STAC Climate Modeling 3.0 Workshop

Steering Committee

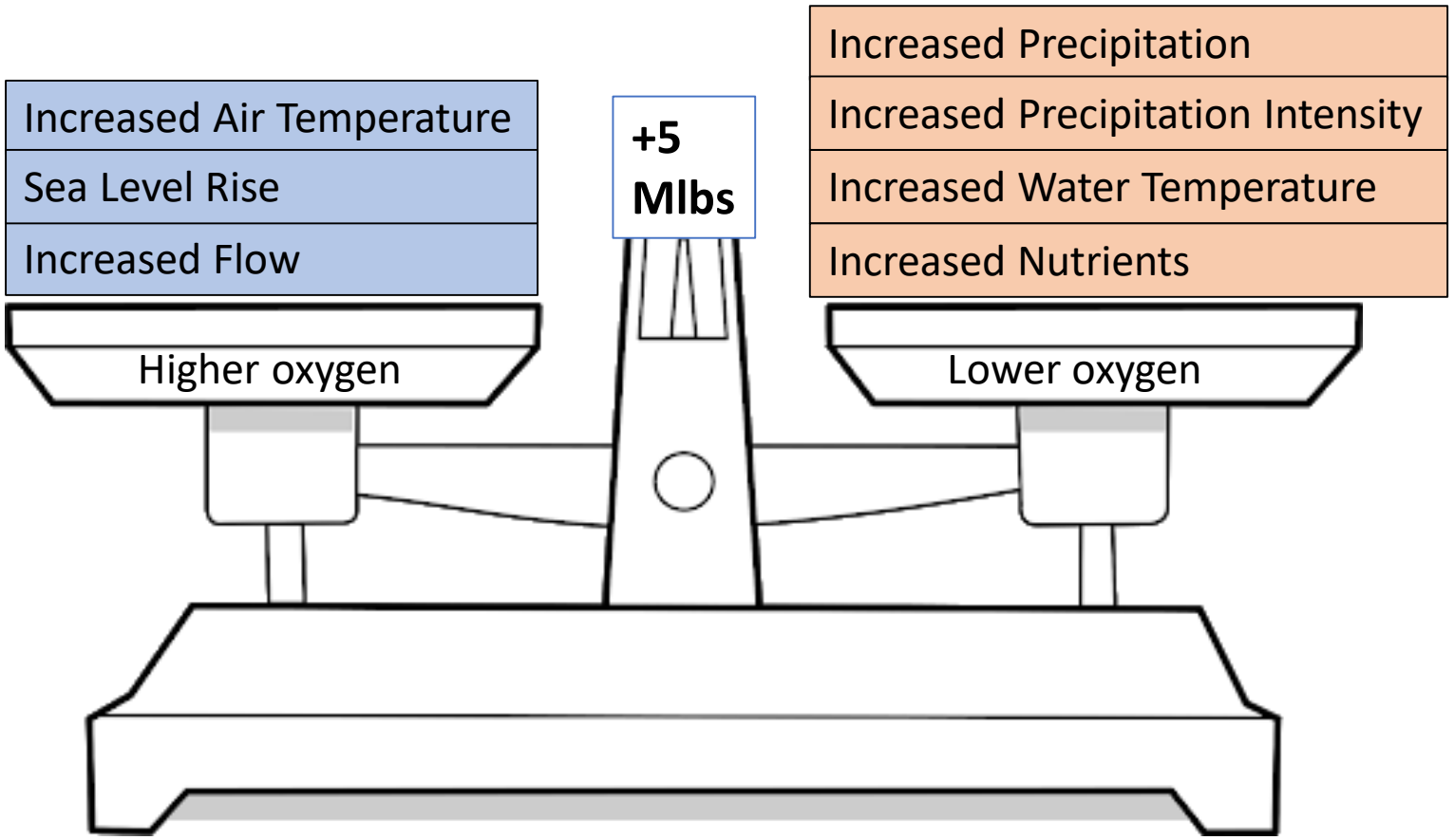
- Mark Bennett
- Zach Easton
- Marjy Friedrichs
- Jeni Keisman
- Lewis Linker
- Ray Najjar
- Robert Sabo
- Gary Shenk
- Charlie Stock

