Are you looking to…

- Increase local engagement?
- Improve outreach and communications?
- Learn through hands-on workshops?
- Foster meaningful change?

We need a change in *human behavior* to make progress towards our goals of restoring the Chesapeake Bay.

Local engagement and communication are critical to encouraging that change and making a positive impact on our environment.

Behavior Change Training

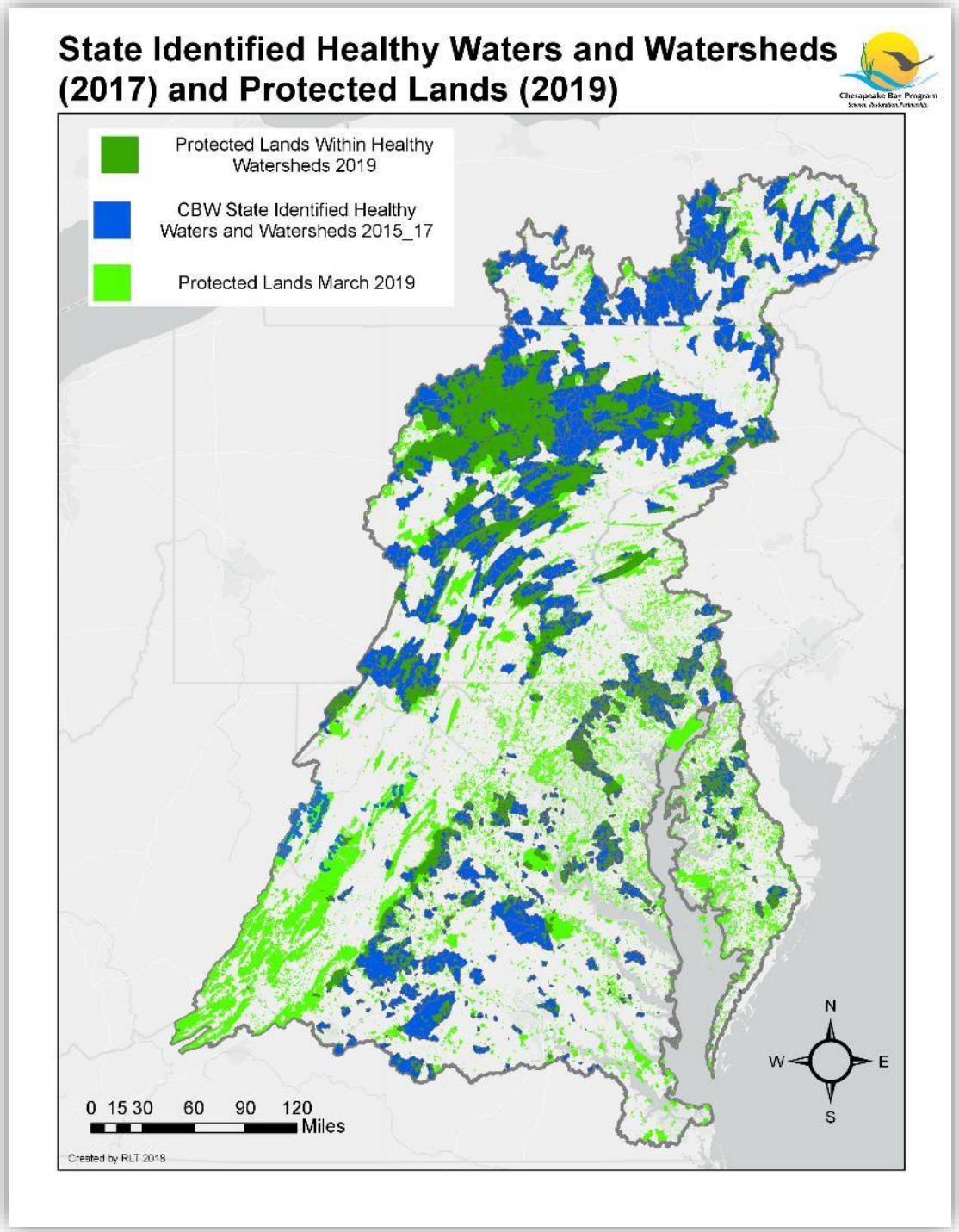
This training will cover the basic concepts of communityy based social marketing and theories along with guidance for how to apply them.

