

Indicators

STAR JUNE MEETING

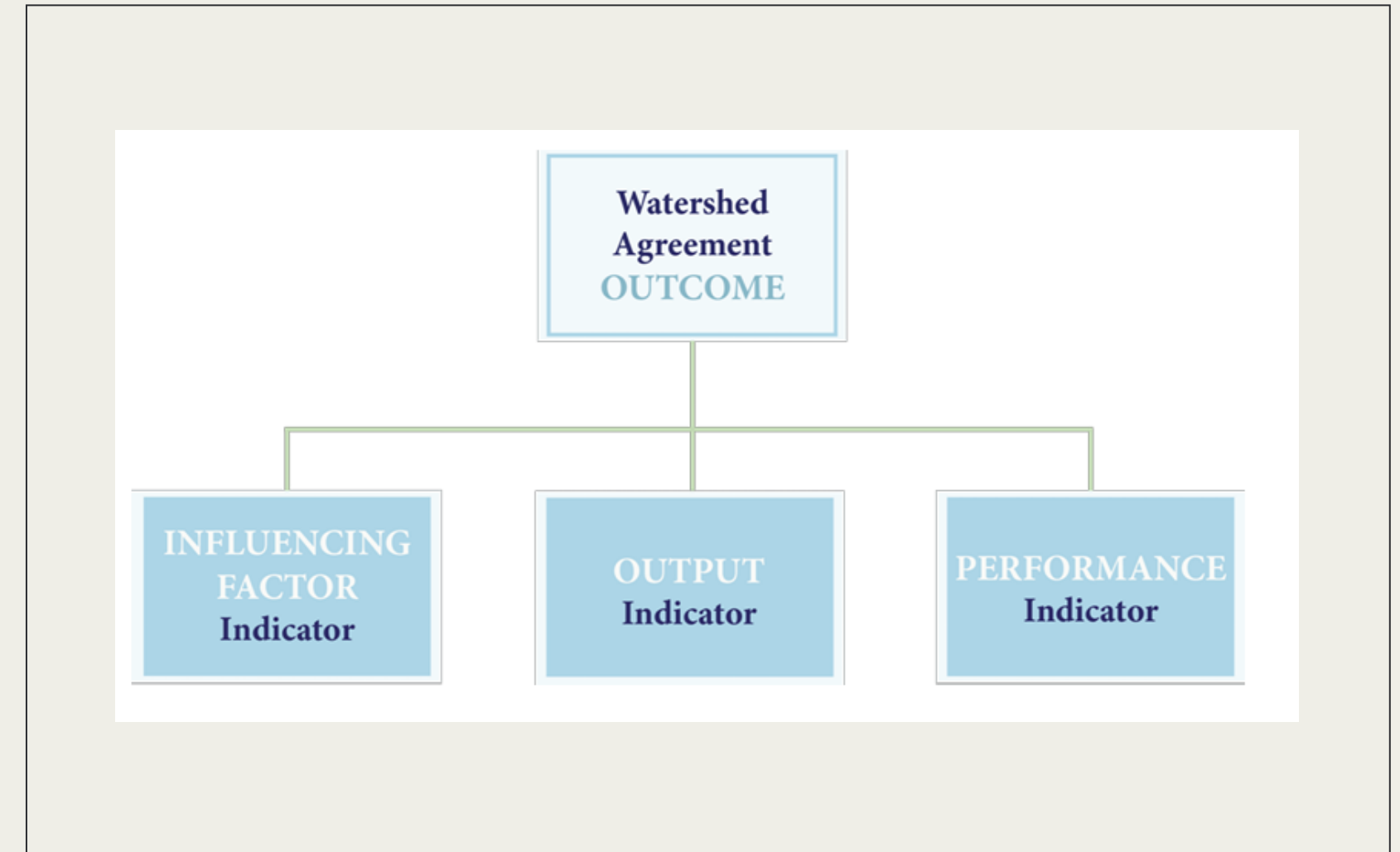
Breck Sullivan
STAR Coordinator
6/26/2025

CBP INDICATORS (2015)

Influencing Factor: What key influencing factors are impacting the achievement of an outcome?

