

Delaware River Basin Commission

Resolution 2017-4

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Water Quality Advisory Committee
West Trenton, NJ
March 29, 2018



Resolution 2017-4

Resolution to Review the Designated Aquatic Life Uses and Associated Water Quality Criteria for Zones 3, 4 and a Portion of Zone 5 of the Delaware Estuary

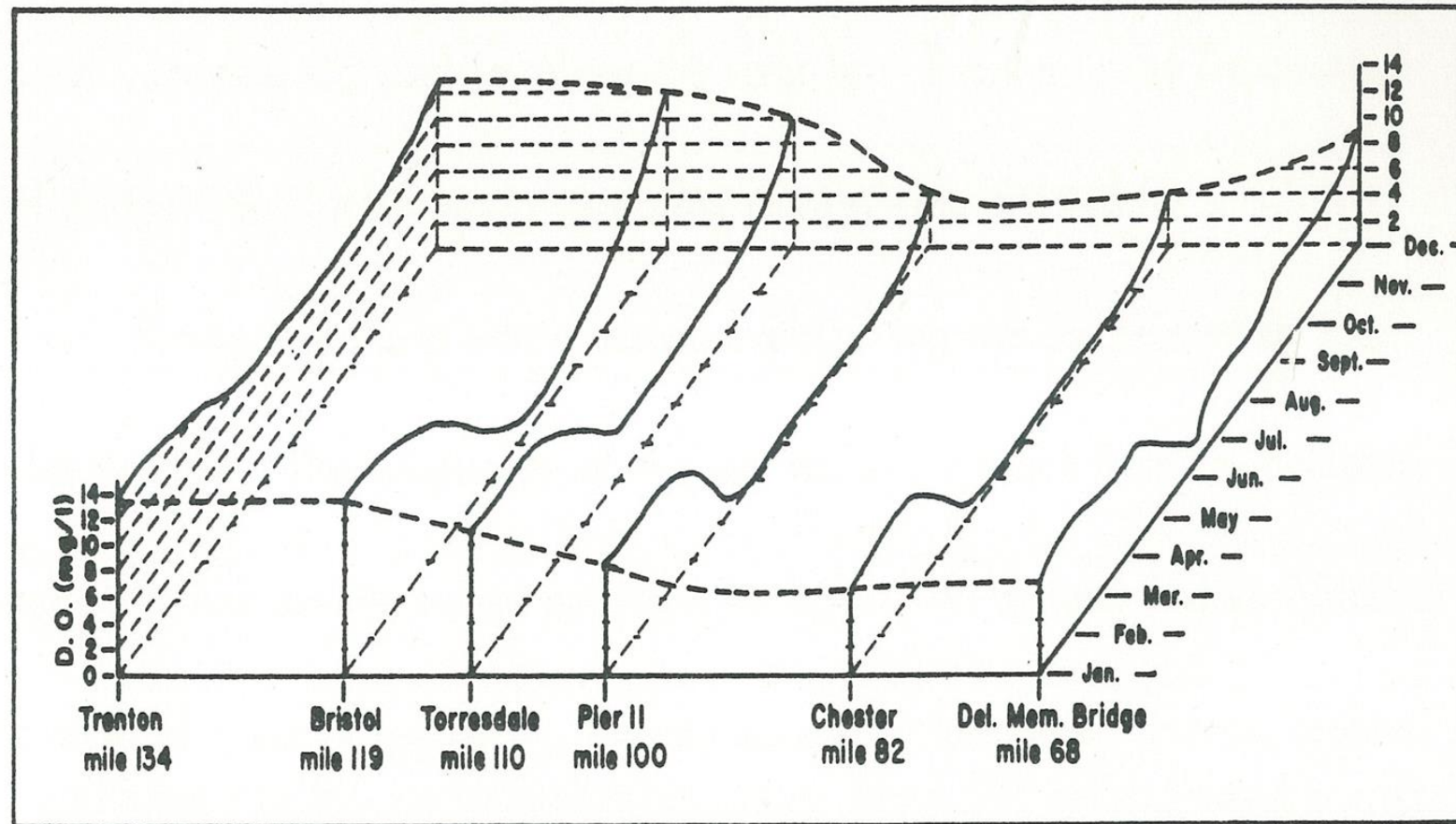
Presentation Outline

- Background

- Resolution 2017 – 4
 - Elements

- On-going projects

Mean Monthly D.O. - 1963



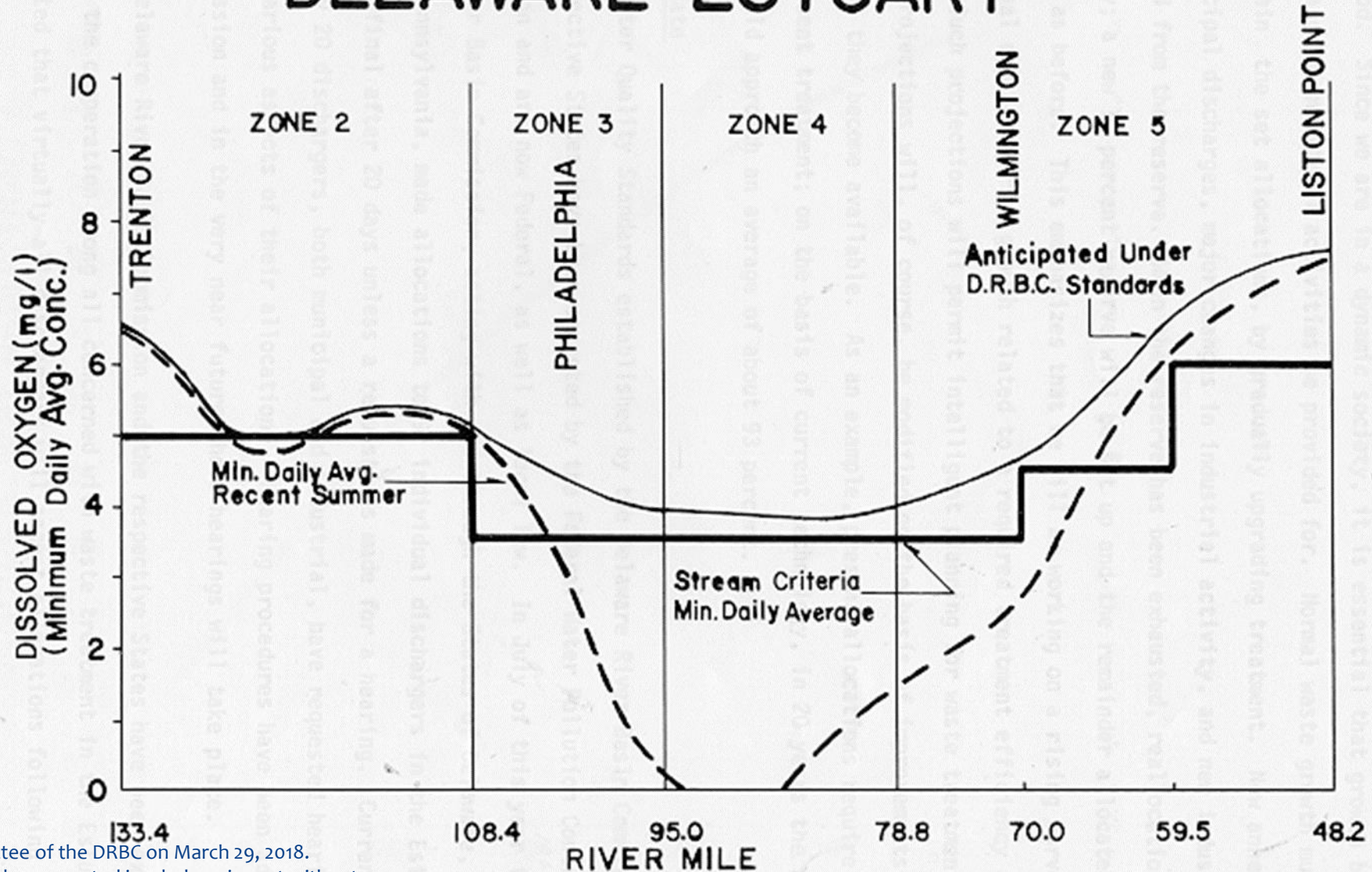
Current Designated Aquatic Life Uses in DRBC Regulations

