



Federal Facility Planning Goals for WIP III

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Federal Facilities Workgroup Meeting
November 13, 2018



Federal Facilities Workgroup

11/13/18 Agenda

- Federal Planning Goals and Protocol Discussion
(Discussion Lead: Jeff Sweeney)
 - How federal targets were determined for Pennsylvania facilities and why they are the same level-of-effort as the state's targets
 - Update the Protocol language
- 10:05-10:55
- Meeting Materials
 - Excel spreadsheet of LAPGs to Federal Planning Goals
 - Protocol for Setting Targets, Planning BMPs and Reporting Progress for Federal Facilities and Lands

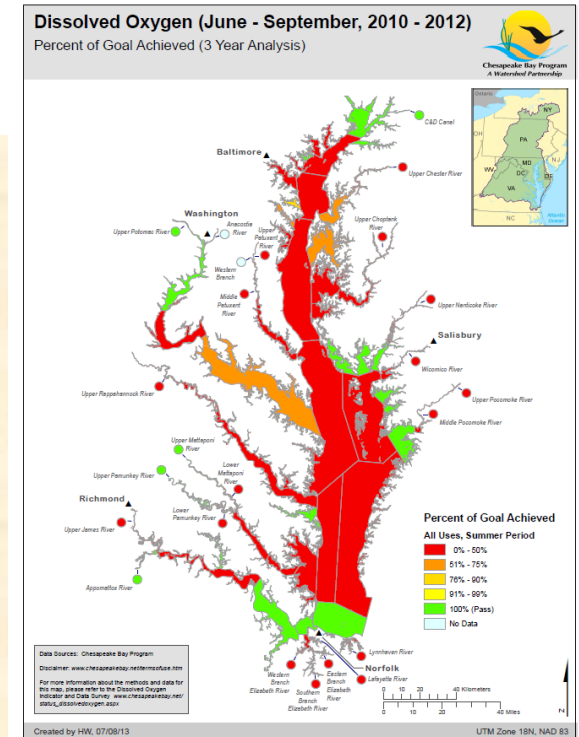


Planning Targets

Nitrogen, Phosphorus and Sediment Loading Caps

Some rules of equity:

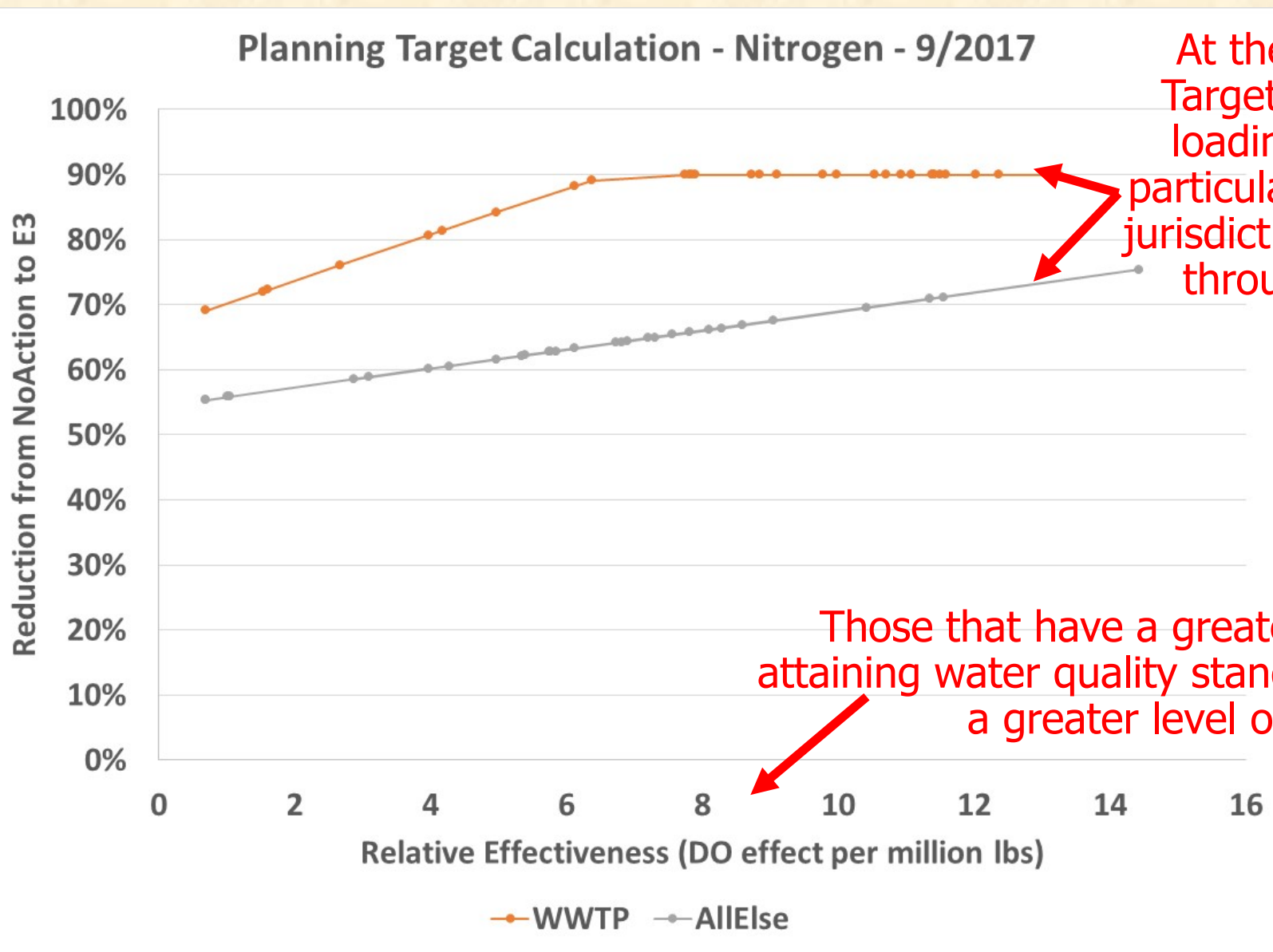
- Those who pollute more should do more
- Those that have a greater influence on attaining water quality standards should have a greater level of effort





CB Watershed Planning Target Methodology "Hockey Stick"

Those who pollute more should do more



At the end, Planning Targets do not specify loading goals for any particular source. That is jurisdictions' responsibility through their WIPs.



