Chesapeake Bay Program
Science. Restoration. Partnership.

Brook Trout Outcome

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Through the Chesapeake Bay Watershed Agreement*, the Chesapeake Bay Program has committed to…*

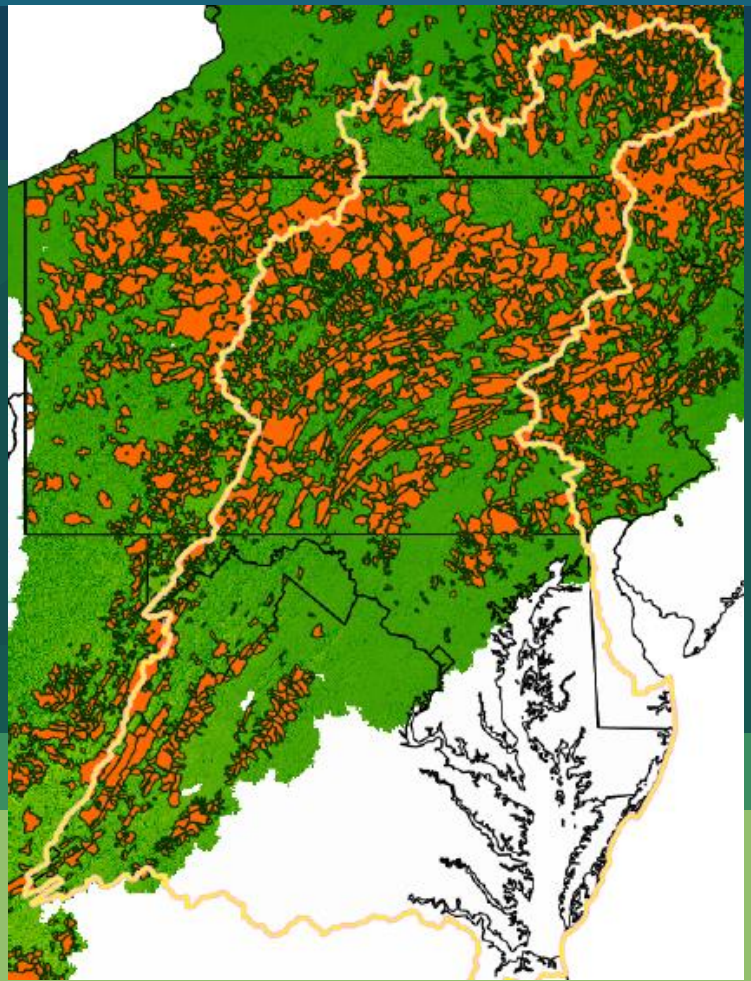
Goal: Brook Trout Outcome

Outcome: *Restore and sustain naturally reproducing Brook Trout populations in Chesapeake Bay headwater streams, with an eight percent increase in occupied habitat by 2025.*

Occupied Habitat:

Baseline: EBTJV 2015 assessment estimated 13,500 sq. km of allopatric (Brook Trout only) occupied habitat bay wide.

Outcome target: Increase by 1,100 sq. km for a total of 14,600 sq km by 2025.



