

Climate Change in the Chesapeake TMDL

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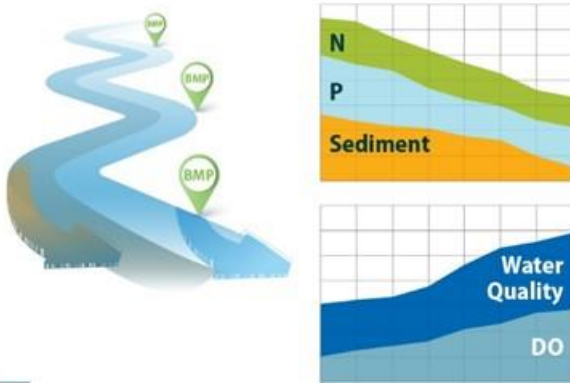
Chesapeake Bay Commission 1/7/2021

TMDL summary



What management practices...

BMP Implementation Results

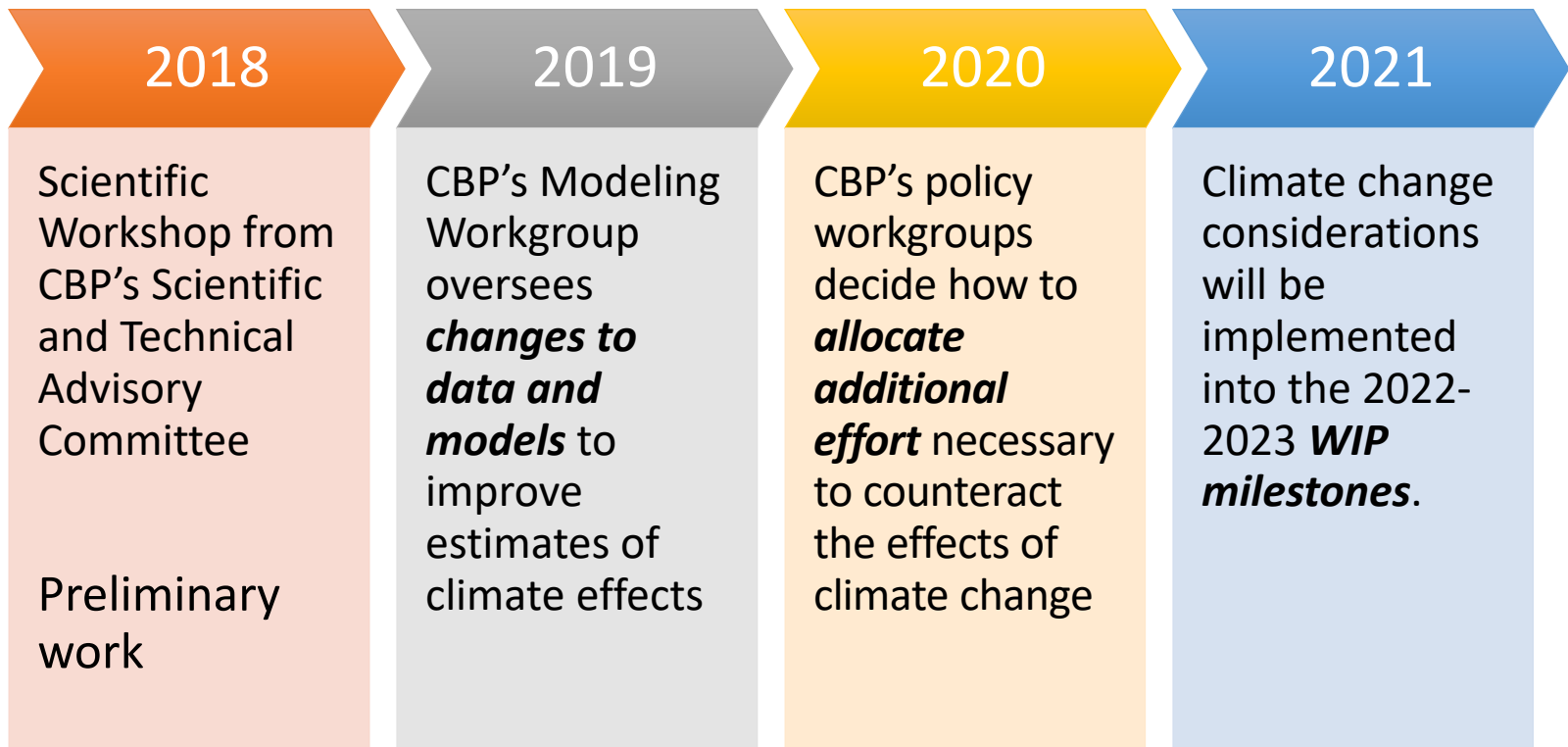


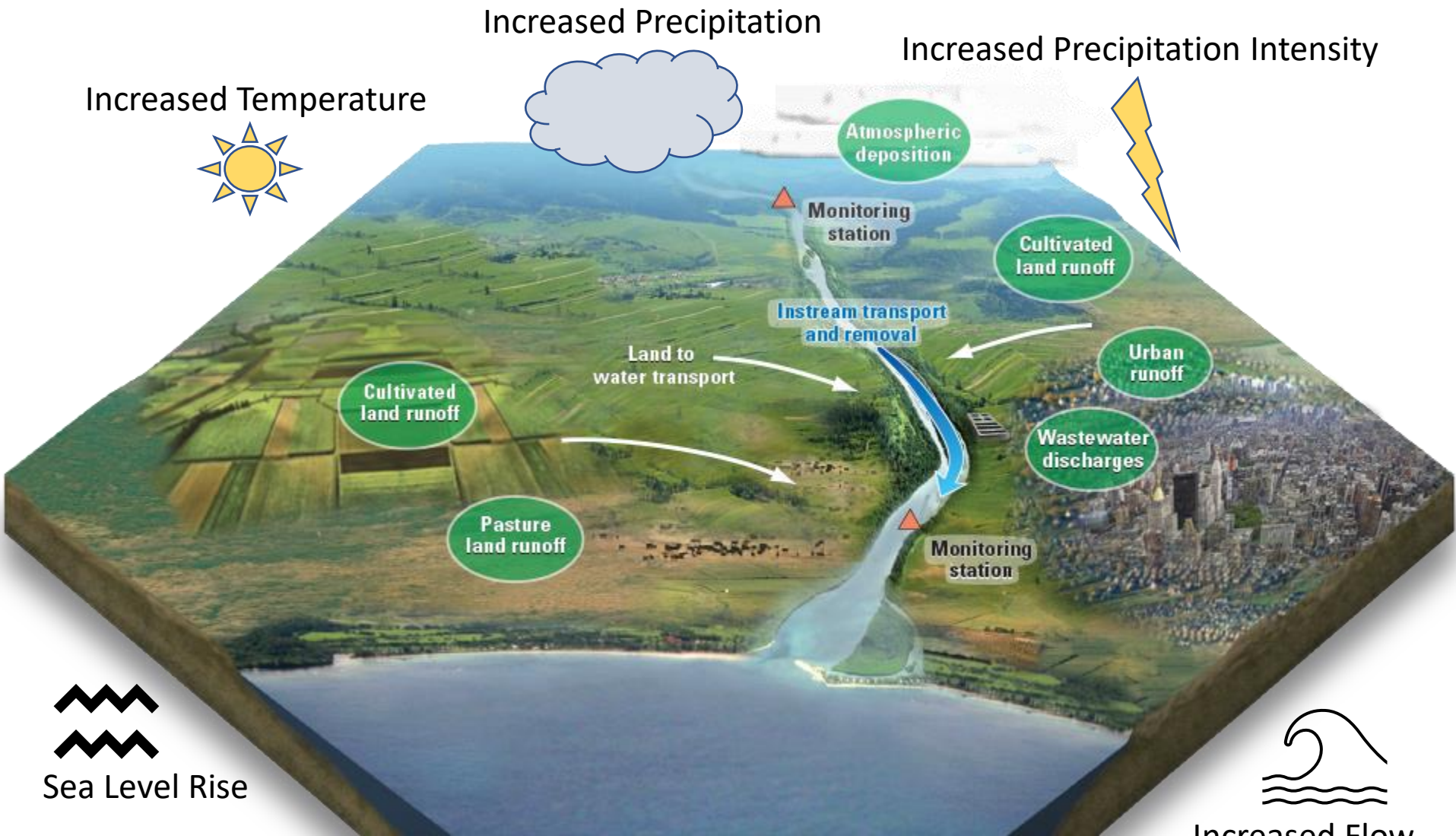
.... Will reduce nitrogen and phosphorus to levels ...

