

STEERING THE MID-POINT ASSESSMENT: CRITICAL DECISION POINTS

How and when will these "load allocations" be decided?

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Chesapeake Bay Commission
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What we are going to cover...

- Defining and Understanding Terms
 - Baywide Assimilative Capacity
 - State-Basin Planning Targets
 - TMDL Allocations
 - Local Area Planning Goals
- Schedule for developing these incremental steps for the Mid-Point Assessment and Phase III WIPs
- How might the values change with the new models

Step 1:

Baywide Assimilative Capacity

The total load of pollutants that the Bay can receive and still meet dissolved oxygen water quality standards.

The dissolved oxygen water quality standards depend on the “designated use” of the area

- Migratory Fish Spawning and Nursery Areas

- Shallow and Open Water Areas

- Deep Water

- Deep Channel

The Bay Water Quality Model helps us determine the Baywide maximum load (October 2017)

Bay Dissolved Oxygen Criteria

Minimum Amount of Oxygen (mg/L) Needed to Survive by Species

Migratory Fish Spawning & Nursery Areas

Shallow and Open Water Areas

Deep Water

Deep Channel

6



Striped Bass: 5-6



American Shad: 5

5



White Perch:



Yellow Perch: 5

4



5

Hard Clams: 5



Alewife: 3.6

3



Crabs: 3



Bay Anchovy: 3

2



Spot: 2

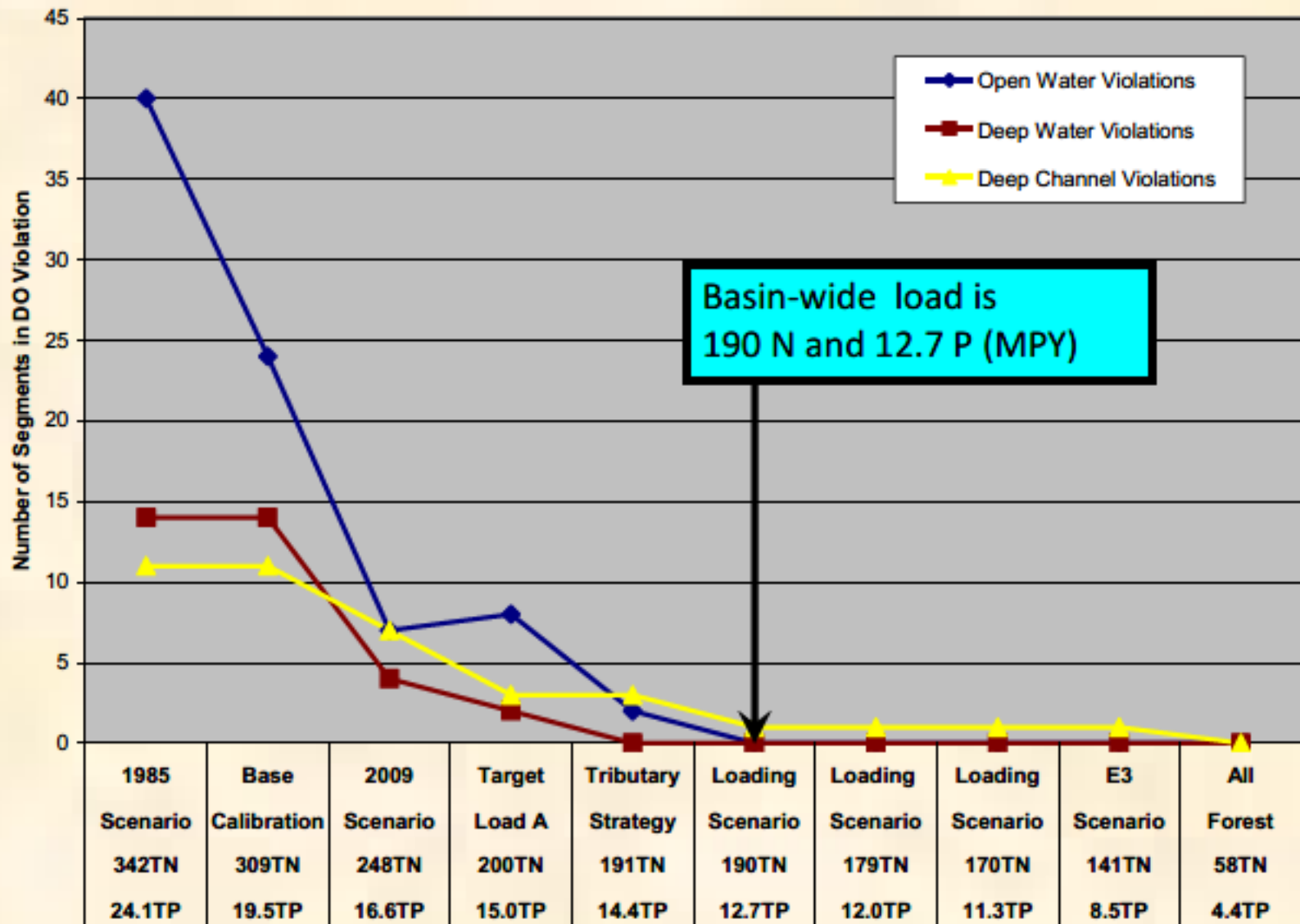
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Worms: 1