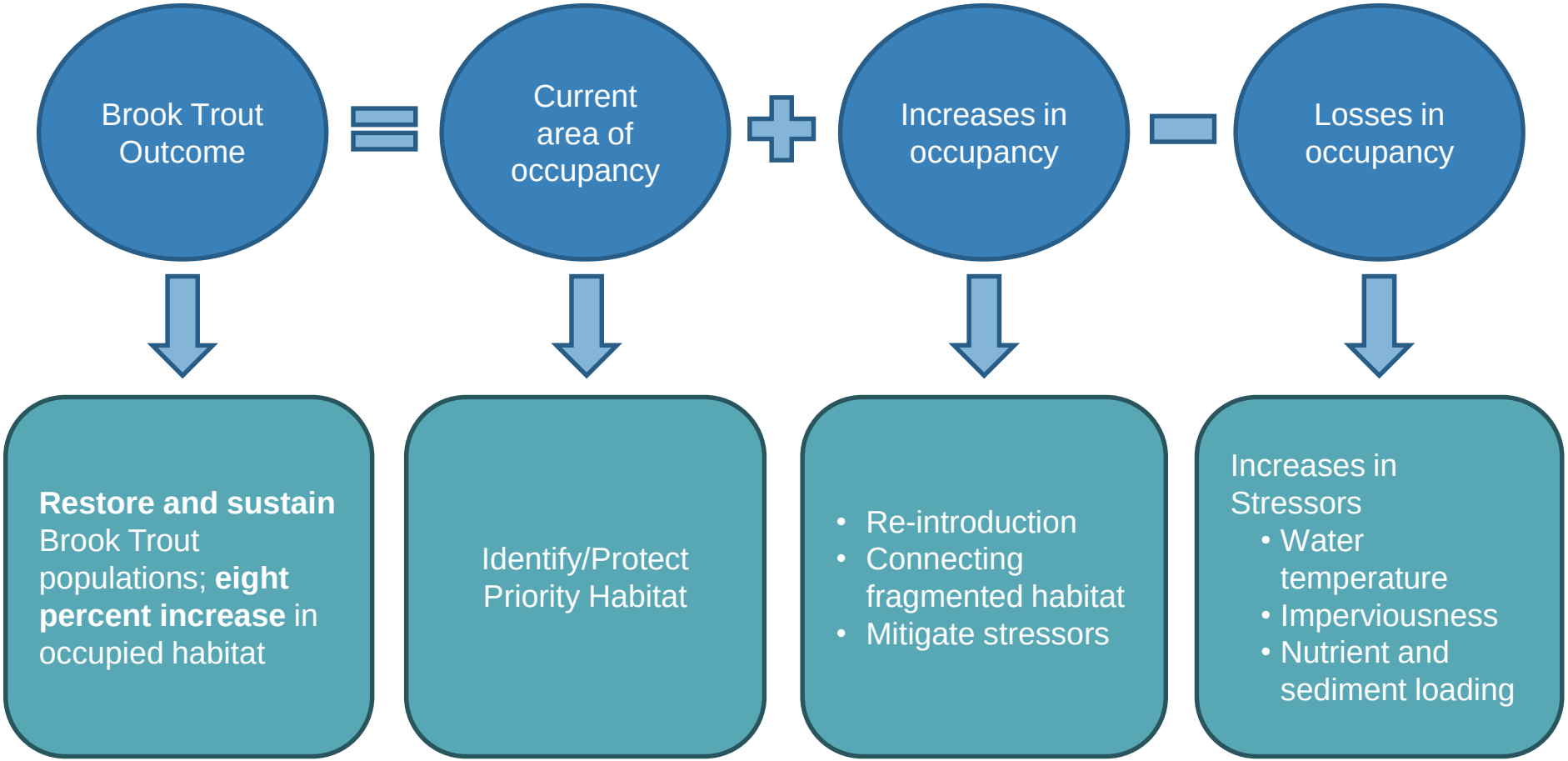
What We Want

Dedicated Staff/Team Members to be more engaged and invested in the Outcome.

1

Setting the Stage:

What are our assumptions?


Brook Trout Outcome
=
Current area of occupancy
+
Increases in occupancy
–
Losses in occupancy
Restore and sustain Brook Trout populations; eight percent increase in occupied habitat
Identify/Protect Priority Habitat
• Re-introduction
• Connecting fragmented habitat
• Mitigate stressors
Increases in Stressors
• Water temperature
• Imperviousness
• Nutrient and sediment loading

Logic Behind Our Outcome

Following the Decision Framework:

Factors

- Scientific/Technical Understanding
- Partner Participation
- Agency Engagement

Current Efforts and Gaps

- Driver/stressor impacts
  - Climate/Land Use
  - Temperature
  - Sediment
  - Invasives/exotics
- Monitoring support
- Landowner participation