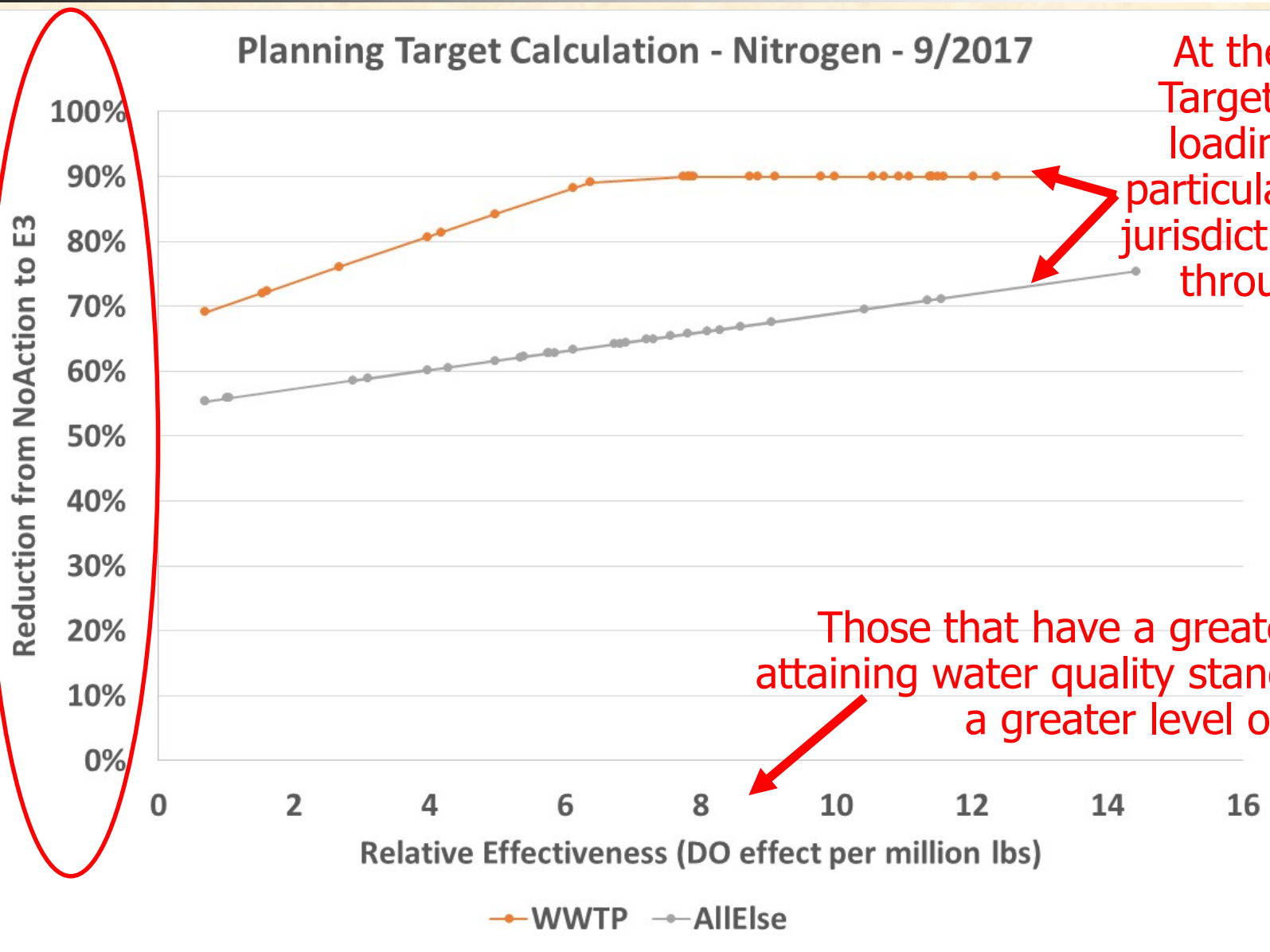
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CB Watershed Planning Target Methodology

Defining the Controllable Loads

- NoAction
- E3 (Everything, Everywhere, by Everyone)
 - NoAction and E3 are one component of the Planning Target calculations
 - Equity rule = Major river basins that contribute the most to the Bay water quality problems must do the most to resolve those problems (on a pound-per-pound basis)
- The difference between NoAction and E3 loads is defined as the “controllable” loads.



CB Watershed Planning Target Methodology E3 Model Scenario

- The E3 scenario is an estimate of the application of management actions . . . with theoretical maximum levels of managed controls on all pollutant load sources.
- There are no cost and few physical limitations to implementing BMPs in the E3 scenario.
- Generally, E3 implementation levels and their associated reductions in nutrients and sediment could not be achieved for many practices, programs and control technologies when considering physical limitations and participation levels.



E3 Scenario

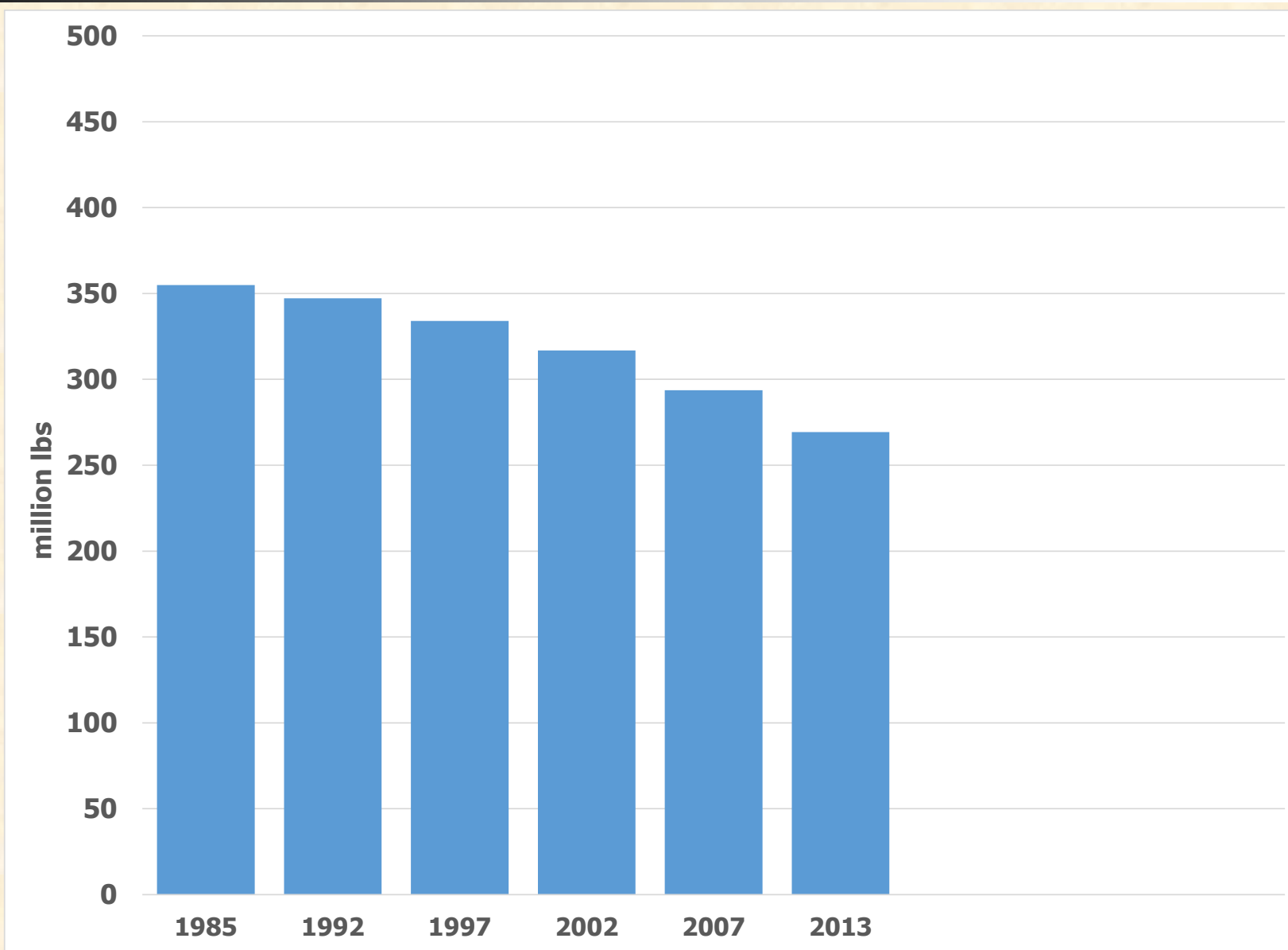
Urban, Forestry & Septic BMP Implementation Levels

