

Establishing Scenario Years for Planning Targets and Phase III WIPs

Presentation for Land Use Workgroup
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Remaining Decision Points

- What scenario year should be used to establish Phase III WIP **planning targets**?
 - 2010? 2012? 2017? 2025 (historical trends)?
- What scenario year should be used to develop **Phase III WIPs**?
 - 2010? 2012? 2017? 2025 (historical trends)?
- Partnership could approve different scenario years for the two decisions.

What scenario year should be used to establish Phase III WIP planning targets?

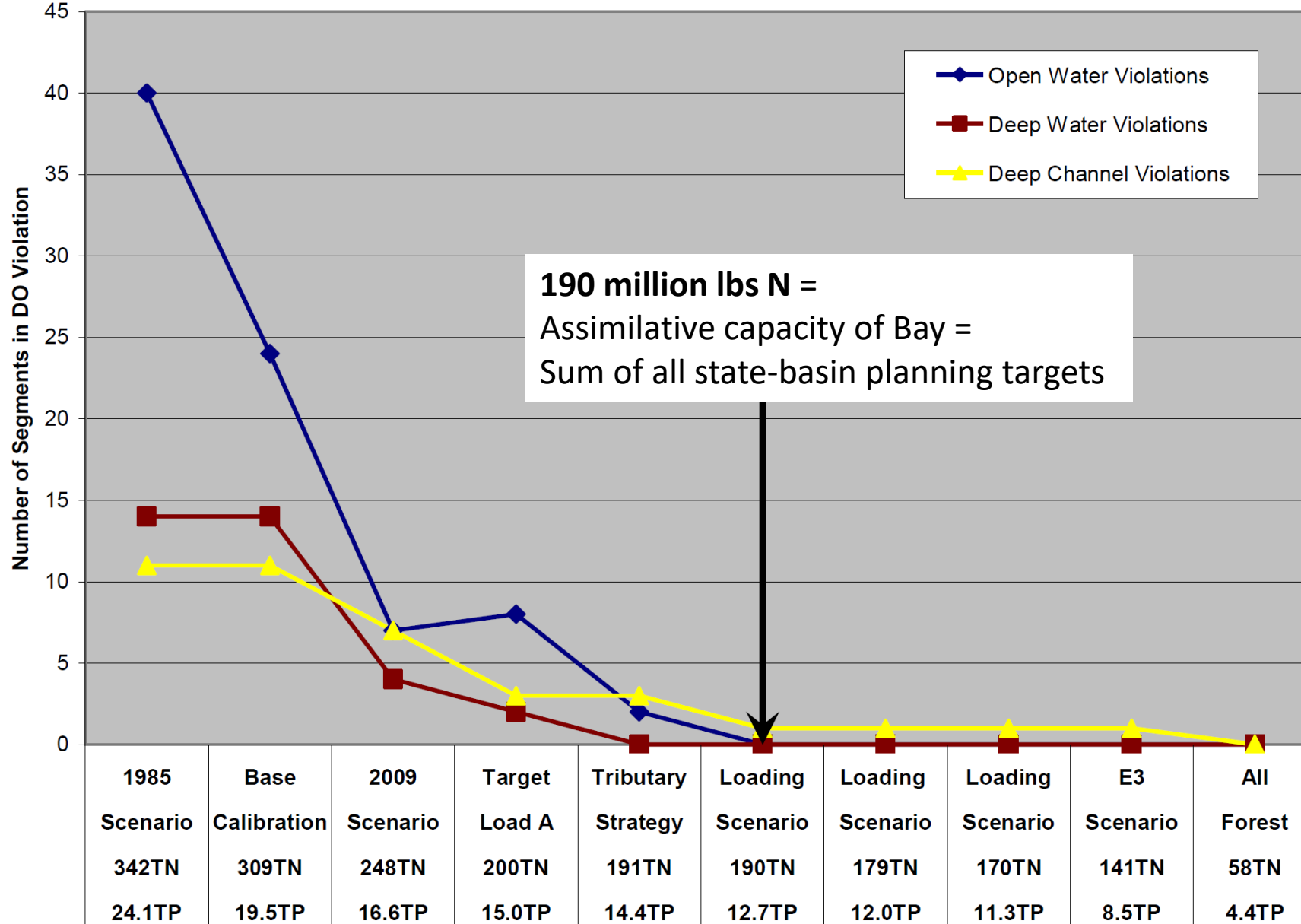
Scenario Year – The year for which a scenario of management actions is applied against. Each year has unique estimated land uses, crops, animals, septics, etc.