Purpose

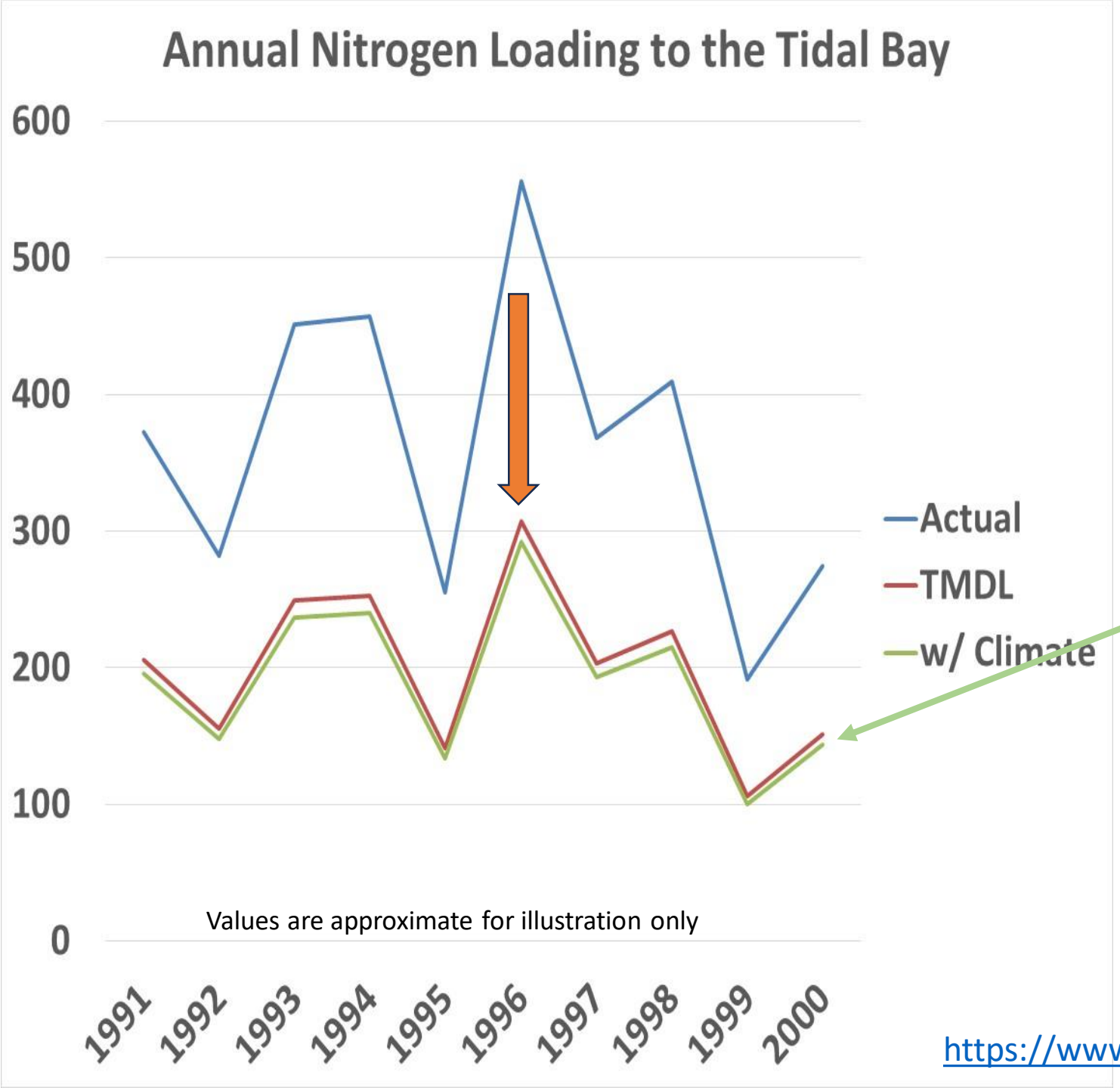
- Develop recommendations to guide the Chesapeake Bay Program in developing models and methods to estimate the effects of climate change on the Bay TMDL and on living resources.
- The Bay TMDL relates oxygen, clarity, and chlorophyll to nitrogen, phosphorus, and sediment inputs.