Chesapeake Bay Foundation

Thursday, October 31st, 8:30am-4:30pm

How You Can Help

- Renewed engagement of HWGIT members
- Improved Coordination and Collaboration among GITs and workgroups
- Ensure that related and/or dependent cross-GIT priorities are addressed within the CBP
- Share key information with stakeholders: Communicate results of data, maps, assessment and vulnerability information, messages, and land use policies, incentives and planning tools.



Renewed Engagement

HW GIT Jurisdictional members

Please email Nora at njackson@chesapeeakebay.net for updates and corrections.

First Name	Last Name	Agency	Email
Matt	Robinson	DC DOEE	matthew.robinson@dc.gov
Stephen	Williams	DNREC	stephen.williams@state.de.us
Angel	Valdez	MDE	angel.valdez@maryland.gov
Debra	Herr Cornwell	MDP	deborah.herrcornwell@maryland.gov
Scott	Stranko	MD DNR	scott.stranko@maryland.gov
Jason	Dubow	MDP	jason.dubow@maryland.gov
Kristen	Wolf	PA DEP	kwolf@pa.gov
Scott	Carney	PA DEP	rscarney@pa.gov
Chad	Thompson	WV DEP	chad.m.thompson@wv.gov
John	Wirts	WV DEP	John.C.Wirts@wv.gov
Tim	Craddock	WV DEP	Timothy.D.Craddock@wv.gov
Cassandra	Davis	NYSDEC	cassandra.davis@dec.ny.gov
Lauren	Townley	NYSDEC	lauren.townley@dec.ny.gov
Todd	Janeski	VA DCR	todd.janeski@dcr.virginia.gov
Greg	Evans	VA	greg.evans@governor.virginia.gov

MB Response, Cont.

- Improved Coordination and Collaboration among GITs and workgroups
- Ensure that related and/or dependent cross-GIT priorities are addressed within the CBP
- Share key information with stakeholders: Communicate results of data, maps, assessment and vulnerability information, messages, and land use policies, incentives and planning tools.

- GIT Chairs meeting 10/29 focused on how the CHWA can help meet other CBP outcome needs.
- Local leadership workgroup has three ongoing efforts: **Ecologix report identifying local priorities, local leadership engagement strategy, and creating cross-watershed education materials**

2013 Grouping Survey items into our Strategic themes…

- Develop a method to track and report watershed health and protection
- Healthy Watershed Vulnerability Assessments

Technical/Analytical (Tracking)

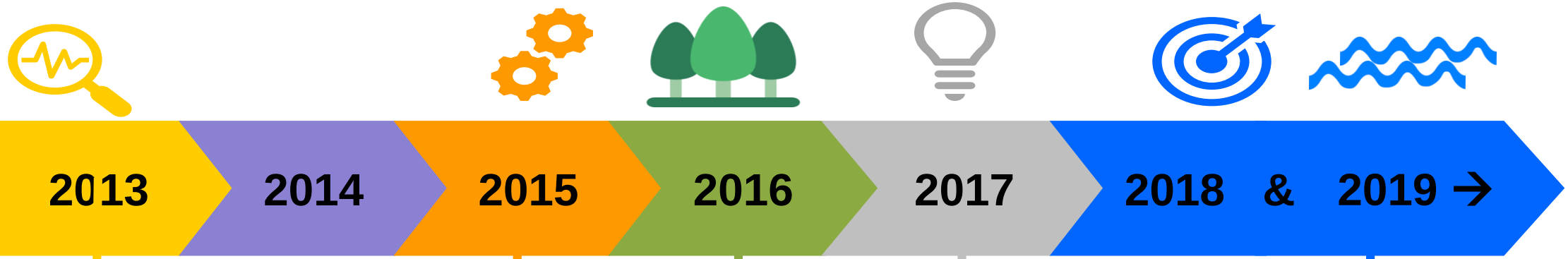
- Outreach and communications messages/tools
- Engage with local governments
- Engage with Land Trusts and other NGOs
- Develop a local pilot demonstration project

Local Engagement + Communications

- Work collaboratively with other GITs
- Find funding opportunities
- Build upon current policy (e.g., Antidegradation)
- Innovative Land Use, TDR and Zoning practices