- 2010 was chosen as the “scenario year” for the 2010 Chesapeake Bay TMDL planning targets.

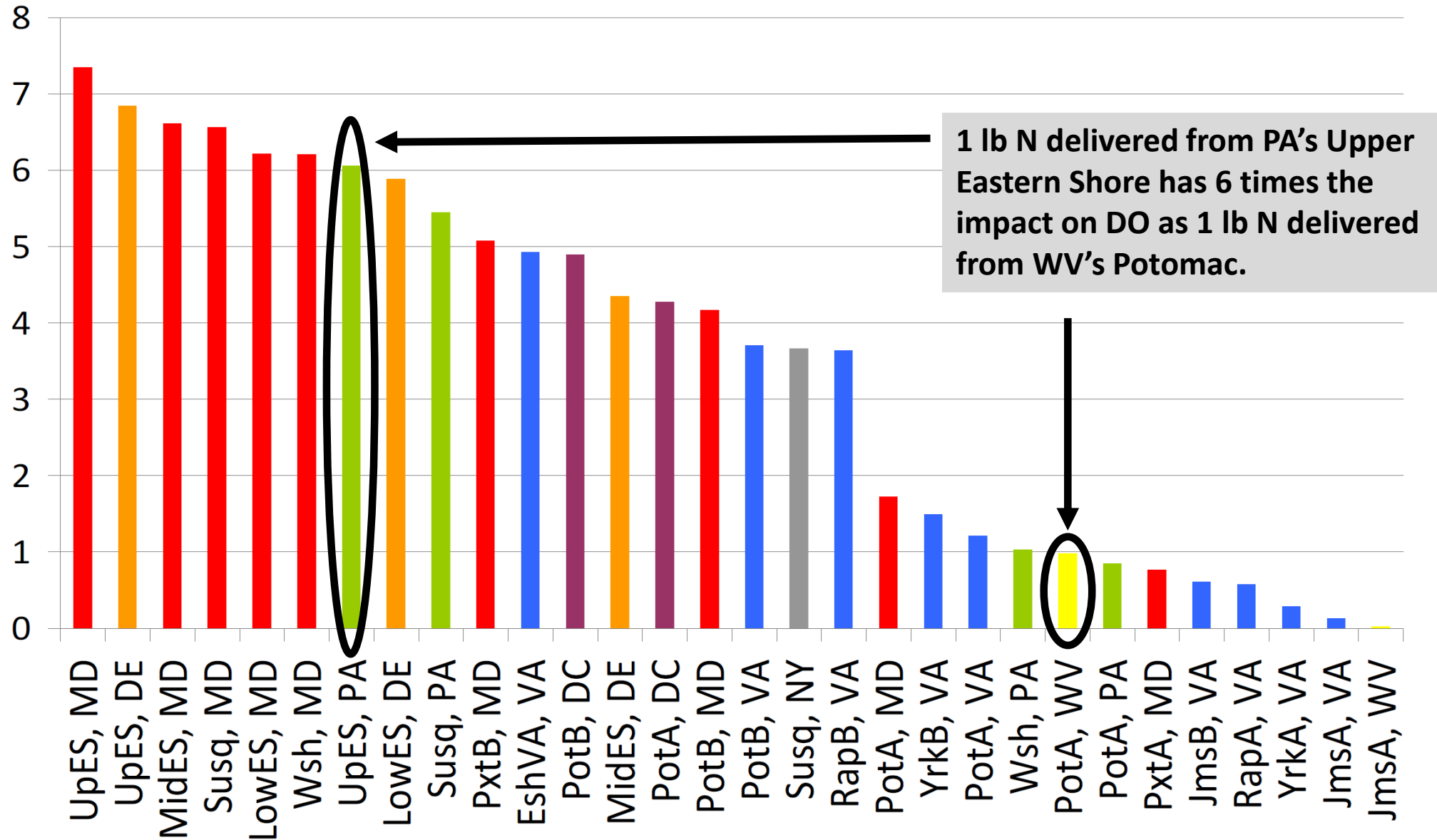
Planning Target – Allowable nutrient or sediment delivery based upon:

- 1) assimilative capacity of the Bay
- 2) reduction potential from delta of no action and E-3 scenarios
- 3) % of reduction potential needed based upon relative impact of basin’s loads on DO in main-stem

Dissolved Oxygen Criteria Attainment



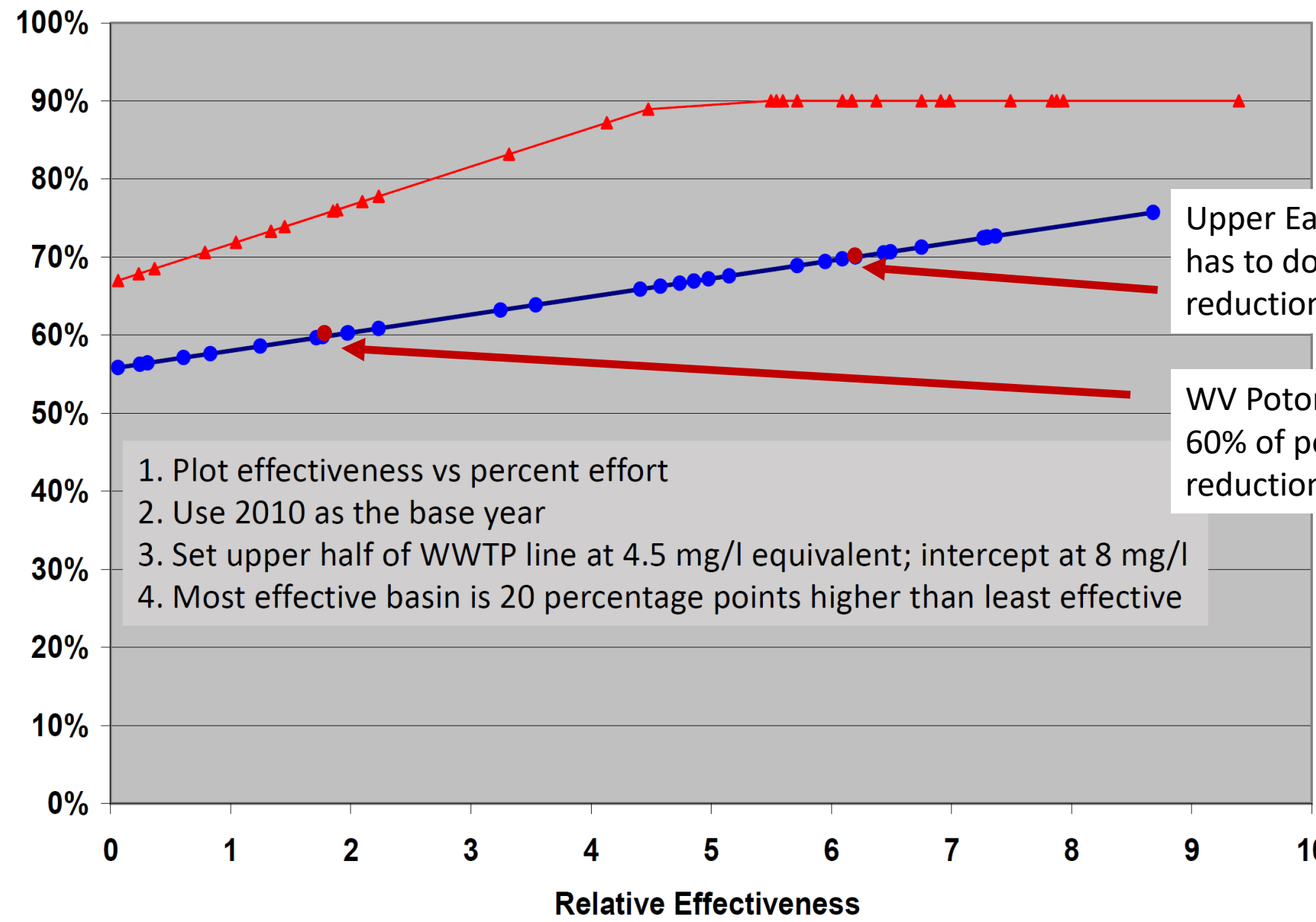
Major River Basin by Jurisdiction Relative Impact on Bay Water Quality