<u>Urban, Forestry & Septic</u>	
Phase 6 BMP	E3 Implementation Level
Stormwater Management - New Development	100% of new development has Runoff Reduction BMPs sized for 2.0 inch Impervious area
Stormwater Management - Retrofits	Runoff Reduction Retrofits sized to treat 1.5 inch Impervious area for 75% of each urban land use type (accommodates physical limitations)
Stormwater Management Composite	100% of area that can be managed through these techniques
Erosion & Sediment Control	100% of construction sites are treated to ESC Level 3 and have high-risk Urban Nutrient Management plans
Urban Nutrient Management	100% eligible Pervious Cover has Urban Nutrient Management Plan implementation which is split 20% High Risk and 80% Low Risk
Forest Buffers	Turfgrass (no canopy) within 10m of all streams and rivers that's unbuffered (from high-resolution land cover); CB watershed-wide average = 4% of turfgrass area
Shoreline Erosion Control	Included with Forest Buffers on turfgrass (no canopy) within 10m of tidal waters that are unbuffered (from high-resolution land cover)
Urban Tree Canopy	No net loss of tree canopy
Street Cleaning	100% of Transport Impervious Cover swept using SCP-1
Advanced Grey Infrastructure Nutrient Discovery Program & Storm Drain Clean Outs	5% of Urban N and P load removed due to both credits
Urban Stream Restoration	5% of urban stream miles are restored at the default Stream Restoration value; Applied to 1st to 5th order streams using the NHD+ 24K resolution dataset
Septic Connections	10% of septic systems connected to wastewater treatment facilities
Septic Denitrification Enhanced	100% of systems remaining after connections
<u>Resource BMPs</u>	E3 Implementation Level
Forest Harvesting BMP	100% of Harvested Forest area
Forest Conservation	No net loss of true forest
DiploidOysters3	MD = 112 M oysters; VA = 280 M oysters