Policy/Program Development

Healthy Watersheds Goal Team Milestones



- **2013**
  - PUBLISH MAP OF STATE IDENTIFIED HEALTHY WATERSHEDS AND WATERS
  - TRACKING HEALTHY WATERSHEDS FRAMEWORK
- **2014**
- **2015**
  - UPDATE HEALTHY WATERSHED MAP
- **2016**
  - PHASE I FOREST RETENTION STUDY
- **2017**
  - CONSERVATION LAND-USE POLICY TOOLKIT
  - PHASE II FOREST RETENTION STUDY
  - UPDATE HEALTHY WATERSHEDS MAP
  - HEALTHY WATERSHEDS CO-BENEFIT FACT SHEET
- **2018 & 2019 →**
  - CHESAPEAKE HEALTHY WATERSHEDS ASSESSMENT
  - HIGH RESOLUTION STREAM MAPPING
  - PHASE III FOREST RETENTION STUDY
  - IMPROVED PROTECTED LANDS INDICATOR 2020
  - MD PILOT HEALTHY WATERSHED ASSESMENT

HWGIT Management Approaches

- Tracking Healthy Waters and Watersheds
- Local Leadership
- Support State-Based Efforts
- Federal and State Leadership

HWGIT Activities
2019 2021

Tracking Healthy Waters and Watersheds

1. Technical review of data and Tetra Tech report, review .gdb and associated data, familiarize with methods, datasets
2. assess PHWA results and next steps for assessing progress towards achieving the Healthy Watersheds Outcome.
3. Publish CHWA in CBP Open Data and ArcGIS online
4. Assess changing conditions for all land cover metrics included in the PHWA
5. Guide development of GIT Funding project:
    - Implementation of Chesapeake Healthy Watersheds Assessment in Maryland's Tier II watersheds

HWGIT Activities 2019 2021

Local Leadership

1. Work with Local Engagement workgroup and implement Local Engagement Strategy
    - Prototype draft format in which other resources could be modeled after.
        - Incorporate Healthy Watersheds TMDL Forest/Conserved Lands Retention Study Phase III and other related Land Use Options Evaluation Products (completed GIT funding project)
        - Development of cross outcome materials for local elected officials, to convey policies, planning incentives and tools to reduce conversion. (FY 2019 GIT funding project with Habitat GIT)

HWGIT Activities 2019 2021

Support State-Based Efforts

1. Provide a shared forum for mutual learning.

2. Guide development of GIT Funding project:
   - Implementation of Chesapeake Healthy Watersheds Assessment in Maryland's Tier II watersheds
   - Work with other Jurisdictions to identify other state specific datasets that can/should be incorporated into future assessments.

HWGIT Activities 2019 2021

Federal and State Leadership

1. Continued support of the Chesapeake Conservation Partnership
   - Development of an improved indicator for compiling and reporting land conservation data. (GIT funding project 2018)
2. Investigate additional threats to high-valued lands using best available data related to development pressure and forest, farmland, and wetland conversion utilizing the results of the Land Use Methods and Metrics outcome as well as the PHWA (FY'20-FY'21) (pending LUMM rates of conversion) (Cross listed with LUMM outcome actions)

NPS, USGS, EPA employees are leads on these activities.

