Accounting for Growth

Concepts & Priorities for Maryland's Phase III WIP

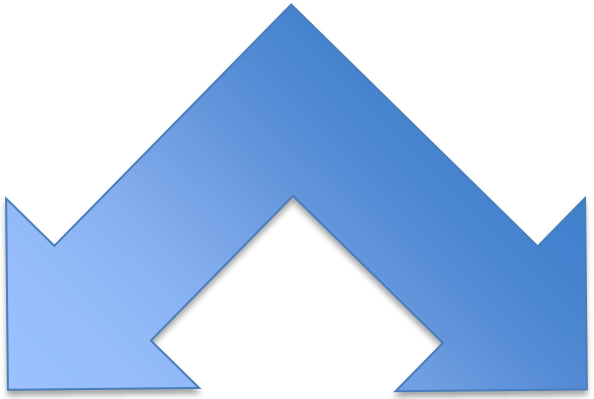
- Policy development
- Role of AfG Objectives
- Understanding reallocation
- Understanding Policy options
- Next steps

Background

- Bay TMDL: Allocations were set for states
  - State (Bay Cabinet) divided allocation among sectors
  - We must reduce existing loads to meet allocations
  - We must maintain the load cap in perpetuity
- Allocations for Growth
  - Allocation for wastewater: Built-in growth capacity
  - No allocation for new loads in the other sectors
  - Main focus of AfG Policy development is on
    - Stormwater loads from new development, and
    - OSDS loads from new development;
  - But AfG Policy is required for all sectors

Basic AfG Premise

New or increased load, all sectors



Load Allocation **Load Offset**

Background/ Focus for Phase III

Phase I & II WIPs, 2013 AfG Work Group

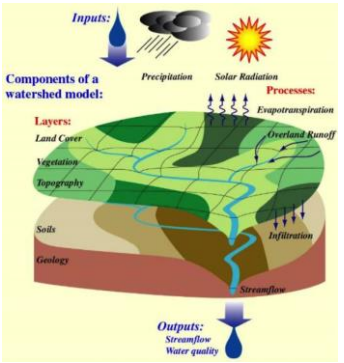
- Align Phase III AfG Policy w existing policies/ programs
- Answer Load Allocation/ Offset Questions
- Use AfG Objectives to develop/evaluate policy options

AfG Objectives

1. ***Allocate loads equitably across sectors***
2. *Require offsets for new or increased loads*
3. *Incorporate a margin of safety*
4. ***Align with existing policies to minimize loads***
5. ***Be compatible with other public objectives***
6. ***Empower local government***
7. ***Simple, practical, transparent and enforceable***
8. *Integrate with Trading Program*

Objective 1:
Allocate future loads consistently and equitably across source sectors

What load (if any) will be reallocated for new development?



1. How are loads allocated?
2. Where would a “reallocation pool” come from?
3. How else must the pool be used?
4. How big is the pool, & how much is available for what?

1. How Loads Are Allocated

Limits of Technology & Programs

- *Best technology available*
- *Feasible reach/ effects of programs*

Necessary Extent of Implementation

- *Equal % of reducible loads*
- *Closer = More*
- *EPA targets for major basins*
- *Increase %'s to hit targets*

