# Relative Influence of BMPs To-Date on Load Reductions

## Agriculture Sector

# Objectives

- Identify the agricultural BMPs reported by states to-date (through 2013 Progress) and quantify their relative contribution to nutrient and sediment load reductions from a No-Action condition to 2013 Progress.
- Results in the following slides are focused on the agricultural sector.

# Method

- Create a NO ACTION Scenario.
- Determine load reductions between 2013 Progress Scenario and NO ACTION.
- Isolate each 2013 Progress BMP in a separate scenario using CAST processing rules.
- Determine load reductions from the isolated BMP scenario to the NO ACTION.
- Compare the relative load reductions among the BMPs.

# Agriculture Practices

| | | | |
|---|---|---|---|
| LandRetire | Land Retirement | PrecRotGrazing | Prescribed Grazing |
| ForestBuffers | Forest Buffers | UpPrecIntRotGraze | Precision Intensive Rotational Grazing |
| ConserveTill | Conservation Tillage | MortalityComp | Mortality Composting |
| CoverCrop | Cover Crop | EffNutManDecAgVA | Decision Agriculture |
| AWMS | Animal Waste Management Systems | ForestBuffersTrp | Forest Buffers on Fenced Pasture Corridor |
| GrassBuffers | Grass Buffers | NoTill | Continuous NoTill |
| EnhancedNM | Enhanced Nutrient Application Management | WaterContStruc | Water Control Structures |
| CarSeqAltCrop | Carbon Sequestration | Cropirrmgmt | Crop Irrigation Management |
| ConPlan | Conservation Plans | EffNutManEnhanceVA | Enhanced Nutrient Application Management |
| ComCovCrop | Commodity Cover Crop | NonUrbStrmRest | NonUrban Stream Restoration |
| WetlandRestore | Wetland Restoration | LoafLot | Loafing Lot Management |
| DecisionAg | Decision Agriculture | OSWnoFence | Pasture Alternative Watering |
| PastFence | Stream Access Control with Fencing | ConserveTillom | Conservation-Till Specialty Crops |
| GrassBuffersTrp | Grass Buffers on Fenced Pasture Corridor | TreePlantTrp | Tree Planting on Fenced Pasture Corridor |
| DairyPrecFeed | Dairy Precision Feeding | PoultryPhytase | Poultry Phytase |
| PoultryInjection | Poultry Injection | SwinePhytase | Swine Phytase |
| TreePlant | Tree Planting | BioFilters | BioFilters |
| CaptureReuse | Capture & Reuse | HorsePasMan | Horse Pasture Management |
| ManureTransport | Manure Transport | LagoonCovers | Lagoon Covers |
| ContinuousNT | Continuous NoTill | NutMan | Nutrient Application Management on Crop |
| BarnRunoffCont | Barnyard Runoff Control | Alum | Ammonia Emission Reductions (Alum) |
| LiquidInjection | Liquid Injection | | |