CB Watershed Planning Target Methodology

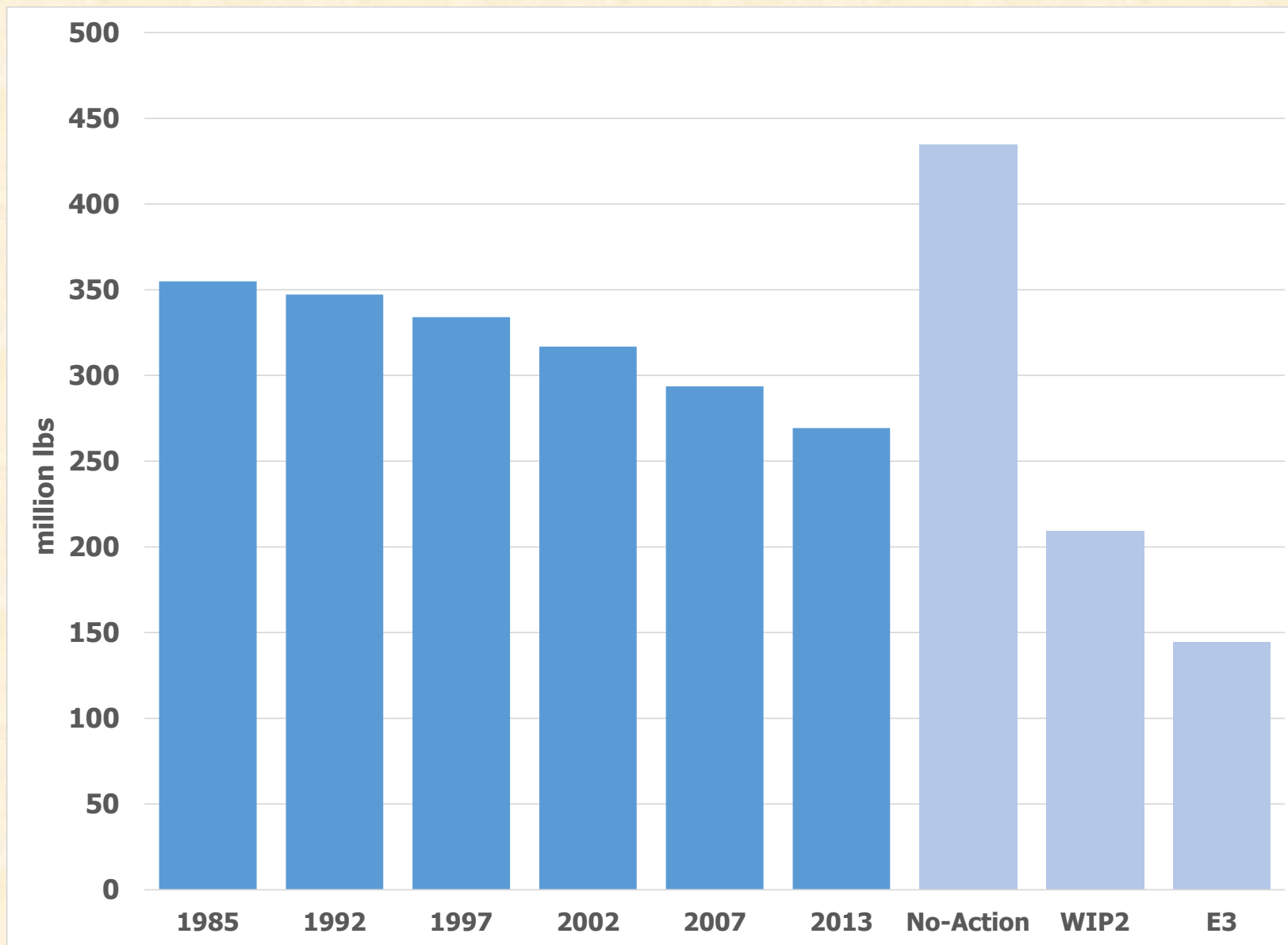
Nitrogen Loads, CB Watershed-wide





CB Watershed Planning Target Methodology

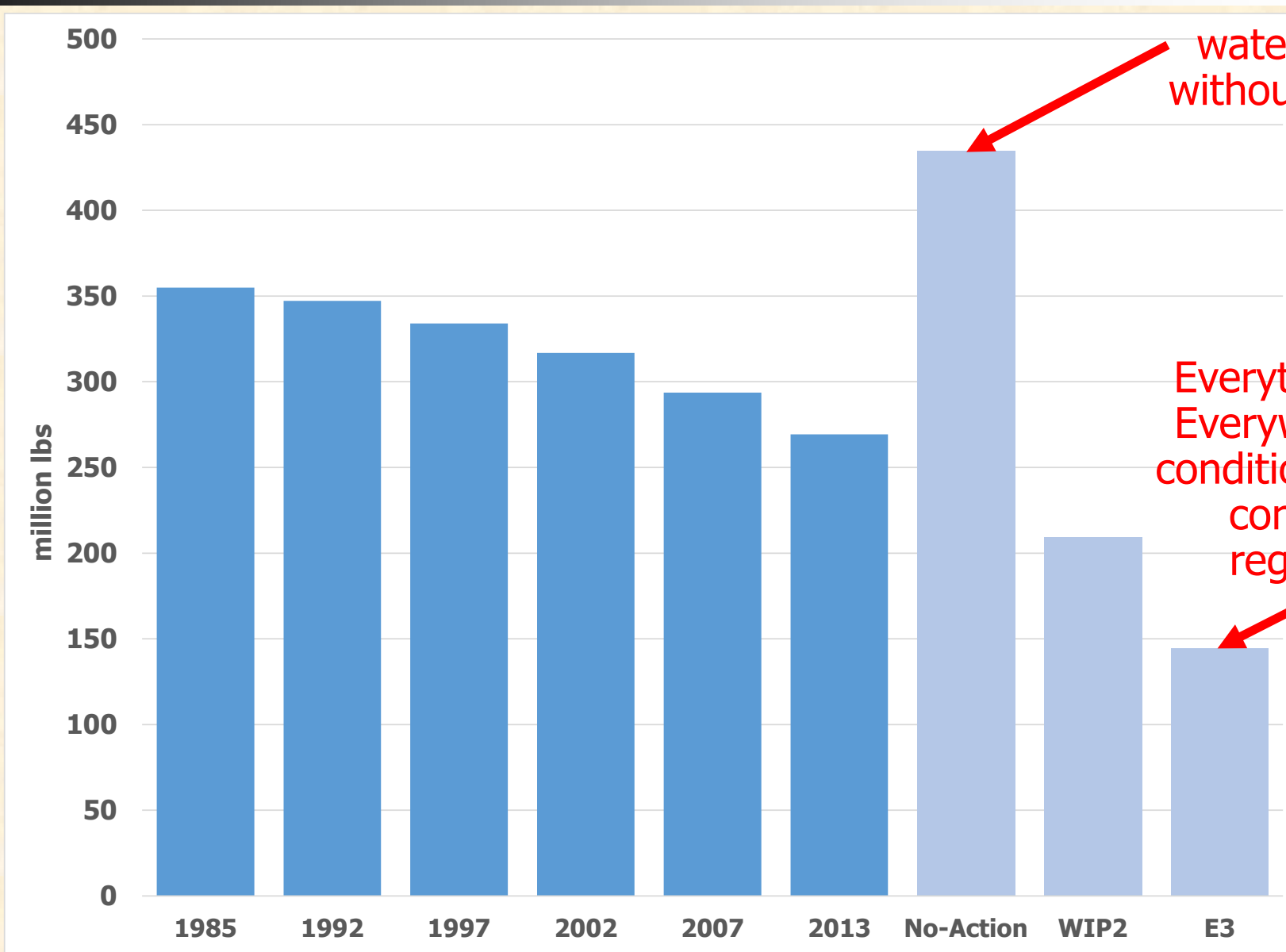
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CB Watershed Planning Target Methodology

Nitrogen Loads, CB Watershed-wide



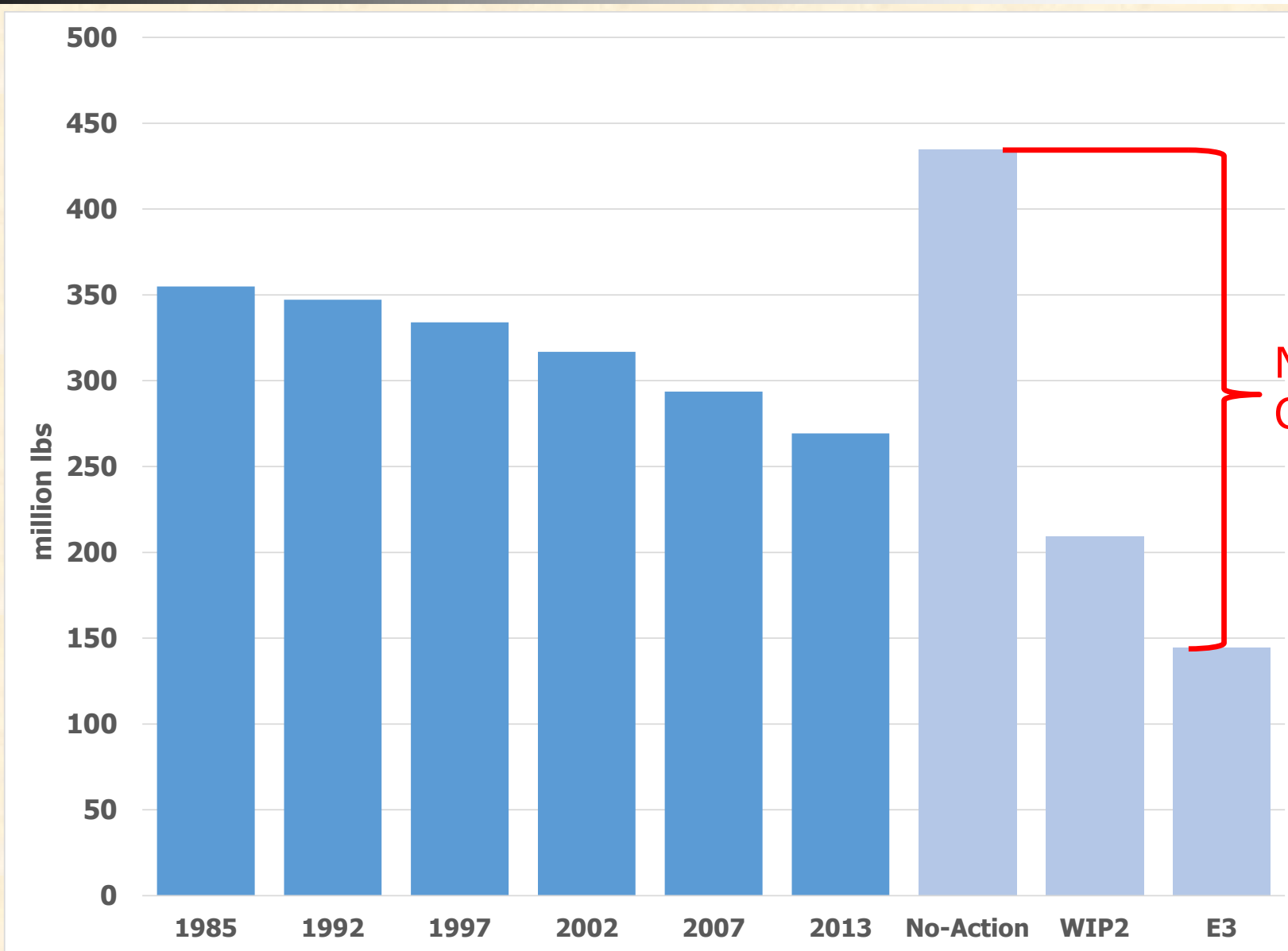
NoAction:
watershed conditions
without controls on load

E3:
Everything by Everyone
Everywhere: watershed
conditions with maximum
controls on loads,
regardless of cost