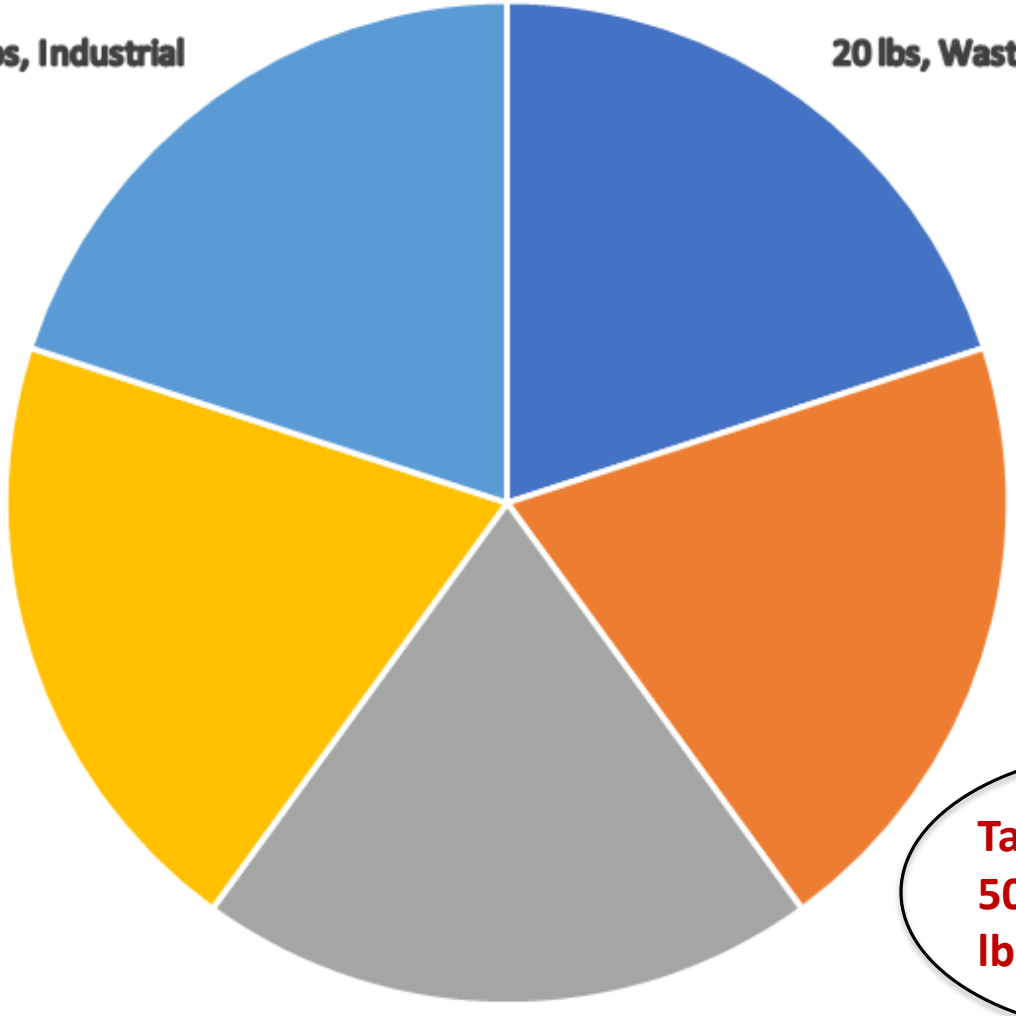
To Existing Source Sectors

→ **Target Loads**
Target Reductions

