

Delaware River Basin Commission

Update on Eutrophication Model Development

Water Quality Advisory Committee

West Trenton, NJ

May 14, 2019

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Presented to an advisory committee of the DRBC on May 14, 2019. Contents should not be published or re-posted in whole or in part without permission of DRBC.



Reports posted since the July 2018 WQAC meeting

- * Report to DRBC on concentrations of nutrients and chlorophyll a and rates of respiration and primary production in samples from Delaware Bay collected in May and July 2014: https://www.nj.gov/drbc/library/documents/nutrients/nutrients-chlor-a_DelawareBay_UMd2015_rev012519.pdf
- * Report to DRBC on concentrations of nutrients and chlorophyll a and rates of respiration and primary production in samples from the Delaware River collected in May and July 2018: https://www.nj.gov/drbc/library/documents/nutrients/nutrients-chlor-a_DelawareEstuary_UMd_feb2019.pdf
- * A Review of Dissolved Oxygen Requirements for Key Sensitive Species in the Delaware Estuary:
https://www.nj.gov/drbc/library/documents/Review_DOreq_KeySensSpecies_DelEstuary_ANSt_oDRBCnov2018.pdf

Modifications to Point Dischargers Data Collection Effort

- * E-mail notifications sent out on March 27, 2019 followed by letters
 - To discontinue analysis of the following parameters:
 - 20-day Carbonaceous BOD (CBOD20) standard method
 - 20-day Carbonaceous BOD (CBOD20) amended method

 - To add following analytical parameters:
 - Dissolved Organic Carbon (DOC)
 - 5-day Carbonaceous BOD (CBOD5)

DRBC's Monitoring Effort (2019)

- * Tributary Nutrient Monitoring – 25 tributaries, 1x per month
- * Delaware River at Trenton and Schuylkill at Philadelphia - 2x per month
- * Light extinction monitoring, 3 events, boat based, many locations (~30 per event)
- * Primary Productivity monitoring, upper estuary, 2 events, 15 sites, top & bottom
- * Delaware Estuary Water Quality (Boat Run) including added algal speciation

Hydrodynamic – Eutrophication Model

- * Meeting of Model Expert Panel with DRBC Staff: Report to WQAC
https://www.nj.gov/drbc/library/documents/WQAC/032019/ExpertPanel_WQACreport.pdf

- * Perform diagnostic simulations
 - for EFDC
 - Cross-checking of EFDC-WASP8 linkage
 - Being identified the needs for code enhancement

- * Develop and refine model inputs to WASP8

At Future WQAC meetings

- * Overall Designated Use Project schedule (wet year)
- * Formation of workgroup/subcommittee
 - Allocation Policies and Procedures
 - Ammonia toxicity by individual dischargers (mixing zone evaluations)
 - Methods to estimate ultimate CBOD for major point and non-point sources

Question?



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