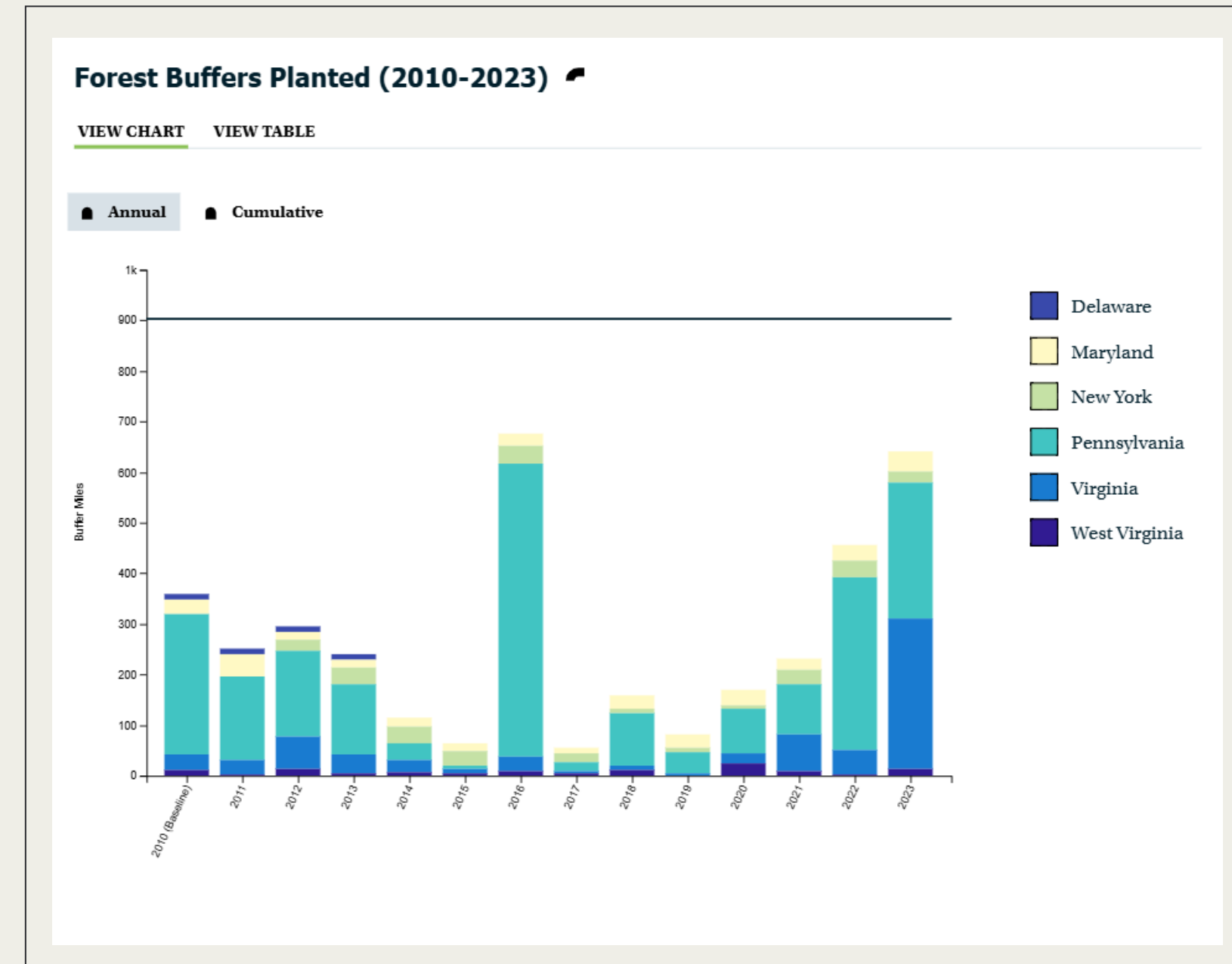
Output: Are we doing what we said we would do in our work plans and management strategies?