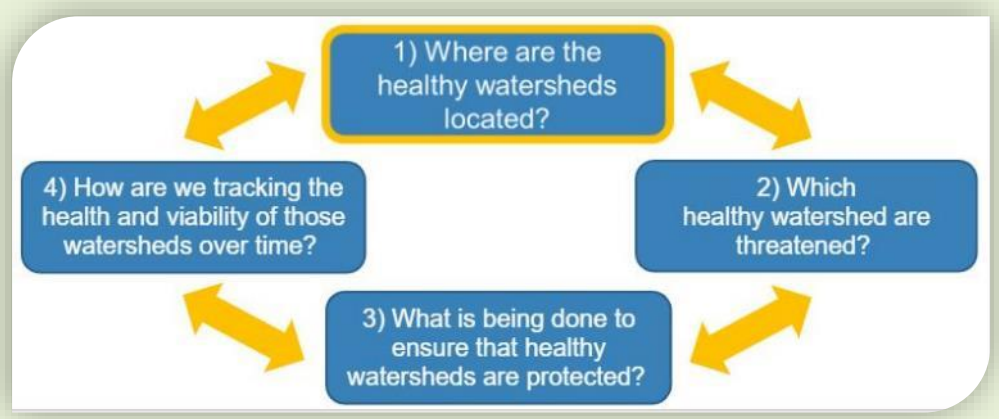
HWGIT Activities 2019 2021

Proposed NEW Management Approach

Coordination and Cooperation

1. Committed coordination and cooperation with key GITs and workgroups to assure shared resources, information and priorities while reducing duplication of efforts.
   - Stream Health WG, Fish Habitat, Brook Trout, Climate Resiliency, Protected Lands
   - Host shared Climate workgroup and HWGIT meeting to work through Climate Smart tool (2020)
   - Facilitate the sharing of information related to conservation finance mechanisms with CCP and Healthy Waters/Forest Retention Project-Phase III: Final Report for Chesapeake Bay Trust

Management Strategy: Tracking Framework



2017 SRS Presentation

Where are the healthy watersheds located?

Which healthy watersheds are threatened?

What is being done to ensure that healthy watersheds are protected?

How are we tracking the health and viability of these watersheds over time?

STAR Science Needs

Monitoring healthy watersheds: continued support needed

- Chesapeake Healthy Watersheds Assessment project (closing Fall 2019)
- Implementation of CHWA in MD Tier II watersheds (starting Spring 2020)

Vulnerability assessment: need more information on current and future stressors and how to integrate into healthy watershed assessment

- Factors influencing vulnerability (CHWA, USGS Theme 3 Science plan)
- Historic, future and current landscape metrics, climate variability
- Identification of additional climate risk factors associated with watershed health and vulnerability. (cross outcome)

STAR Science Needs

Track the health of state-designated healthy watersheds (more to come later today)

Marginally healthy watersheds: ways to identify and track

- The CHWA can help inform this as well as the MD CHWA but there is formalized work plan actions for this need.

Communication & coordination of technical products: between GITs and workgroups; with states

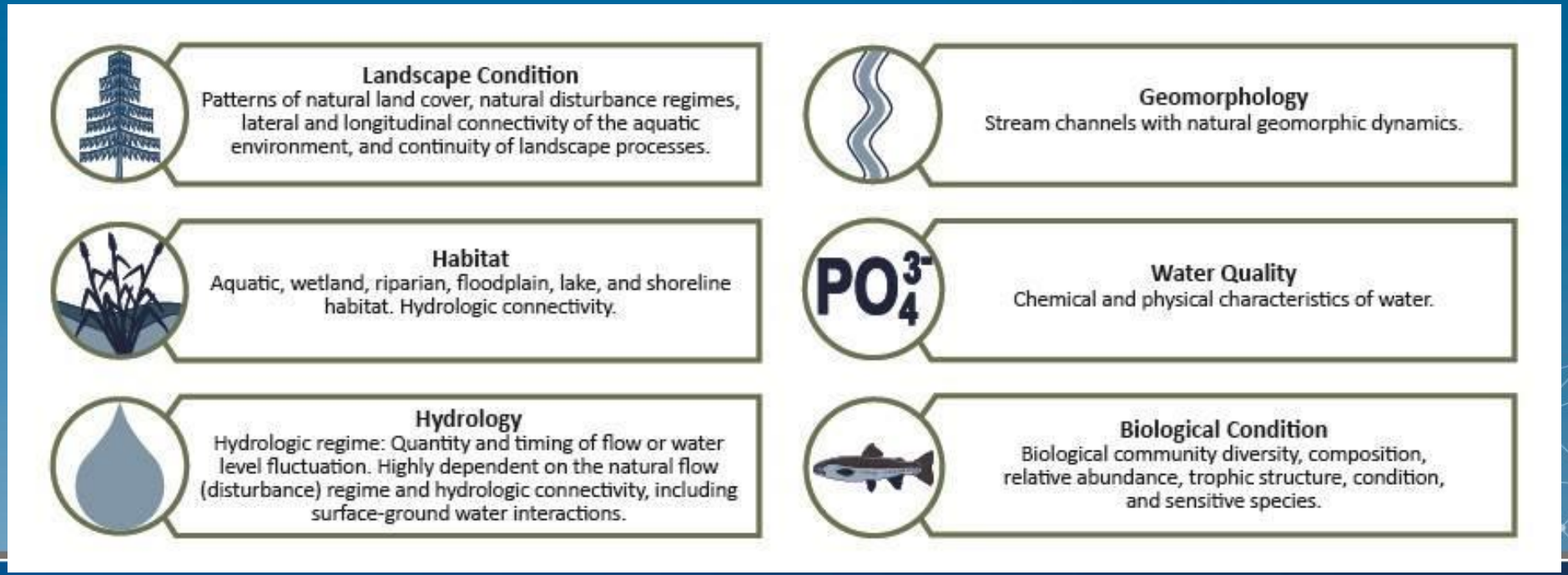
- Utilize local engagement strategy to communicate technical resources as well as the policies, incentives and planning tools aimed at reducing land use conversion. (cross outcome)