.... That will achieve appropriate dissolved oxygen in the Bay?

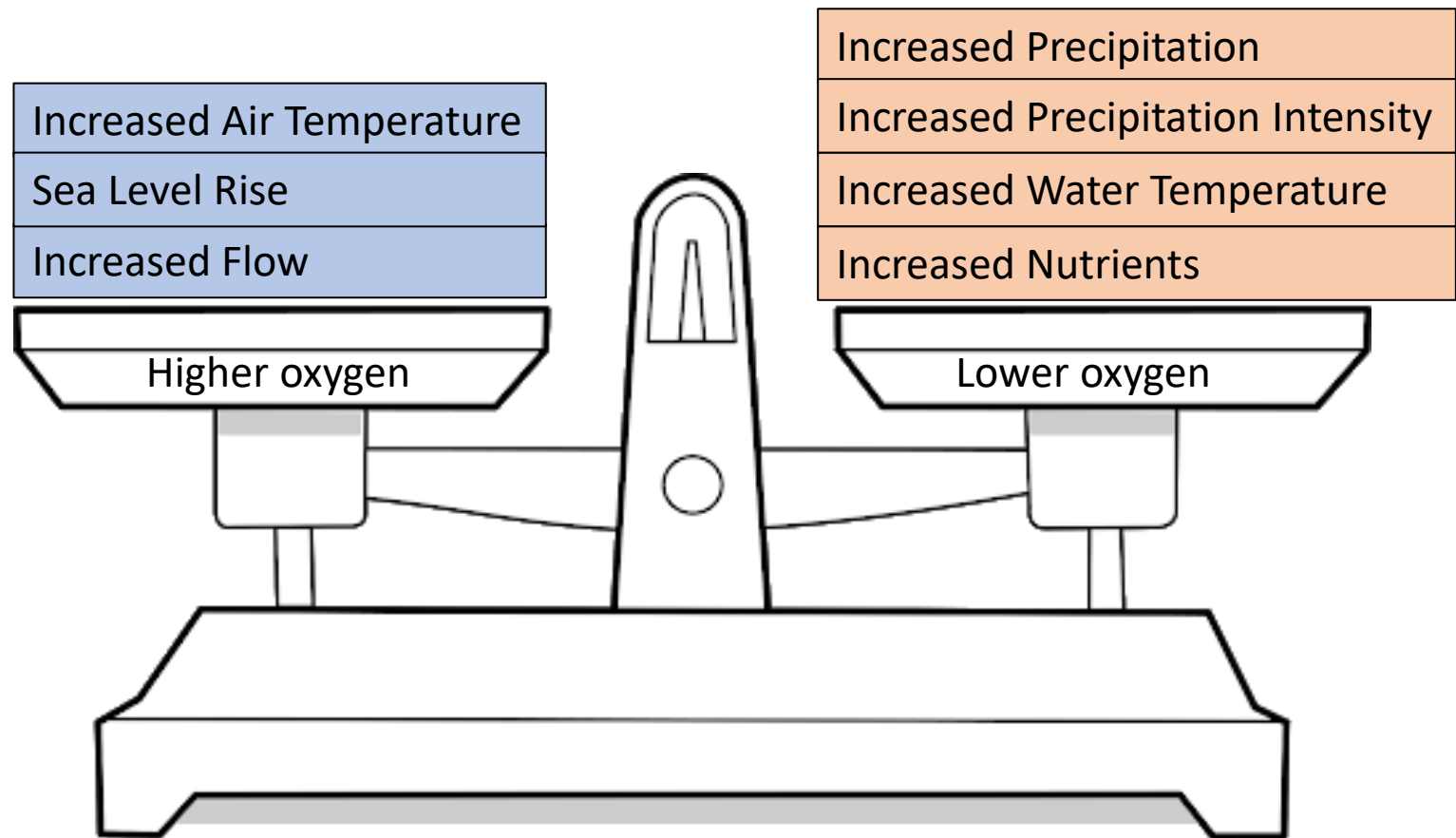
How has climate change affected the level of effort between 1995 and 2025?