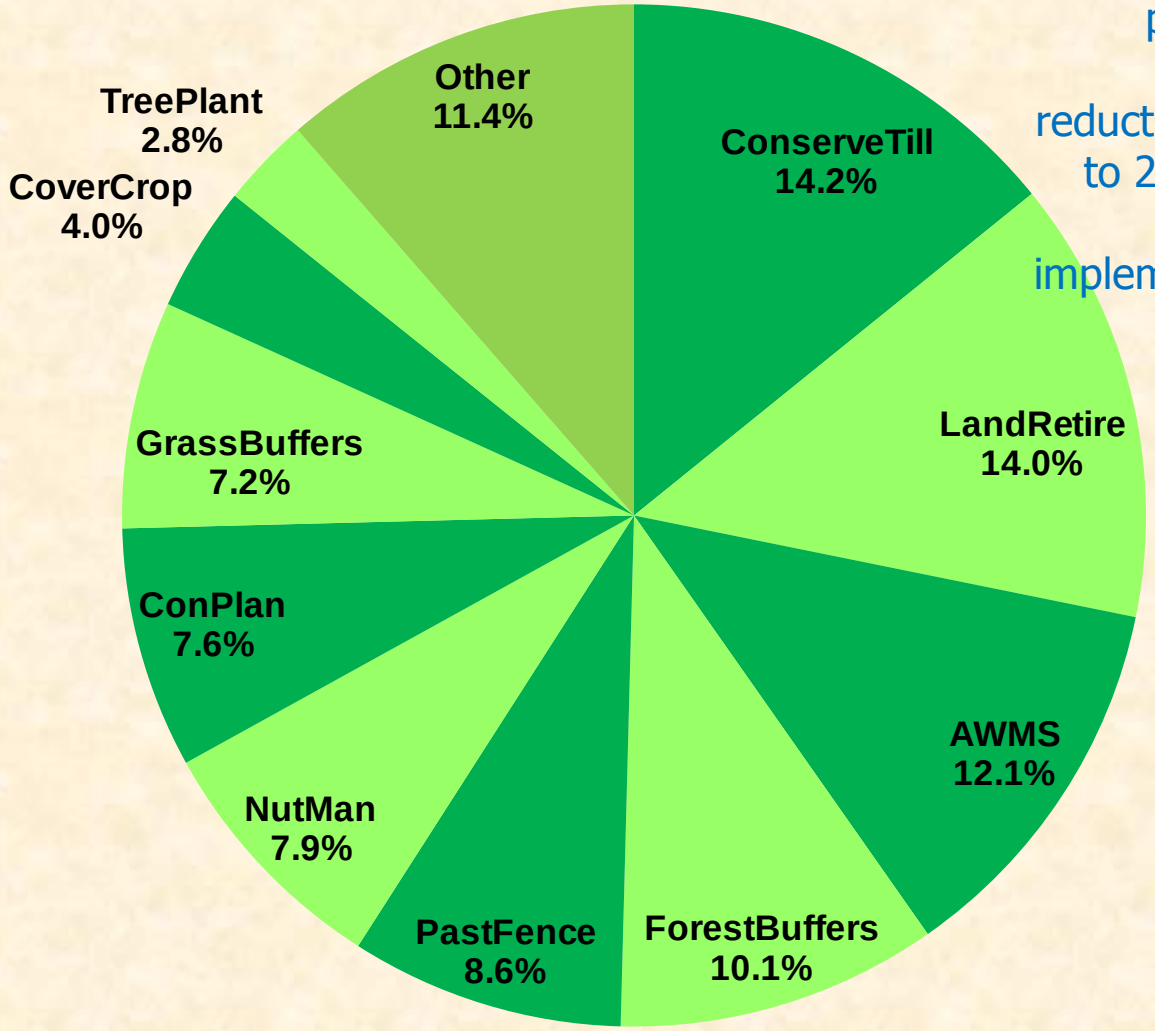
# Agricultural Nitrogen Reductions

Relative influence of 2013 Progress BMPs on load reductions

# Agriculture Nitrogen Load Reduction by BMP

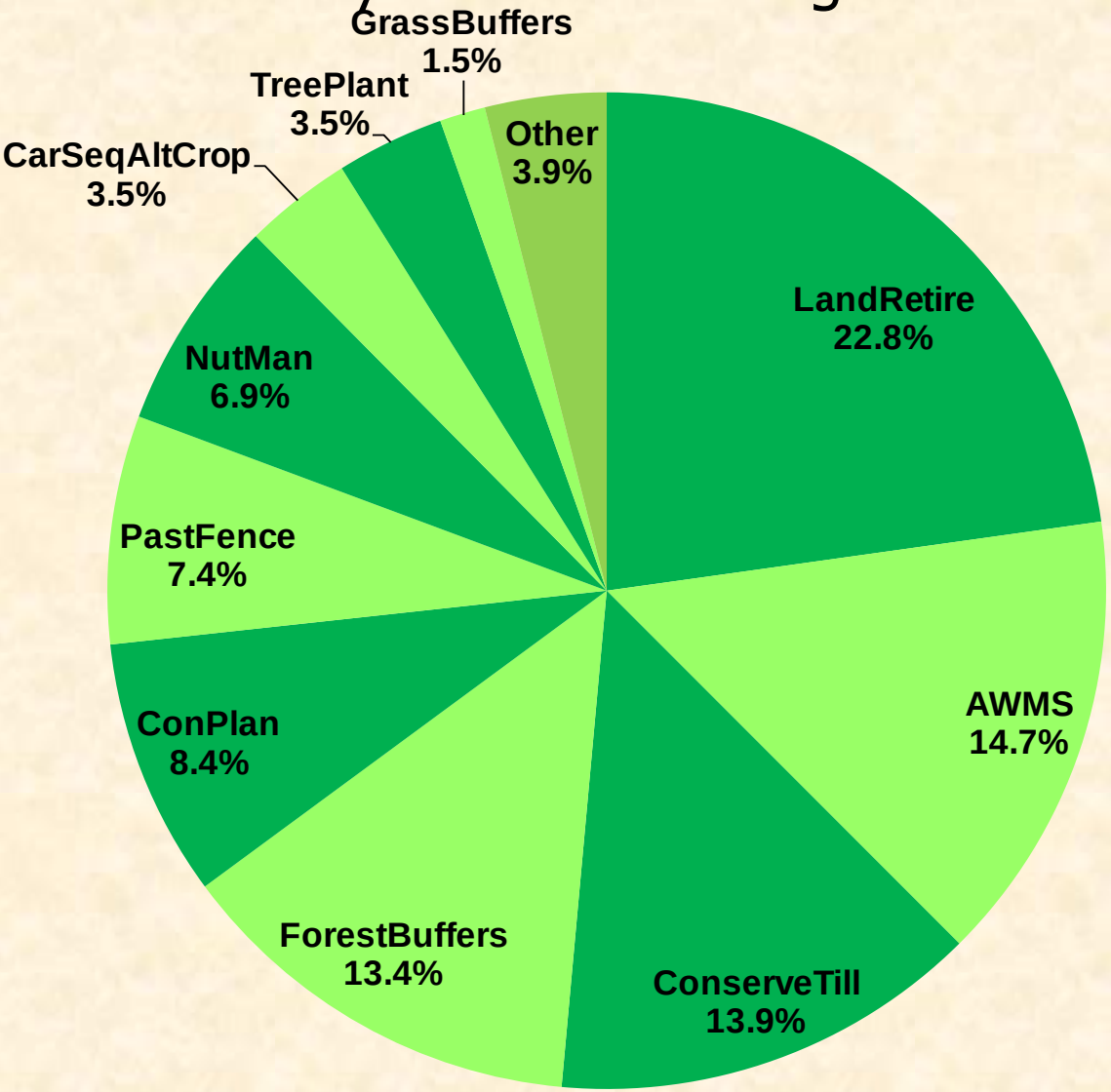