Management Approaches

- Identify/communicate priority (best) areas
- Emerging stressors/restoration priorities
- Refine/apply decision support tools (DST)
- Continue/expand monitoring

2

Progress:

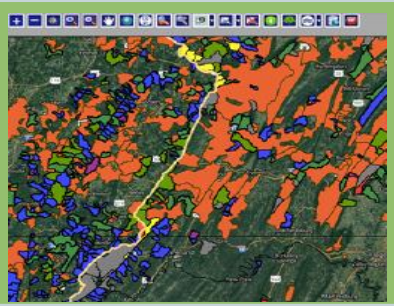
Are we doing what we said we would do?

What is our progress?

- 9/13 action items completed
- Identified "Best of the Best" Brook Trout patches for conservation/ restoration

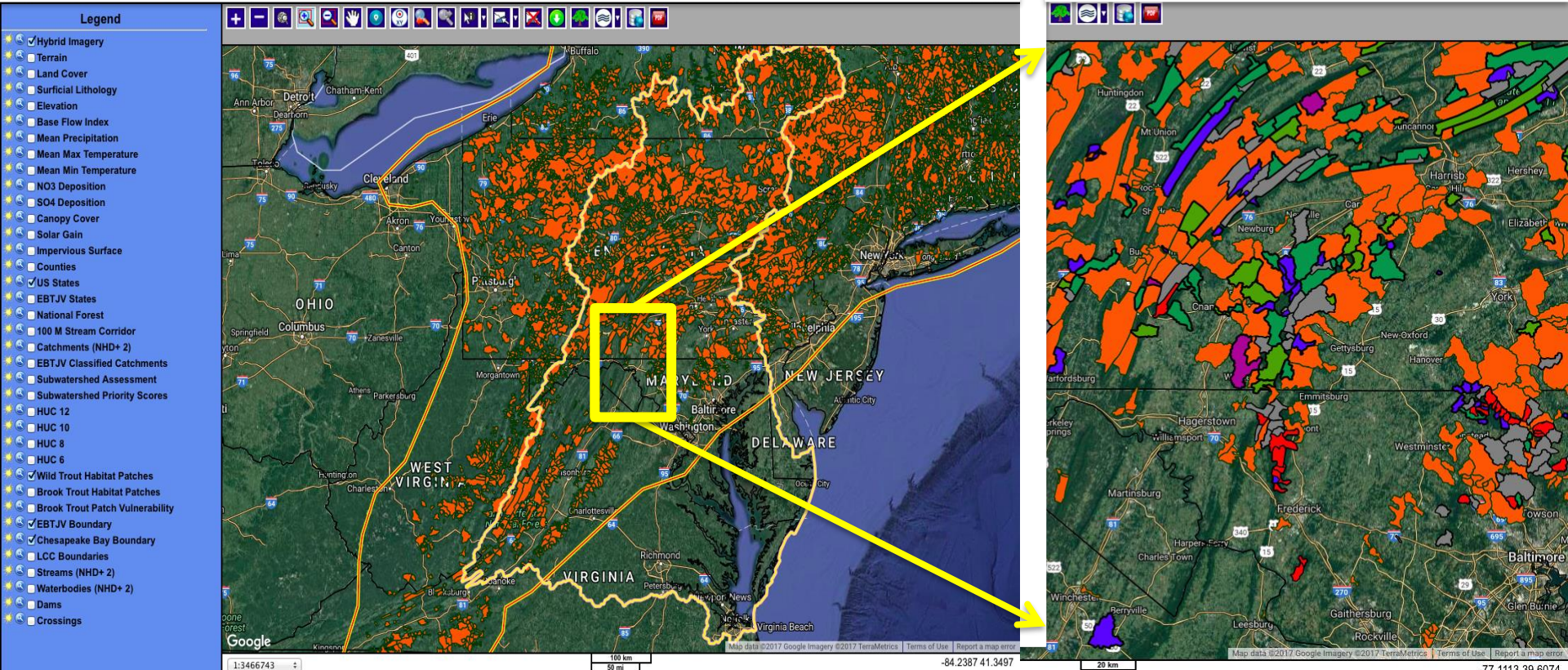
Supporting Restoration Work

- Trout Unlimited – Cacapon, Shenandoah, James
- Multi-partner (Fed, State, County, NGO's) Upper Gunpowder



- Updated CB Brook Trout occupancy model in Upper Susquehanna River Basin
- Coordinating with partners - spatially explicit DST

Are we on track?



