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# **Scenario Base Year - Details**

## **Clean Water Goal Team**

### **July 27<sup>th</sup> 2026**

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# Scenario Base Year Summary

What is scenario base year?

- Land use, agricultural inputs, and other model parameters that produce base conditions
- When data are not available, the CBP backcasts and forecasts these modeled parameters to produce the modeled landscape in other years

Why is the scenario base year important?

- The planning target scenario base year is important because the difference between E3 and No Action sets the controllable load



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# Considerations

| <b>Criterion</b>                                                                                                               | <b>2010</b>                             | <b>2022</b>                             |
|--------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|-----------------------------------------|
| <b>Level of Confidence in Data<br/>(LULC, Septic, Fertilizer, Crop<br/>Acres and Yields, Animal<br/>Parameters, Biosolids)</b> | <b>Less Confidence<br/>in Aggregate</b> | <b>More Confidence<br/>in Aggregate</b> |
| <b>Responsibility for additional load<br/>from a state-basin that grows (due<br/>to parameters listed above)</b>               | <b>State Basin<br/>That is Growing</b>  | <b>All<br/>State-Basins</b>             |



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# Confidence in Datasets: 2010 vs 2022

## Land Use

- Highest confidence in 2022 because 1) native resolution of imagery is 60cm, 2) was an Ag Census year, 3) best quality ancillary data
- 2010 represents backcasted land use, informed by Landsat (30m) based products

## Septic

- Higher confidence in 2022 since 1) it captures sewer hook ups that occurred on existing development, while 2010 does not and 2) sewer hookups based on new development are dependent on backcasted land use for 2010

## Fertilizer

- Raw data for 2022 are more certain as AAPFCO processing step was removed in 2016



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# Confidence in Datasets: 2010 vs 2022

## Crop Acres, Animals, Yields

- Lower response rate in 2022 Ag census compared to 2007 and 2012 census
- Modeled yields based on record back to 1950 reduces uncertainty of data associated with any one given year

## Animal Parameters

- General increase in certainty after 2014, improvements to manure coefficients

## Biosolids

- Mixed: Some states update each year (MD, DE, WV), but for those that don't 2013/2014 would be carried forward



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## P6 Discussion: How are loads associated with growth across state-basins distributed?



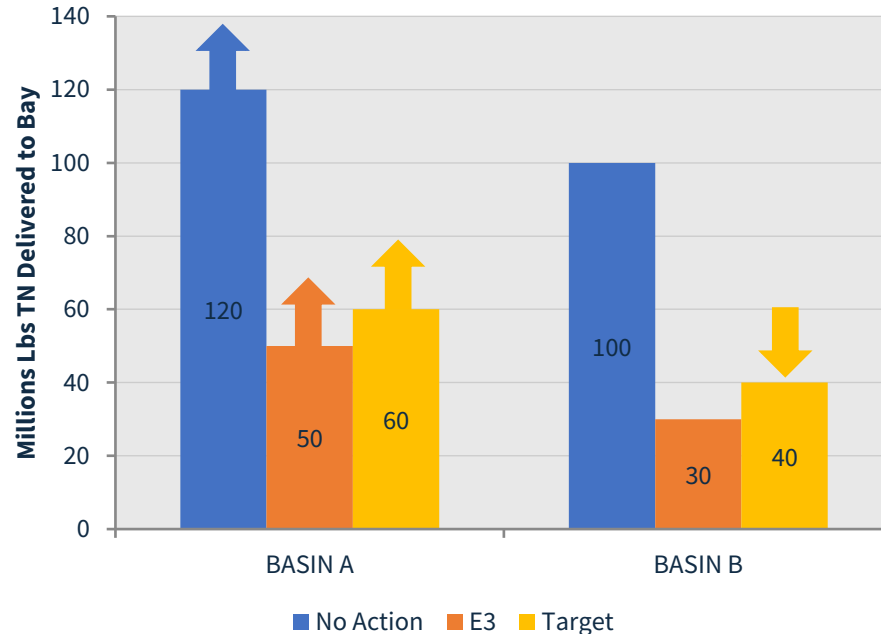
### Basins with Equal Effort & Targets

- Scenario year = 2010
- Targets must sum to 100
- Basins have same impact on DO.
- Basins have same no action, E3 and targets.
- **% Reduction needed = 71% for both basins.**



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## P6 Discussion: How are loads associated with growth across state-basins distributed?



### Basin A Grows, Basin B Does Not

- Scenario year = 2022
- Targets must = 100
- Basin A grows.
- Basin B does not grow.
- **% Reduction needed for both basins = 86%**
- **Basin B has more to do!**



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# **If 2022 is Selected, How to Deal with Growth?**

## **Potential Options:**

1. Growth from 2010 to 2022 is assigned to the jurisdictions where the growth occurred
2. Hold jurisdictions with minimal growth (WV & NY) steady and partnership decides through negotiation how to distribute the growth among remaining jurisdictions



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## **Option 1: Assigning Growth to Where it Occurred From 2010-2022 Will Result in the Same Balance as 2010**

- Once all decisions finalized, run E3 and No Action for both 2010 and 2022 scenarios to identify difference in growth
- Jurisdictions where growth occurred from 2010 to 2022 take on responsibility for that growth
- Functionally results in same balance of growth between jurisdictions as 2010



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## **Option 2: Partnership Negotiates Different Accounting for Growth Between 2010 and 2022**

- Identify growth from 2010 to 2022
- Jurisdictions with minimal growth are kept at 2010 levels, remaining jurisdictions negotiate how to distribute loads from growth



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## **2<sup>nd</sup> Partnership Principle on Planning Targets is Limited in What it Refers to**

- “State-river basins that contribute the most to Bay water quality problems must do the most to resolve those problems. More effective basins do more”
- The principle is specifically referring to the concept that leaky basins are asked to do more than retentive basins



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# **In the absence of a new decision, 2010 remains the Scenario Base Year**

- The last decision on Scenario Base Year was to select 2010
- Unless there is CWGT consensus or a super majority at the PSC, the previous decision stands



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# **E3 and Scenario Base Year Timeline for Review and Completion**

## Requested Deliverables

- Presentation from each sector WG outlining desired scenario base year (and E3 assumptions), and justification

## Timeline

- August CWGT – Draft presentation ready for discussion from workgroups
- September CWGT – Finalize Scenario Base Year (and E3 Assumptions)



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# Summary At a Glance: 2010 vs. 2022

| Criterion                              | 2010            | 2022            |
|----------------------------------------|-----------------|-----------------|
| Confidence in LULC Data                | Less Confidence | More Confidence |
| Confidence in Septic Data              | Less Confidence | More Confidence |
| Confidence in Fertilizer Data          | Less Confidence | More Confidence |
| Confidence in Crop Acres & Yields Data | More Confidence | Less Confidence |
| Confidence in Animal Parameters        | Less Confidence | More Confidence |
| Confidence in Biosolids                | Mixed           | Mixed           |
| Growth Allocation                      | Hold at 2010    | Option 1 or 2   |



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Decision #1

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| Confidence in Crop Acres & Yields Data | More Confidence | Less Confidence |
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| Confidence in Biosolids                | Mixed           | Mixed           |
| Growth Allocation                      | Hold at 2010    | Option 1 or 2   |

If 2022, Decision #2:  
1. Growth Balance = 2010  
2. Negotiations



**Thank you!**

**Questions?**



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