

State of the Monitoring Update from MAC and DRBC



Delaware River Basin Commission

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Joint STAC / MAC meeting

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On the Horizon

- Estuary health;
- Natural gas (?);
- Effective monitoring coordination.

Administrative

- Updated MAC resolution in June:
 - Emphasize support to PDE and STAC;
 - Emphasize coordination role of the MAC;
 - Update membership.

Estuary Health: Impacts of Nutrients, Dissolved Oxygen, other stressors

- Multiple drivers converging on DO and nutrients;
 - Nutrient Criteria Development Plan
 - Riverkeeper Petition
 - WQAC Resolution - *within one year the DRBC will prepare a description of existing aquatic life uses for a Finding of Existing Uses*
 - STAC DO brief
- What does a healthy estuary mean?
- Enhanced estuary monitoring;
- Follow-up studies related to toxics:
 - Copper study;
 - PAHs;
 - Ambient toxicity;
 - Emerging Contaminants.

Natural Gas Monitoring

- Effort now for natural gas baseline (pre development);
 - Conductivity;
 - Baseline biological monitoring (Haas funded);
 - Hydraulic fracturing aqueous waste parameters (archived and new samples);
 - Baseline radiochemistry (WPF funded);
 - Mayfly toxicity test development (Stroud);
- If NG development commences -> expanded monitoring effort;
 - Regional;
 - Scalable;
 - Plus groundwater;
 - Plus real-time capability.

Focus on *Cooperative* Monitoring

- Ongoing long term cooperation with NPS for Scenic Rivers Monitoring;
- Mussel survey, non-tidal Lower Delaware (USGS cooperation);
- Young-of-year shad survey (PAFBC, NJ, NY, DRBC, USFW, NMFS, NPS, City of Philadelphia);
- Assisted with PA periphyton assessment;
- Assisting EPA with NRSA sites in PA, and NJ with NRSA sites on the Delaware River;
- Adding air temperature to existing NG baseline locations to support EPA's climate change Regional Monitoring Network (no cost);
- Test deployment of oil sheen sensor with USGS, GE, and Local Area Committee (no cost);
- Adding *Vibrio* sample collection to the Boat Run to support NOAA effort to develop a predictive model (no cost);
- Participating in a PWD dye study targeted for this summer (applied for funds for equipment & labor);
- Worked with PADEP and USGS-NJ to scope out NG baseline radiochemistry monitoring;
- Scoping participation for RARE nutrient monitoring in estuary;
- Cooperative monitoring efforts with local Universities:
 - University of Delaware (I-131 and NSF cruises);
 - Rutgers University (air monitoring network, deploy estuary DO loggers);
 - Temple University (SE PA tribs for PPCPs, PA Sea Grant);
- Cooperative marsh coring project with UDel, ANS-Drexel and DNREC.