

ORSANCO/Ohio River Users Program

- Progress Report -

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ORSANCO

The Ohio River Valley Water Sanitation Commission (ORSANCO) was created in 1948 and is an interstate agency with regulatory and enforcement authority for improving and maintaining the water quality of the Ohio River. In fulfillment of this mandate, the Commission undertakes a variety of programs designed to identify the pollution problems within the watershed, monitor water quality conditions of the river and regulate wastewater discharges to the river through the establishment of pollution control standards.

The ORSANCO/Ohio River Users Program is an innovative concept designed to provide a mechanism for water users to recommend needed scientific studies or projects to the Commission and then provide financial support to perform the study or project through the establishment of a program fund. Recommended studies and projects are to be supportive of the Commission's mandate and should be designed to improve the scientific basis for water resource and water quality management decisions.

For many years, ORSANCO has enjoyed a cooperative working relationship with Ohio River water users in a number of different ways, mainly through its various industry advisory committees. The ORSANCO/Ohio River Users Program strengthens those relationships and creates additional opportunities for industry to actively participate in the activities of the Commission.

Recently Completed Projects

Re-evaluation of the Technical Justification for Existing Ohio River Mainstem Temperature Criteria

This study provided the Commission with a thorough review of the technical advancements made since the initial development of ORSANCO's temperature criteria in 1978. Contract work was initiated in 2003 and a final report was presented to the Commission's Technical Committee in 2005. The Commission will now rely on information contained in this report to make informed decisions regarding future revisions to the Commission's temperature criteria.

Ongoing Projects

In 2005, the Commission initiated two new projects funded through the ORSANCO/Ohio River Users Program. These two studies will serve to inform the Commission on emerging contaminants and will help the Commission to transfer assessment approaches to state agencies and other interested parties.



A Study to Investigate the Presence of and Effects from Endocrine Disrupting Compounds (EDCs) Within the Mainstem Ohio River

In 2005 the ORSANCO Research Committee identified an emerging class of toxicants known as endocrine disrupting compounds as a top research priority. EDCs are increasingly being detected in waterways and their presence has been linked to a wide variety of developmental and reproductive abnormalities in aquatic life and has been loosely linked to human health problems as well. Very little is known about EDCs in the Ohio River. Upon receiving funding support through the River Users Program, a pilot study was begun in 2005. Initially, the study focused on testing various methods for detecting the presence of EDCs in the water and also measuring the effects upon aquatic life (fish) which have been exposed to EDCs.

This collaborative effort relates to studies underway by the USEPA and US Geological Survey. This project will serve to effectively expand, enhance, and provide an Ohio River focus to national EDC research efforts. Initial test results seem to indicate that EDCs are present within the Ohio River and that fish are showing effects that could be related to EDC exposure.

The Commission plans to continue this research in 2006 and intends to use the results of this pilot effort to leverage funds from other ongoing national EDC research efforts in future years.

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Preparing Ohio River fish samples for genetic analysis which will reveal possible effects from EDC exposure.

Development of an Ohio River Fish Index software program

This computer application will allow users to enter fish data and will calculate Ohio River Fish Index (ORFI_n) scores.

The Ohio River Fish Index is an assessment tool developed by the Commission. It combines 13 measures of fish community health into a single score that can be easily understood and used to verify whether the water quality of the Ohio River is sufficient to maintain a high quality fish community. It is a tool to be used to judge water quality and easily communicate the status of the fish community to water quality managers and the public alike. The use of a single score to communicate multiple, complex measures of an environmental resource is very similar in scope to the *air quality index* we are all familiar with.

This software will effectively transfer this assessment technology to other state and federal water quality management agencies as well as to other end users such as consulting firms or industry biologists conducting ecological research on the Ohio River.

Future Projects

The ORSANCO/Ohio River Users Program is open to suggestions for new studies that result in improvements in water quality management decisions. To discuss and develop study ideas, please contact staff coordinator, Erich Emery, or a member of the advisory committee. Additional information about this program can be found on the Commission's web page at www.orsanco.org.