

Pennsylvania Fish and Boat Commission commentary relative to RFAC's 2017 General Study  
Work Plan and Salinity Study Statement

04/03/19

The Pennsylvania Fish and Boat Commission (PFBC) is pleased to have the Delaware River Basin Commission (DRBC), Regulated Flow Advisory Committee (RFAC) and the Parties to the 1954 U.S. Supreme Court Decree, recognize and actively pursue, investigations of critical informational needs of ecological processes and aquatic communities, related to the flow management within the Delaware River Basin. These comments are based on proposed study materials (Studies) provided by RFAC<sup>1</sup>.

We are concerned traditional flow management goals minimize the importance of the biologically rich and diverse aquatic communities throughout the Delaware River Basin. Simply stated, aquatic species require water resources to maintain suitable habitat for their existence. As aquatic habitats are continually manipulated, potential loss of suitable habitat exists, precluding any possibility for their improvement. The PFBC highly recommends RFAC convene and embrace resource agencies and NGOs for sound scientific evaluation of the Studies' impact to the sustainability of the aquatic community. To this end, the PFBC offers our fishery resource expertise to assist in the interpretation of Studies' findings. Understanding of the Delaware River Basin aquatic resource needs could be further improved through the inclusion of the Delaware River Basin Fish and Wildlife Management Cooperative, of which PFBC is a member. Regardless of the entity incorporating aquatic resource needs into flow management discussions, consideration for the ecology of the basin is of paramount importance.

As a resource agency, the PFBC has a mandated obligation for stewardship of the Commonwealth's aquatic resources. Specifically, listed endangered and threatened species receive priority consideration in addition to economically or recreationally important fishery resources. Both the Atlantic and Shortnose sturgeons are Federally and state listed endangered species; furthermore, both use the tidal upper Delaware Estuary freshwater reaches as critical spawning and nursery grounds. The potential detachment of New York City upper basin water supply reservoirs from salt front management during droughts is of critical importance to PFBC. Alternative flow objectives, particularly during drought emergency when water is most needed, could profoundly impact these species ability for survival. Other migratory and resident species, such as Striped Bass, Alewife, Blueback Herring and American Shad, also utilize upper estuarine habitats for spawning and nursery grounds. We are highly encouraged by the recovering aquatic communities in the upper Delaware Estuary, which we view a significant biological response to water quality improvements in recent years. Yet, altering salt front management may preclude that continued improvement.

Salinity and its management are of key concern in the upper Delaware Estuary, but there are other water quality parameters of similar importance that should not be overlooked within

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<sup>1</sup> [https://www.state.nj.us/drbc/about/advisory/RFAC\\_meeting\\_04092019.html](https://www.state.nj.us/drbc/about/advisory/RFAC_meeting_04092019.html)

the upper Delaware Estuary and throughout the Basin. A plethora of modeling exercises allow insight into flow management decisions. Yet, there is a distinct lack of any model linkage between physical water quality parameters and suitable aquatic habitat. The exception is the Decision Support System (DSS: Bovee *et al.*<sup>2</sup>), which links flow and water temperature to available species-specific habitats through employment of habitat suitability curves. Thus, as water managers continue to evaluate alternative programs, impacts to the aquatic community, at least in terms of habitat availability, can be easily quantified and visualized in the upper Basin. The PFBC advocates the extension of the DSS, or similar concepts, downriver to encompass the entire main stem Delaware River/upper Estuary.

In conclusion, we strongly urge RFAC and the Parties to the Decree consider the Basin's aquatic needs in a more holistic approach, as up river decisions directly affect downriver resources and interests. Thank you for the opportunity for commentary input.

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<sup>2</sup> Bovee, K.D., T.J. Waddle, J. Bartholow, L. Burris. 2007. A decision support framework for water management in the upper Delaware River. U.S. geological Survey Open-file Report 2007-1172, 122 p.