CB Watershed Planning Target Methodology

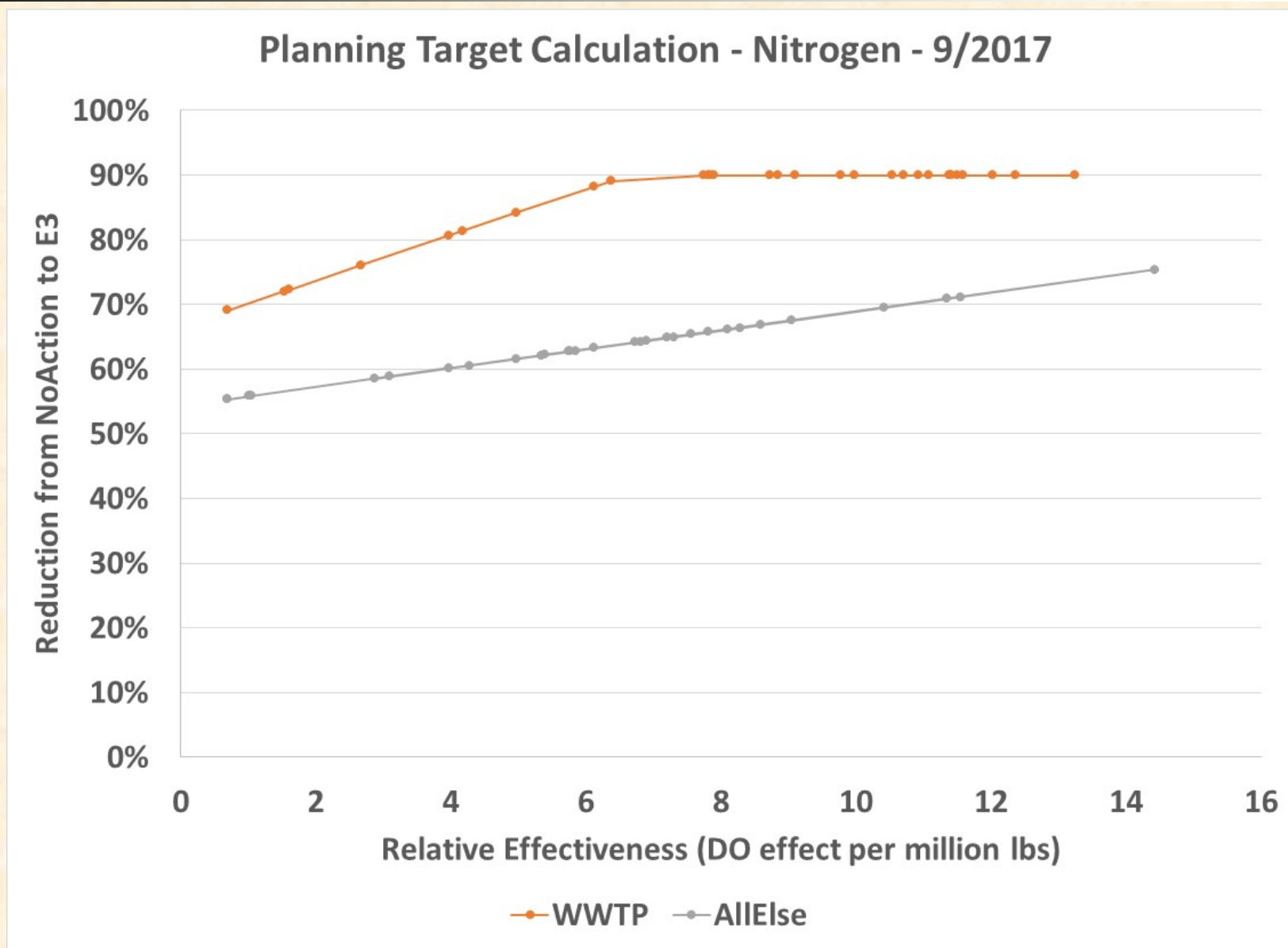
Nitrogen Loads, CB Watershed-wide



NoAction - E3 =
Controllable Load



CB Watershed Planning Target Methodology "Hockey Stick"



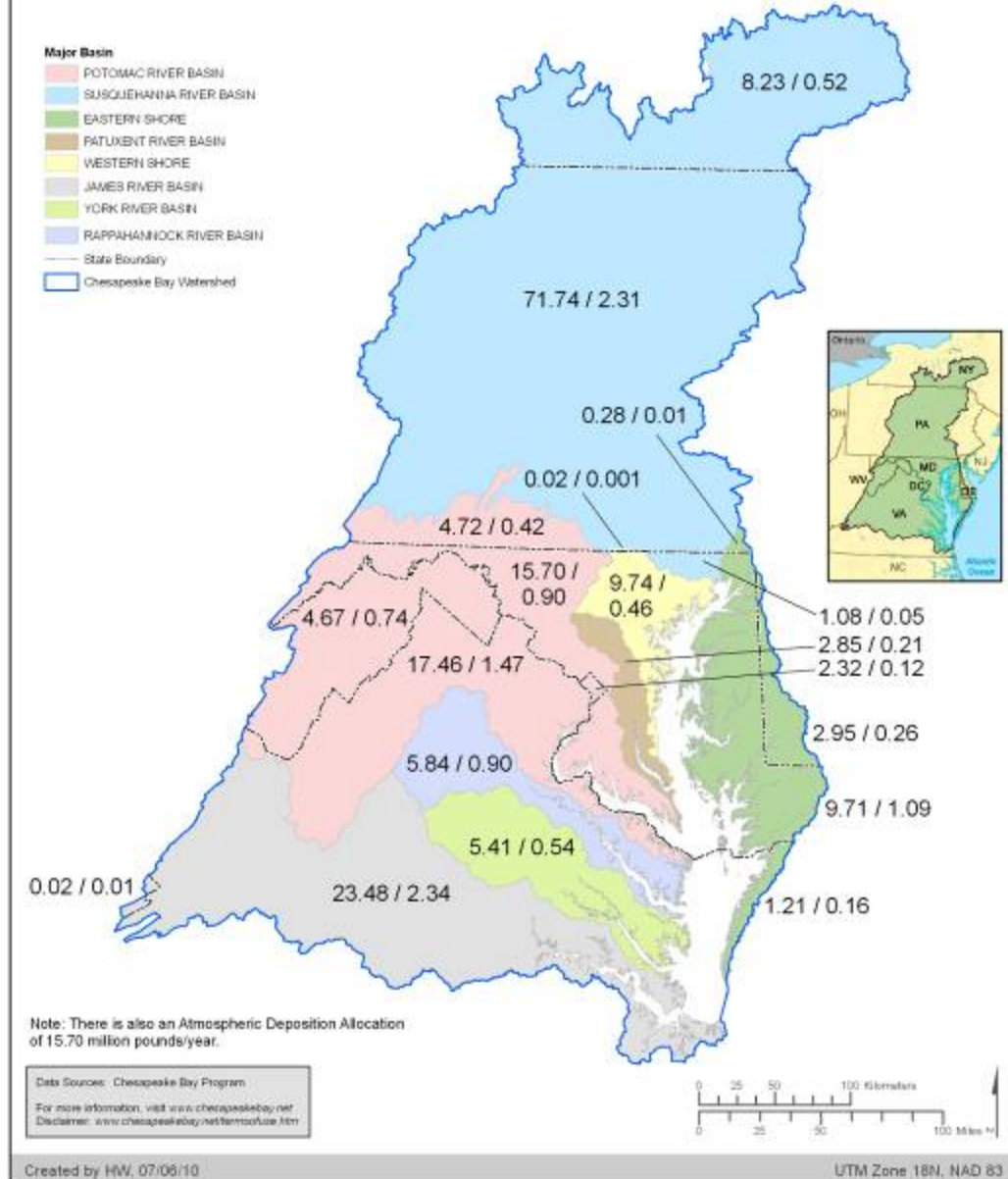


Planning Targets

Nitrogen, Phosphorus and Sediment Loading Caps

Once equitable planning targets were agreed to, jurisdictions develop Watershed Implementation Plans (WIPs) to meet those loading caps