## All Jurisdictions' – 2013 Progress

Each slice represents the percent of the total agricultural load reduction from No-Action to 2013 attributable to state-reported implementation levels for that BMP.



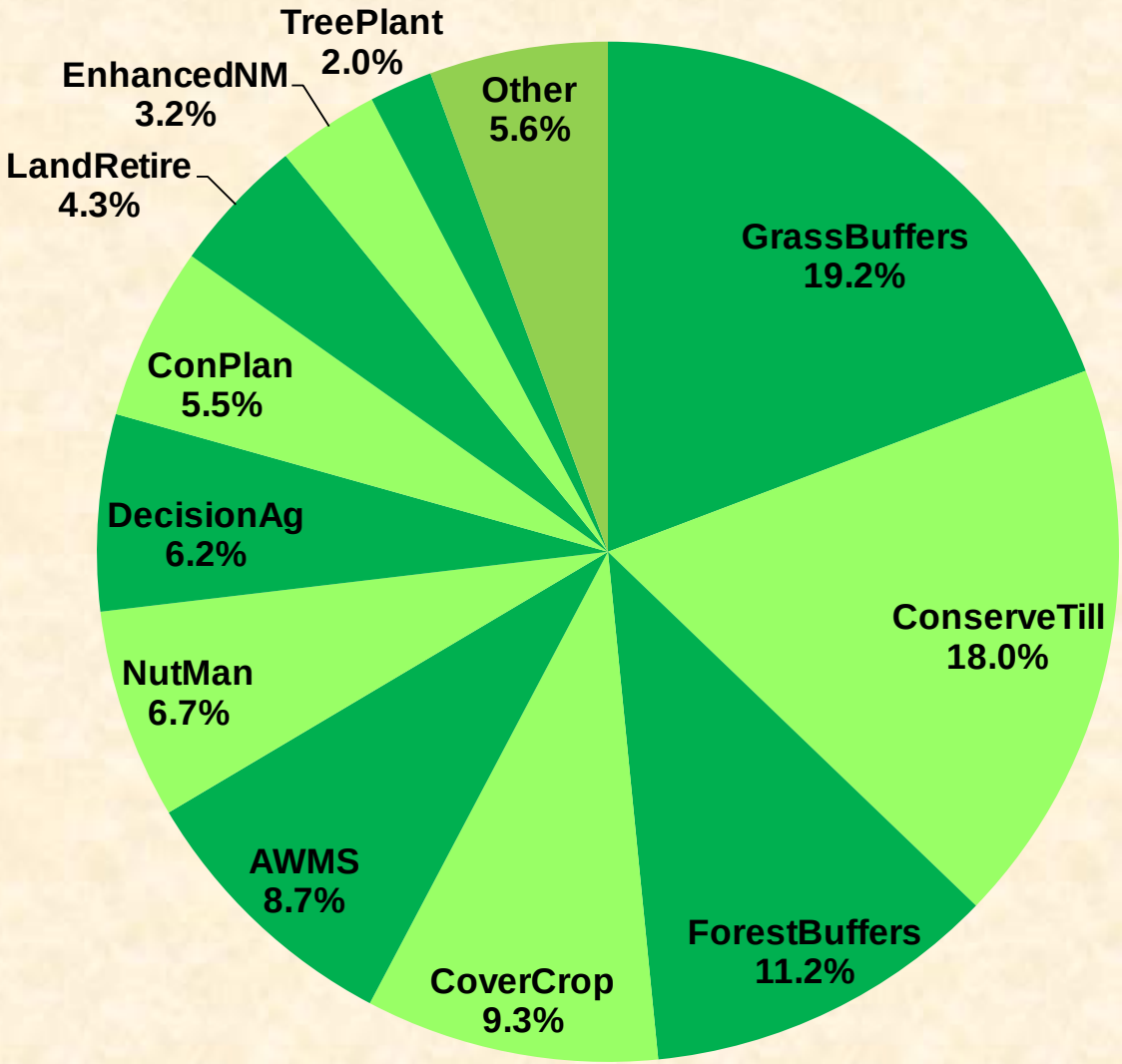
# Agriculture Nitrogen Load Reduction by BMP

