



September 9, 2021

Commissioners  
Delaware River Basin Commission  
P.O. Box 7360, 25 Cosey Road  
West Trenton, NJ 08628

**Re: Lethal oxygen conditions in the tidal Delaware River for a 3<sup>rd</sup> Year in a Row**

Dear Commissioners,

We call your attention to the alarming conditions experienced in the tidal Delaware River over the last three years. Oxygen conditions during the summer of 2021, like those in 2019 and 2020, reached lethally low concentrations. The following statement summarizes the dire conditions and the urgency for swift Commission action to protect aquatic life:

*In the absence of Commission action to upgrade the uses and dissolved oxygen standards for the tidal Delaware River, there is no floor that protects oxygen conditions for the River's aquatic life. Atlantic sturgeon, American shad, and striped bass (among a host of other species) will all be exposed to lethal concentrations of dissolved oxygen during the critical early life stages for spawning and rearing of juveniles. Dissolved oxygen can and will fall below 3.5 mg/L until standards are raised and pollutant loads are reduced.*

For the 20 mile reach between the Ben Franklin Bridge and the Commodore Barry Bridge, dissolved oxygen fell below 3.5 mg/L in each summer of 2019, 2020, and 2021. The summer of 2020 was the worst among the three years, with minimum dissolved oxygen of 2.8 mg/L recorded near the Commodore Barry Bridge in Chester, PA, and a minimum dissolved oxygen of 3.3 mg/L recorded near the Ben Franklin Bridge in Philadelphia. But in all three summers, dissolved oxygen concentrations fell into the lethal range documented in DRBC's own commissioned study of oxygen requirements for Delaware estuary species.<sup>1</sup> Now, in 2021, after three years of repeated insults to the River, it is time to call your attention to some of the worst conditions seen in the tidal River over the last 15 years.

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<sup>1</sup> Stoklosa, A.M., D.H. Keller, R. Marano, and R.J. Horwitz. 2018. A Review of Dissolved Oxygen Requirements for Key Sensitive Species in the Delaware Estuary. Final report by the Patrick Center for Environmental Research, Academy of Natural Sciences of Drexel University submitted to Delaware River Basin Commission; November 2018; 51 pp. Retrieved from [https://www.nj.gov/drbc/library/documents/Review\\_DOreq\\_KeySensSpecies\\_DelEstuary\\_ANStoDRBCnov2018.pdf](https://www.nj.gov/drbc/library/documents/Review_DOreq_KeySensSpecies_DelEstuary_ANStoDRBCnov2018.pdf)

These concentration numbers are alarming enough. Yet the context for these oxygen numbers is even more alarming. ***Each summer from 2019 through 2021, dissolved oxygen saturation fell below 50% in Zone 3 and Zone 4 of the tidal River.*** Yes, our abuse of the River has left less than half of the available oxygen for the fish and other aquatic life who have no alternative source for life-giving oxygen. The magnitude of our continued gross pollution of the Delaware River has no modern equivalent in our region, and few in the nation.

We acknowledge there has been great progress and substantive restoration of oxygen conditions since the 1960s and the Commission's 1967 and 1968 standard-setting and wasteload allocation, respectively. Yet those standards are over 50 years old and were never intended to protect the well-documented spawning by resident and migratory fish that now occurs every year in Zones 3, 4, and 5 of the tidal River.<sup>2</sup> While dissolved oxygen can remain relatively abundant in some years, such as the summer of 2014, the estuary's overall fate, and the fate of such species as the critically endangered Atlantic sturgeon, are left to chance and the vagaries of an ever-more-volatile and changing climate in the absence of Commission action and a reduction in pollutant loads.

You, the Commission, and all stakeholders in the Delaware estuary know the causes of the depressed oxygen (loading of BOD) and the simple solution to the problem (using available technologies such as nitrification to reduce BOD loads). Lethal oxygen conditions occur only because we have failed to take action and reduce pollutant loads using these conventional technologies.

We urgently request action from the Commission instead of further delays.

At this critical juncture in history, with so much on the line, the Commission can once again demonstrate its leadership role in rebuilding our communities and restoring our ecosystems.

Delay no further. Act now for our endangered and special species of the estuary, for our economic recovery, and for the generations to come who will learn this history of how an ecosystem can be reborn.

Respectfully,

Maya K. van Rossum, the Delaware Riverkeeper, Delaware Riverkeeper Network  
Joseph Otis Minott, Executive Director & Chief Counsel, Clean Air Council  
Jacquelyn Bonomo, President & CEO, PennFuture  
Doug O'Malley, Director, Environment NJ

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<sup>2</sup> **DRN, DRSFA, LRSA. 2013.** Petition and supporting documentation submitted to DRBC on March 5, 2013, for the upgrade of uses and the increase in dissolved oxygen standards for the tidal Delaware River. 88 pgs.;

**DRBC 2015.** Existing Use Evaluation for Zones 3, 4, & 5 of the Delaware Estuary Based on Spawning and Rearing of Resident and Anadromous Fishes. Delaware River Basin Commission report; revision date 30-September-2015; p. 32. Retrieved from [https://www.nj.gov/drbc/library/documents/ExistingUseRpt\\_zones3-5\\_sept2015.pdf](https://www.nj.gov/drbc/library/documents/ExistingUseRpt_zones3-5_sept2015.pdf);

**DRN, CAC, PennFuture, EnvirNJ, NJTF, UPM, DRSFA, NJSBC, DRYL, TTUD, RNP, AV, LRSA, LVGSC, SCPC, FHR, DVCA. 2021.** Supplemental Petition Requesting DRBC Immediately Upgrade Aquatic Life Uses and Dissolved Oxygen Stream Quality Objectives. Submitted to DRBC on March 3, 2021. 10 pgs.