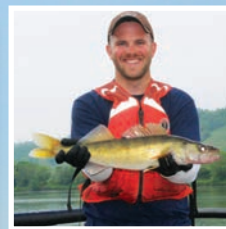
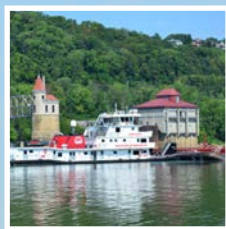


Ohio River Users  
ORSANCO  
5735 Kellogg Avenue  
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ORSANCO



***Building  
Partnerships  
for  
Better  
Science***



***Ohio River Users...***



## ***You are a River User***

Industries, utilities, farmers, and the general public use the Ohio River in a multitude of ways. Through programs such as the Ohio River Users Program, the Ohio River Valley Water Sanitation Commission (ORSANCO) works closely with Ohio River users in its efforts to improve the quality of the Ohio River. New science and research is essential to drive sound water management decisions that will benefit both the river and the users of this vital natural resource.

## ***Ohio River Users Program***

Water quality regulations are only as sound as the data on which they are based. Great strides have been made to better understand the natural dynamics of large riverine systems; however, more research is needed to adequately characterize the complex nature of the Ohio River. Through improved scientific study, water quality regulations can be developed that more accurately reflect the unique characteristics of the Ohio River.

The need for strong scientific data is the driving force behind the Ohio River Users Program. This program was created as a mechanism to provide the necessary funding to perform needed water quality studies on the Ohio River. Studies are selected by the Commission to achieve and improve the understanding of the Ohio River, which in turn will assure that appropriate requirements are applied to river users. Studies are performed under the guidance of the Ohio River Users Program Advisory Committee composed of representatives of industries, utilities, and other river interests. Since the program's inception in 1993, this innovative collaboration of diverse river interests have supported numerous studies to improve the scientific basis for water quality management decisions.

## ***About ORSANCO***

The Ohio River Valley Water Sanitation Commission (ORSANCO), established by compact in 1948 to control and abate pollution in the Ohio River Valley, is an interstate commission representing eight states and the federal government. Member states are: Illinois, Indiana, Kentucky, New York, Ohio, Pennsylvania, Virginia, and West Virginia. The Commission operates programs to improve water quality in the Ohio River and its tributaries, including setting wastewater discharge standards, performing biological assessments, monitoring for chemical and physical properties of the waterways, and conducting special surveys and studies.

ORSANCO enjoys representation from a broad spectrum of interests through its various advisory committees. ORSANCO has always recognized the importance of working closely with Ohio River users in its efforts to improve the quality of the Ohio River, as demonstrated by the development of effective pollution control standards. For this reason, ORSANCO has attained a reputation for professionalism and credibility among water users and regulatory agencies alike.



*We all want our water quality improvement efforts to be based upon good science. Projects supported by the Ohio River Users Program help bring that good science to the river.*

*My company has helped underwrite studies by ORSANCO because they ultimately result in valid water quality standards.*

*-Tom Herman, Zeon Chemicals*

# Better Science

## Committee Membership

The purpose of the Ohio River Users Program Advisory Committee is to facilitate communication between ORSANCO and the river users. Specifically, the Committee provides advice and guidance to the Commission on the overall operations and administration of the Ohio River Users Program, reviews and makes recommendations regarding the scientific merit and relevancy of proposed studies, and monitors progress of ongoing studies.

**Current committee memberships includes representatives from:**

Bayer	Chevron	Dupont
Koppers	Marathon	Mountain State Carbon
Zeon Chemicals		
Publicly Owned Treatment Works Advisory Committee		
Power Industry Advisory Committee		
Water Users Advisory Committee		
ORSANCO Commissioners		

## Notable Completed Studies

### Temperature Criteria

Evaluated the technical justification of existing temperature criteria for the Ohio River and recommended revisions to ORSANCO's Pollution Control Standards based on an assessment of new data.

### Mixing Zones

Compared existing mixing zone policies for Ohio River states and provided guidance towards developing a more consistent approach among states in delineating mixing zones.

### Background Water Quality Conditions

Developed guidelines for statistical procedures to define instream concentrations in order to facilitate consistency among Ohio River states in developing water quality-based effluent limits.

### Emerging Contaminants

Conducted a pilot study to test different sampling techniques to detect endocrine disrupting compounds (EDCs) and to evaluate if fish in the Ohio River exhibited signs of exposure to EDCs.

### Towing Industry Regulations

Reviewed and compared state and federal water quality regulations pertaining to the towing industry on the Ohio River.

## Call for Future Study Ideas

The Ohio River Users Advisory Committee welcomes your input and encourages suggestions for future studies.

Some requested topics include:

Nutrients	Mercury	Harmful Algae
Bromide	Invasive Species	Emerging Contaminants





# Better Decisions

## *Improving Science through Collaboration*

### **Current Focus: Total Dissolved Solids**

ORSANCO adopted a 500 mg/L ambient water quality standard for total dissolved solids (TDS) in 2011. Very little data existed at that time to document ambient TDS levels in the Ohio River, thus making it difficult to evaluate the potential ramifications of implementing the new standard. The Ohio River Users Program set out to fill the data void by proposing a monitoring effort to measure concentrations of TDS in the river. Coincidentally, a similar study had been proposed by water utilities along the Ohio River to evaluate bromide levels in source water due to concerns about the formation of disinfection byproducts generated during the water treatment process.

The complementary TDS and bromide sampling plans were combined to produce a robust and cost-efficient monitoring effort to characterize TDS and a suite of individual dissolved solids ion constituents, including bromide, in the Ohio River and selected tributaries. This partnership successfully leveraged Ohio River Users Program funds to complete the expanded monitoring project which generated three times the amount of data proposed in the original TDS-only study.

Results from the year-long, weekly sampling effort at 11 Ohio River and 5 tributary locations indicated that TDS levels in all samples collected from the Ohio River were well below ORSANCO's 500 mg/L standard. Sulfate, bicarbonate, calcium, chloride, and sodium made up approximately 93 percent of the total dissolved solids concentrations measured in the Ohio River. The full report is available at [www.orsanco.org](http://www.orsanco.org).

## Please Send Your Gift Today!

### ***Your Donation Supports Effective Water Quality Management***

ORSANCO extends a cordial invitation to every river user along the Ohio River to invest in this important program. Your contribution to the Ohio River Users Program will help fund important scientific studies which are needed to develop appropriate Ohio River water quality standards and to guide sound water resource management decisions. Give today to support better decisions through better science.

Please use the enclosed, self-addressed envelope to send your contribution today. Contributions to ORSANCO are tax deductible.

For more information, contact Sam Dinkins • [sdinkins@orsanco.org](mailto:sdinkins@orsanco.org) • 513-231-7719 Ext.108

**Thank you.**