Overall;
by Sector;
& by Basin

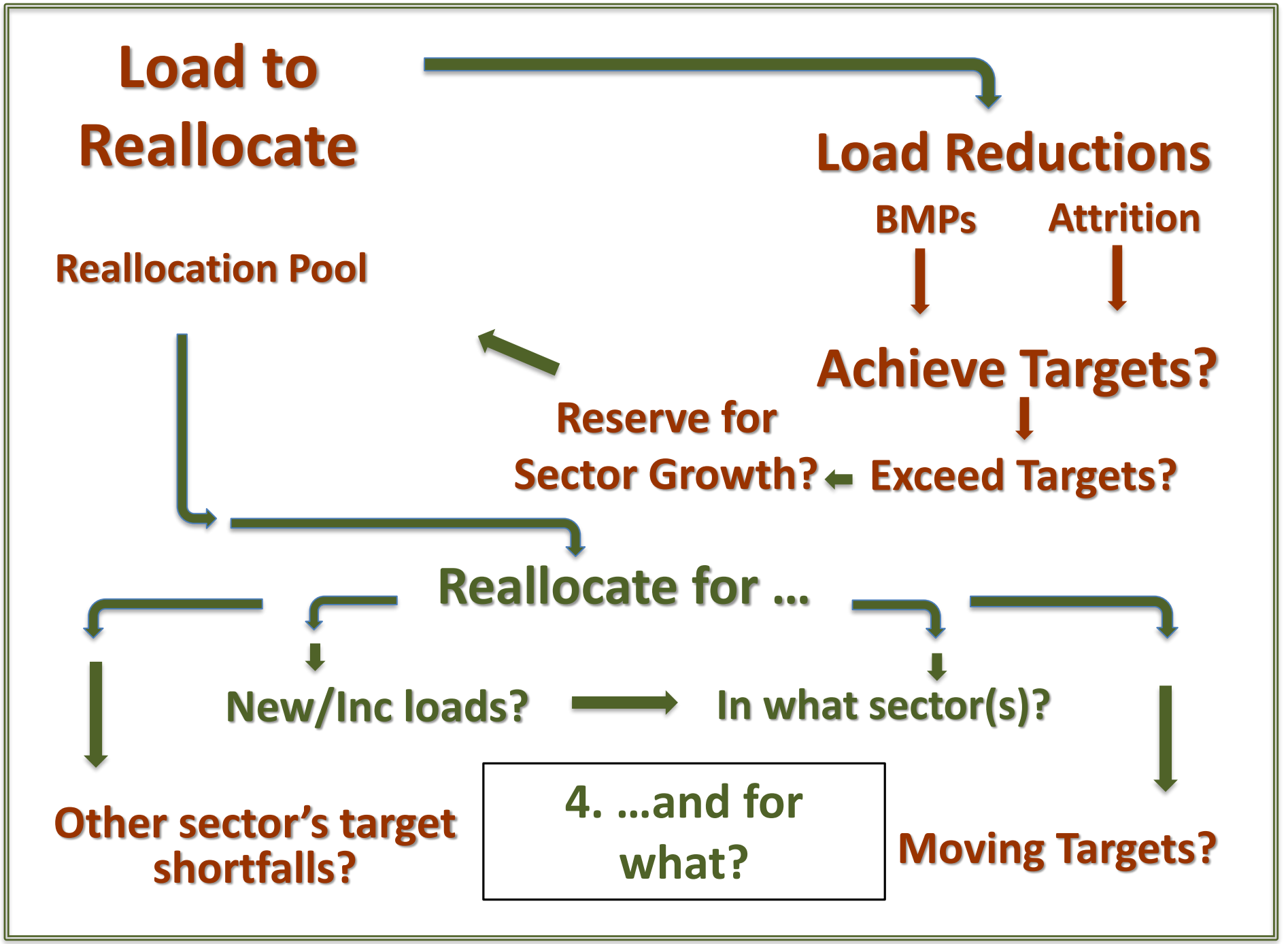
2025 Load is Already Allocated:

Total Target Load: 100 Lbs



Current Loads:
150 lbs Total; 30 lbs/ sector

Target Reductions:
50 lbs Total; 10 lbs/ sector

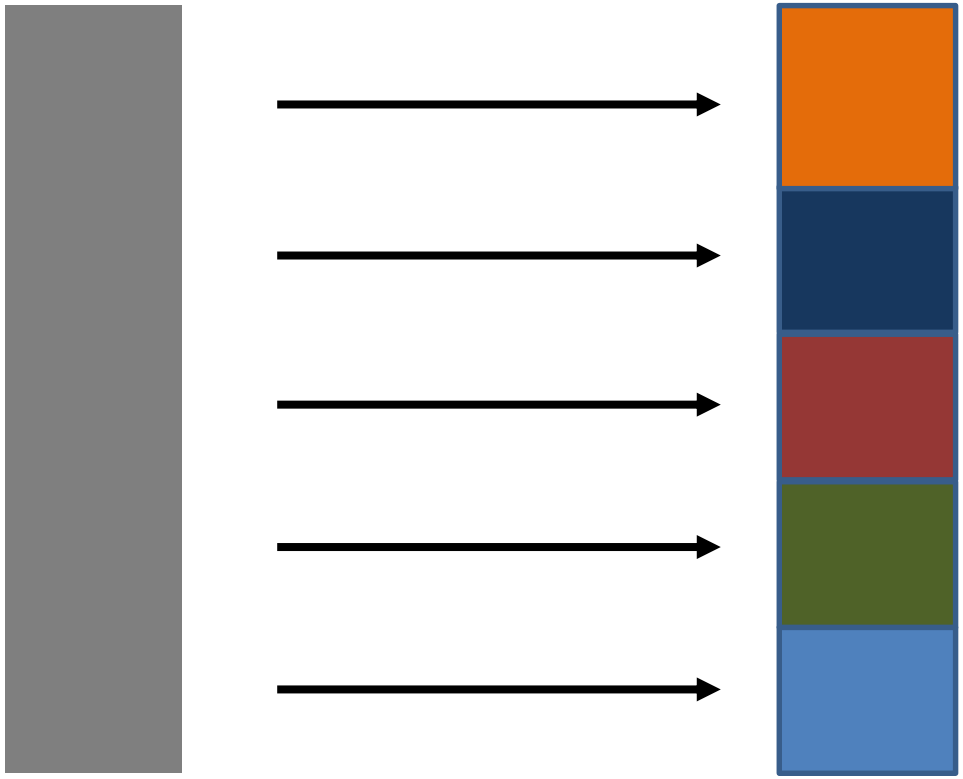

Load to Reallocate
Load Reductions
BMPs
Attrition
Reallocation Pool
Achieve Targets?
Reserve for Sector Growth?
Exceed Targets?
Reallocate for …
New/Inc loads?
In what sector(s)?
Other sector's target shortfalls?
4. …and for what?
Moving Targets?

Reallocation Considerations Summary

Load Reduction:

- BMPs
- Attrition

Used/ reserved/ reallocated for…



Target load reductions

Sector growth

Other sector shortfalls

Moving targets

Growth in other sectors

From any source sector

… & site by site

Reallocation Process: Estimates

1. *BMP implementation/ reductions by sector*
2. *Attrition/ reductions/ growth by sector*
3. *Reductions, by sector & overall, vs. targets*
4. *Minus:*
   - *Shortfalls toward target loads, by sector & overall*
   - *Loads reserved for growth by sector*
   - *Reallocation for moving targets*

Remainder = potential reallocation pool

Two Accounting for Growth Policy Options

1. *OSDS & Forest Conversion Option*
2. *Per Capita Loading Option*

OSDS/ Forest Conversion Option

OSDS – No Allocation: Tier IV? Tier III? 1,000 feet of streams? Everywhere?

Forest Conversion – Forest load allocation: Offset Stormwater loads in excess of forest

Everywhere Else – Post Dev load allocation: no offsets required

Will the reallocation pool cover this option?

Per Capita Loading (PCL) Option

- *High, Low, & Moderate Per Capita Loading Areas*
- *Mapped by county, municipality*

Reallocation: Lowest per capita loading rates, X 2025 projected growth (per Jurisdiction)

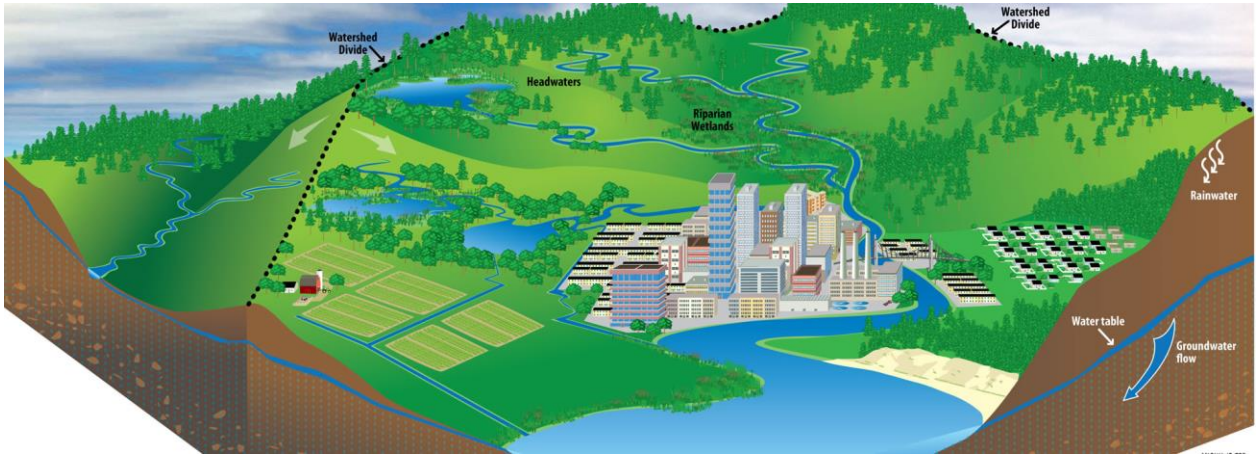
Jurisdiction Choices – Allocations vs. Offsets

- *Allocate to Low per capita areas only?*
- *To all areas?*
- *Other options? Evaluate vs. AfG Objectives*

Will the reallocation pool cover this option?