Chesapeake Bay Major River Basin Nitrogen and Phosphorus July 1, 2010 Draft Allocations by Jurisdiction
(N / P in million pounds per year)



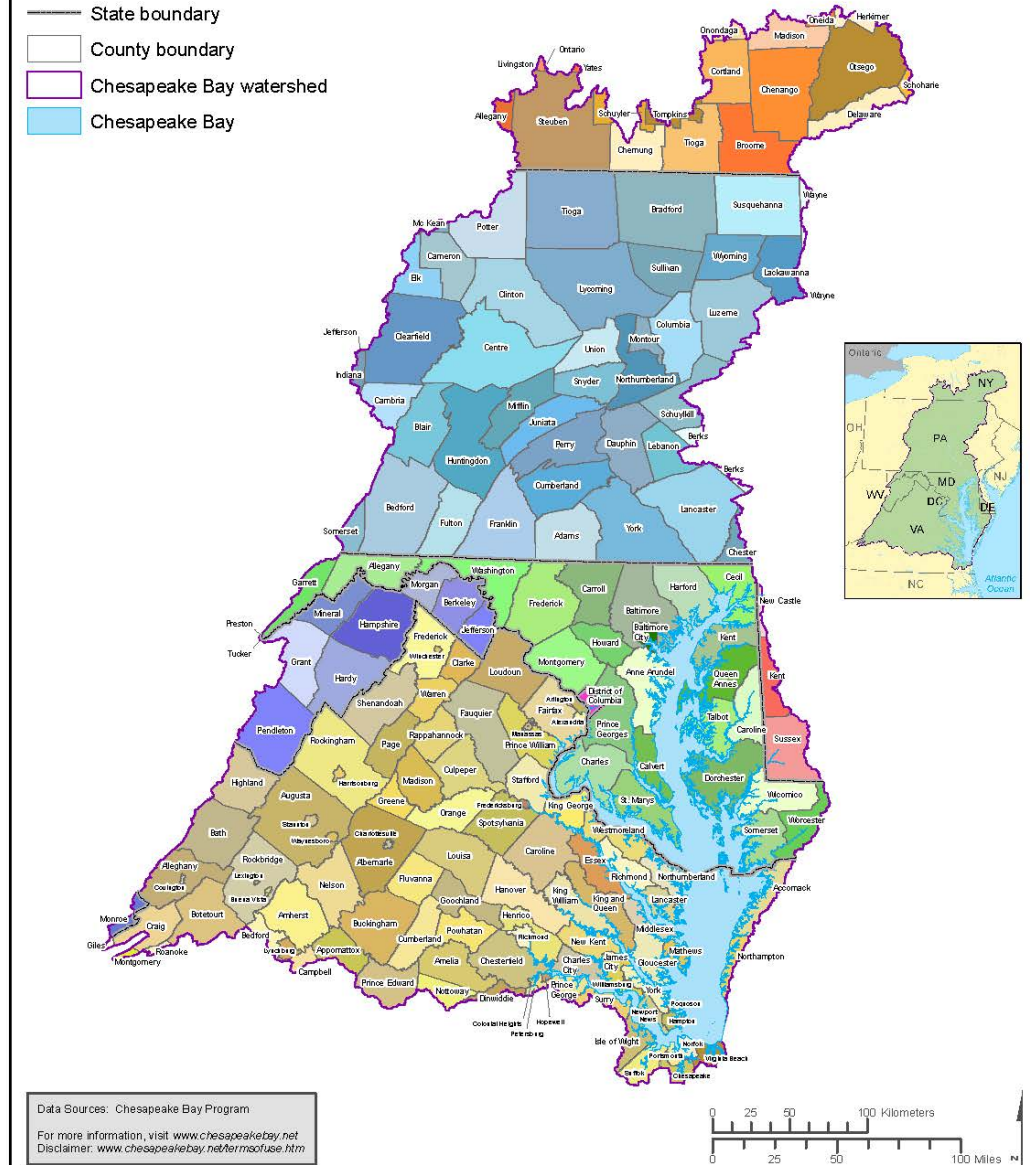


Planning Goals for Localities and Federal Facilities in PA

Use the same concept of equity:

- Those areas that contribute the most to the Bay water quality problems must do the most to resolve those problems.
- The difference between NoAction and E3 loads is defined as the “controllable” loads.