Zone	River Mile	Aquatic Life Use	Diadromous Fishes
2	108.4 – 133.4	maintenance and propagation of resident fish and other aquatic life	passage of anadromous fish
3	95 – 108.4	maintenance of resident fish and other aquatic life	passage of anadromous fish
4	78.8 – 95	maintenance of resident fish and other aquatic life	passage of anadromous fish
5	70 – 78.8	maintenance of resident fish and other aquatic life	passage of anadromous fish
	48.2 – 70	maintenance and propagation of resident fish and other aquatic life	passage of anadromous fish
6	0 – 48.2	maintenance and propagation of resident fish and other aquatic life maintenance and propagation of shellfish	passage of anadromous fish

Presented to an advisory committee of the DRBC on March 29, 2018.
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DRBC, 2015. Existing Use Evaluation for Zones 3, 4 and 5 of the Delaware Estuary Based upon spawning and rearing of resident and anadromous fish.

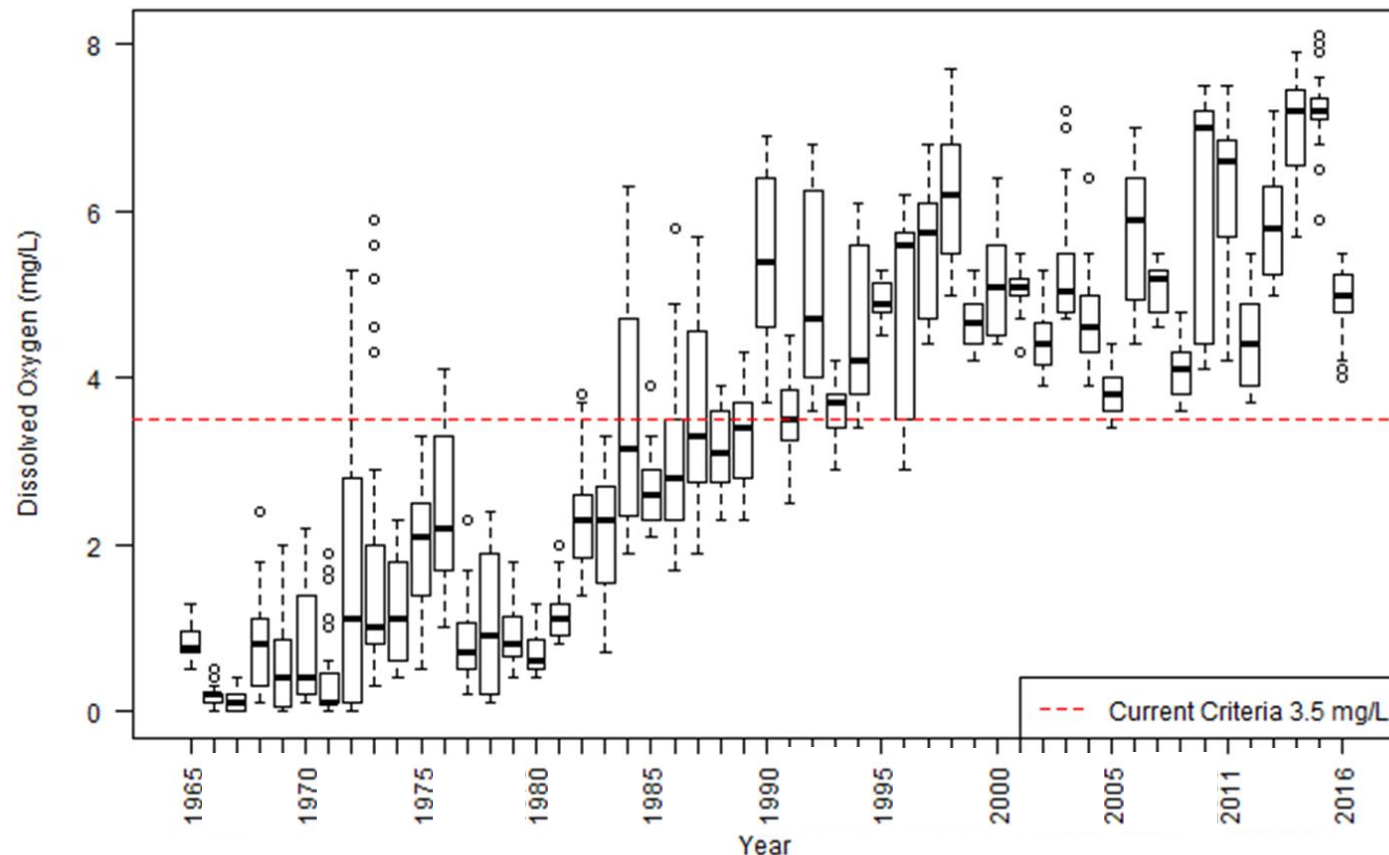
DISSOLVED OXYGEN PROFILES DELAWARE ESTUARY



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What's Next?