## Pennsylvania 2013 Progress



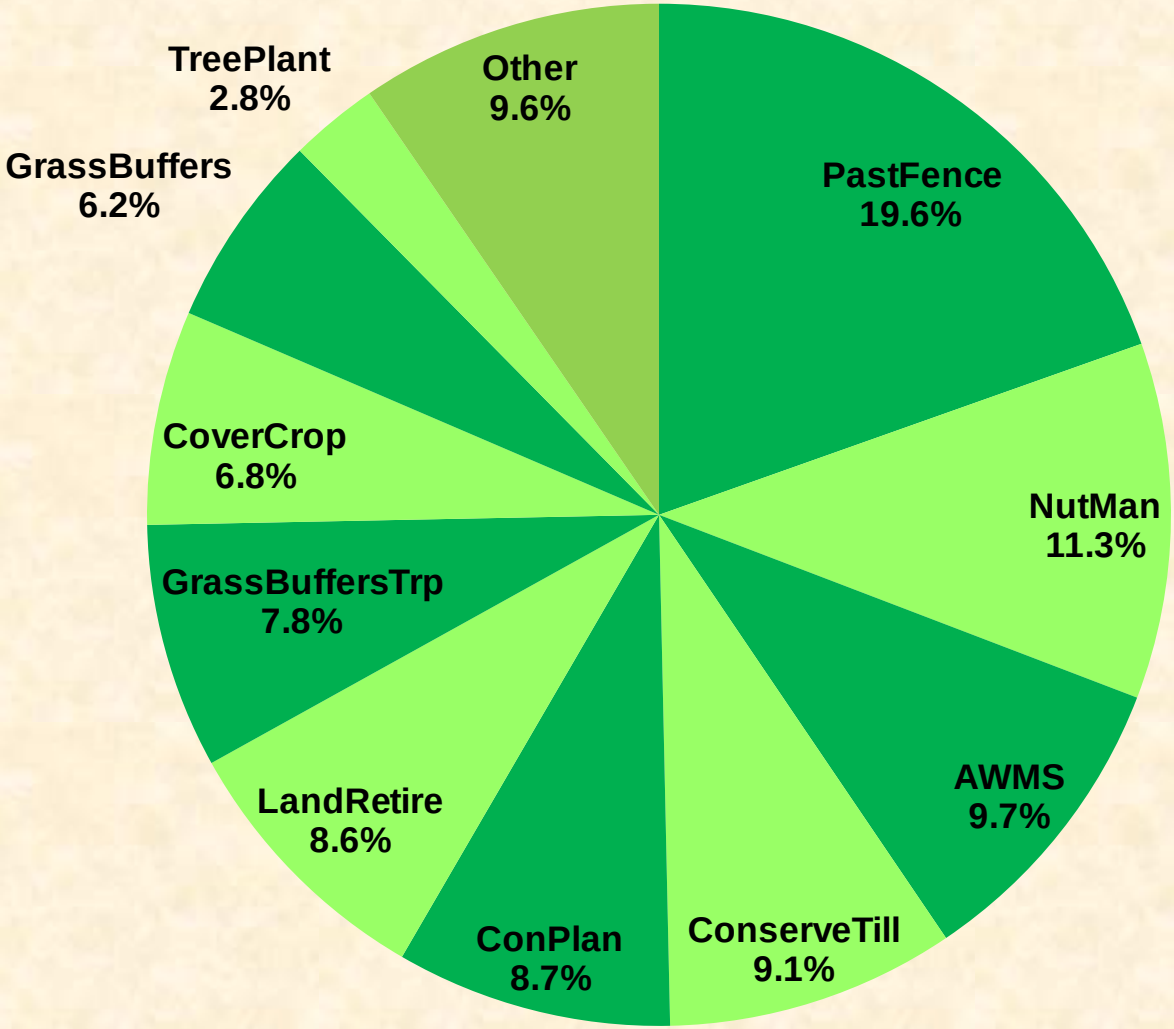
# Agriculture Nitrogen Load Reduction by BMP

## Maryland 2013 Progress



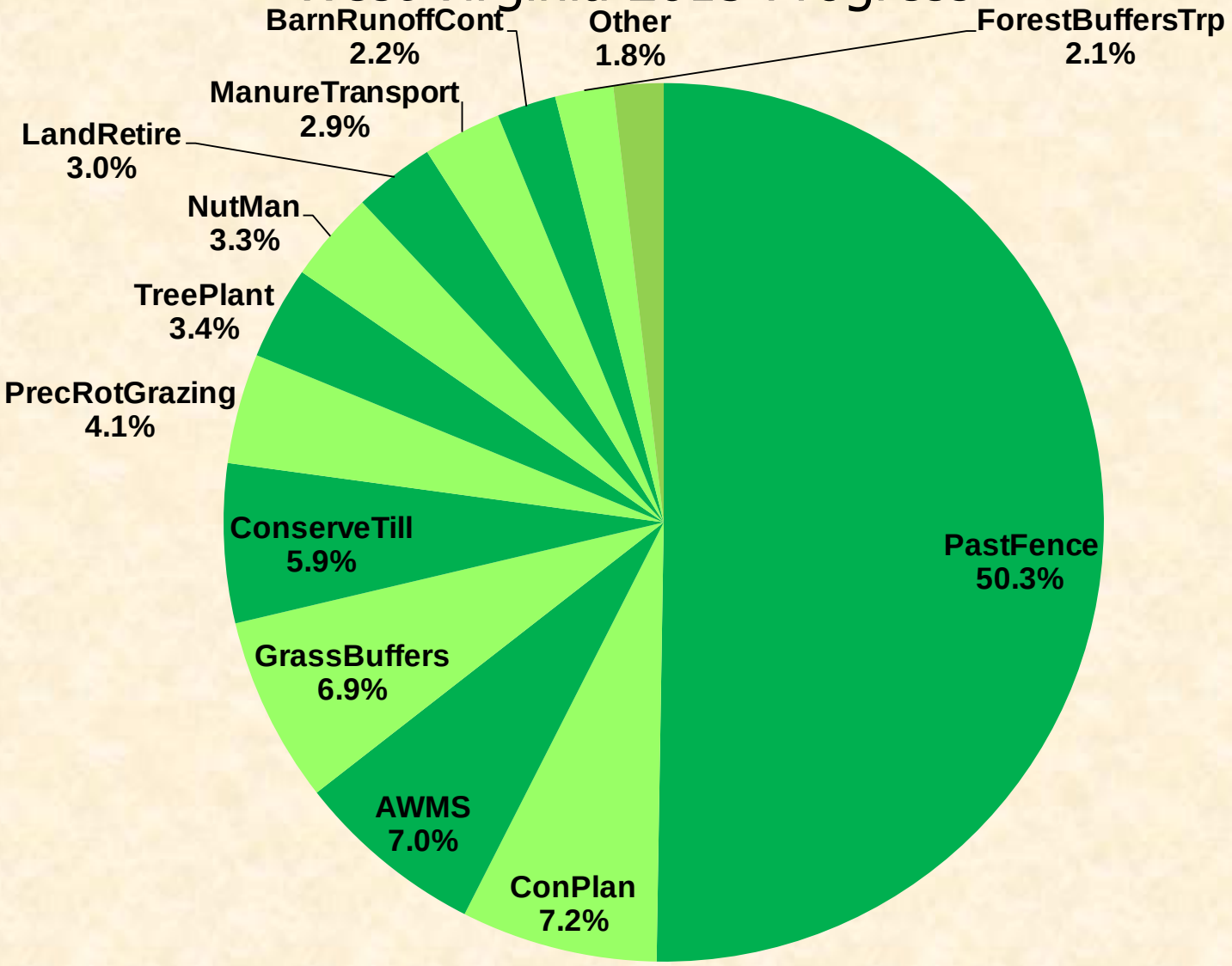
# Agriculture Nitrogen Load Reduction by BMP