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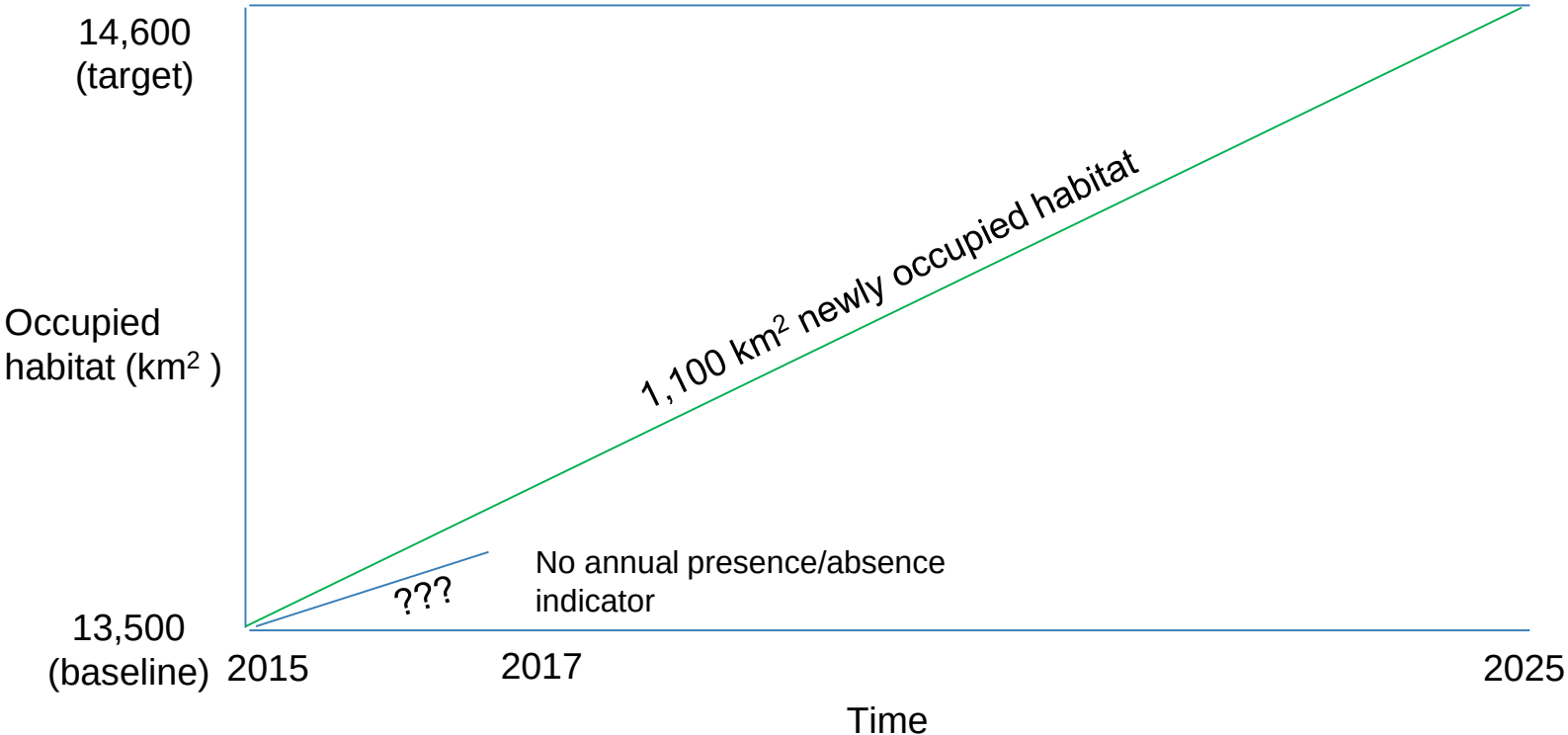
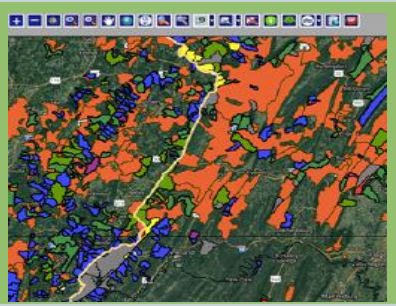