0

Dissolved Oxygen Criteria Attainment



		Base	No Action	1985 Progress	2009 Progress	2013 Progress	WIP2	E3	All Forest
Phase 6		352TN	429TN	361TN	279TN	274TN	204TN	140TN	40TN
8/9/17		22.5TP	44.0TP	30.5TP	17.9TP	17.1TP	12.3TP	7.1TP	2.1TP
		1993-1995	1993-1995	1993-1995	1993-1995	1993-1995	1993-1995	1993-1995	1993-1995
Cbseg	State	Deep Channel	Deep Channel	Deep Channel	Deep Channel	Deep Channel	Deep Channel	Deep Channel	Deep Channel
CB3MH	MD	16.0%	10.9%	7.7%	0.6%	0.6%	0.0%	0.0%	0.0%
CB4MH	MD	46.0%	51.6%	45.4%	25.9%	25.6%	0.0%	0.0%	0.0%
CB5MH	MD/VA	14.2%	18.5%	13.5%	0.9%	0.8%	0.0%	0.0%	0.0%
CHSMH	MD	37.4%	25.4%	17.7%	5.6%	5.1%	0.0%	0.0%	0.0%
POTMH	MD/VA	20.2%	20.4%	14.2%	0.0%	0.0%	0.0%	0.0%	0.0%
POMMH	MD	20.4%	20.6%	14.3%	0.0%	0.0%	0.0%	0.0%	0.0%
RPPMH	VA	19.0%	23.9%	13.2%	0.0%	0.0%	0.0%	0.0%	0.0%
EASMH	MD	25.4%	26.0%	18.8%	12.3%	12.2%	0.6%	0.0%	0.0%
MD5MH	MD	21.7%	25.3%	20.6%	4.3%	4.2%	0.0%	0.0%	0.0%
VA5MH	VA	4.5%	9.6%	3.7%	0.0%	0.0%	0.0%	0.0%	0.0%
PATMH	MD	24.8%	28.5%	26.6%	1.6%	1.0%	0.0%	0.0%	0.0%

		Base	All Forest	No Action	1985 Progress	2009 Progress	WIP2	E3
Phase 5.3.2		323TN	53.6TN	376TN	344TN	264TN	189TN	138TN
		20.6TP	2.6TP	37.9TP	25.7P	18.3TP	13.2TP	10.6TP
		1993-1995	1993-1995	1993-1995	1993-1995	1993-1995	1993-1995	1993-1995
Cbseg	State	Deep Channel	Deep Channel	Deep Channel	Deep Channel	Deep Channel	Deep Channel	Deep Channel
CB3MH	MD	16.0%	0.0%	22.0%	19.2%	7.3%	0.2%	0.0%
CB4MH	MD	46.0%	0.0%	52.8%	49.1%	26.4%	2.9%	0.0%
CB5MH	MD/VA	14.2%	0.0%	20.0%	16.7%	0.6%	0.0%	0.0%
CHSMH	MD	37.4%	0.0%	41.5%	37.4%	35.6%	16.6%	2.3%
POTMH	MD/VA	20.2%	0.0%	27.4%	22.7%	0.0%	0.0%	0.0%
POMMH	MD	20.4%	0.0%	27.6%	22.8%	0.0%	0.0%	0.0%
RPPMH	VA	19.0%	0.0%	28.1%	25.1%	0.0%	0.0%	0.0%
EASMH	MD	25.4%	0.0%	35.6%	27.5%	14.0%	1.6%	0.0%
MD5MH	MD	21.7%	0.0%	27.2%	23.8%	3.9%	0.0%	0.0%
VA5MH	VA	4.5%	0.0%	10.7%	7.4%	0.0%	0.0%	0.0%
PATMH	MD	24.8%	0.0%	49.1%	38.2%	11.5%	0.0%	0.0%

Step 2:

State-Basin Planning Targets

Subdivision of the Baywide Assimilative Capacity to the State-Basin scale

Guiding principles for this subdivision:

- Areas that contribute the most, must do the most

- Get credited for past implementation

- Loads must result in water quality attainment

The Bay Watershed and Water Quality Models helps us determine the State-Basin Planning Targets