Afternoon 12:30 Session

Assessing Watershed Health

PHWA employs metrics in six categories:

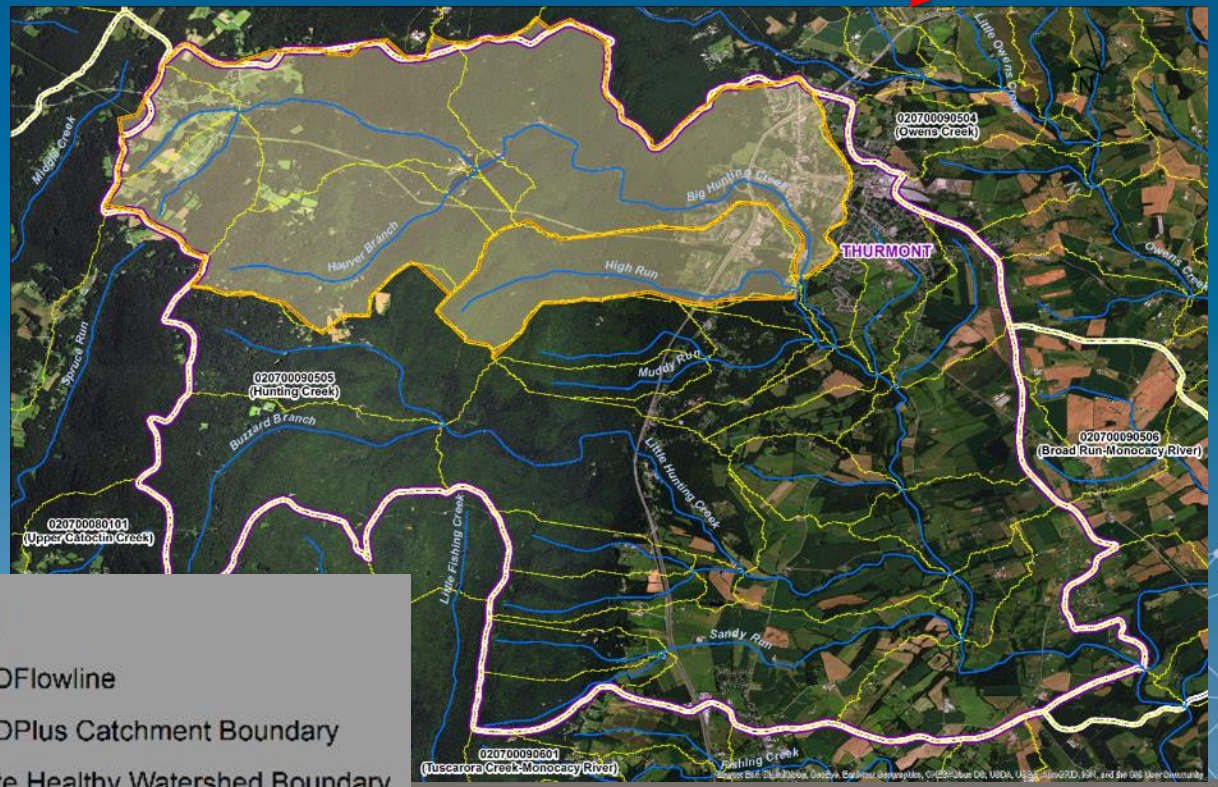
- Landscape condition
- Habitat
- Hydrology
- Geomorphology
- Water quality
- Biological condition