Chesapeake Bay Counties

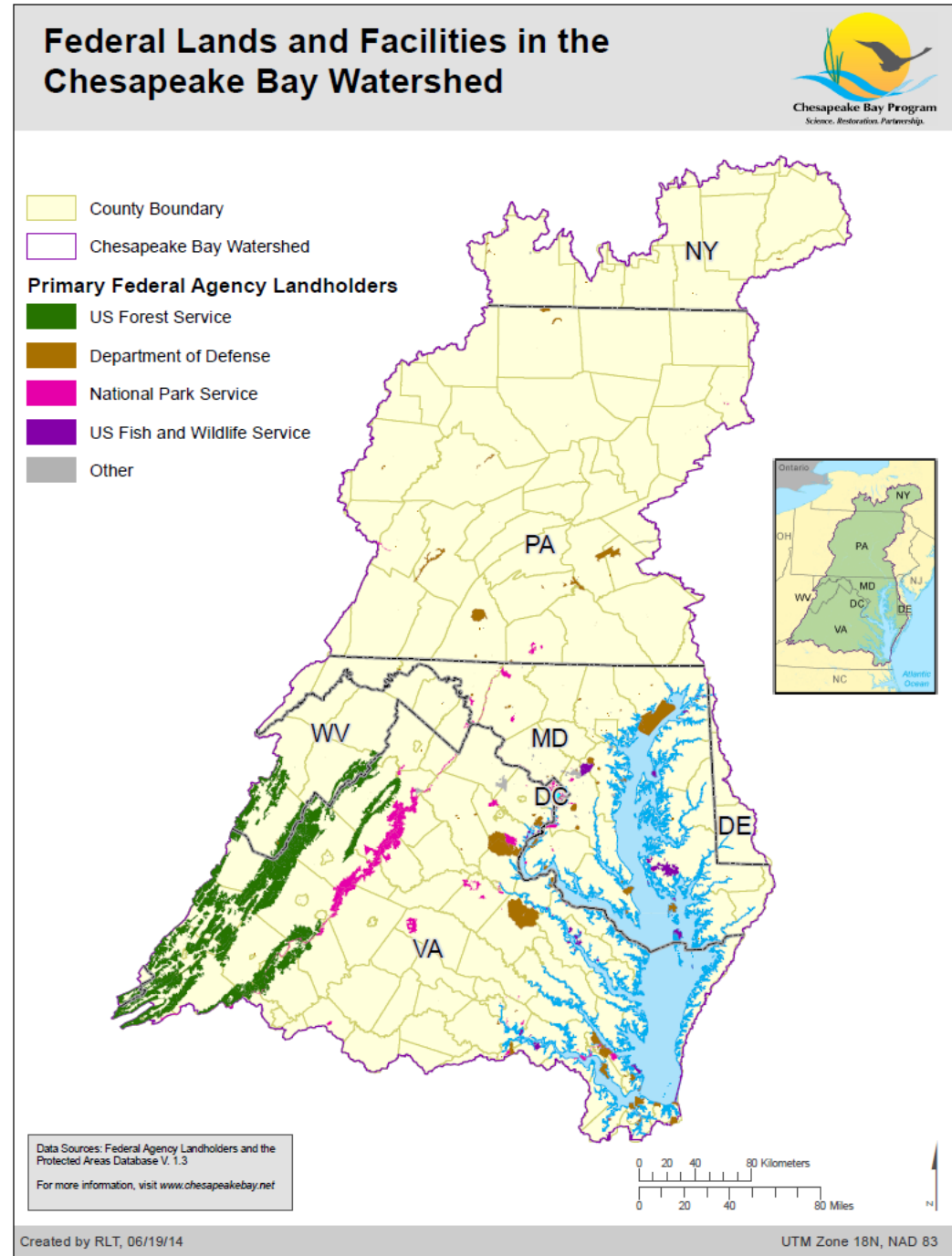




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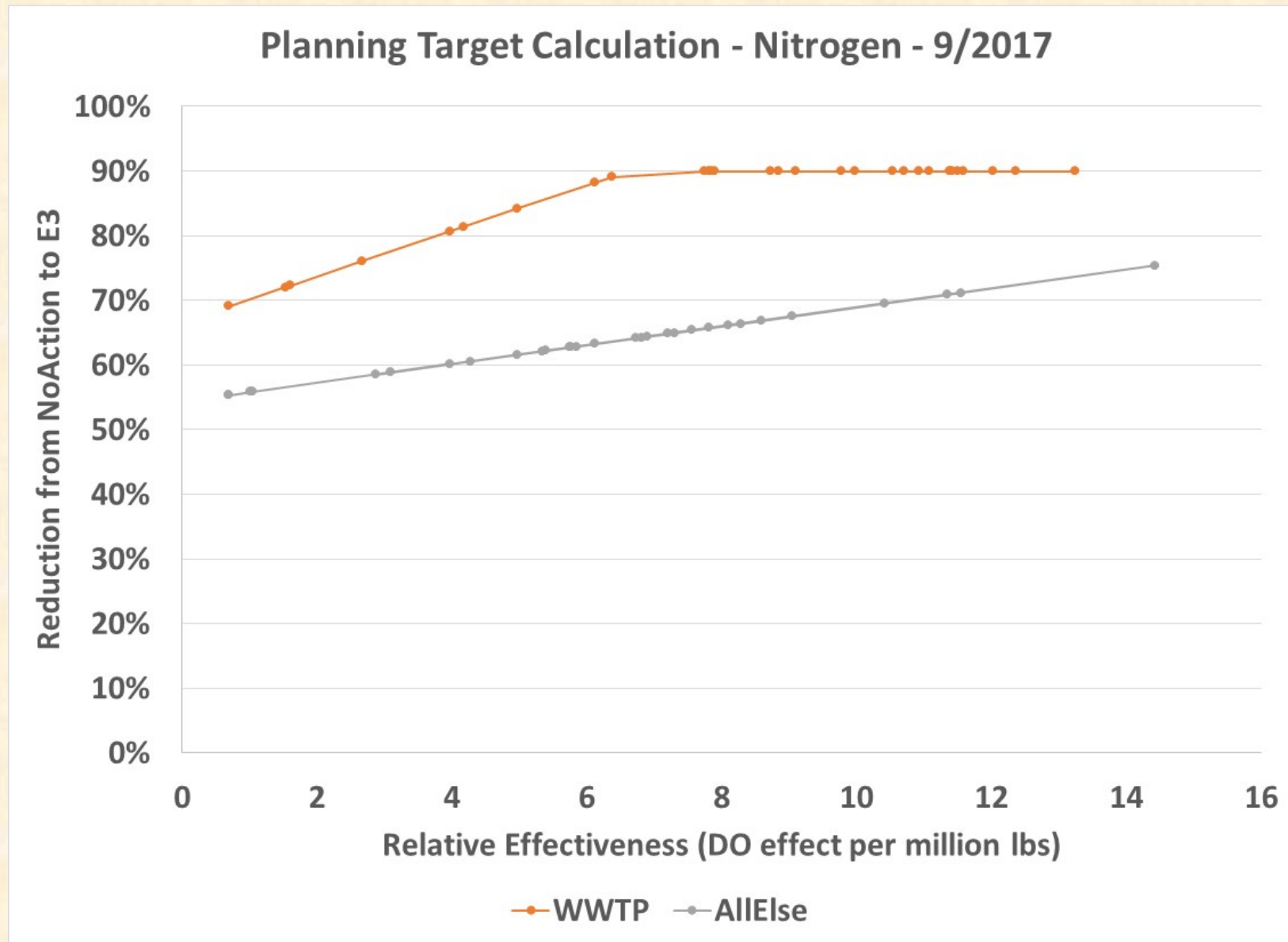


Federal Facilities Planning Goals

- Planning goals should be equitable among federal agencies and the rest of PA outside the facility boundaries = localities/counties.
- At the end, planning goals need to make sense among PA tributaries and localities, the facilities, and among sources.
- There should be reasonable assurance the goals can be achieved.