Draft Planning Targets – November 2018

Final Planning Targets – March 2018

Determining Who Contributes the Most

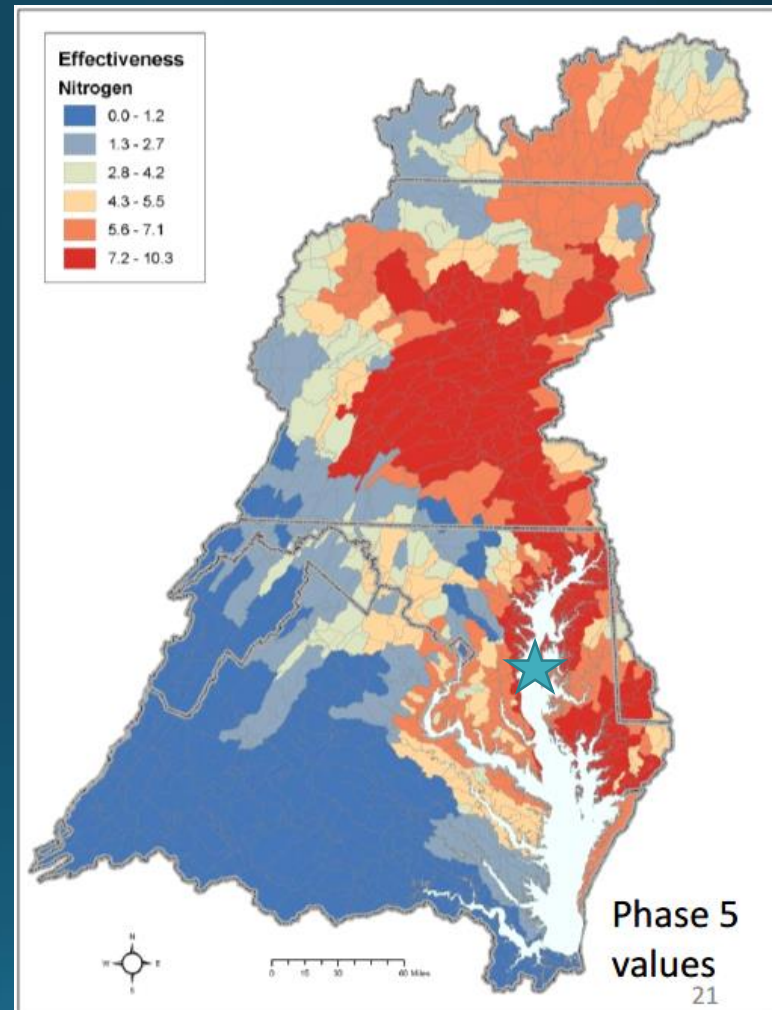
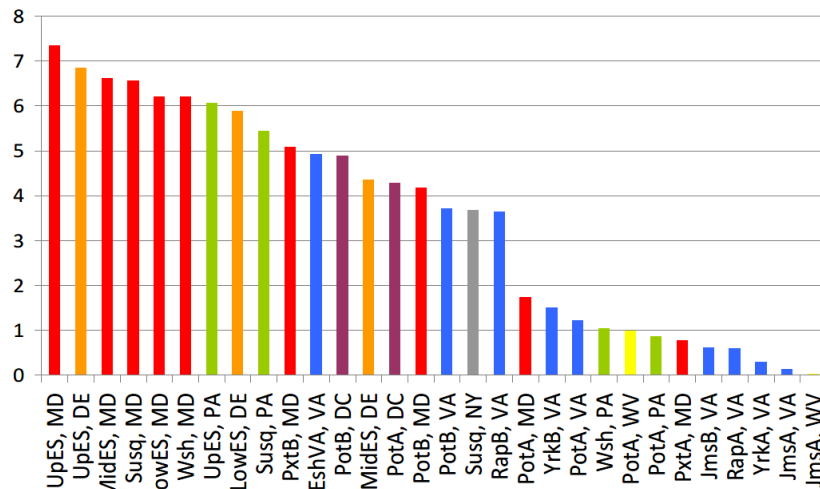
Contributes to what?

- Deep Chanel DO at CB₄MH ★

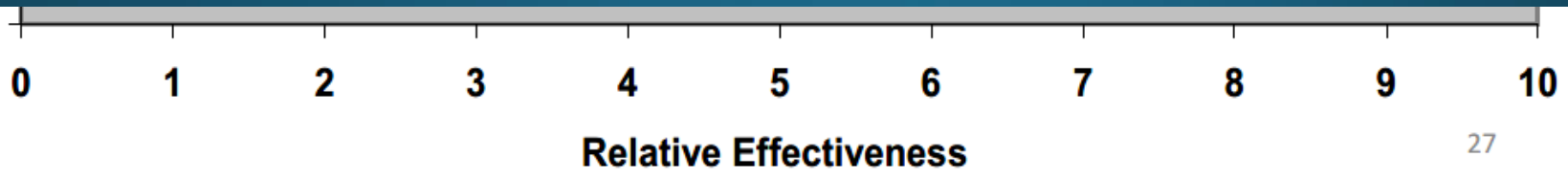
Two key factors:

- Distance from tidal waters
- Position along the mainstem Bay Watershed and Water Quality Models

Major River Basin by Jurisdiction Relative Impact on Bay Water Quality



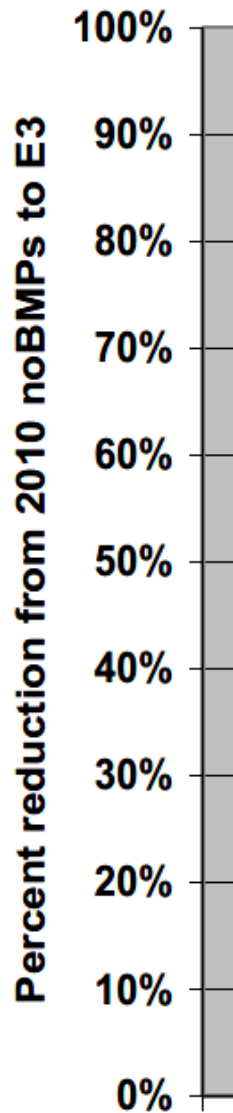
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27

Credit for Past Implementation

Percent reduction from 2010 noBMPs to E3



Percent reduction from 2010 noBMPs to E3
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%

A method that requires all state-basins to make a similar effort from here on out would disadvantage states that have already done more.