EPA Office of Water, Healthy Watersheds Program, March 2017

Addressing Watershed Scale

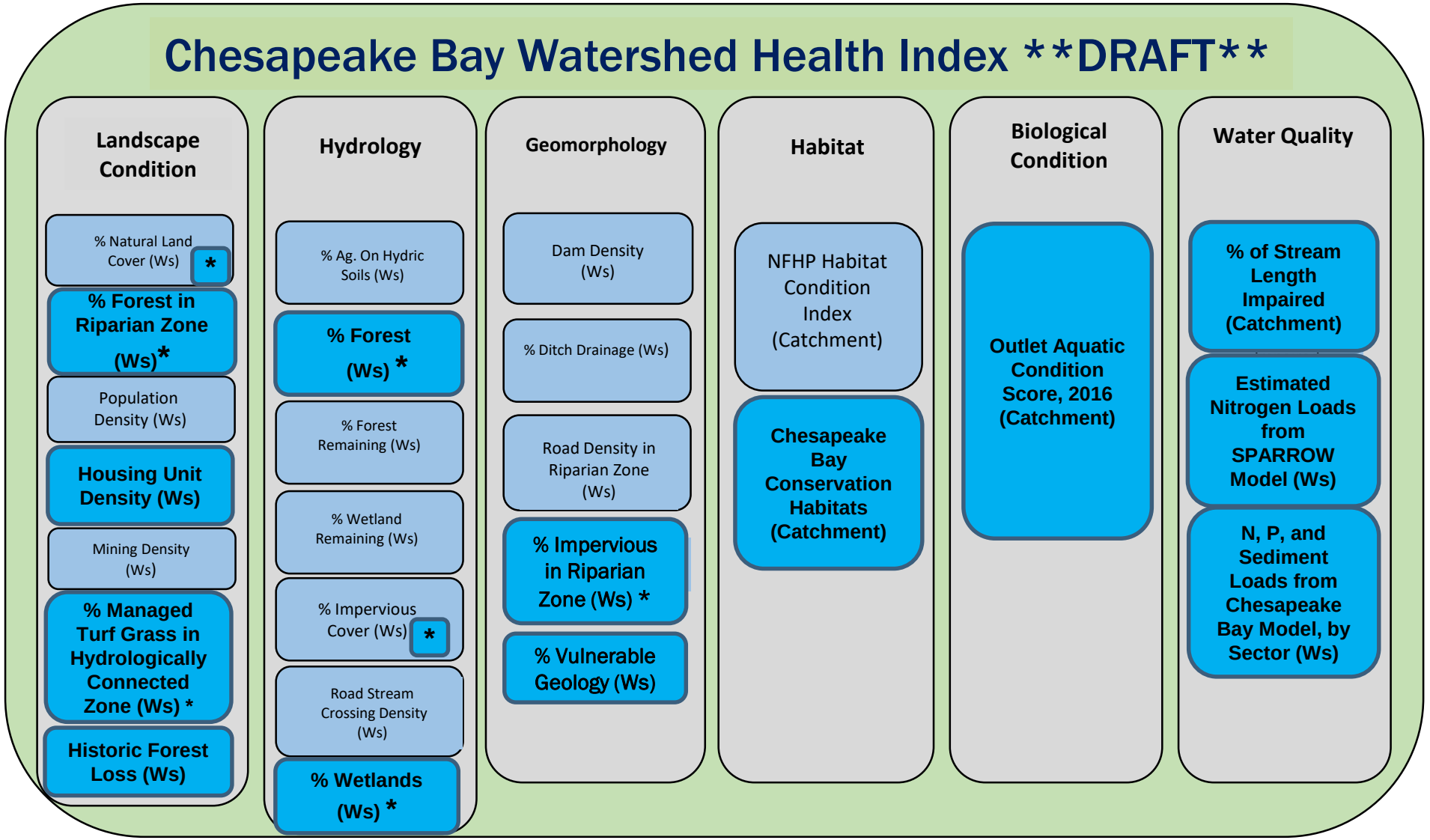
- PHWA developed nationally to provide data at HUC12 scale; this regional application required finer scale
- Developed metrics at NHDPlus catchment scale
- Calculated for all 83,623 catchments in Chesapeake watershed (average area ~2 km^2)



Legend

- NHDFlowline
- NHDPlus Catchment Boundary
- State Healthy Watershed Boundary
- HUC-12 Boundary