% Reduction 2010 NA - 2010 E3

Nitrogen -- Phase 5.3 -- Goal=190

- All Other
- WWTP



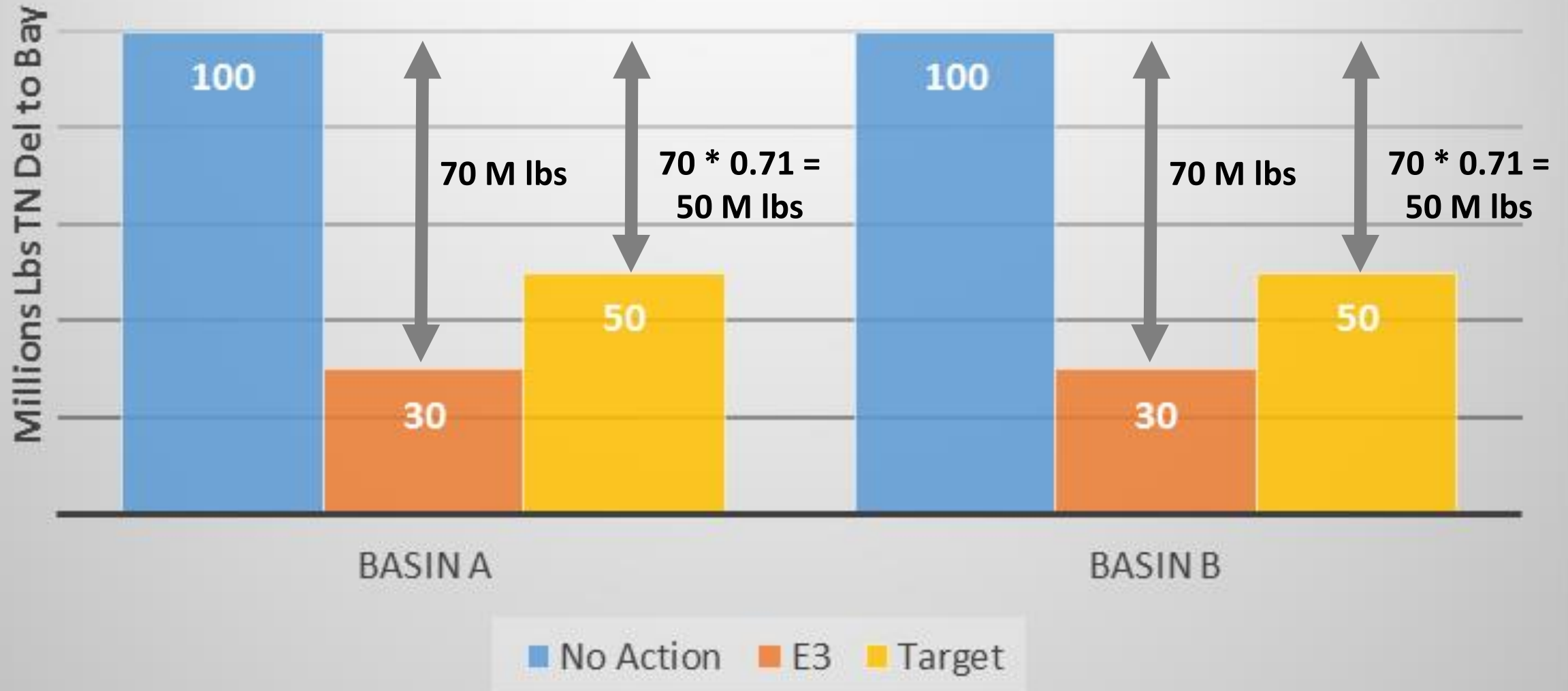
Upper Eastern Shore of PA has to do 70% of possible reductions from NA to E3

WV Potomac has to do 60% of possible reductions from NA to E3

- 1. Plot effectiveness vs percent effort
- 2. Use 2010 as the base year
- 3. Set upper half of WWTP line at 4.5 mg/l equivalent; intercept at 8 mg/l
- 4. Most effective basin is 20 percentage points higher than least effective

