



April 19, 2022

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The Honorable Kathy Hochul
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Re: 2022 Draft DRBC Report "Linking Aquatic Life Uses with Dissolved Oxygen Conditions in the Delaware River Estuary"

The Delaware Riverkeeper Network (DRN), Environment New Jersey, Clean Air Council and PennFuture are deeply disappointed in the blatant misrepresentation of scientific data and studies in the recently issued 2022 Draft DRBC Report "Linking Aquatic Life Uses with Dissolved Oxygen Conditions in the Delaware River Estuary." Cherry picking science in support of a predetermined outcome is inconsistent with the agency's reputation of integrity when it comes to putting forth reliable scientific analysis.

We request Commissioner intervention to ensure that discussion and decision making around water quality standards is supported by the science and not manipulated to advance the interests of dischargers at the expense of the public and aquatic life.

On March 23, 2021, 17 organizations submitted a petition requesting the DRBC upgrade the designated use of Zone 3, Zone 4, and River Miles 78.8 to 70.0 of Zone 5 of the Delaware Estuary to

include maintenance and propagation of resident fish and other aquatic life, and spawning and nursery habitat for migratory fish. Zone 3, Zone 4, and Upper Zone 5 are currently designated only for maintenance and passage rather than the full aquatic life protections. This most recent petition, submitted by Delaware Riverkeeper Network, Clean Air Council, PennFuture, Environment New Jersey, New Jersey Tree Foundation, Urban Promise Ministries, Delaware River Shad Fishermen's Association, New Jersey Sustainable Business Council, Delaware River Yachtsmen's League, Tree Tenders of Upper Darby, Riverfront North Partnership, Aqua Vida, Lehigh River Stocking Association, Lehigh Valley Group Sierra Club, Sierra Club Pennsylvania Chapter, Friends of Heinz Refuge, Darby Valley Creek Association, was an updated version of a similar request submitted in 2013 by the Delaware Riverkeeper Network, Lehigh River Stocking Association and the Delaware River Shad Fishermen's Association.

Both petitions outlined the significant body of scientific documentation demonstrating that maintenance and propagation of resident fish and other aquatic life, and spawning and nursery habitat for migratory fish, are current existing uses and that dissolved oxygen standards need to be increased to 6.3 mg/l in order to protect critical species in our estuary. The DRBC has conducted additional scientific reviews that confirm these findings and requests.

Rather than relying upon the most recent scientific assessments regarding aquatic life uses and oxygen needs for the Delaware Estuary, the DRBC's new draft report on aquatic uses and dissolved oxygen notably relies on significantly outdated information. This error is underscored by the draft report's failure to utilize the recent findings of DRBC's existing expert reports – including the one commissioned by the DRBC staff itself (Academy of Natural Sciences of Drexel University, or ANSDU) and that of its federal partner, the National Marine Fisheries Service (NMFS) -- for the protection of the critically endangered Atlantic sturgeon of the Delaware River.

In 2018, DRBC commissioned ANSDU to look at the specific dissolved oxygen requirements of resident species of the tidal Delaware River.¹ Among its conclusions for critical dissolved oxygen needs, ANSDU found *"6.3 mg/l or higher is also required by Atlantic Sturgeon which may be found in any zone of the estuary at any time of the year."*²

Similarly, NMFS reviewed the critical habitat needs for the federally-endangered Atlantic sturgeon to identify and protect those areas "on which are found those physical or biological features" that are "essential to the conservation of the species."³ In its final decision in 2017, NMFS promulgated a critical habitat definition that requires dissolved oxygen at or above 6.0 mg/L for juvenile rearing habitat in rivers including the tidal Delaware River.⁴

¹ 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 the Delaware River Basin Commission; November 2018; 51 pp. Available from https://www.nj.gov/drbc/library/documents/Review_DOreq_KeySensSpecies_DelEstuary_ANStoDRBCnov2018.pdf

² IBID, pg. 28

³ 16 U.S.C. §§ 1532(5)(A).

⁴ National Marine Fisheries Service. 2017. Endangered and threatened species; designation of critical habitat for the endangered New York Bight, Chesapeake Bay, Carolina and South Atlantic distinct population segments of Atlantic Sturgeon and the threatened Gulf of Maine distinct population segment. Federal Register 82(158): 39160–39274.

Thus, we see two recent reviews of the literature by fisheries experts reaching nearly identical conclusions: Atlantic sturgeon need between 6.0 and 6.3 mg/L of dissolved oxygen to protect their early life stages from the harmful effects of hypoxia.

Given such consistency in the most recent literature reviews, it is both astonishing and alarming that DRBC has combed through older literature summaries (2001/2003) to find justification to set forth a lower, less-protective 5.0 mg/l dissolved oxygen criterion as “suitable” for Atlantic sturgeon in the draft report. This is particularly problematic because the draft report asserts that it will do **exactly the opposite** of searching for older and less protective values:

“Where possible, preference was given to recent studies. Generally, when reconciling multiple interpretations, the more conservative value was selected.” (pg. 2 of draft DRBC Technical Report)

DRBC’s conclusion that 5.0 mg/l is “suitable” to protect Atlantic sturgeon and other estuary species from lethal and non-lethal impacts of low dissolved oxygen is neither scientific nor defensible. This conclusion indeed threatens to derail the critical restoration of dissolved oxygen in this estuary and the full protection of our ecosystem and our communities, including the critically endangered Atlantic sturgeon.

The substantial scientific literature evaluating the dissolved oxygen requirements for juvenile Atlantic sturgeon clearly and consistently identifies a concentration between 6.0 and 6.3 mg/L as necessary to protect from both reduced survival and sub-lethal impacts due to hypoxia. These concentrations do not represent “optima” for Atlantic sturgeon but simply the consensus from the scientific literature for minimum known and needed protection levels. DRBC’s characterization of the 6.0 to 6.3 mg/L dissolved oxygen concentrations as somehow superfluous or unnecessary for Atlantic sturgeon is a rejection of established science and must not contaminate the current deliberations.

The willingness of DRBC to discard science is deeply disappointing. Despite strong disagreements regarding final decision-making outcomes, in the past the stakeholders have always agreed that DRBC was making best efforts to put forth credible scientific analyses and interpretations thereof to support debate and decision-making. This draft report is contrary to, and undermines, those efforts and respect for DRBC as a fair arbiter of scientific data and information.

The Delaware Riverkeeper Network, Environment New Jersey, Clean Air Council and PennFuture are fully prepared to put forth detailed analysis of the March 2022 Draft Report once there has been agreement on a process for receiving and considering such information that is credible, defensible and scientifically reputable. Until such time, we have no confidence that the information will not be disregarded, or, worse yet, misused to advance damaging and dangerous outcomes for our River, region, communities and aquatic life.

We invite a conversation with any and all Commissioners to discuss this information individually or collectively. To do so, please contact Maya van Rossum, the Delaware Riverkeeper, at 215-369-1188 ext 102 or via email at keepermaya@delawareriverkeeper.org.

While there may be room to disagree on the policy outcomes, we trust that as the leaders of the DRBC you remain dedicated to the values of credible scientific analysis and both legally and scientifically defensible decision-making, and as such will share our concern.

Respectfully submitted,



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