Analysis

Discussion Question 2: Which actions were most critical in progress thus far?

Greater coordination and consensus among conservation partners

Integrating the best available science into DST, restoration decisions, monitoring



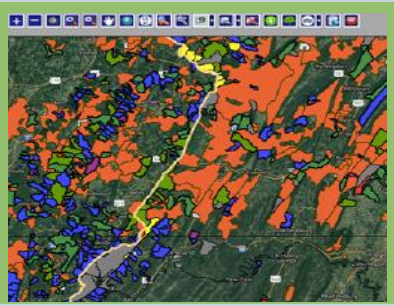
Identifying and prioritizing "best of the best" areas within each state for both conservation and restoration

Analysis

Discussion Question 3: Which management actions will be the most critical to your progress in the future? Why?

- Coordination between DST and on-the-ground practitioners, projects

- Identifying key decision-makers at state/local levels to educate/engage
- Monitoring restoration progress/success



- Cross-GIT goal coordination
- Strong engagement, participation among the partners

3

Challenges:

Are our actions having the expected effect?

Challenges

- Limited ability to control stressors
- Insufficient resources for partner engagement/monitoring
- Limited understanding/access to DST's
- Majority of restoration opportunities are on private property
- Restoration opportunities not equal among States

4

Adaptations:

How should we adapt?

Based on what we've learned, we plan to…

- Improve coordination with partners and local agencies to tie their projects with our Outcome target and CBP priorities
- Develop a priority list of streams to re-introduce and restore brook trout to create naturally reproducing populations
- Develop a template for communicating "best of best" areas for conservation/restoration efforts
- Work with partners to revise work plan to address Challenges including cross-GIT collaboration

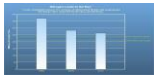
Agreement Goals and Outcomes

Sustainable Fisheries

- Blue Crab Abundance
- Blue Crab Management
- Oyster
- Forage Fish
- Fish Habitat

Vital Habitats Goal

- Wetlands
- Black Duck
- Stream Health
- Brook Trout
- Fish Passage
- Submerged Aquatic Vegetation (SAV)
- Forest Buffer
- Tree Canopy



Water Quality Goal

- 2017 Watershed Implementation Plans (WIP)
- 2025 WIP
- Water Quality Standards Attainment and Monitoring

Toxic Contaminants Goal

- Toxic Contaminants Research
  Toxic Contaminants Policy and Prevention

Healthy Watersheds Goal

- Healthy Waters

Stewardship Goal

- Citizen Stewardship
- Local Leadership
- Diversity

Land Conservation Goal

- Protected Lands
- Land Use Methods and Metrics Development
  Land Use Options Evaluation

Public Access Goal

- Public Access Site Development

Environmental Literacy Goal

- Student
- Sustainable Schools
- Environmental Literacy Planning

Climate Resiliency Goal

- Monitoring and Assessment
- Adaptation Outcome

What We Want

- Dedicated Staff/Team Members to be more engaged and invested in the Outcome.
- Communication/ outreach with key decision-makers to increase awareness/opportunities
- Support for cross-GIT collaboration, monitoring programs

Discussion