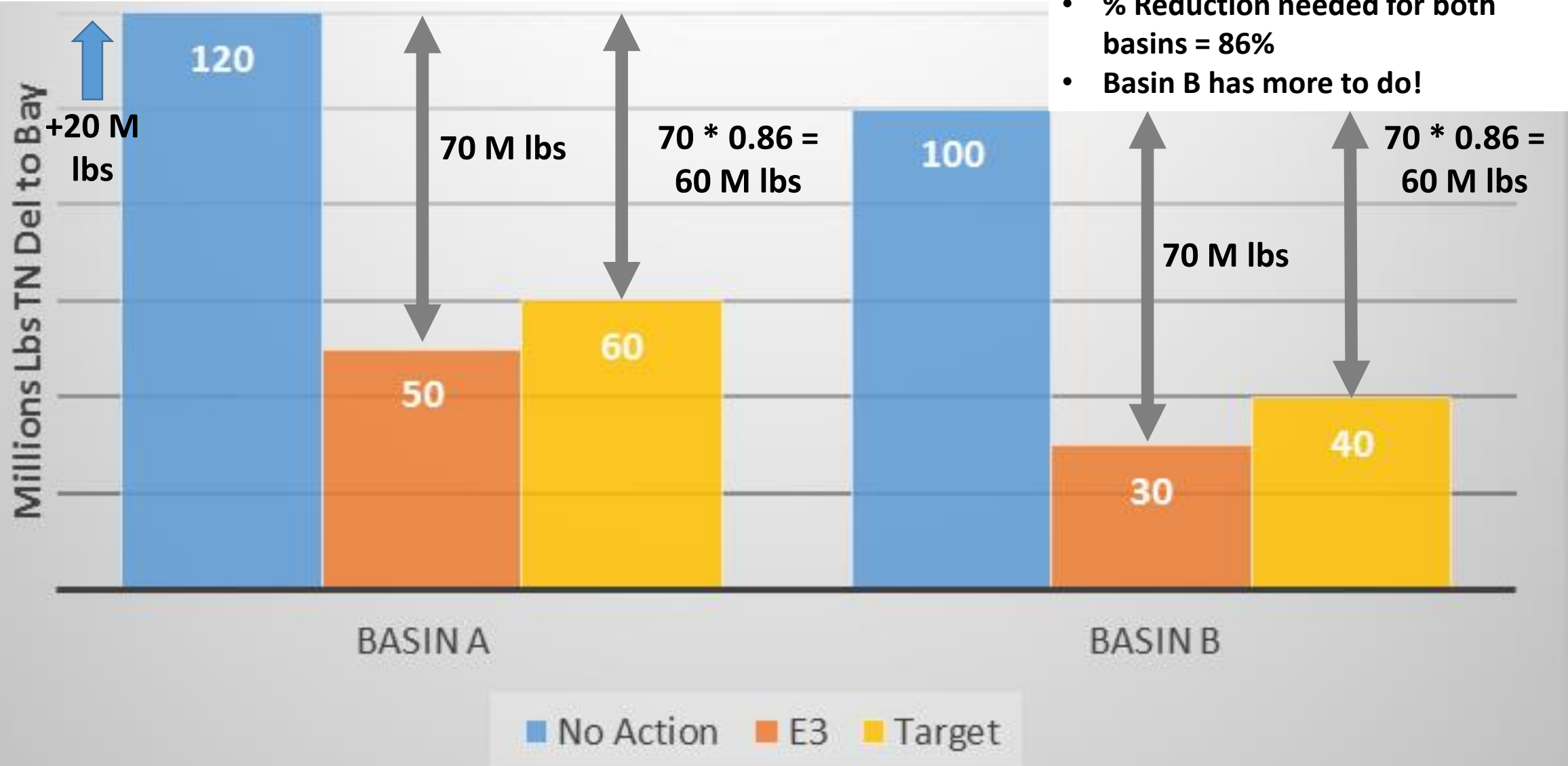
Basins with Equal Effort in 2010

- Scenario year = 2010
- Targets must sum to 100
- Basins have same impact on DO.
- **% Reduction needed = 71% for both basins.**



Future Scenario Year Could Impact Basins with Little Growth

- Scenario year = 2017
- Targets must = 100
- Basin A grows.
- Basin B does not grow.
- **% Reduction needed for both basins = 86%**
- **Basin B has more to do!**





What scenario year should be used to develop Phase III WIPs?

Scenario Year – The year for which a scenario of management actions is applied against. Each year has unique estimated land uses, crops, animals, septics, etc.