Instead, the planning target method uses a percentage of the way between:

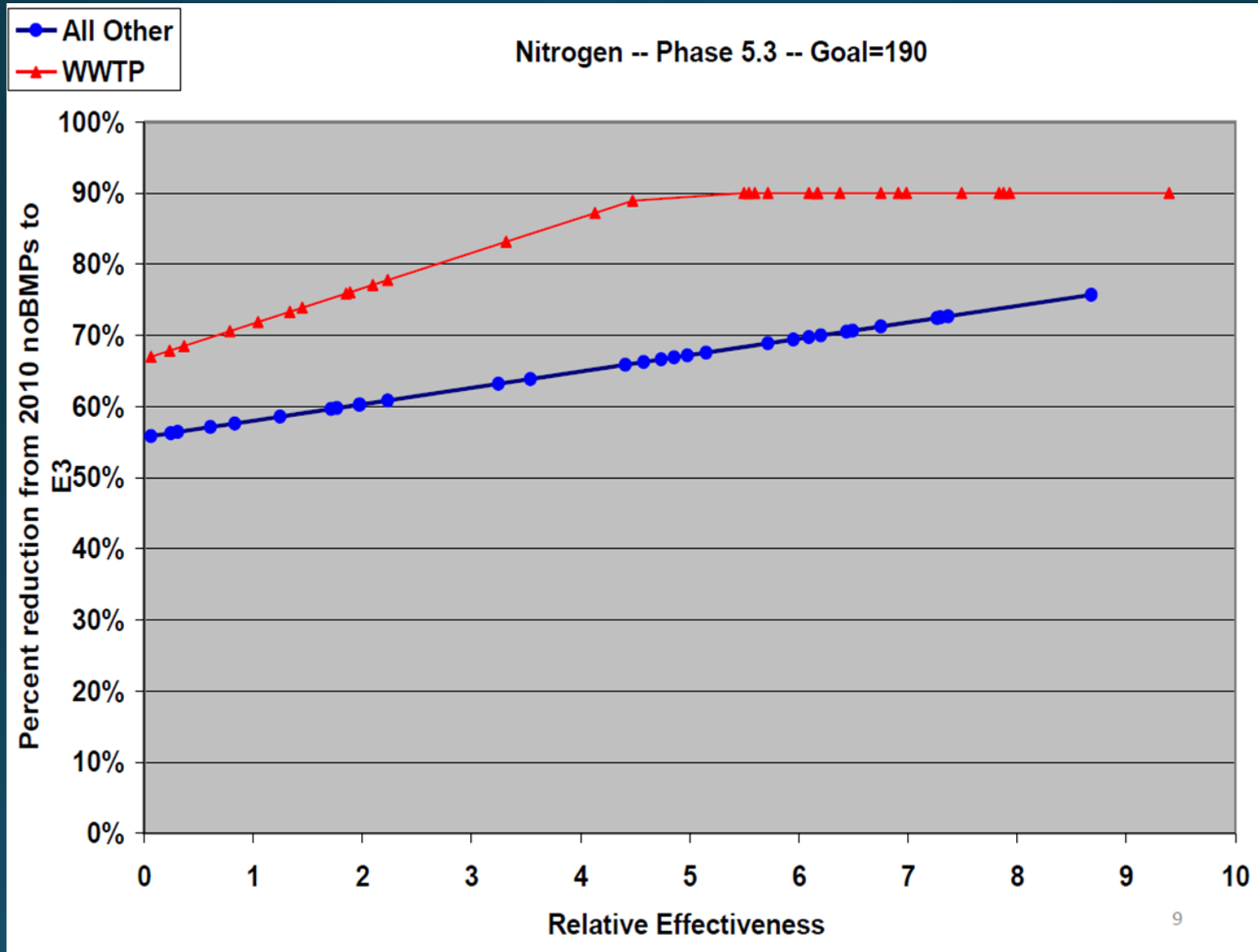
No Action: no BMPs on the ground

And

Everything by Everyone, Everywhere (E3)