PCL Option: Align with Existing Policies to Minimize Loads

Existing local & state policies & programs that minimize per capita pollution footprint of development.



- ***<u>Land Use</u>: Comp Plans, Zoning, State Planning Policy, sewer service, Critical Areas Program, farm and forest conservation programs etc.***
- ***<u>Technology</u>: ESD to the MEP, ENR***

How?

Land Use: minimize per capita physical footprint

Smaller physical footprint

Smaller pollution footprint

Technology: Minimize loads through BMPs

- **ESD – everywhere**
- **ENR – in targeted growth areas**

Combination – lower & higher per capita footprints

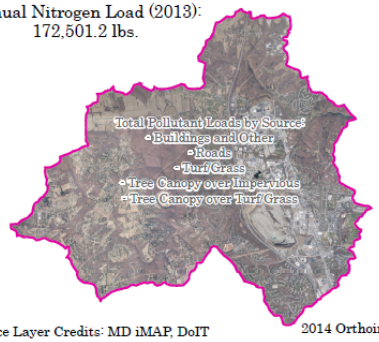
Aligning for Growth

Non-Point Source Allocation Processing

Area Establishment

Land River Segment

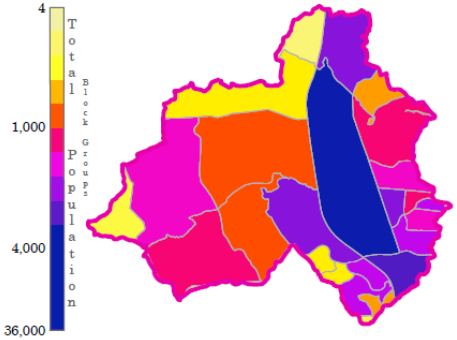
Annual Nitrogen Load (2013):
172,501.2 lbs.



Service Layer Credits: MD iMAP, DoIT

2014 Orthoimagery

Residents and Workers
(Census 2010 & LEHD 2014)



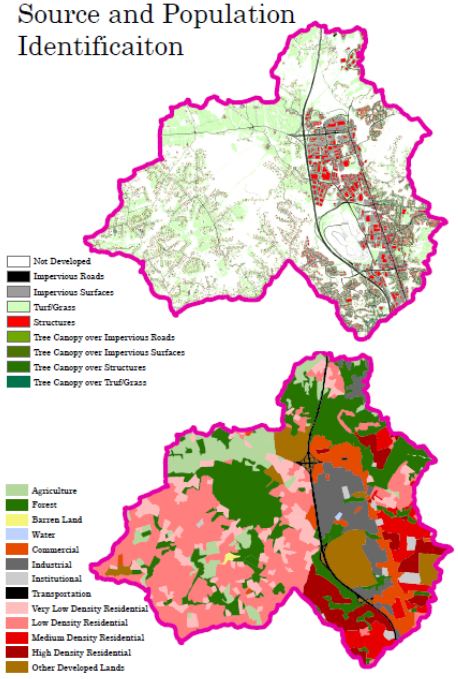
MARYLAND DEPARTMENT OF PLANNING

Analysis and Cartography provided by
The Maryland Dept. of Planning
Geospatial & Data Analysis Unit
September 2017