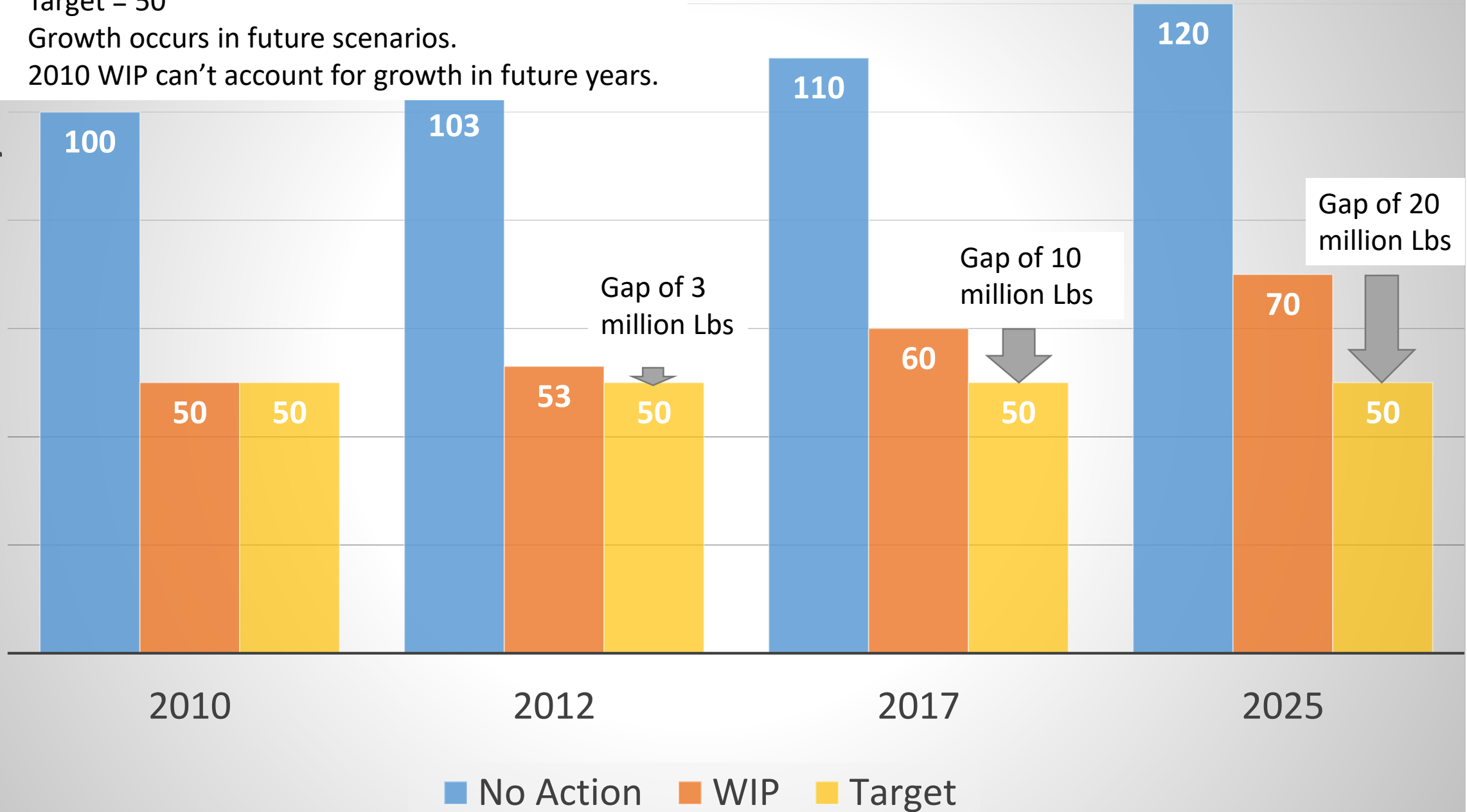
- 2010 was chosen as the “scenario year” for developing the Phase II WIPs.

Accounting for Growth - The 2010 Chesapeake Bay TMDL stated: “WIPs are expected to describe procedures for estimating additional loads due to growth and to provide EPA with information to inform additional pollutant load reductions that are at least sufficient to offset the growth and development that is anticipated in the watershed between 2011 and 2025.”

Example of 2010 WIP not Accounting for Growth

- Target = 50
- Growth occurs in future scenarios.
- 2010 WIP can't account for growth in future years.