Performance: Are we achieving the outcome?



CBP: IMPORTANT INDICATOR QUALITIES(2016)

- Simple and easy to understand
- Be scientifically well-founded
- Have a reference or threshold value of significance
- Be responsive to changes in the environment
- Show trends over time
- Feasible to measure and report (reasonable cost/benefit ratio)
- Updated regularly with reliable procedures (timely with support of a monitoring program)
- Adequately documented, known quality
- Be useable by the community
- Policy relevant



Selected from report to the Balaton Group by the Sustainability Institute: “Indicators and information systems of sustainable development”

ECOHEALTH JOURNAL INDICATORS (2007)

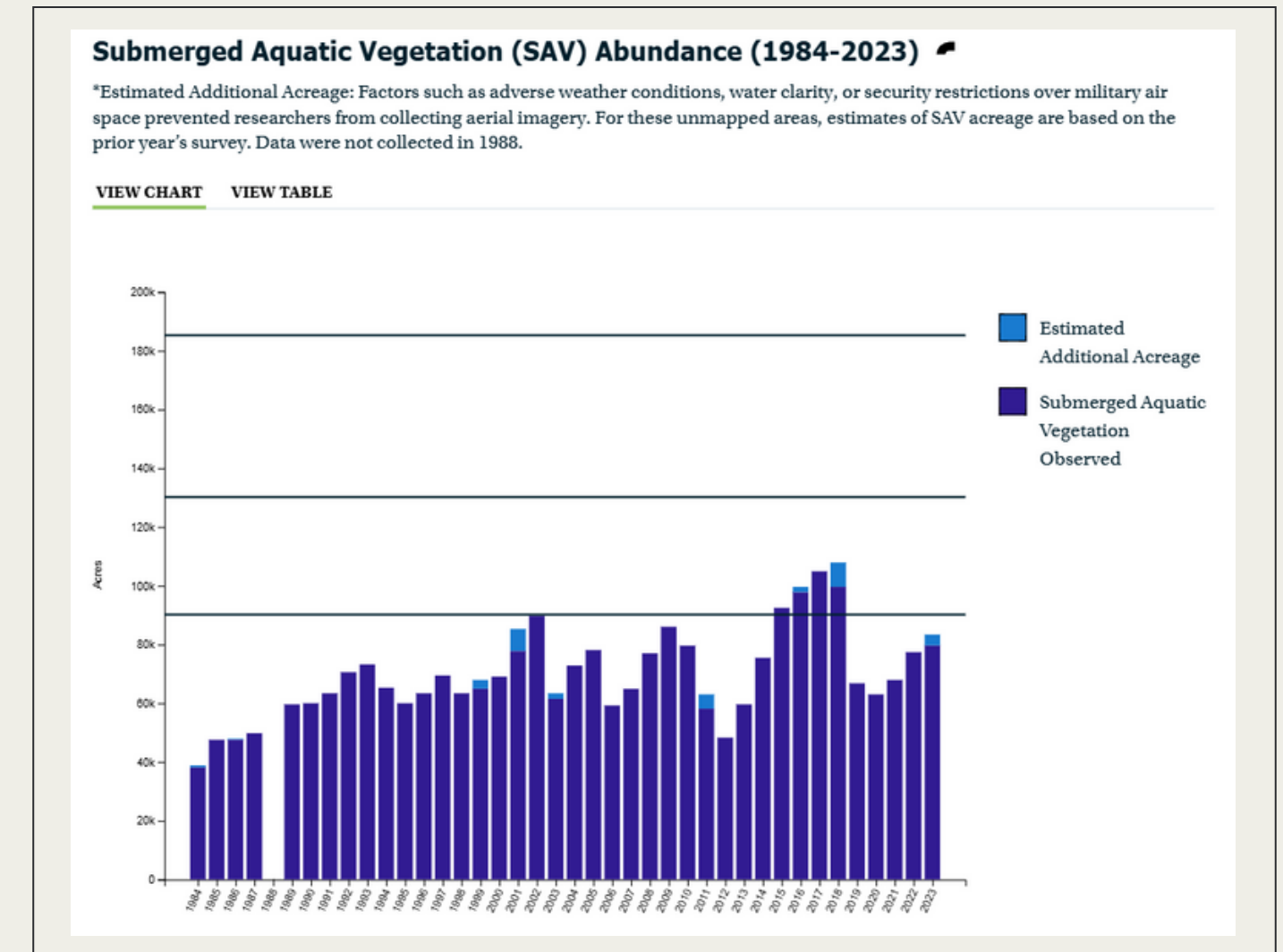
Condition: Explicit reference condition,
current status

