State of the Monitoring
Update from MAC and DRBC

Joint STAC / MAC meeting
Heinz Tinicum National Wildlife Refuge
March 5, 2014
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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.