



April 3, 2017

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

Dear Commissioners,

The draft DRBC Resolution regarding fish propagation and dissolved oxygen levels in zones 3, 4 and the upper portion of zone 5 fails to fulfill your legal obligations to protect the Delaware River, to prevent backsliding of water quality protections achieved, and fails to fulfill the requirements of the Clean Water Act anti-degradation program which the resolution suggests you are seeking to carry out on behalf of the watershed states. The proposed Resolution fails to recognize that the “propagation” aquatic life use currently exists in all zones of the Delaware Estuary and that this “propagation” use has been documented for over 20 years. The DRBC staff report referenced in the resolution confirms the existence of propagation but is far from the first demonstration of this use in the estuary zones identified – it, in fact, is the confirming study that the Resolution purports is needed.

The Resolution must be modified to explicitly recognize “propagation” as an Existing Use, and to instruct DRBC staff to immediately begin rulemaking to upgrade the Designated Uses for Zones 3, 4 and River Miles 78.8 to 70.0 of Zone 5 of the Delaware Estuary. In addition, to protect this “propagation” use, the downgraded dissolved oxygen criteria on the books since 1967 must finally be revised upwards, with a minimum interim criterion of 6.0 mg/L and a higher, more fully protective criterion developed once studies are completed.

In March 2013, the Delaware Riverkeeper Network, joined by the Delaware River Shad Fisherman’s Association (DRSFA) and the Lehigh River Stocking Association (LRSA), documented the existence of the “propagation” use in Zones 3, 4, and 5 of the Delaware Estuary via a petition to the DRBC¹. In this petition, the Delaware Riverkeeper Network and its partners presented data from both Public Service Enterprise Group (PSEG) surveys for the years 2002 through 2004 as well as more recent research on Atlantic sturgeon

¹ petition available at www.delawareriverkeeper.org/sites/default/files/Documents/DO_Petition_03-05-2013.pdf

by the State of Delaware, all of which clearly show successful reproduction or “propagation” for Zones 3, 4, and River Miles 78.8 to 70.0 of Zone 5. These combined data, dating back nearly 20 years, demonstrate that the subject zones of the Delaware Estuary have been used by resident and migratory fish for spawning and rearing habitat for many years.

Since 2013, further reviews and studies have confirmed the findings of the Delaware Riverkeeper Network, DRSFA, and LRSA petition. In 2015, a DRBC staff report² reviewed a combination of data submitted as part of the petition along with additional data extending back to the 1980s. This DRBC report likewise found that “propagation” was clearly documented and showed that the “propagation” use extended further back in time, at least into the 1990s. This includes documented spawning by such key species as striped bass, American shad, and the federally endangered Atlantic sturgeon. This DRBC staff report concluded that “moderate to strong reproduction was demonstrated for multiple species in each zone indicating substantial recovery in the “propagation” use for Zones 3, 4, and upper Zone 5.”

Likewise, the State of Delaware and the U.S. Army Corps of Engineers (through its contractors) have collected data since 2013 on the timing and strength of Atlantic sturgeon reproduction in the Delaware Estuary³. These additional studies have consistently documented young-of-year Atlantic sturgeon in the DRBC water quality zones under consideration, thus further establishing that both resident and migratory fish are currently “propagating” in these zones of the Delaware Estuary.

Over the last 20 years, all relevant studies clearly and consistently show that fish (and other aquatic life) are regularly spawning in Zones 3, 4, and River Miles 78.8 to 70.0 of Zone 5 of the Delaware Estuary. No further study is needed to document that the aquatic life uses for these zones of the estuary need to be updated immediately to recognize the consistent results of the last 20 years: the Delaware Estuary’s Existing Use includes “propagation” and the Designated Use of the Estuary should be revised to provide the full 101(a)(2) uses of the Clean Water Act.

This body of research is clear and unequivocal. The Delaware Estuary, including Zones 3, 4, and River Miles 78.8 to 70.0 of Zone 5, is a vital nursery for a host of important resident and migratory species. The time to act is now. DRBC needs to begin rulemaking to first revise the Water Uses to be Protected (i.e., the Designated Uses) for these three zones to include:

- (a) maintenance and propagation of resident fish and other aquatic life
- (b) spawning and nursery habitat for anadromous fish

DRBC likewise needs to begin rulemaking to revise its Stream Quality Objectives (known as water quality criteria under the Clean Water Act). In particular, the current dissolved oxygen Stream Quality Objectives for Zones 3, 4 and River Miles 78.8 to 70.0 of Zone 5 are at or near the lethal limit for species such as Atlantic sturgeon⁴. A failure to initiate rulemaking immediately will ensure that such lethal dissolved oxygen levels not only will occur in the Delaware Estuary in the years that DRBC continues to study the

² DRBC 2015 staff report available at www.nj.gov/drbc/library/documents/ExistingUseRpt_zones3-5_sept2015.pdf

³ many studies have been completed in recent years; representative studies include (i) Hale et al. 2016. *Trans. Am. Fish. Soc.* 145: 1193; and (ii) ERC, Inc. 2016. “Report of sturgeon monitoring and protection during rock removal for the Delaware River main channel deepening project, December 2015 - March 2016. Report to Great Lakes Dredge and Dock, Co., Apr. 26, 2016.