Evaluate: Clear relationship (i.e. progress)
to a management objective

Diagnostic: Information about system
condition that impacts management goals

Communication: Simple and easy to
interpret

Futures: Forecast conditions based on
current information



ECOHEALTH: IMPORTANT INDICATOR QUALITIES

- An indicator can fit more than one classification/function
- Measurement implies something more about the system than just a parameter value
- Integrate management objectives, ecological understanding, and monitoring design

Table 1. Classification of Chesapeake Bay Program Indicators by Potential Function					
Chesapeake Bay Program indicators	Indicator function				
	Condition	Evaluate	Diagnose	Communicate	Futures
Acres of Bay grasses: density	X	X		X	
Acres of Bay grasses: changes by zone	X	X		X	
Acres of Bay grasses	X	X		X	
Bald eagle population count	X	X		X	
Trends in diving ducks	X	X		X	
Trends in waterfowl: black duck and mallard	X	X		X	
2004 status and trends for waterfowl in need of management	X	X		X	
2004 status and trends for waterfowl doing well	X	X		X	
Trends in shellfish: oyster harvest	X	X		X	
Trends in shellfish: oyster spat (MD)	X	X		X	
Trends in shellfish: oyster spat (James River)	X	X		X	
Trends in blue crab: mature females	X	X		X	
Trends in blue crab: juvenile	X	X		X	
Trends in blue crab: commercial harvest	X	X		X	
American shad: population trends	X	X		X	
Striped bass spawning stock	X	X		X	
Trends in finfish: striped bass	X	X		X	
Benthic community and habitat condition	X	X		X	
Nutrient and sediment loads delivered to the Bay (through 2002)	X	X		X	
Phosphorus trends in rivers: flow adjusted concentrations	X	X		X	
Nitrogen trends in rivers: flow adjusted concentrations	X	X		X	
Sediment trends in rivers: flow adjusted concentrations	X	X		X	
Status of chemical contaminant effects on living resources	X			X	
Bernie fowler sneaker index	X	X		X	
Bay watershed residents survey: level of concern and attitudes		X	X	X	
Chesapeake Basin land use and pollutant loads		X		X	
Chlorophyll a: status and trends (SAV growing season)	X	X	X	X	
Secchi depth: status and trends (SAV growing season)	X	X	X	X	
Bottom dissolved oxygen concentrations	X	X		X	
Mainstem Bay summer dissolved oxygen concentrations	X	X		X	

CBP (2025)

OUTCOME

High level outcome language. (The change in state we aim to influence or the future state we aspire to reach as a consequence of our actions and their outputs.) This language does not need metrics.

- Bullets of **measurable targets** or objectives. These are shorter-term steps and results: this is the place to be as specific, measurable, achievable, relevant, and time bound (SMART) as possible to ensure we are tracking our work, learning from the results, and being publicly accountable.
- These could be more direct measures of our efforts and whether we are following through on plans and commitments.
- Interim steps and tiered targets acknowledge what is realistic in a set period while leaving space for what we ultimately know is needed for the healthy watershed we envision.
- Targets that are not thoroughly flushed out can be listed as “under construction.”

Thank you!

`bsullivan@chESApeakebay.net`

Breck Sullivan
STAR Coordinator
6/26/2025