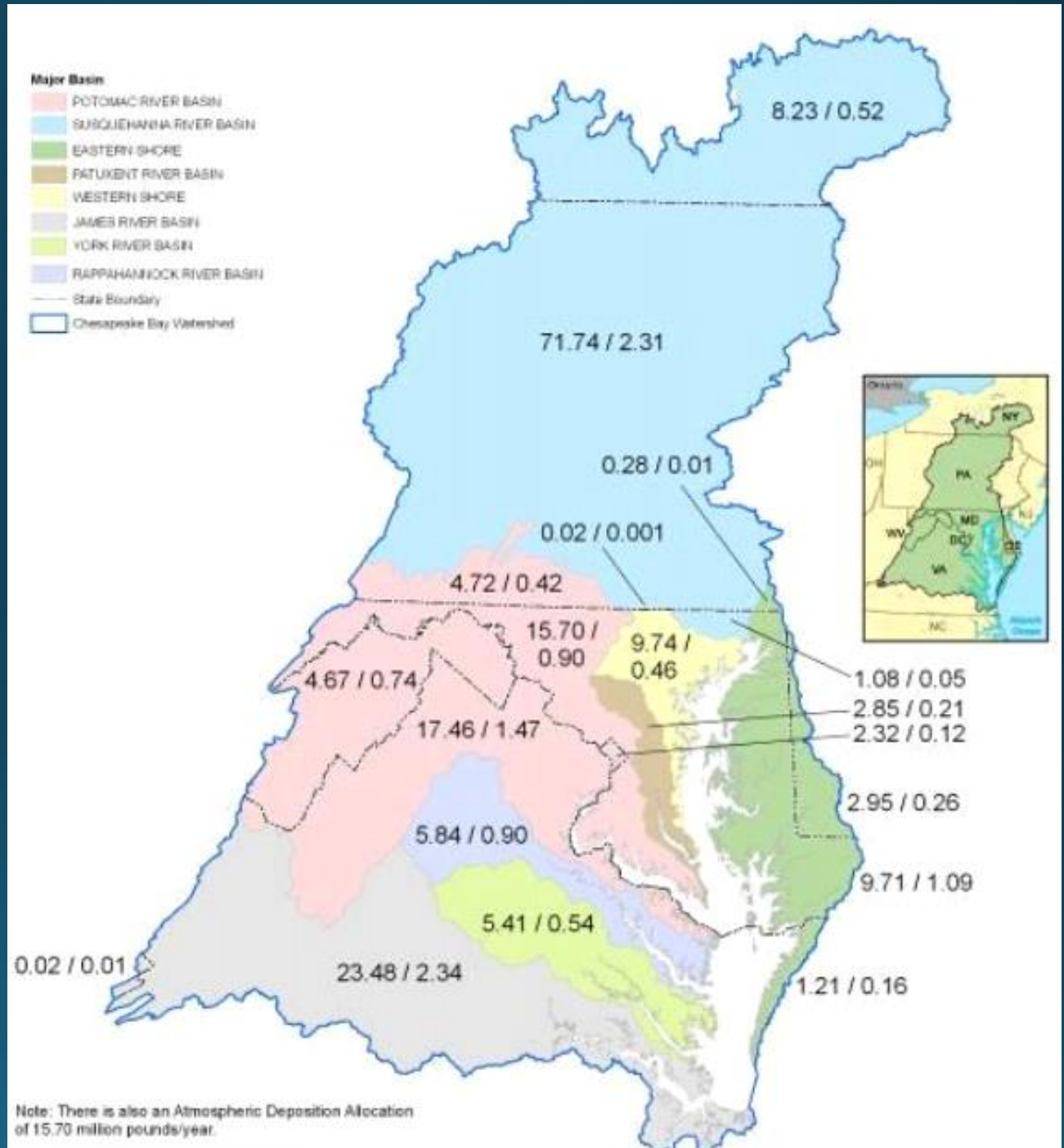
Watershed Model used to evaluate the two scenarios

Resulting Planning Target Method



Results are the allowable Nitrogen and Phosphorus loads for each State-Basin

Loads must result in water quality standards attainment



Step 3? TMDL Allocations

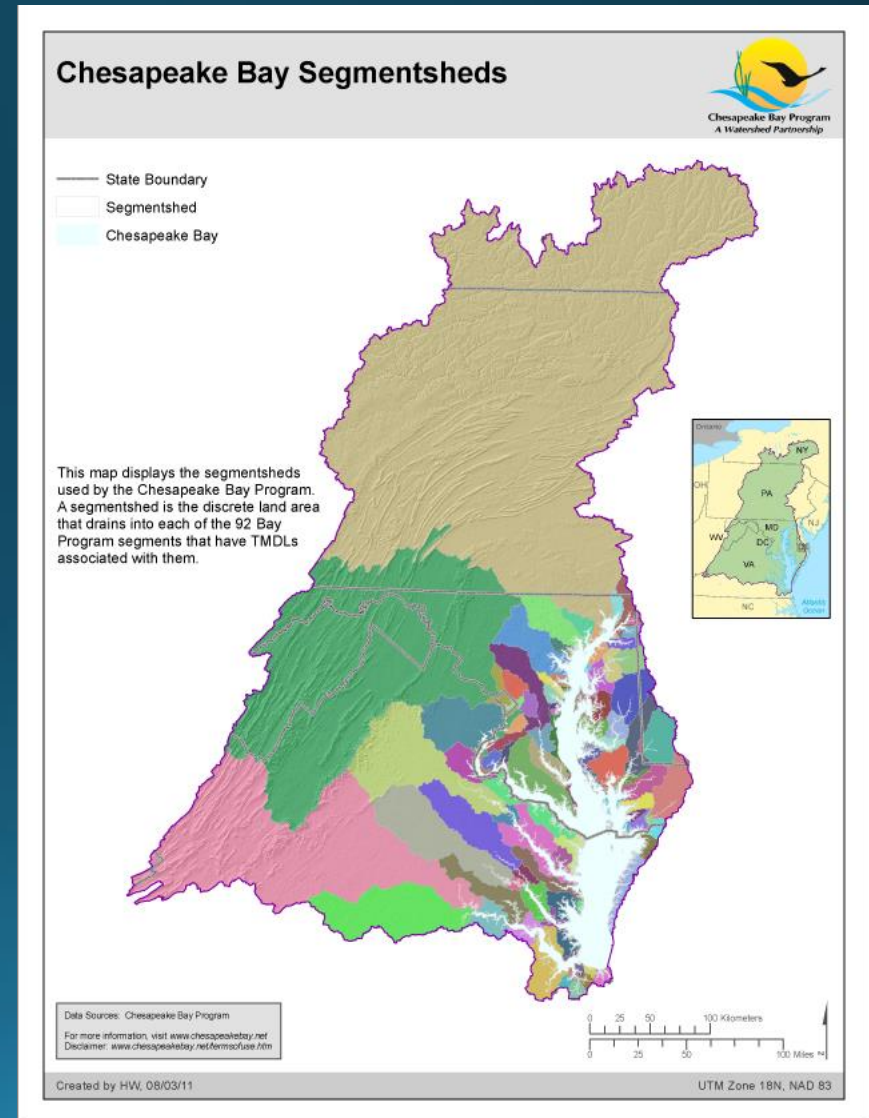
The current TMDL divides the Bay into 92 sub-watersheds (segmentsheds)