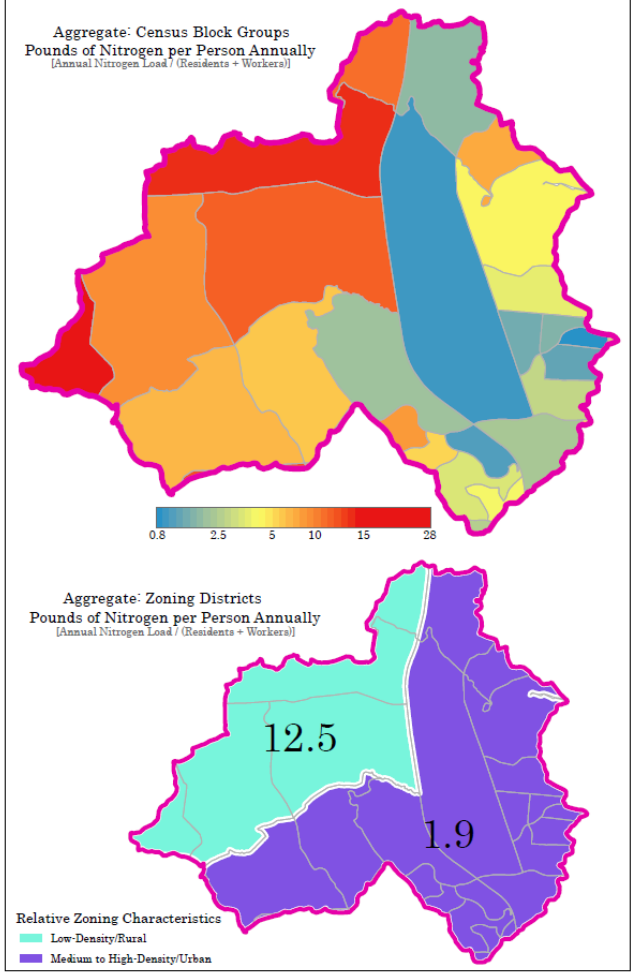
N

[Developed Land Cover (2014) + Land Use (2010)] = Distribution of Inputs

Source and Population Identificaiton



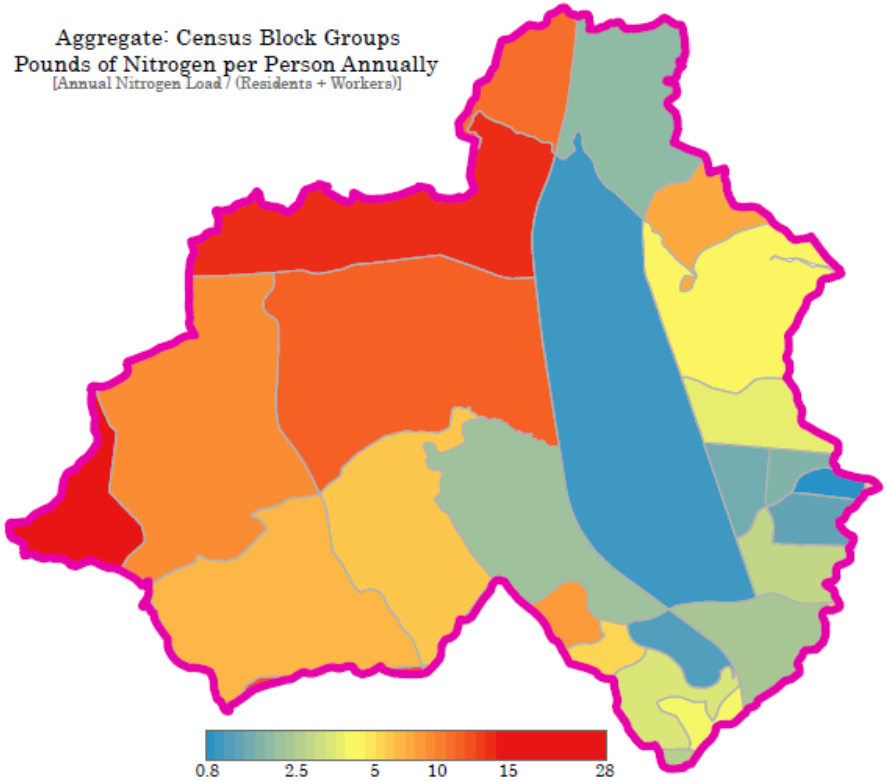
Per Capita Loading Areas

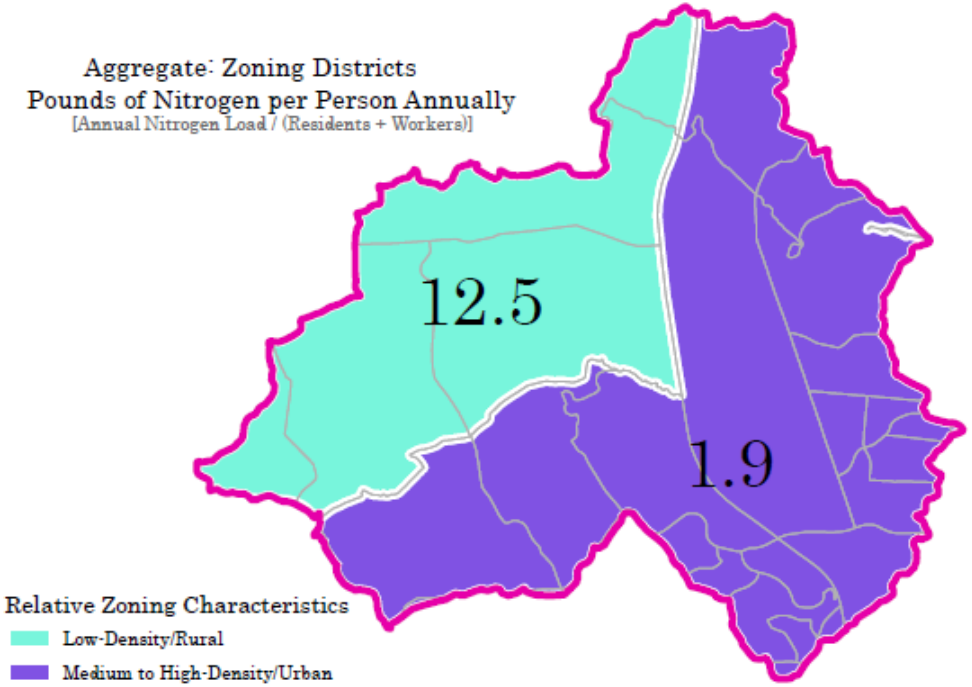


Aligning for Growth

Non-Point Source Allocation Processing

Per Capita Loading Areas





Evaluation of Accounting for Growth Policy Options					
Policy Option	Equitable Allocation Across Sectors[1]	Align with Existing Policies[2]	Compatible with Public Objectives[3]	Empower Local Governments[4]	Simple, Practical, etc.[5]
OSDS & Forest Conversion Option	1) Requires Limits – Y/N/TBD 2) Requires Extent – Y/N/TBD 3) Equitable Demands –Y/N/TBD	Well/ Part/ Least	Y/N/TBD	Y/N/TBD	Y/N/TBD
Phase I & II Per Capita Loading Option	1) Requires Limits – Y/N/TBD 2) Requires Extent – Y/N/TBD 3) Equitable Demands –Y/N/TBD	Well/ Part/ Least	Y/N/TBD	Y/N/TBD	Y/N/TBD

[1] Consider 1) Does the option require the *Limits of Technology and Management* per allocations to other source sectors? Y = Yes, equivalent or greater limits, N = No, substantially lesser limits, TBD = relative limits not clear. 2) Does the option require the *Necessary Extent* of implementation similar to other sectors: Y = Yes, equivalent or greater extent, No, = substantially lesser extent, TBD = relative extent not clear. 3) Does the option impose *Equitable Demands* on OSDS & Stormwater growth sectors compared to other sectors, considering both *Limits* & *Extent*? Y = Yes, similar or equivalent demands, N = No or substantially lesser demands, and TBD = somewhat or not clear.