⁴ Secor & Gunderson 1998. *Fishery Bulletin* 96: 603

problem, but will allow backsliding to take place as new industries and/or increased discharges are permitted, and will also cause Pennsylvania, New Jersey, and Delaware to remain in violation of their Clean Water Act obligations.⁵ To the extent DRBC seeks to assert that it is not bound by the mandates of the Clean Water Act, the resolution makes clear that DRBC is being relied upon by the states to achieve their Clean Water Act obligations and as such DRBC must ensure it achieves the anti-degradation obligations of the Clean Water Act if it is to fulfill this aspect of the Resolution.

Lethal dissolved oxygen levels cannot wait 6 years to be revised. Federally endangered Atlantic sturgeon cannot face the threat of direct mortality and thus “take” each and every spawning season for the next 6 years or more while studies are completed. Dissolved oxygen criteria to support the documented “propagation” use need to be immediately revised to prevent such lethal conditions for Atlantic sturgeon and other sensitive species within the Delaware Estuary.

As described in our 2013 petition to the DRBC, three steps are necessary to provide adequate protection in both the short-term and the long-term.

- ✓ First and foremost, the DRBC needs to recognize that “propagation” has already been clearly and consistently documented for Zones 3, 4, and River Miles 78.8 to 70.0 of the Delaware Estuary, and must move to rulemaking to revise this Designated Use.
- ✓ Second, an interim dissolved oxygen standard that is minimally protective of the propagation use needs to be adopted, with most recent work indicating that an instantaneous 5.0 mg/L criterion is the absolute minimum that should be considered as the dissolved oxygen standard to protect spawning and rearing of these habitats⁶. In fact, given that 5.0 mg/L is the absolutely minimum, the Delaware Riverkeeper Network urges a standard of 6.0 mg/L in order to ensure full protection during the intervening years of study and rulemaking.
- ✓ Third, a final and fully protective dissolved oxygen standard needs to be evaluated and adopted through water quality modeling studies to identify what dissolved oxygen levels in the long-term will protect all species for this vital estuarine environment.

DRBC cannot argue once again that it simply needs more time to study the problem. Discussions first began at DRBC’s Water Quality Advisory Committee (WQAC) in 2008 and 2009 about the evidence of “propagation” throughout the estuary. During these discussions, the WQAC recognized the simplest and easiest way to protect this “propagation” use was to upgrade the dissolved oxygen criteria to be protective of the full Clean Water Act 101(a)(2) aquatic life uses. DRBC likewise began its modeling efforts for

⁵ In light of the evidence demonstrating fish propagation on the mainstem Delaware River, EPA regulations create clear mandatory obligations on Pennsylvania, New Jersey, and Delaware to ensure that water quality standards are protecting fish propagation. EPA’s regulatory mandates provides: “where existing water quality standards specify designated uses less than those which are presently being attained, the State **shall** revise its standards to reflect the uses actually being attained.” 40 C.F.R. § 131.10(i) (emphasis added). Furthermore, according to EPA regulation, States **must** “adopt those water quality criteria that protect the designated use.” 40 C.F.R. § 131.11(a) (emphasis added).

⁶ see Atlantic States Marine Fisheries Commission recommendations for Alewife and Blueback Herring (ASMFC 2009. Amendment 2 to the Interstate Fishery Management Plan For Shad and River Herring (River Herring Management); see also updated Dissolved Oxygen criteria for Pennsylvania streams & lakes (25 Pa. Code § 93, Table 3); it is not clear, however, that a 5 mg/L minimum dissolved oxygen standard is fully protective of all species, particularly the highly sensitive Atlantic sturgeon whose consistent survival under high temperatures has only been confirmed at or above 6 mg/L dissolved oxygen (Secor & Gunderson 1998. Fishery Bulletin 96: 603)

dissolved oxygen in 2012 when it initiated an Expert Panel to oversee the development of a Delaware Estuary eutrophication model. In 2013 the Delaware Riverkeeper Network and our partners submitted a petition with supporting data to document the scientific proof of propagation existing in the estuary. Nearly a decade has passed, and the water quality criteria remain the same.

We would also be remiss not to note that it was disturbing to see DRBC so blatantly prioritize the regulated community as a stakeholder of concern in this process. We note that you did not single out fishers; recreation, ecotourism or fishing industries; subsistence anglers or any of the others that depend upon or appreciate healthy fish populations in our Delaware River in your statement about stakeholders. DRBC is clearly, and inappropriately, allowing its obligations, priorities and proposal to be clouded (if not dictated) by what the regulated community wants rather than what the Delaware River community wants and needs.

There is no question that the fish are here in the estuary each and every spring and summer, spawning in all zones of the estuary and utilizing the Delaware River as nursery habitat. But these fish need adequate dissolved oxygen to survive and successfully reproduce. These species, particularly the endangered Atlantic sturgeon, cannot wait another 6 years to begin identifying ways to improve their survival. That protection needs to occur now, with an immediate initiation of rulemaking to revise the Designated Uses (“Water Uses to be Protected”) and an initial revision of the dissolved oxygen criterion to a 6 mg/L instantaneous minimum. After adoption of these revised standards, DRBC’s efforts for modeling nutrients and dissolved oxygen can then provide a final standard at or above the 6 mg/L that is both attainable and fully protective of the rich and sensitive diversity of the Delaware Estuary’s living resources.

Respectfully,

A handwritten signature in blue ink that reads "Maya K. van Rossum". The signature is written in a cursive style with a long horizontal line extending to the right.

Maya K. van Rossum
the Delaware Riverkeeper