is the benefit that the trading project provides through this pilot phase as an opportunity to evaluate the use of trading, to work through the inevitable challenges that come with trying something new, and to do this ahead of regulatory requirements.

I mentioned earlier that efforts to develop numerical nutrient criteria for the Mississippi River have been unsuccessful to date. ORSANCO has been tasked by its member states to develop numerical nutrient criteria for the Ohio River. For over ten years we have carried out one of the most intensive monitoring programs for algae, nutrients and associated parameters in the US, but we have yet to “crack the code” that would allow us to derive numerical criteria from the monitoring data. We anticipate that, at some point, we will be successful in developing nutrient criteria – or perhaps nutrient reduction limits for the Mississippi River or the Gulf of Mexico will be adopted, which might then be translated upstream into reduction targets for the Ohio River. At any rate, if and when regulatory requirements for nutrient reduction are adopted, we will be in a much better position to address them thanks to the experience of the trading project.

While the participants in the pilot trades include the states of Indiana, Kentucky and Ohio, the beneficiaries of the demonstrations include all of the member states of ORSANCO. In addition, through our participation in the national discussion on trading, we can share lessons learned with colleagues throughout the US. I have learned through active involvement with the Association of Clean Water Agencies that certain basic aspects of pollution abatement can apply in all parts of the country, but that approaches toward their application often need to be tailored to fit the local situation. The exchange of information with states who are involved with trading programs in other parts of the country has been very helpful to me, and I hope that our Ohio Valley experiences have provided useful examples to others.

One of the greatest benefits of this project to me has been the opportunity to work with a new set of partners who share common goals of improving the environment while delivering essential goods and services. Collectively, the participants in our project provide food, water and energy to citizens of the Ohio Valley and beyond. I commend the leadership of EPRI and our project director Jessica Fox for bringing us together.

Mr. Chairman, Members of the Subcommittee, I thank you for this opportunity to share some thoughts on the role of trading in achieving water quality objectives.