2019-2020 Climate Change Analysis

Balance of effects – Science Question



CBP studied 21 different effects producing an overall lower level of oxygen

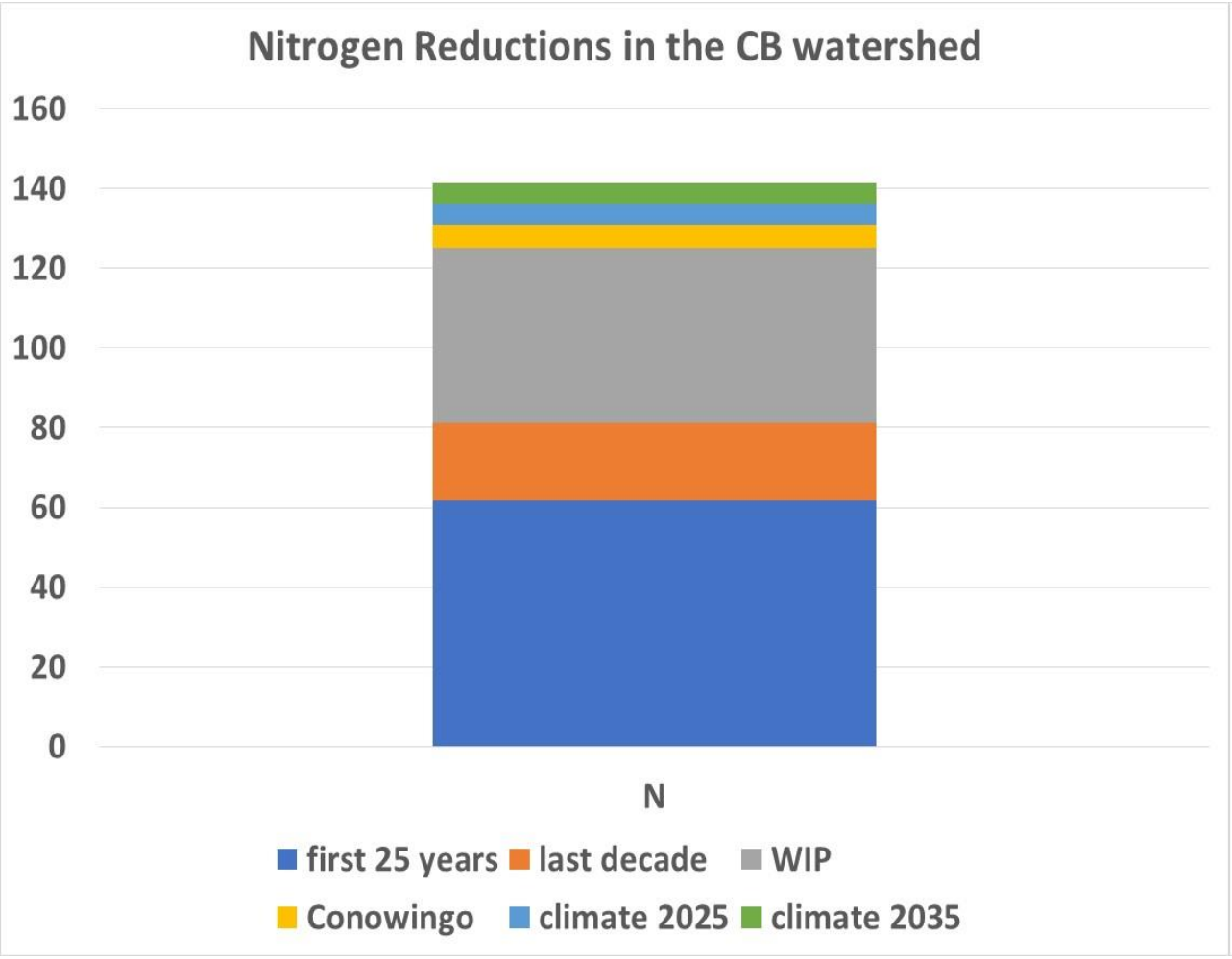


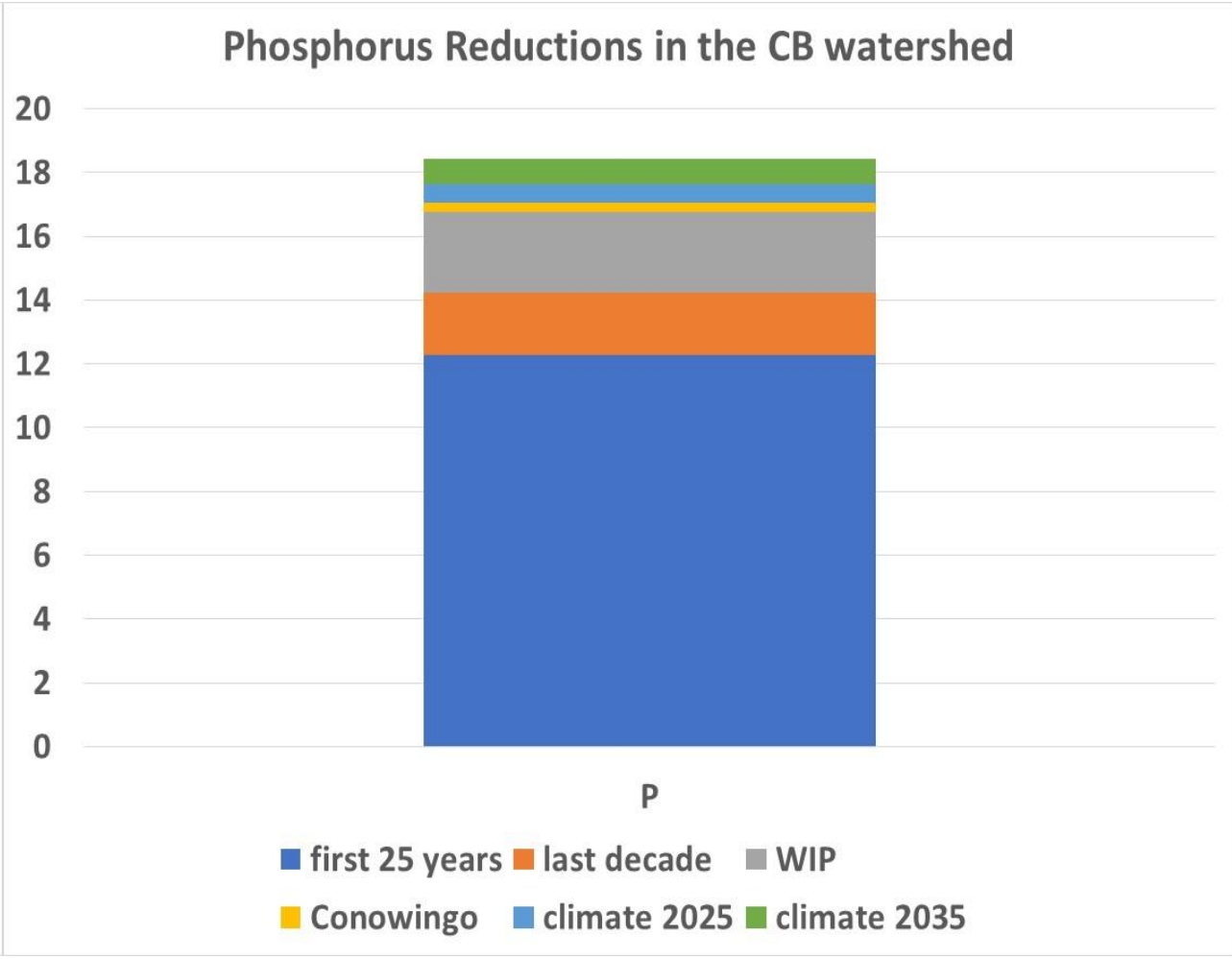
- Reductions would push the loads from a decadal average of ~360 million lbs to ~200 million lbs
- Adding climate change would make a further reduction necessary.
- These are the estimated loads in 1991-2000 such that if the weather patterns of 1993-1995, projected ahead through 30 years of climate change, occurred again, WQS would be met

https://www.chesapeakeprogress.com/clean-water/water-quality

Modeled load reductions from CAST-2019

Climate effects in perspective





Workshop Agenda

DAY 1	Overview	Current and next generation models	Lunch	2019 CBP Climate Effects Modeling	Prior STAC recommendations	Comprehensive Science Projects	Cross-domain Breakouts - Expansive Discussion
DAY 2	Living Resources	New Climate Science	Lunch	Climate Effects Science	Vertical prioritization	Vertical reports	Horizontal expansive
DAY 3	Horizontal Prioritization	Horizontal reports	Lunch	Wrap up			

STAC Climate Change Modeling 3.0

- Recommendations are used by the CBP
  - STAC climate change modeling 1.0 and 2.0 were used extensively
- Recommendations were produced in each of the breakout sessions
  - Priority recommendations determined in plenary
  - All recommendations will be recorded in the workshop report