

# Joint STAC-MACC Meeting

May 31, 2018

## Upper Estuary Primary Productivity Sampling & Ichthyoplankton Augmentation

### Delaware River Basin Commission

West Trenton, NJ

May 31, 2018

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**Delaware River Basin Commission**

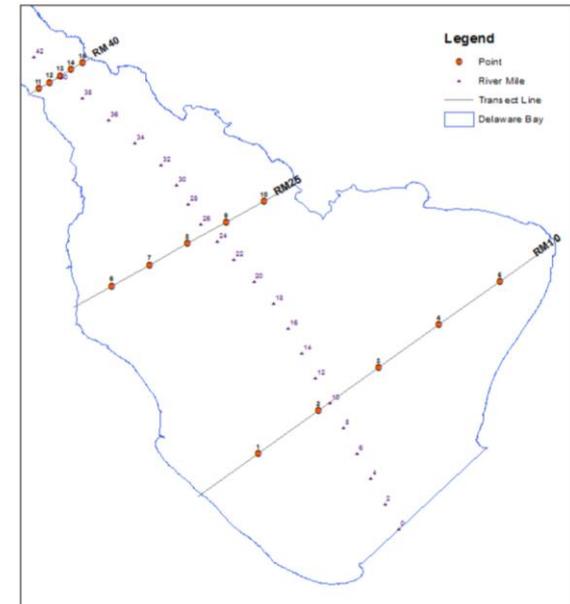
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Presented to the joint STAC-MACC meeting on May 31, 2018.  
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# Upper Estuary Primary Productivity Sampling

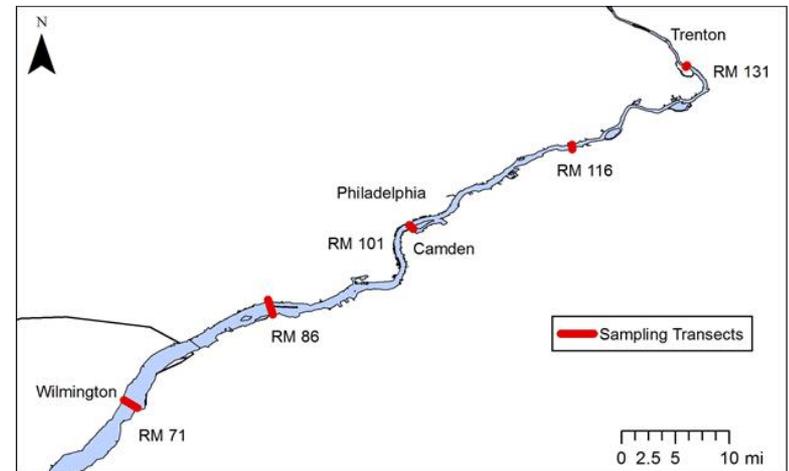
- \* Background
  - \* Eutrophication expert panel requested initiation of primary productivity measurements in Delaware estuary
  - \* In 2014, DRBC collected primary productivity samples from lower estuary (RM 10 – 55)
  - \* After reviewing data, expert panel suggested collecting additional samples in upper portion of estuary
    - \* Zone 2 through upper portion of Zone 5



2014 Primary Productivity Sampling Locations

# Upper Estuary Primary Productivity Sampling

- \* 2018 Sampling
  - \* Two sampling events targeting most productive times of year
    - \* May and July
  - \* Five transects ranging from RM 71 to 131
  - \* Six samples per transect
    - \* Three locations per transect
      - \* One in channel and one on each side
    - \* Surface and bottom sample at each location



2018 Primary Productivity Sampling Locations

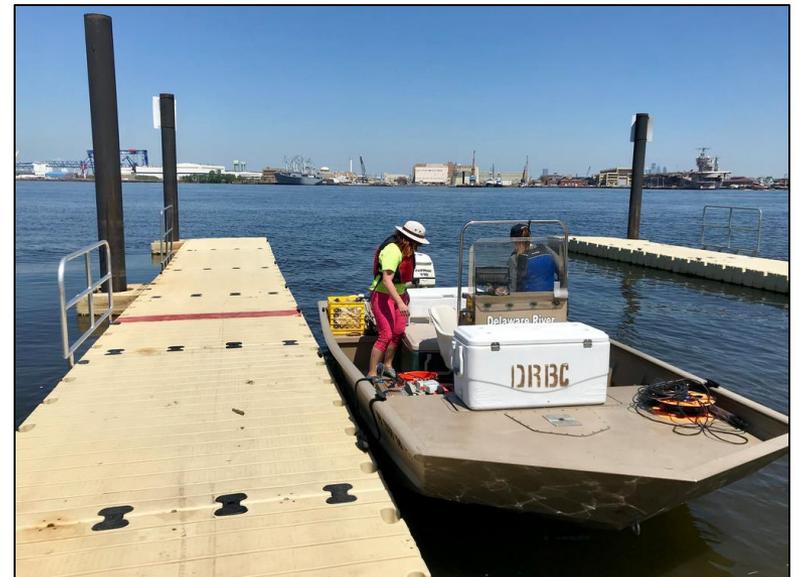
# Upper Estuary Primary Productivity Sampling

- \* Sampling Process
  - \* Grab samples collected with Niskin bottle and discharged into cubetainers
  - \* Samples sent to Tom Fisher at UMCES for ex-situ incubations to calculate productivity and respiration
    - \* Also nutrients and chlorophyll a
  - \* Additional parameters collected include water temperature, dissolved oxygen, conductivity, and light transmission (PAR).



# Upper Estuary Primary Productivity Sampling

- \* Future work
  - \* May sampling has been completed
  - \* Next sampling event is scheduled for early July
  - \* DRBC may collect primary productivity samples in 2019 as well
- \* Questions?



# Ichthyoplankton Augmentation

- \* In 2018, PSEG will collect ichthyoplankton samples from the Delaware estuary
  - \* Twice monthly, April through July
- \* 90 samples collected during each event using a towed plankton net
- \* DRBC identified an area of interest that we felt was being under sampled
  - \* Roughly C&D Canal to PA/DE Line
- \* DRBC provided funds to collect 3 additional samples per event in this area
- \* 2018 sampling is underway
  - \* Only one sample collected in April due to unsafe conditions
  - \* Two samples collected in May