Each segmentshed TMDL includes:
Waste Load Allocations (WLA)

For the permitted sources
Load Allocations (LA)

For each of the other sources

These WLAs and LAs
are enforceable under the
Clean Water Act



Step 3? TMDL Allocations

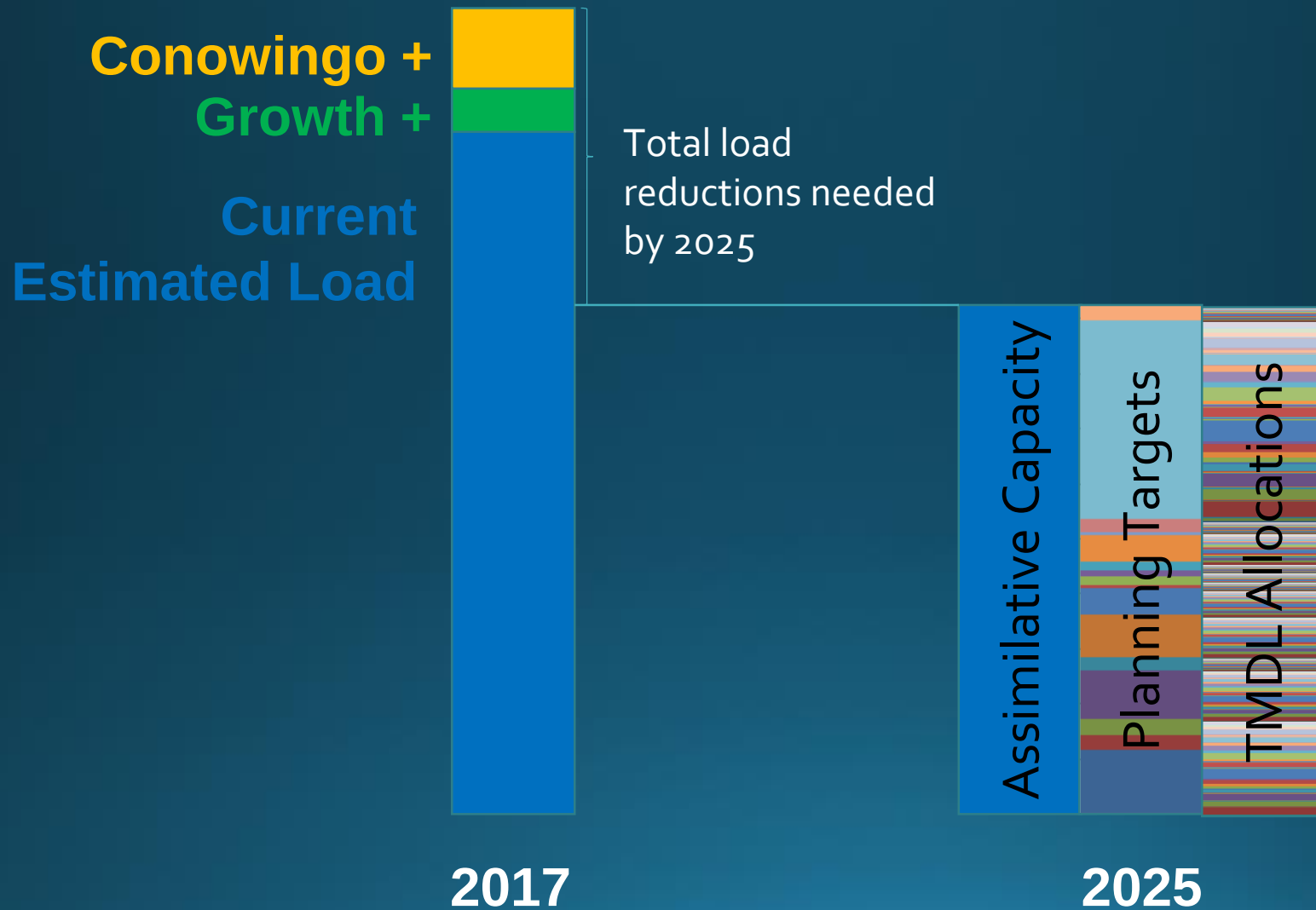
TMDL Allocations are detailed in Appendix Q of the 2010 Bay TMDL