CBP Climate Work Plan



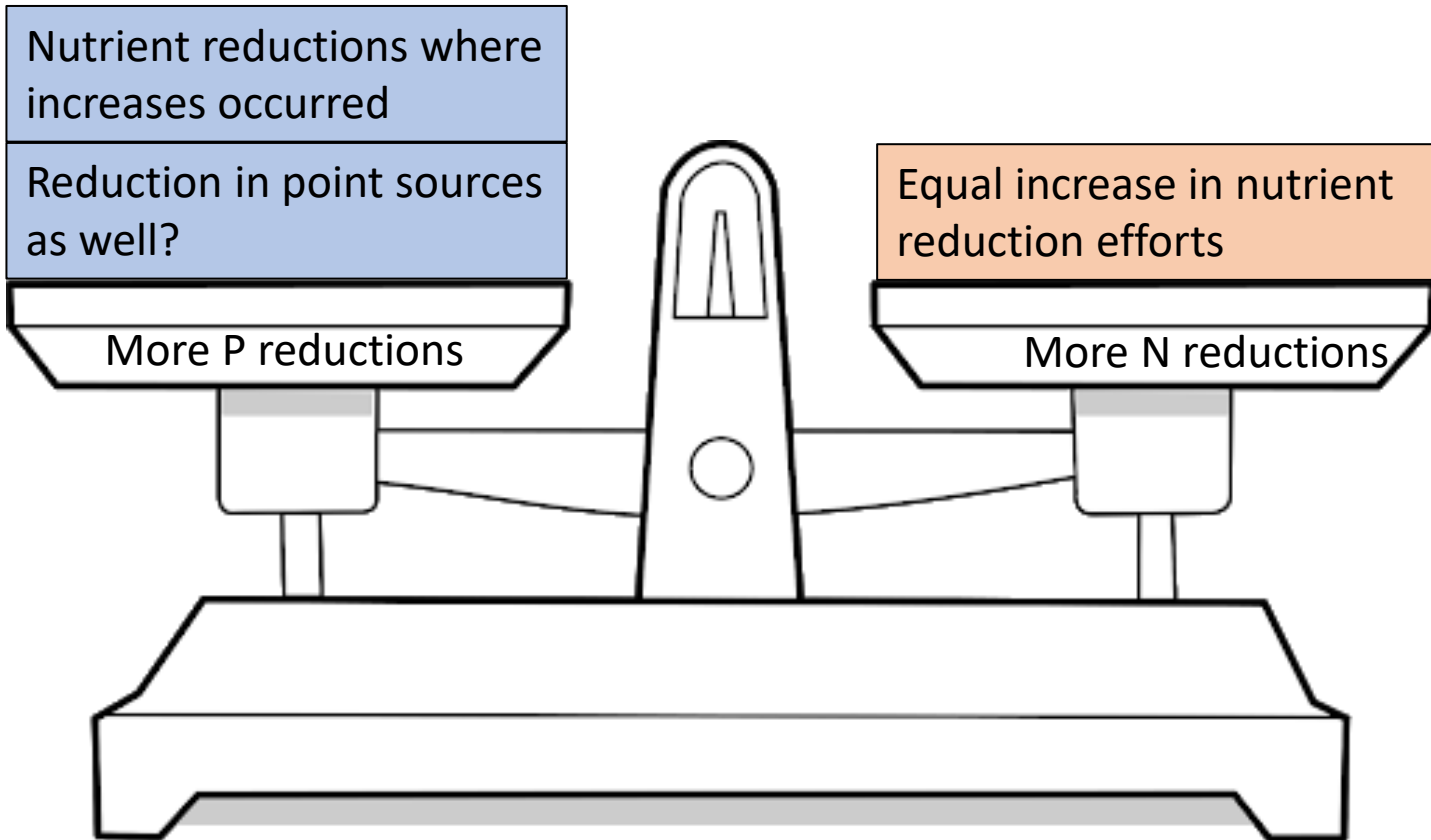


Balance of effects – Science Question



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

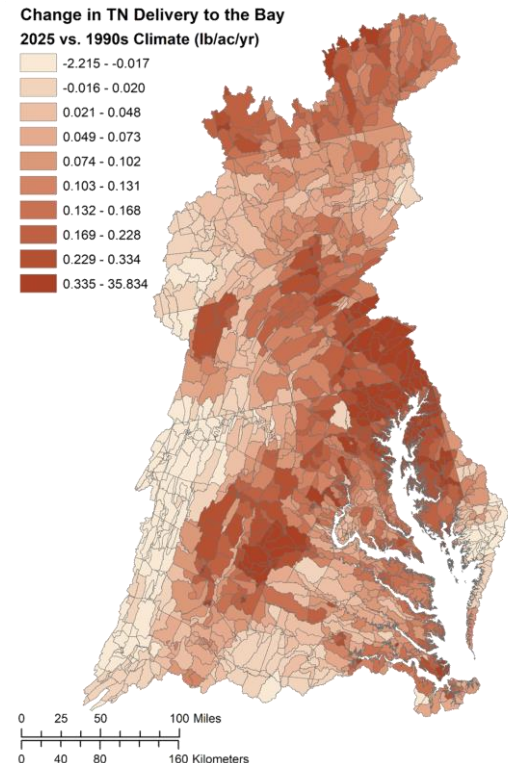
Balance of effort – Policy Question



Principles' Staff Committee

12/17/2020

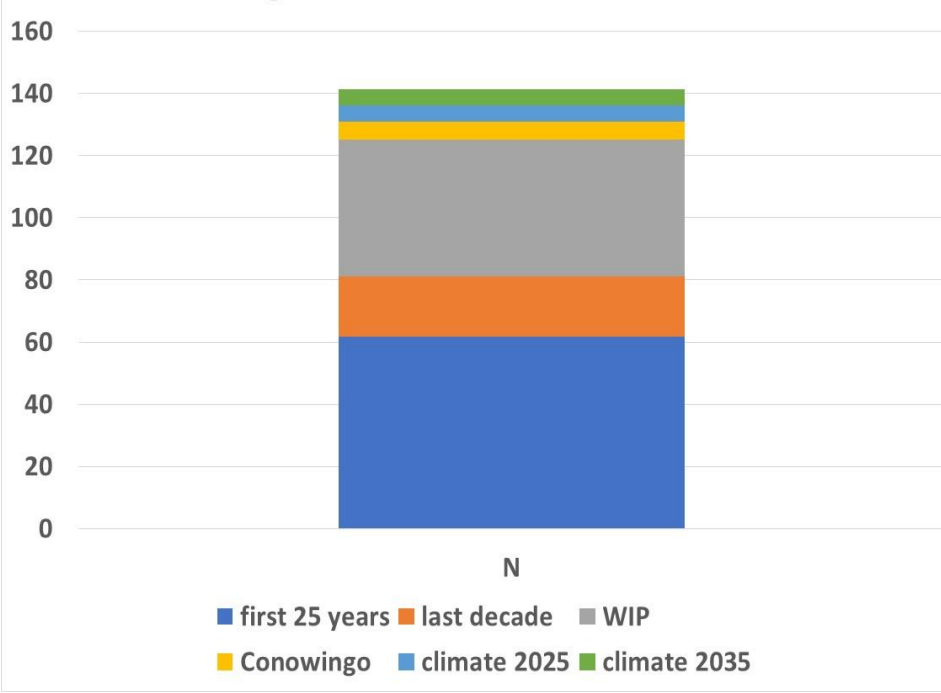
- Approved reductions based on where increases have occurred
 - NY given some relief
 - Negative values in WV set to zero
 - Stipulated that this decision does not set a precedent
 - Jurisdictions will begin addressing climate loads in their 2022-2023 milestones
- Commitment to continue to improve understanding of climate effects
- Reassess in 2025 for effects to 2035