Chesapeake Bay Watershed Health Index **DRAFT**



Original PHWA Metrics

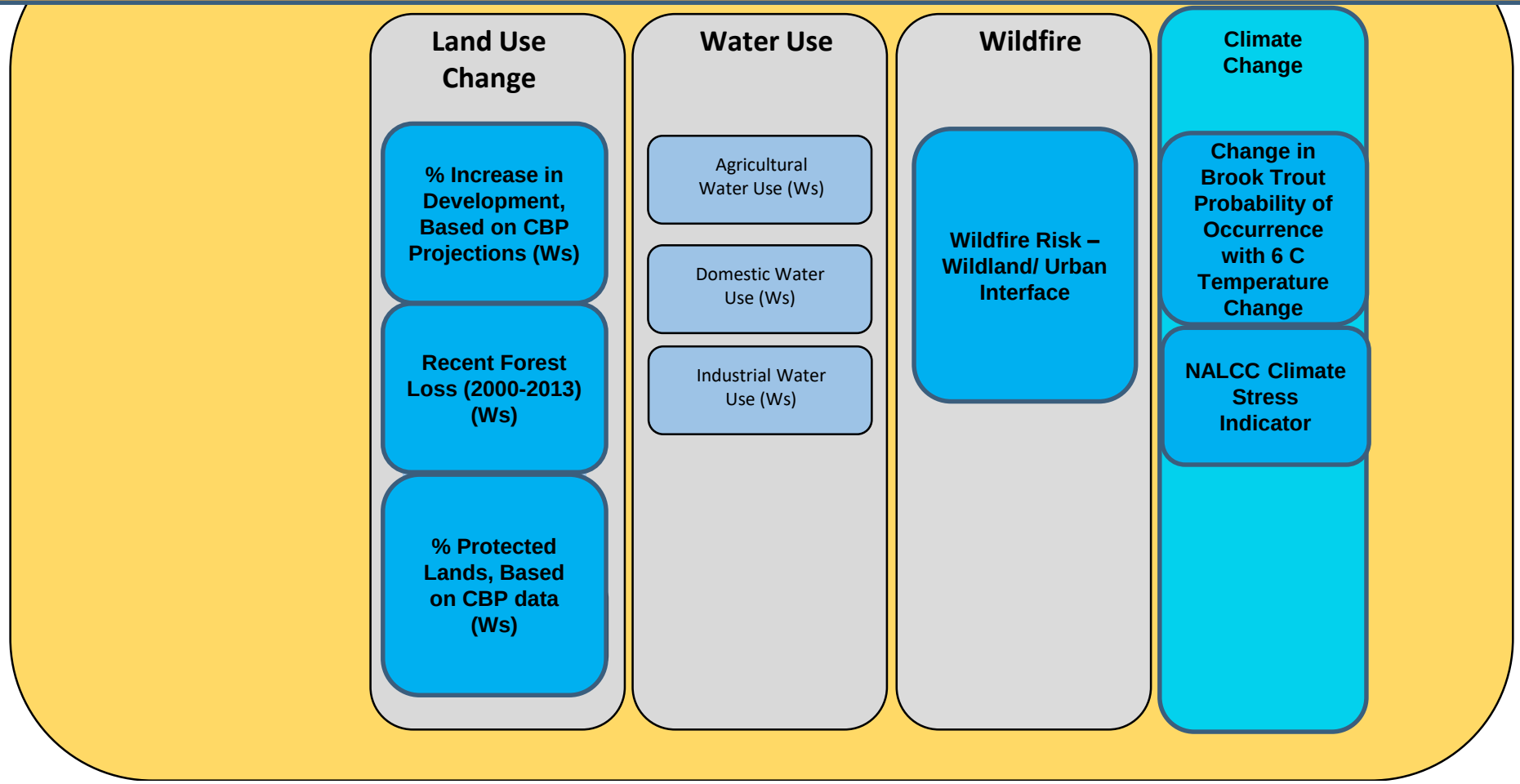
New Metrics

* Customized using Chesapeake Bay high-resolution land use/cover data

Note: All metrics calculated at NHDPlus catchment scale

Ws = Metric value calculated for entire upstream watershed

Chesapeake Bay Watershed Vulnerability Indicators **DRAFT**



Original PHWA Metrics

New Metrics

Note: All metrics calculated at NHDPlus catchment scale

Ws = Metric value calculated for entire upstream watershed

Challenge of Using CHWA v1.0 Metrics as “Indicators” of Watershed Health