Since EPA established the Bay TMDL in 2010, EPA decides if and when the TMDL Allocations will be updated

Updates to the TMDL Allocations would be based on the new models and Phase III WIPs

Decision expected after Phase III WIPs are final, April 2019

Affect of Other Key Decisions



Local Area Planning Goals

Local Area Planning Task Force:

Should local Area Planning Goals be Established?

Yes, to facilitate engagement of local partners

At what scale?

**Many options, must be finer than the State-Basin
Planning Targets**

How should the goals be expressed?

**Many options, Loads, reductions, %BMPs, etc.
Jurisdictions decide.**

Since these are a function of the Final Planning Targets, Local Area Planning Goals will likely be developed in April 2018

Local Area Planning Goals

Local Area Planning Goals provided to Local Partners to help engage them in WIP planning

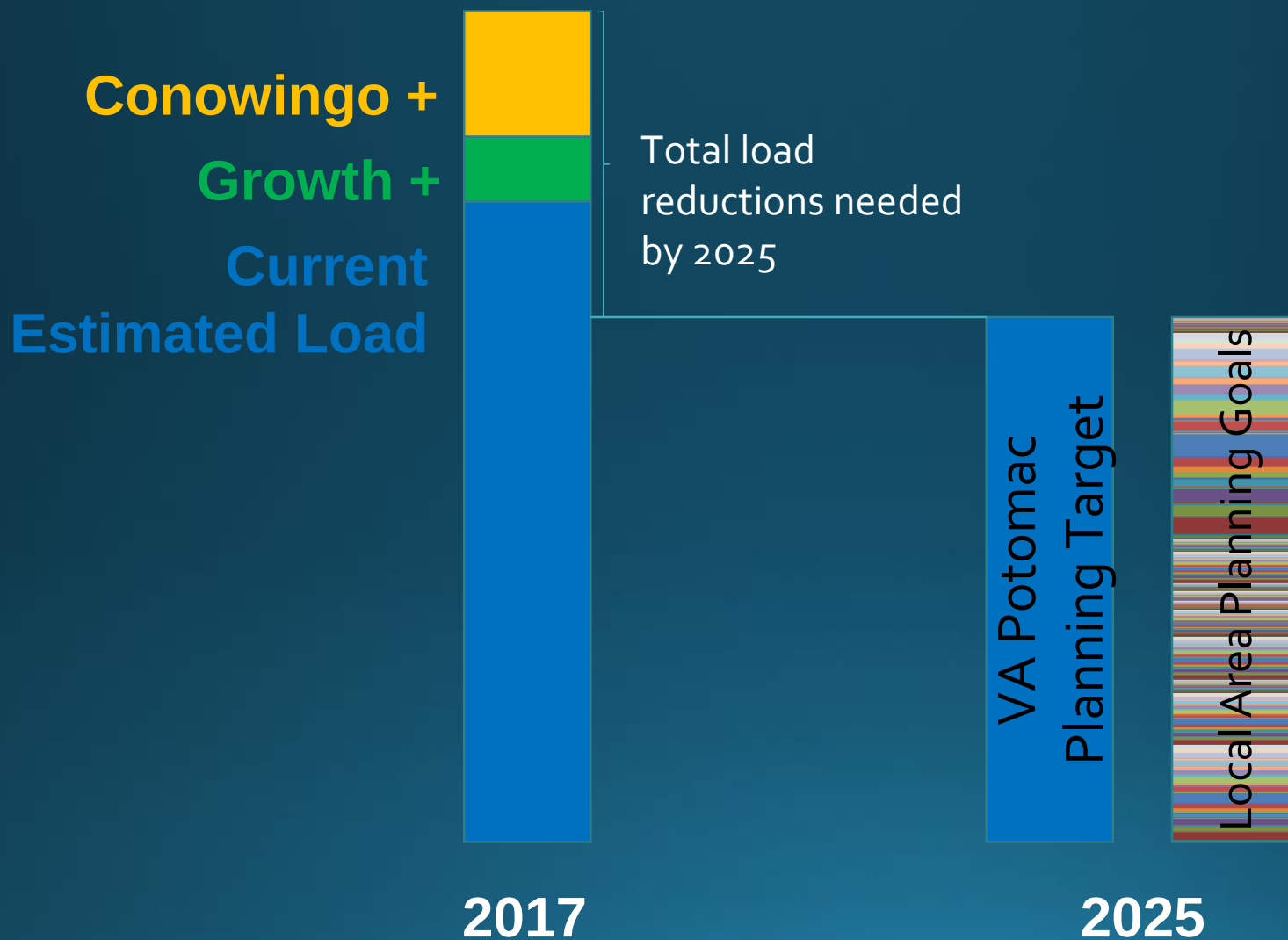
These goals are not enforceable

Local Partners, in cooperation with Jurisdictions, develop implementation scenarios to achieve Planning Goals

