Chesapeake Bay Program
Science. Restoration. Partnership.

MODELING NEEDS
OF THE
GOAL IMPLEMENTATION TEAMS

Modeling WG Call

April 11, 2018

Scientific, Technical Assessment, and Reporting Team

Presenter: Scott Phillips (STAR co-chair)

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 GOAL: 2018-19 NEEDS

TMDL outcomes

- Develop WIPs
- Assess progress (2019-2025)
- Climate change impacts
- Optimization

Attainment & Monitoring

- Standards
- Explain watershed and estuary trends

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

Toxic Contaminants

- PCBs regional issues
- Urban, ag, WWTP

Healthy Watersheds

Stewardship

- Protected Lands
- Public Access

Climate Resiliency

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

FISHERIES AND HABITAT: INTER-RELATED MODELING ISSUES

Fish Habitat

- Habitat types
- Land change and climate

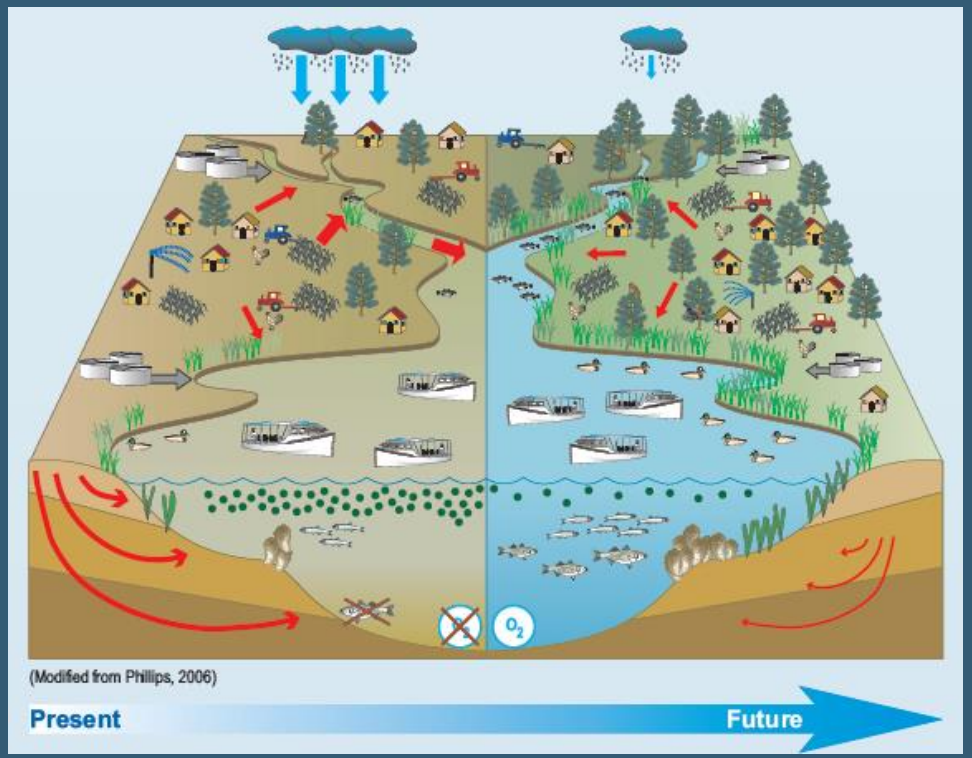
SAV

Stream Health

- Sediment sources
- IBI and benthic condition

Brook Trout

- Stream temp & climate change



HEALTHY WATERSHEDS AND STEWARDSHIP

Land protection

Healthy Watersheds

- Growth scenarios and vulnerability
- Development, energy, climate change

SUGGESTED NEXT STEPS

- Consider:
  - Amount of support for WIPs and progress
  - Address selected outcomes with "co-benefits"
- Approaches to build capacity in modeling
  - Modeling Team take on selected co-benefits
  - Establish Living Resources Team in Modeling WG
    - Additional partners modeling efforts
  - RFPs and GIT funding for gaps