Chesapeake Bay Program
Science. Restoration. Partnership.

SCIENCE NEEDS
OF THE
WATER-QUALITY IMPLEMENTATION GOAL TEAM

WQ GIT meeting

April 9, 2018

Scientific, Technical Assessment, and Reporting Team

Presenters: Scott Phillips and Peter Tango (STAR)

SCIENCE NEEDS HAVE INCREASED FOR THE WATERSHED AGREEMENT

- 10 goals, 31 outcomes
- Increasing needs
- Addressing needs (TODAY)
  - Dialogue
  - Priorities
  - Build capacity
    - Engage more science providers
    - RFPs, contractors
    - Evolve existing efforts

CHESAPEAKE SCIENCE SUPPORT

GOAL IMPLEMENTATION TEAMS: SCIENCE NEEDS

FISHERIES | HABITAT | WATER QUALITY | HEALTHY WATERSHEDS | STEWARDSHIP | LEADERSHIP

STAC: Science Advisors

- GUIDANCE
- REVIEW
- ADVICE ON PROVIDERS

STAR: Science Coordination

- MONITORING
- DATA INTEGRITY
- STATUS AND TRENDS
- EXPLAIN AND PREDICT CHANGE
- MODELING
- CLIMATE CHANGE
- INFORMATION AND GIS SUPPORT
- SYNTHESIZE AND INFORM

Science Providers

CBP OFFICE | FEDERAL | STATE | LOCAL | ACADEMIC | NGOs

WATER QUALITY GIT OUTCOMES

TMDLs

-Assess progress (2019-2025)

-Climate change impacts

Attainment & Monitoring

-Tidal Standards

-Watershed conditions

Forest Buffers

-Implementation

Toxic Contaminant Goal

Policy and Prevention

-PCBs sources, transport, reductions

Research

-Human consumption (PCBs and Hg)

-Chemicals of concern

-Urban, ag, WWTP

STATUS OF CURRENT EFFORTS: UPDATES OF 2016-17 ACTIVITIES

WIPs Outcome: **actions mostly complete**

- Phase 6 model
- Land Cover
- BMPs
- Supporting WIP development

Attainment and Monitoring Outcome: Complete in 2018

- Attainment techniques and updates
- Explaining trends
  - Synthesis products

STATUS OF CURRENT EFFORTS: UPDATES OF 2016-17 ACTIVITIES

- Toxic Contaminant Policy and Prevention: Progressing
  - PCBs story maps,
  - Indicator updates
  - Source tracking

- Toxic Contaminant Research: Varied progress
  - Mercury summary: lacking
  - Effects of contaminants on fish and wildlife
  - Sources and occurrence
  - Relative Risk: progress on co-benefits but lacking on approach
  - Emerging issues: Microplactics (STAC)

POTENTIAL WQ GOAL SCIENCE NEEDS, 2018-2019: DISCUSSION

WIP Outcome

- Support for WIPs: Scenarios and progress
- BMP verification program implementation, efficiencies
- Climate change and climate resilient BMPs
- Optimization system (BMP co-benefits?)

Attainment and Monitoring Outcome

- Monitoring: nontidal and tidal networks, mapping of soil P conditions, manure data, Land cover updates
- Improved techniques to assess attainment
- Explain trends in the watershed and estuary (implications for milestones)
- Sediment and benthic conditions

POTENTIAL TOXIC CONTAMINANTS GOAL NEEDS, 2018-19

Policy and Prevention

- PCBs: Regional modeling
- Storm water BMP removal effectiveness
- Monitoring in fish, water, sediment

Research

- Mercury synthesis (?) to develop policy and prevention options
- Impacts of EDCs on aquatic life
- Source sectors: sources, occurrence, effects in ag and urban areas
- Risk Assessment: source sector approach?
- Co-benefits of nutrient, sediment, and toxic contaminant reductions

SETTING PRIORITIES: CO-BENEFITS OF OUTCOMES

- **Outcomes in WIPs**
- **MB has identified**

Fish and Habitat

- Brook Trout
- Fish Habitat
- Stream Health
- Wetlands
- Forest Buffer
- Tree Canopy
- SAV

Water Quality

- Toxic contaminants

Healthy Watersheds

Stewardship

- Protected Lands
- Public Access

Climate Resiliency

- BMPs

NEXT STEPS AND WAYS TO ADDRESS

- Further identify priority topics: Water Quality , Toxic Contaminants, Forest Buffers
  - Which on-going efforts need to continue?
  - New efforts
  - Co-benefits
- Interact with Science Providers
  - CBP office: modeling team, monitoring team, land change team
  - Federal agencies
  - States
  - Academic
- Assess additional funding opportunities
  - Grants and develop RFPs Topics
  - GIT funding