Millions Lbs TN Del to Bay



What about Alternative 2025 Scenarios?

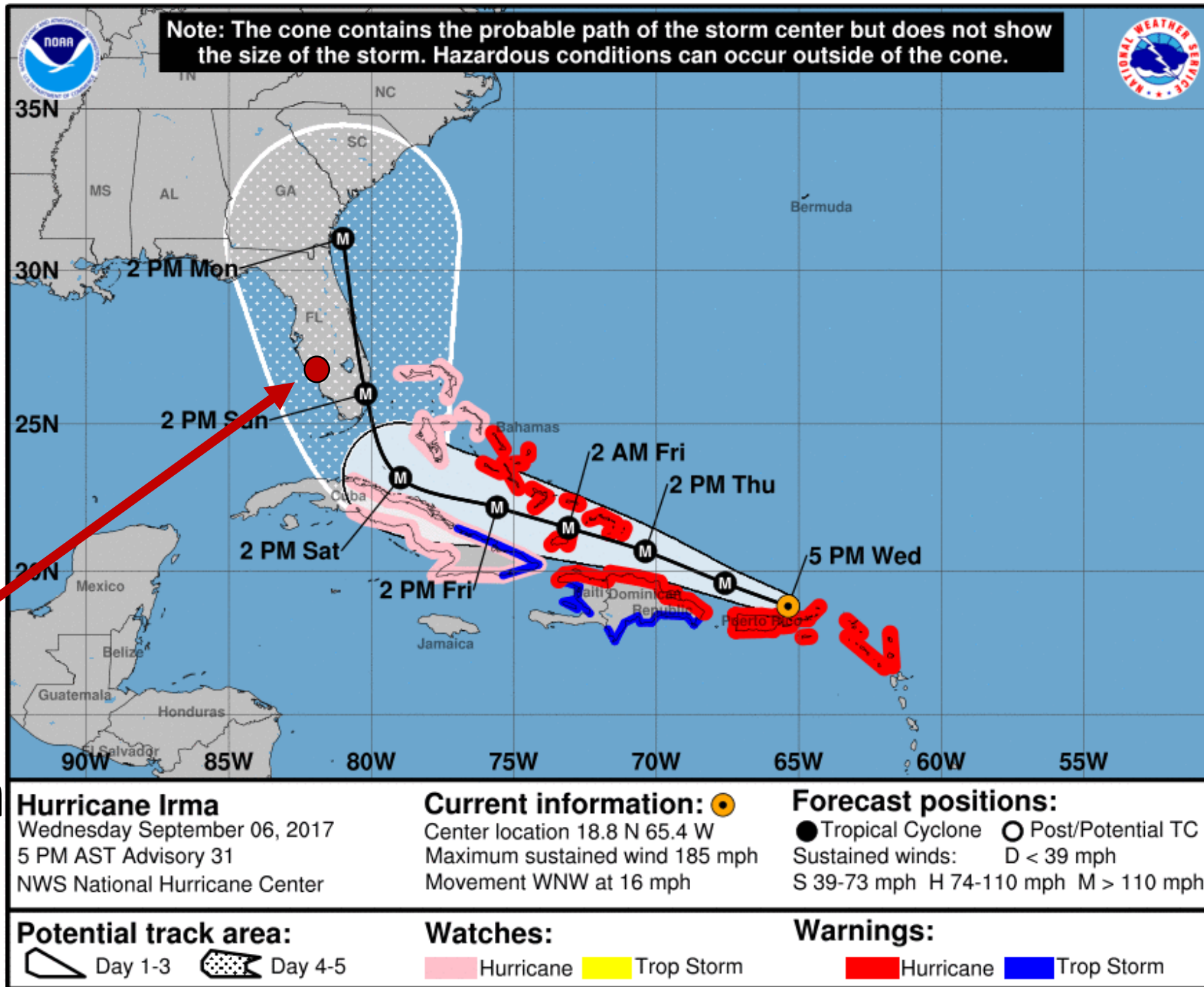
- LU Team developing the following 2025 land use sets:
 - Historical Trends
 - Current Policy
 - Current Policy +
 - Utopia
- Historical Trends is currently complete and will be used for Phase III WIP purposes.
- Jurisdictions could choose to set their Phase III WIP on one of the other three sets to represent planned changes in land use policies by 2025.