[2] Does the option take advantage of existing programs that already minimize loads, encourage growth where effects of those programs are greatest, and discourage growth where they are least effective? Well = likely to take effective advantage, Part = likely to take some advantage, Least = likely to take relatively little or no advantage.

[3] Does the option as much as possible support, complement, or at a minimum avoid undermining other important public policies and objectives that may be affected by AfG Policy? Y = Yes, for all policy objectives of concern identified, N = No, will significantly undermine one or more policy objectives, TBD = unclear.

[4] Can the option give local governments a role in Policy implementation that provides the ability to use land use decisions and AfG Policy to mutually support the TMDL and their own land use plans and objectives? Y = Yes, the two policy arenas will be mutually supportive. N = No, AfG policy adds little or nothing to existing ability of land use policy to achieve goals or may compromise it. TBD = unclear.

[5] Can the process to implement the policy be simple and streamlined enough to follow; create clear obligations and practicable means to meet them for affected parties; maximize flexibility for participants in the offset market; minimize complexity and costs to affected parties; and maximize accountability and transparency? Y = Yes, for all or most considerations, N = No, for many considerations, and TBD = unclear without more details

Next Steps: General

1. *Feedback/ Suggestions*
2. *Revisions/ develop both policy options*
3. *Supporting technical analysis*
4. *Evaluate policy options*
5. *Recommendation to Bay Cabinet on Policy Options*