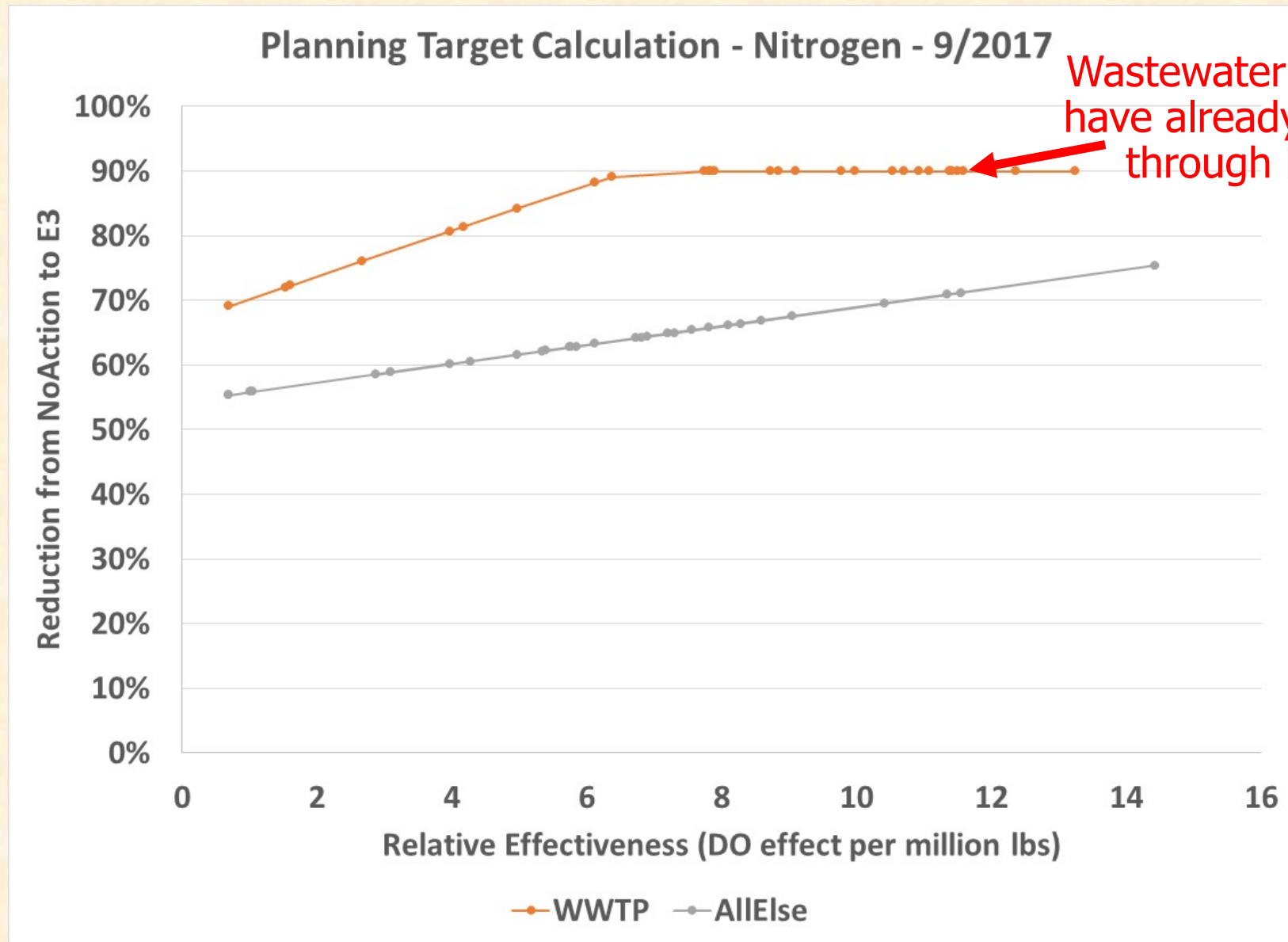


Planning Goal Methodology for PA Localities and Federal Facilities





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For PA localities and federal facilities, focus on equity of load reductions to improve local water quality = Less emphasis on meeting water quality standard in the estuary.



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Federal Facilities Pennsylvania


- **DOD**
- ~~ARS~~
- ~~FS~~
- **FWS**
- **GSA**
- ~~NASA~~
- **NPS**
- ~~SI~~
- ~~Other Federal~~



Pennsylvania Federal Facilities

Adams County Example

Geography	Agency	NoAction	E3	Target
		Nitrogen	Nitrogen	Nitrogen
		Edge-of-Stream Load	Edge-of-Stream Load	Edge-of-Stream Load
		(lbs/year)	(lbs/year)	(lbs/year)
Adams County	Department of Defense	2,301	1,648	1,818
Adams County	National Park Service	28,042	17,712	20,406
Adams County	Non-Federal	5,966,742	2,230,412	3,204,705



$$\text{Target} = \text{NoAction} + ((\text{E3} - \text{NoAction}) * 0.739237853)$$



Pennsylvania Federal Facilities

Planning Goals

- Planning goals for PA counties and federal facilities are edge-of-stream loads, not delivered to tidal waters as Planning Targets are for the states' major tributaries.
 - Relevant conversion factor would translate.
 - At the end, if goals are achieved edge-of-stream, they would be achieved at the tidal waters.



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 - At the end, if goals are achieved edge-of-stream, they would be achieved at the tidal waters.
- Each county and each federal facility in PA has a planning goal of 73.9% of NoAction-E3 load difference.
- It is possible to combine goals (and progress) for federal facilities within an agency/department, e.g. combine all DOD facilities in PA for a single Nitrogen planning goal.



Pennsylvania Federal Facilities Planning Goals

- Adding up the planning goals for all PA counties + federal facilities = PA's state-wide Planning Target.
 - Planning Targets are by state-basin and WIPs need to meet targets at that scale, e.g., Susquehanna PA, Potomac PA, etc.



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- Adding up the planning goals for all PA counties + federal facilities = PA's state-wide Planning Target.
 - Planning Targets are by state-basin and WIPs need to meet targets at that scale, e.g., Susquehanna PA, Potomac PA, etc.
- Goals/targets do not specify loading goals for any particular source. That is jurisdictions'/facilities responsibility through their WIPs.



District of Columbia Federal Facilities Planning Goals

- Proposed federal facility goals also use the method of a percent of E3 load. Draft planning goals have been distributed by DOEE to federal agencies in DC and comments were due 10/15/18.



Virginia Federal Facilities Planning Goals

- Proposed federal facility goals rooted in WIPII load reductions.
 - WIPII Planning Targets based on same level-of-effort as the 2010 TMDL which used, in part, the NoAction-E3 concept.
 - Federal facilities are expected to “meet all regulatory requirements (MS4, Industrial Stormwater, Wastewater, Erosion and Sediment Control, Post-Construction Stormwater, Chesapeake Bay Preservation Act).”



Maryland Federal Facilities

Planning Goals

- Intend to keep the same targets from WIPII as they have done analysis outside the model and feel that the methodology holds with respect to the new model. "The estimated interim target loads and reductions for FF are based on a 20% retrofit of any untreated impervious surface at a facility. A 20% retrofit of untreated impervious surface provides a reasonable approximation of what restoration practices a facility could achieve in a relatively short time period. This approach for estimating loading targets is being applied to all federal facilities."



New York Federal Facilities

Planning Goals

- Local Area Planning Goal Plan – NY has been developing the local area planning goals for the Phase III Watershed Implementation Plan. Currently, local area planning goals will be implemented on the HUC 10 Watershed scale. HUC 10 watersheds with comparatively higher loading for agriculture, point source, or developed loads will be given a percent load reduction goal based on 2017 Phase 6 load data available from CAST. The local area planning goals are still being reviewed and are subject to change. Developing LAPG preliminary presentation to the USC soon.
- LAPG to Federal Facility Planning Goals – Federal facilities in NY's portion of the Chesapeake Bay watershed account for 0.08% of the acres in the watershed and about 0.1% of the total load for Nitrogen and Phosphorus, based on the most recent data from the Phase 6 model in CAST. **Therefore, we think it's appropriate to not assign percent load reduction goals for these facilities in the development of our local area planning goals.** WIP development schedule and upcoming events will be posted to the Phase III Watershed Implementation Plan page on NYSDEC website. Federal Facilities are welcome to participate in any of the events posted.



West Virginia Federal Facilities Planning Goals

- Local Area Planning Goal Plan – Can work one on one with FF if there is a problem. Developing LAPG July through September.
- LAPG to Federal Facility Planning Goals – FF practices and/or strategies, if communicated to our West Virginia Trib Team, will be incorporated into the local planning goals for each sector. **Won't have specific federal targets**, but for example if livestock exclusion occurs on USFS land it will help us meet those sector targets. **Similar if we have any urban stormwater related local targets for areas where FF might exist**. A summary of FF participation in WIP development and their anticipated participation in implementation will be included in the WIP