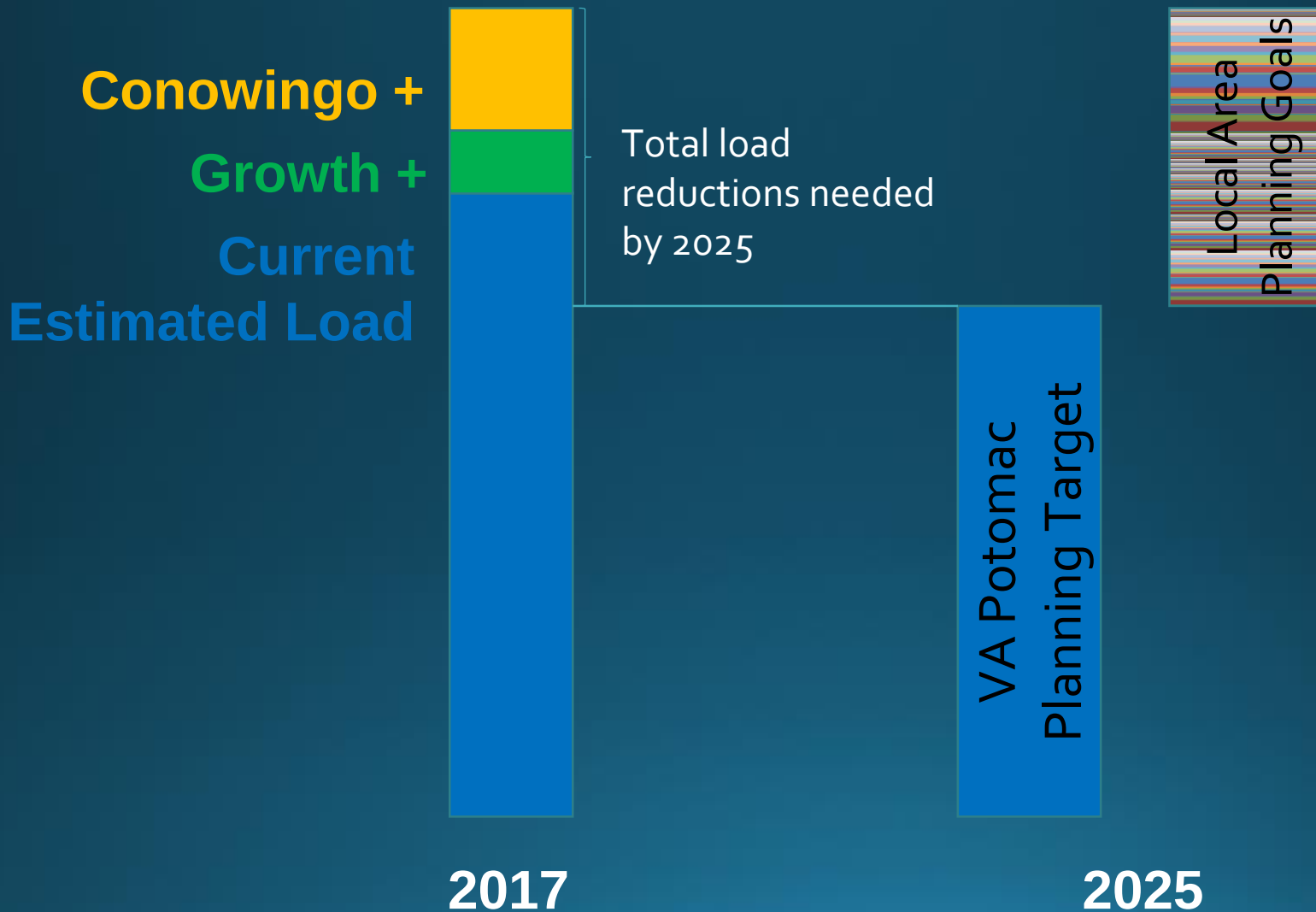
Local implementation scenarios are combined to create the Phase III WIP implementation forecasts through 2025

Implementation forecasts are run through Bay Models to ensure State-Basin Planning Targets and Water Quality Standards are achieved

LAPGs could be a subdivision of the State-Basin Planning Targets to a finer scale of geography and/or source



LAPGs could be a subdivision of the load reductions to a finer scale of geography and/or source



Summing up...

- Baywide Assimilative Capacity
 - Single number Baywide for N and P
 - October 2017
- State-Basin Planning Targets
 - 18 State-Basin values for N and P
 - Draft: November 2017, Final: March 2018
- Local Area Planning Goals
 - Jurisdictionally determined
 - Finer than State-Basin scale
 - Non-enforceable
 - April 2018
- TMDL Allocations
 - EPA Decision
 - Spring/Summer 2019

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How and when will these "load allocations" be decided?

Questions and Discussion

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