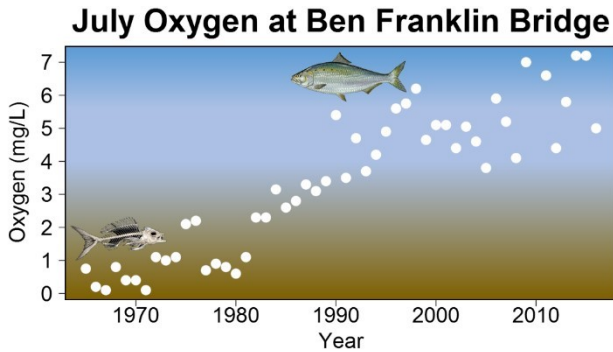


DRBC Taking the Next Steps to Further Improve Oxygen Levels in the Delaware Estuary



This graphic shows how dissolved oxygen (DO) levels have improved since 1965 at this location on the Delaware River in Philadelphia, Pa.

of the river and the bay—was plagued by too little oxygen resulting from the discharge of raw and poorly treated wastewater.

In 1961, when the DRBC was created, little or no oxygen was present during the summer months in a 30-mile reach of the Delaware Estuary from Wilmington, Delaware to Philadelphia, Pa., preventing the survival of resident fish and the passage of migratory fish, as well as reproduction.

Improving oxygen levels in the Delaware Estuary was one of DRBC's first regulatory tasks. Steady improvement occurred throughout the 1970's and 1980's due to effective water quality management by DRBC, the federal government and the basin states, as well as substantial investment in wastewater treatment facilities by public entities and private industry. Today, American shad can migrate from the ocean to the upper portions of the basin, and striped bass and sturgeon are now able to spawn at least some of the time in the estuary. However, continued low oxygen levels at certain times of the year remain a critical barrier to full aquatic life health in this portion of the watershed.

DRBC is currently developing a water quality model that will help inform how to achieve higher oxygen levels in the Delaware Estuary. Water quality data must be collected in order to develop this model. Monitoring of wastewater treatment facilities, tributaries, non-point sources, and atmospheric deposition in the Delaware Estuary will continue for the next two years. Since the Delaware River at Trenton is the largest source of freshwater to the estuary, an accurate measurement of the loads of nutrients, such as nitrogen and phosphorus, coming from this part of the river is also needed to better understand the processes that may be affecting oxygen in the estuary.

When this project is completed, DRBC hopes to achieve higher levels of oxygen in the Delaware Estuary, leading to improved water quality and more consistent and successful fish reproduction.

Learn more at <https://www.nj.gov/drbc/quality/conventional/designated-use.html>.

Oxygen in water is essential to the reproduction and growth of fish and other aquatic life. Oxygen enters water both from the air and as a by-product of photosynthesis from algae and aquatic plants, but it can be depleted by discharges from wastewater treatment plants and the decay of vegetation.

Historically, the Delaware Estuary—the tidal portion

DRBC: Managing, Protecting & Improving the Basin's Water Resources Since 1961

- ◆ The Delaware River Basin Commission is a federal-interstate compact agency. Its members are the governors of the four basin states & the Commander of the U.S. Army Corps of Engineers' North Atlantic Division., who serves as the federal representative.
- ◆ DRBC was formed in response to major water resource challenges requiring regional solutions, and to this day is a successful model for federal-state collaboration.
- ◆ DRBC programs include water quality protection, water supply allocation, regulatory review, water conservation, drought management, watershed planning, flood loss reduction, and education/outreach.
- ◆ In its 50+ years, DRBC has achieved many noteworthy accomplishments, including:
 - ⇒ DRBC's Special Protection Waters program protects the existing high quality waters of the river's non-tidal watershed;
 - ⇒ DRBC's Pollutant Minimization Plan regulations have helped to significantly reduce PCB loadings to the river;
 - ⇒ DRBC has been recognized for its comprehensive water conservation, drought management, and watershed planning programs.

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