What about Progress and Milestones?

- Regardless of scenario year decision, progress and milestones are assessed on projected scenarios.
 - Example: 2016 Progress implementation applied to 2016 projected scenario year, not 2010 scenario year.
- Previous WQGIT decision already dictates CBPO revise scenario year projections once per milestone period to account for best available data.

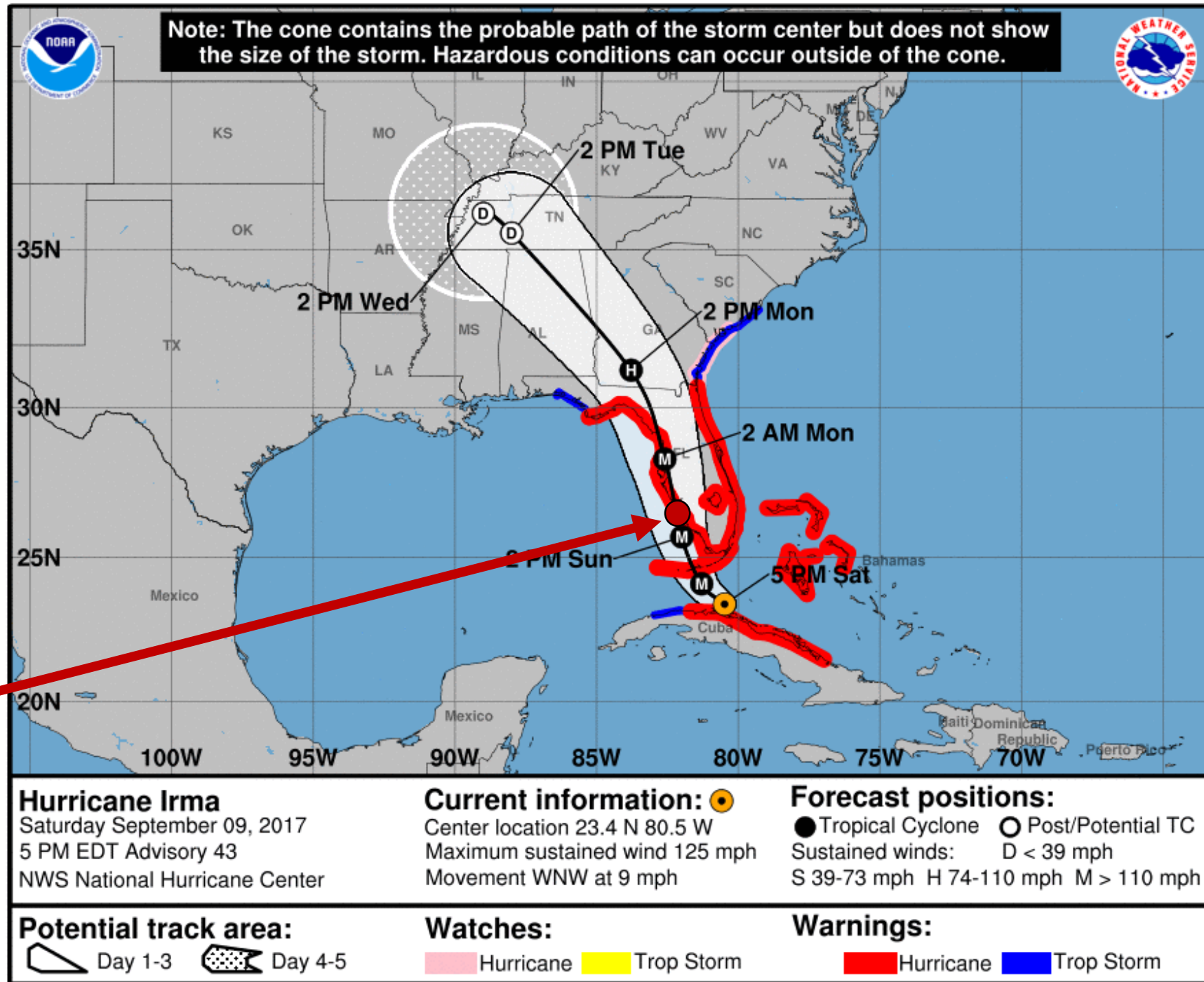
Landfall
-4 days

Landfall
Location



Landfall
-1 days

Landfall
Location



Landfall