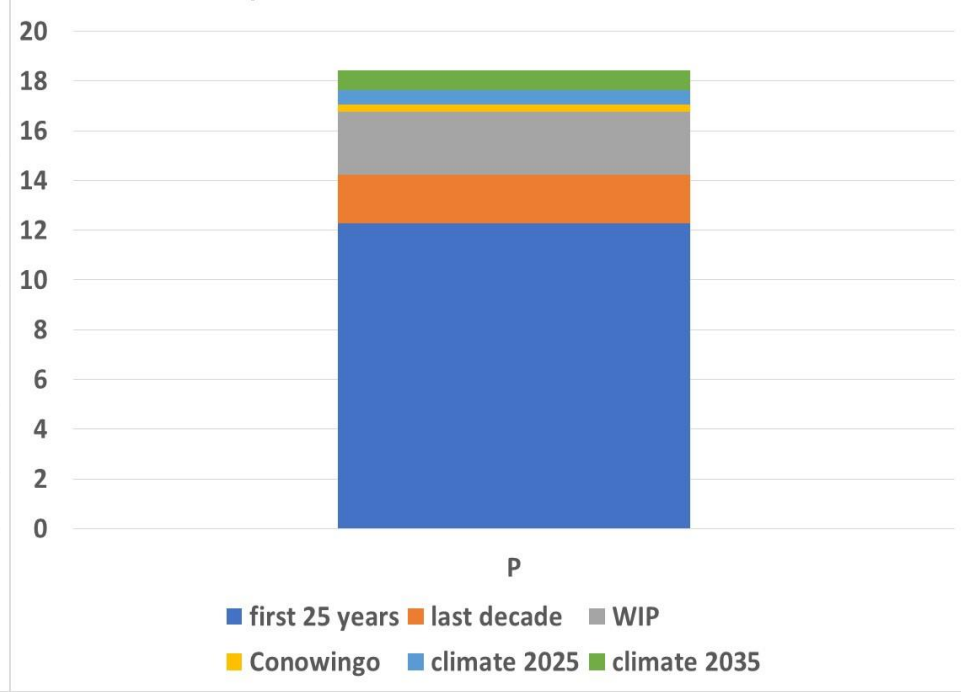
Reductions expected		
	TN	TP
DC	0.007	0.001
DE	0.039	0.003
MD	1.142	0.111
NY	0.399	0.044
PA	1.811	0.095
VA	1.589	0.337
WV	0.000	0.009
Total	4.986	0.599

Climate effects in perspective

Nitrogen Reductions in the CB watershed



Phosphorus Reductions in the CB watershed



Other Chesapeake Region Climate Impacts

- Flooding
- Shoreline erosion
- Wetland loss
- Habitat changes
- Increased stream temperatures
- Species changes
- Drought effects on water supply
- ...