## Virginia 2013 Progress



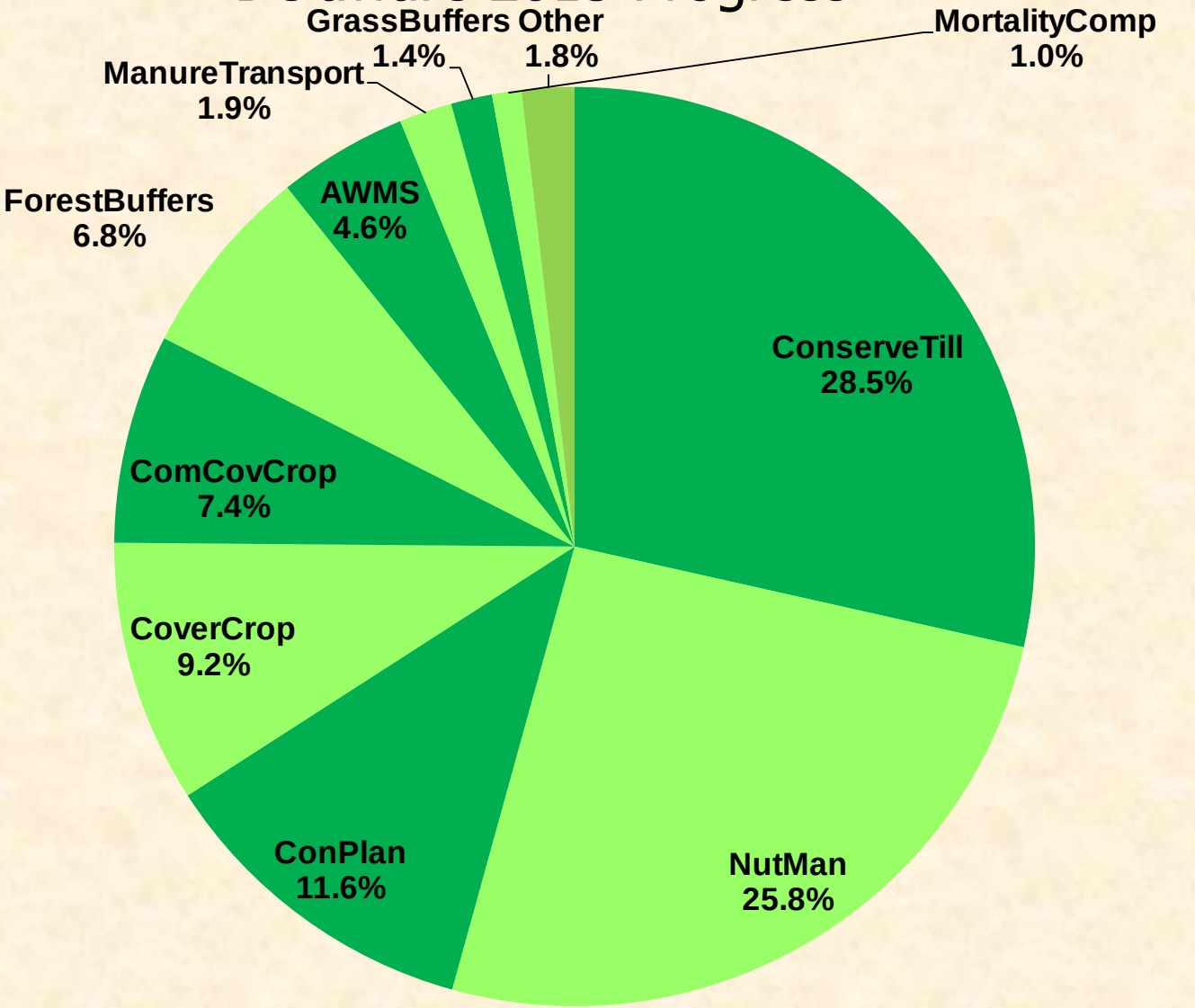
# Agriculture Nitrogen Load Reduction by BMP

## West Virginia 2013 Progress



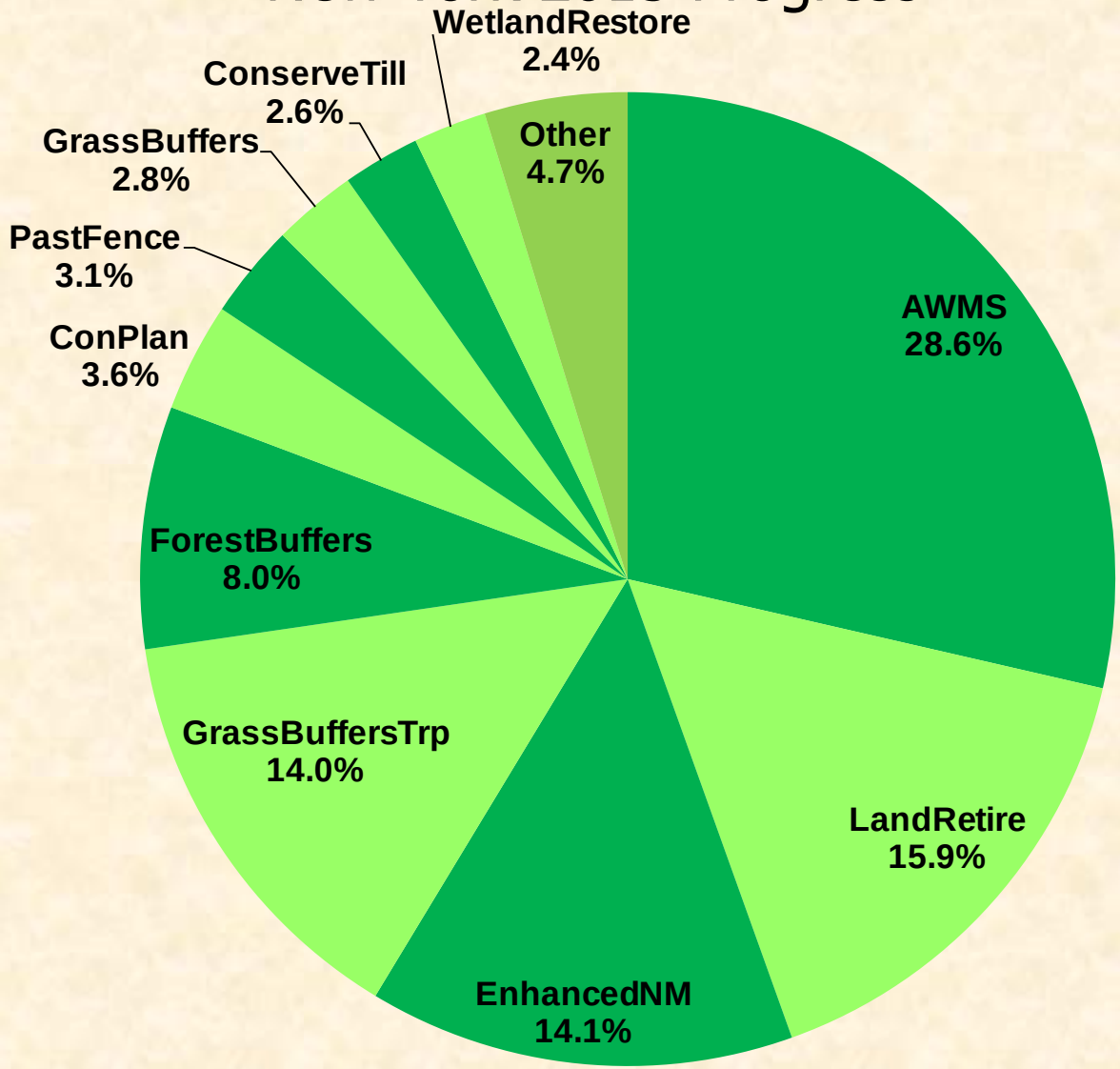
# Agriculture Nitrogen Load Reduction by BMP