July Dissolved Oxygen Daily Mean Values
USGS 01467200 Delaware R at Ben Franklin Bridge at Philadelphia



Daily Mean Dissolved Oxygen in July
USGS 01467200 Delaware R. at Ben Franklin Bridge at Philadelphia

What should the water quality standards be for the WQ Zones in the Delaware River Estuary?

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- Draft Resolution was published on February 23, 2017
- Special Public Hearing took place on April 6, 2017
- Comment period ended on April 13, 2017
- Response to comments document was published:
http://www.nj.gov/drbc/library/documents/Res_EstuaryAquaticLifeUses_CommentResponseDoc_2017.pdf
- Resolution 2017-4 passed on September 13, 2017
http://www.nj.gov/drbc/library/documents/Res2017-04_EstuaryExistingUse.pdf

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- ❑ Recognizes that evidence supports further study on the inclusion of propagation as a designated use in Zones 3, 4 and 5.
- ❑ Provides for studies to be undertaken in consultation with co-regulators and dischargers.
- ❑ Directs the Executive Director to initiate DRBC rulemaking to revise the aquatic life uses and criteria consistent with the results of the identified studies and the objectives and goals of the Clean Water Act.

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- ❑ Significant water quality improvement since 1967
- ❑ Shared achievement
- ❑ Shared goals with co-regulator states and the USEPA:
 - Improved conditions and uses should be protected.
 - Water quality improvement must be continued.
 - WQS should be updated as soon as possible and practicable.
 - Early actions should be promoted and implemented.
 - Stakeholders should be consulted in the DRBC rulemaking process and implementing the proposed WQS.

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□ Actions identified in the Resolution:

- Input from expert panels on eutrophication modeling and the DO requirements of aquatic species.
- Additional field studies on the occurrence, spatial and temporal distribution of the life stages of Delaware Estuary fish species.
- Input from consultations pursuant to the ESA concerning the dissolved oxygen and other water quality criteria needed to support endangered species.
- Development and calibration of a eutrophication model for the Delaware Estuary and Bay.

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□ Actions identified in the Resolution (cont.):

- Determination of nutrient loading from point and non-point sources that can be discharged while maintaining levels of DO that are protective of key aquatic species.
- Identification and evaluation of the capital and operating costs of optimizing best available technology or applying innovative technologies capable of achieving higher levels of DO.
- An evaluation of the physical, chemical, biological, social and economic factors affecting the attainment of uses.
- Issuance of a final report after soliciting input from the WQAC other stakeholders.

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□ Additional elements in the Resolution

- An early action workgroup of co-regulators to identify and encourage the implementation of practicable early actions in the near-term to reduce the loading of ammonia and other oxygen-depleting pollutants to the Estuary.
- Recognition of PWD's Delaware Estuary DO Improvement Partnership
- Recognition of valuable contributions of the WQAC

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□ Schedule for Analysis and Rulemaking:

- Directs the Executive Director to prepare a schedule to complete the draft attainability assessment within 3.5 years (March 2021).
- Commission seeks to issue a final rule and an implementation strategy within 6 years.

□ Goal: Determine the designated use that is attainable for the protection of aquatic life and associated WQ criteria for Zones 3, 4 and upper Zone 5 for Aquatic Life.

Ongoing & Planned Activities

- ❑ Development of a Eutrophication Model for the Estuary
 - Formed a Model Expert Panel and engaged modeling consultant (LimnoTech)
- ❑ Intensive monitoring for mainstem and 24 tributaries initiated in 2018
- ❑ Tiered monitoring for 71 point sources in 2018 and 2019
- ❑ Issued RFP for engineering/technical analysis - Feb. 2018
 - Social and economic analysis included in recently awarded ANSD grant.
- ❑ Convened early action co-regulator workgroup
- ❑ Initiated review of DO requirements of key fish species with ANSD
- ❑ Collaborated with PSEG on 2018 ichthyoplankton surveys of Estuary and Bay
- ❑ ESA consultation with NMFS – initiated December 2016