## Delaware 2013 Progress



# Agriculture Nitrogen Load Reduction by BMP

## New York 2013 Progress

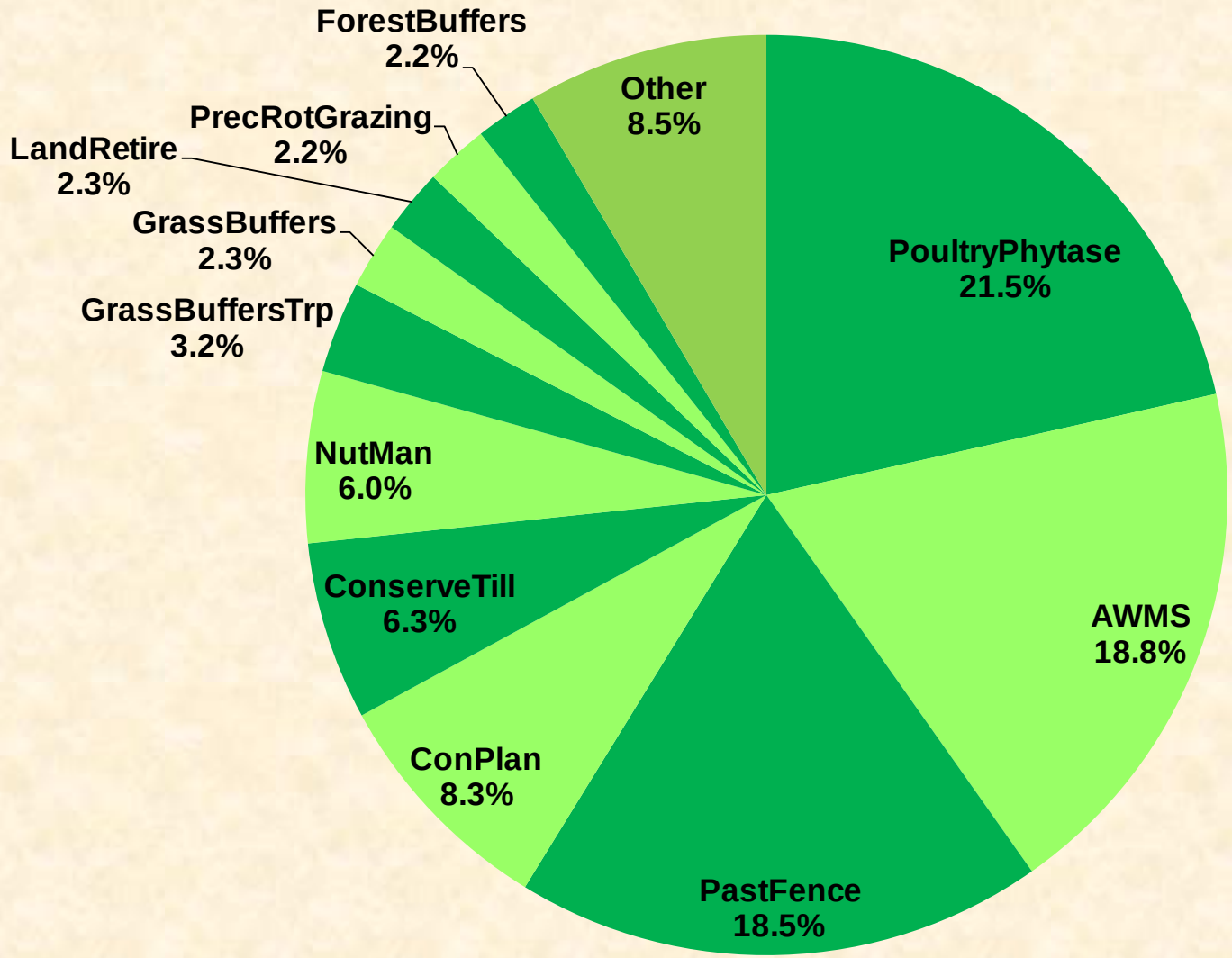


# Agricultural Phosphorus Reductions

Relative influence of 2013 Progress BMPs on load reductions

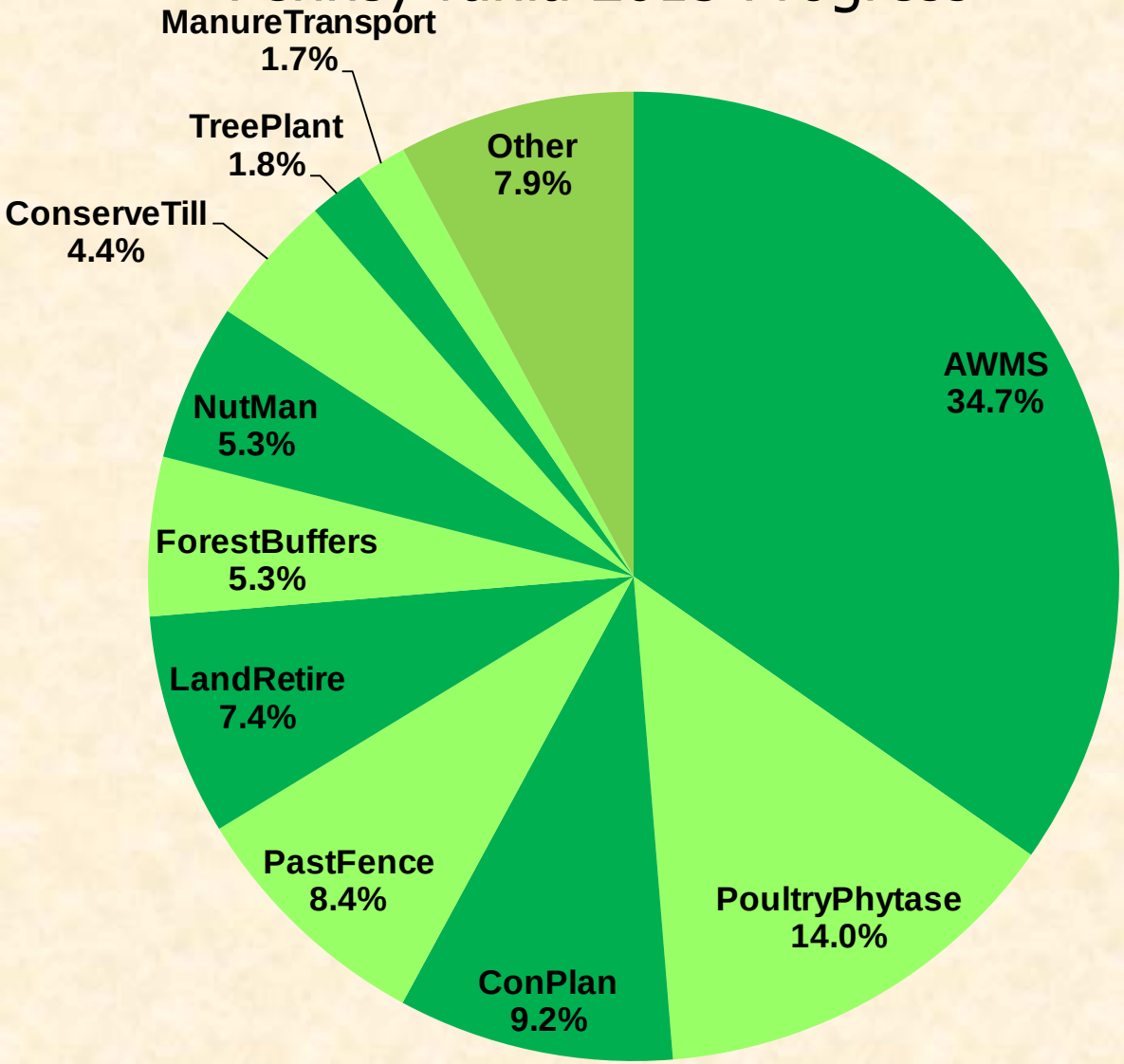
# Agriculture Phosphorus Load Reduction by BMP

## All Jurisdictions' – 2013 Progress



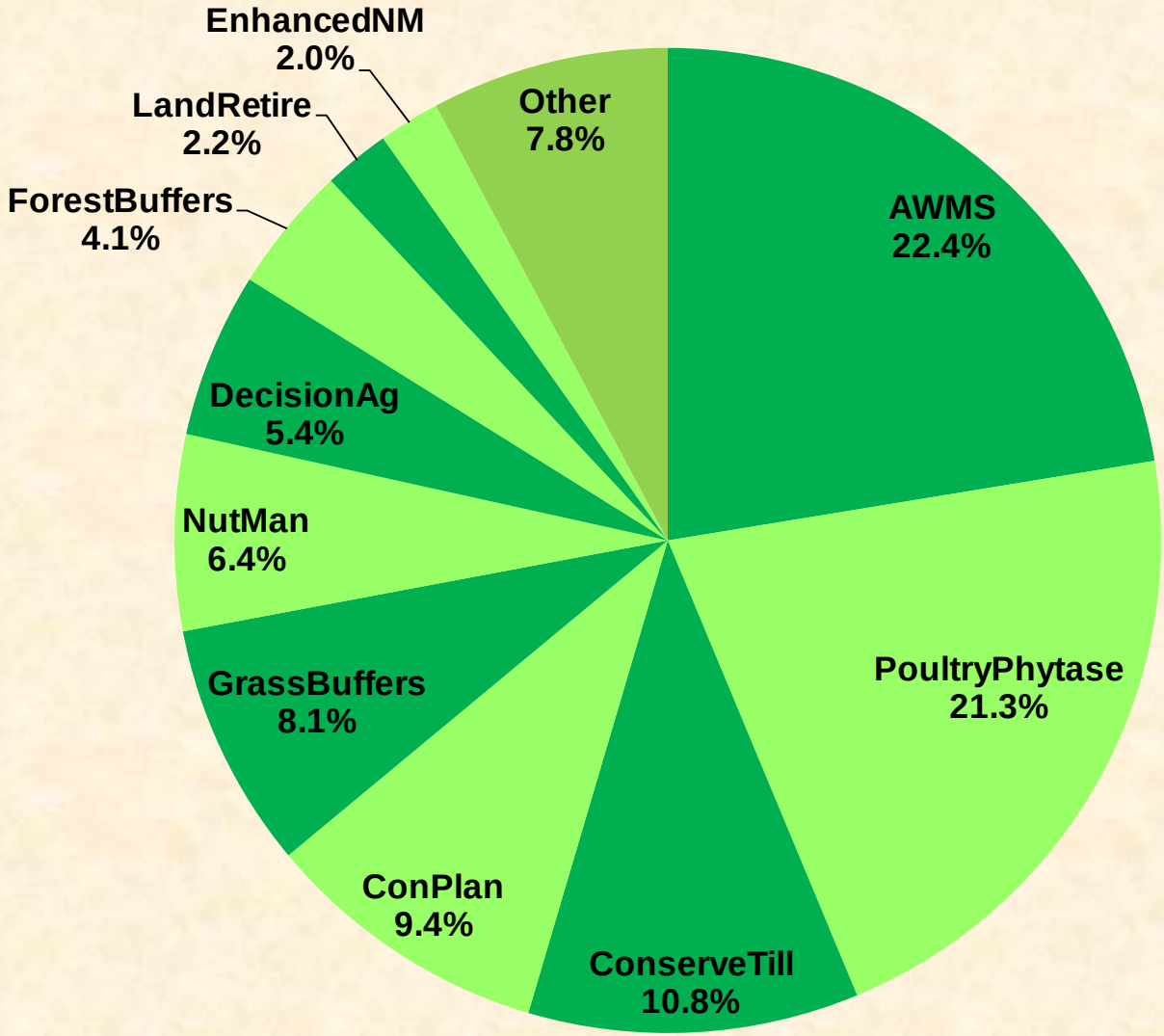
# Phosphorus Relative Load Reductions

## Pennsylvania 2013 Progress



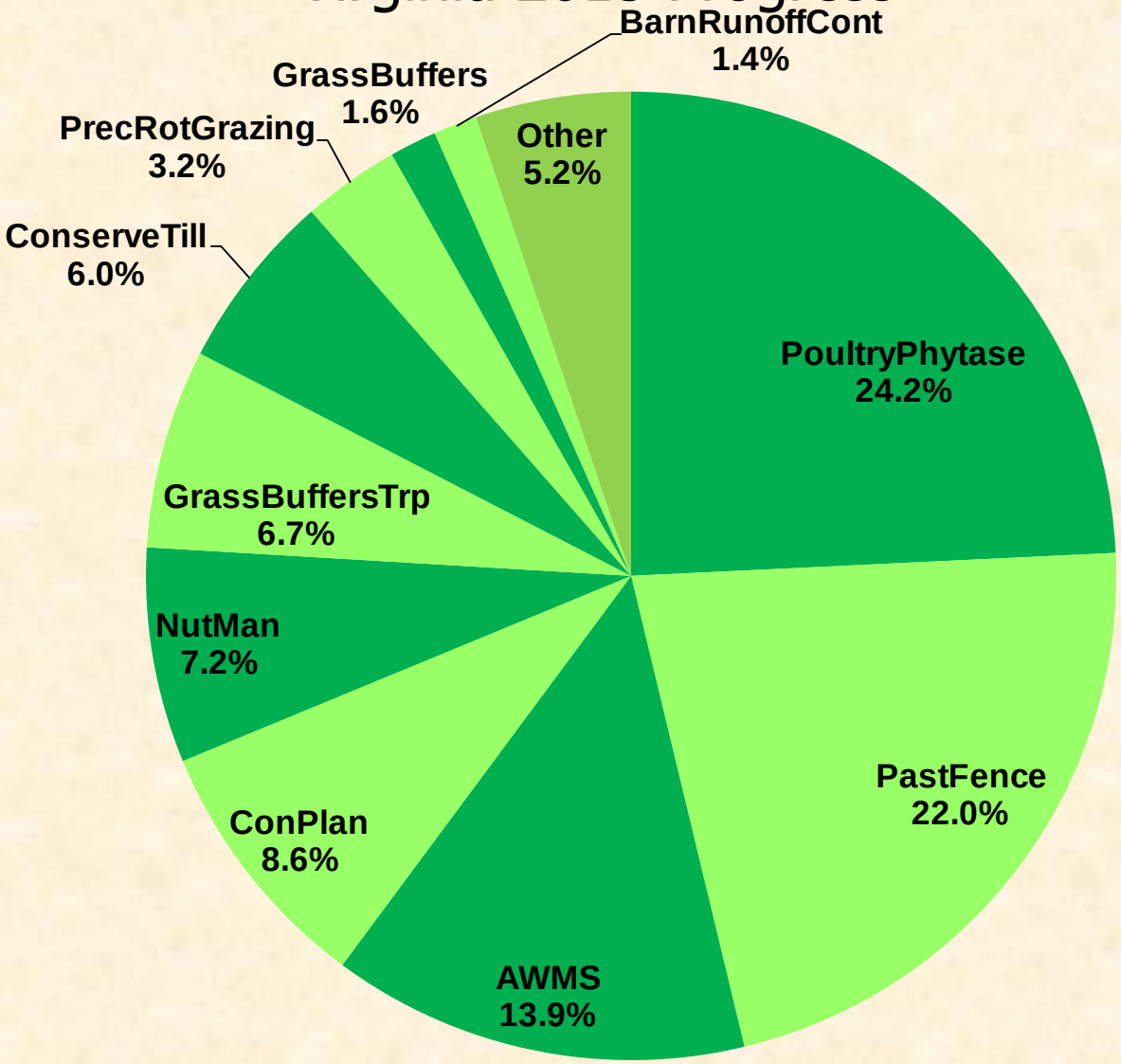
# Agriculture Phosphorus Load Reduction by BMP

## Maryland 2013 Progress



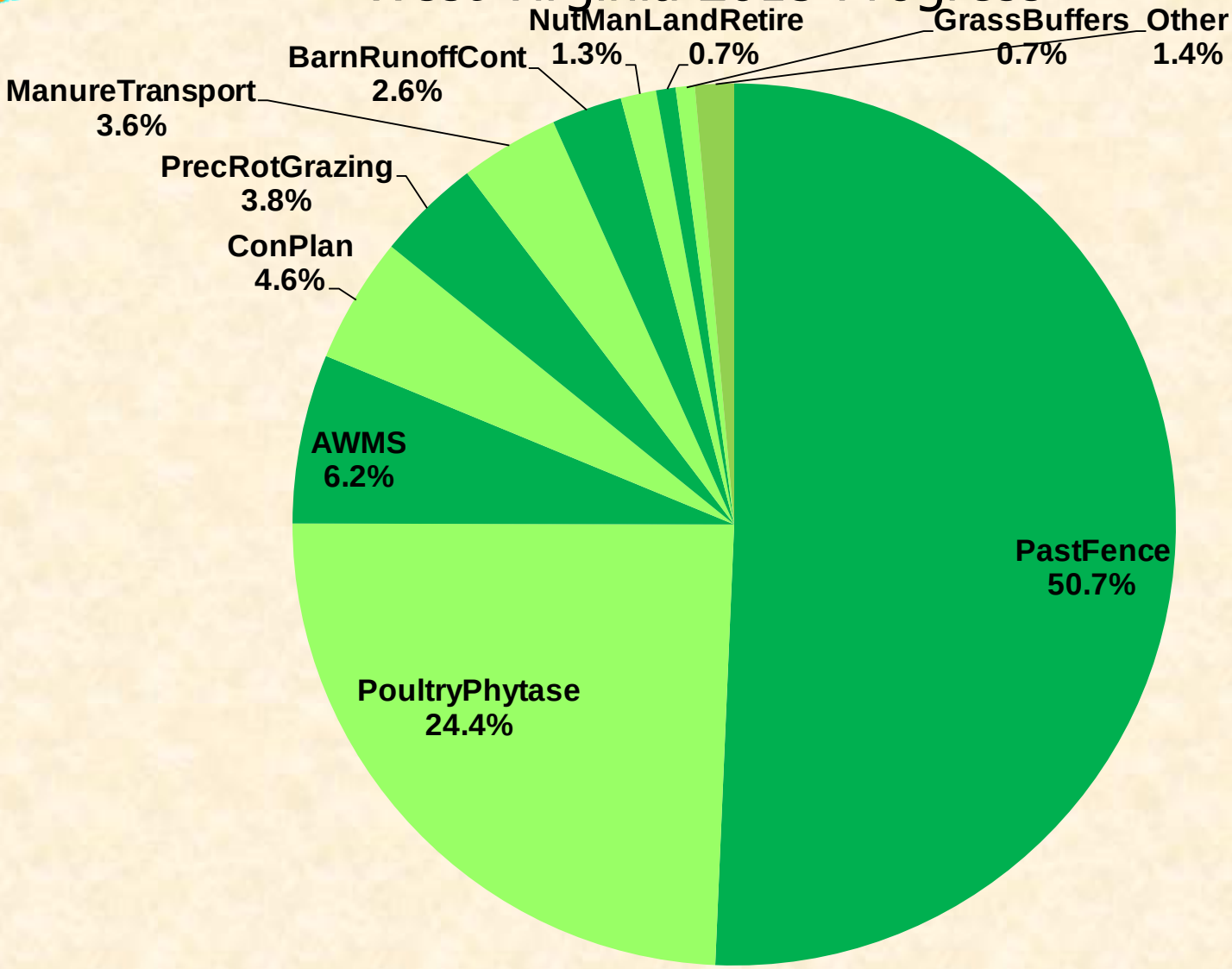
# Agriculture Phosphorus Load Reduction by BMP

## Virginia 2013 Progress



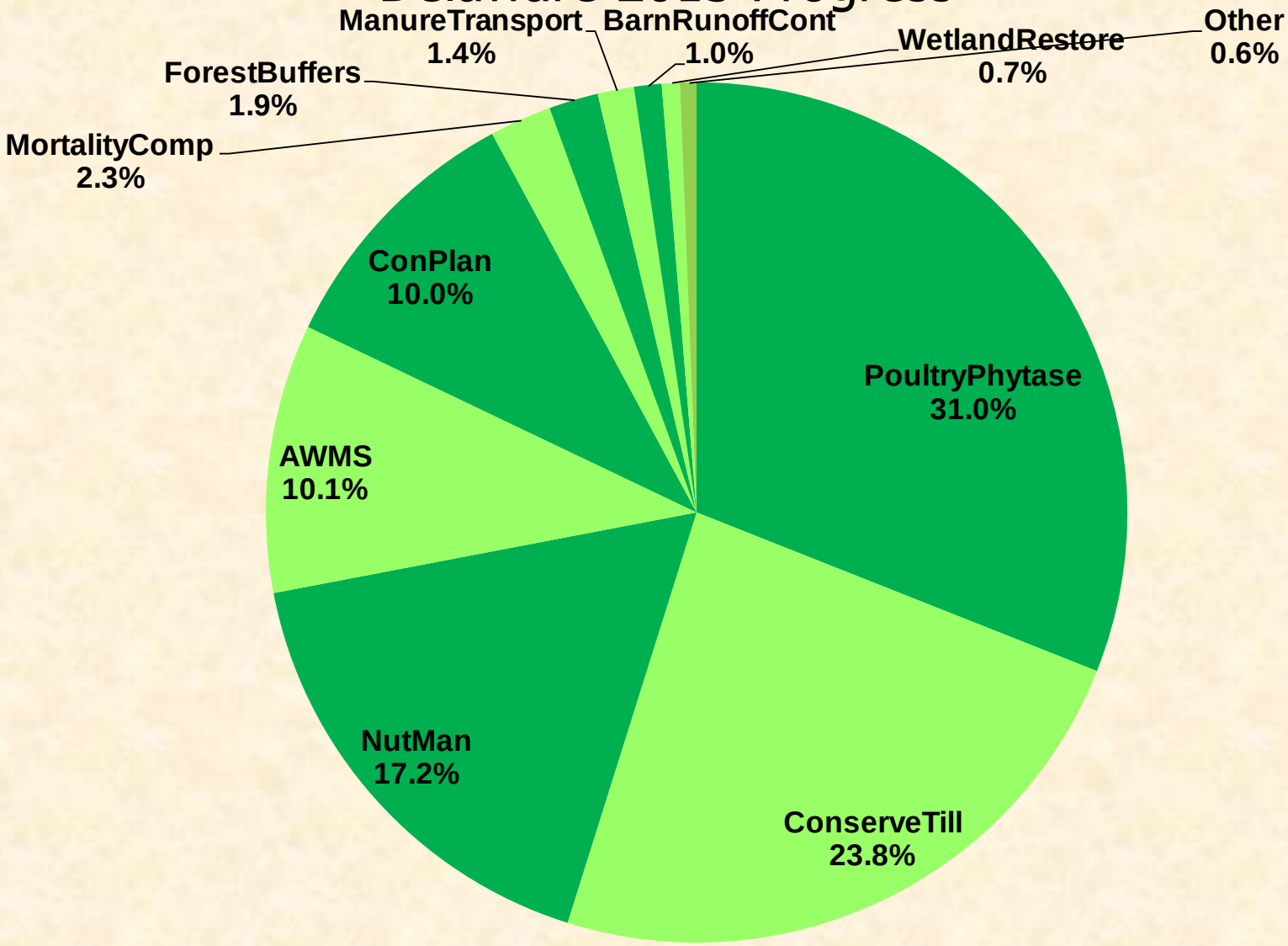
# Agriculture Phosphorus Load Reduction by BMP

## West Virginia 2013 Progress



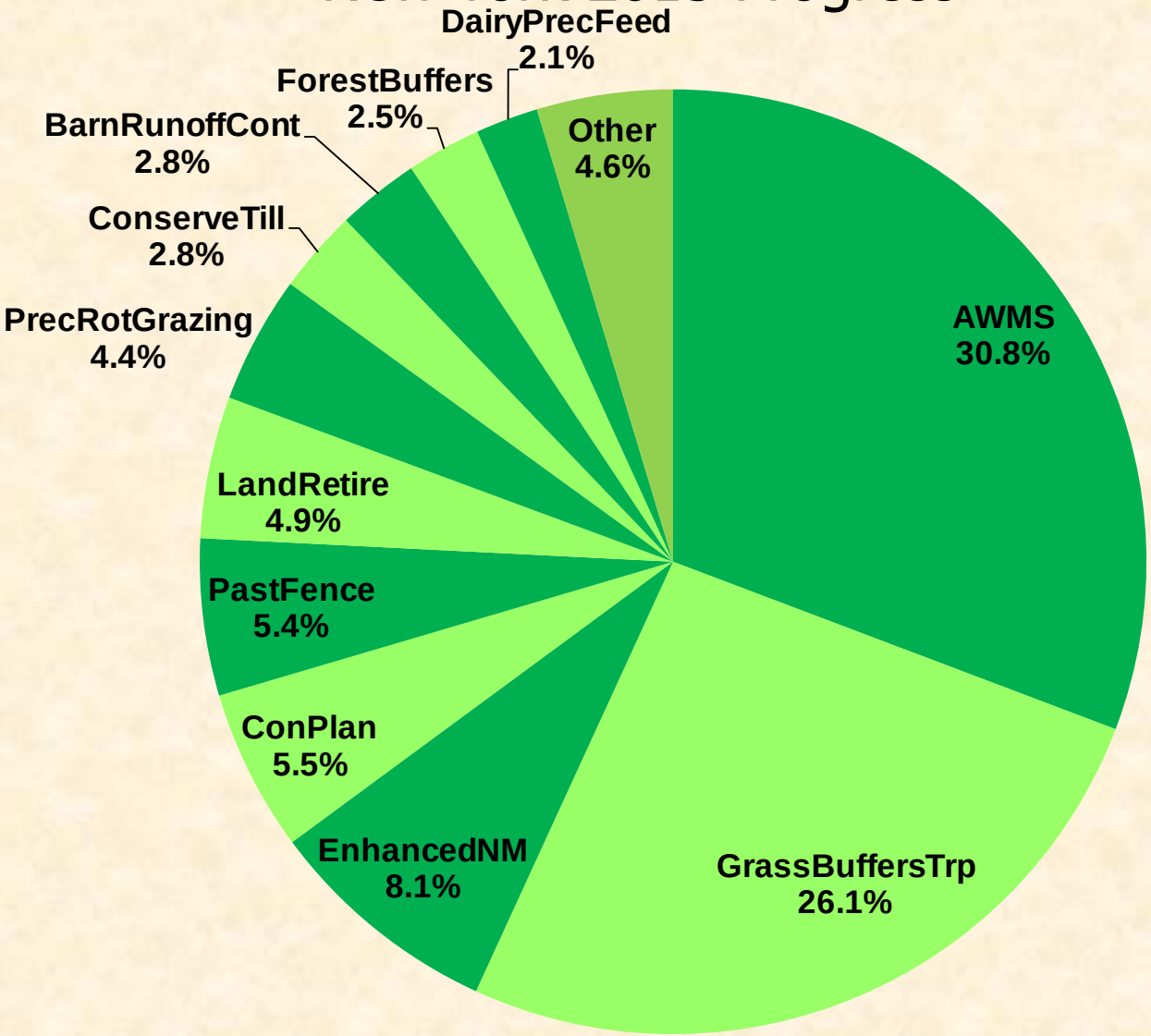
# Agriculture Phosphorus Load Reduction by BMP

## Delaware 2013 Progress



# Agriculture Phosphorus Load Reduction by BMP

## New York 2013 Progress

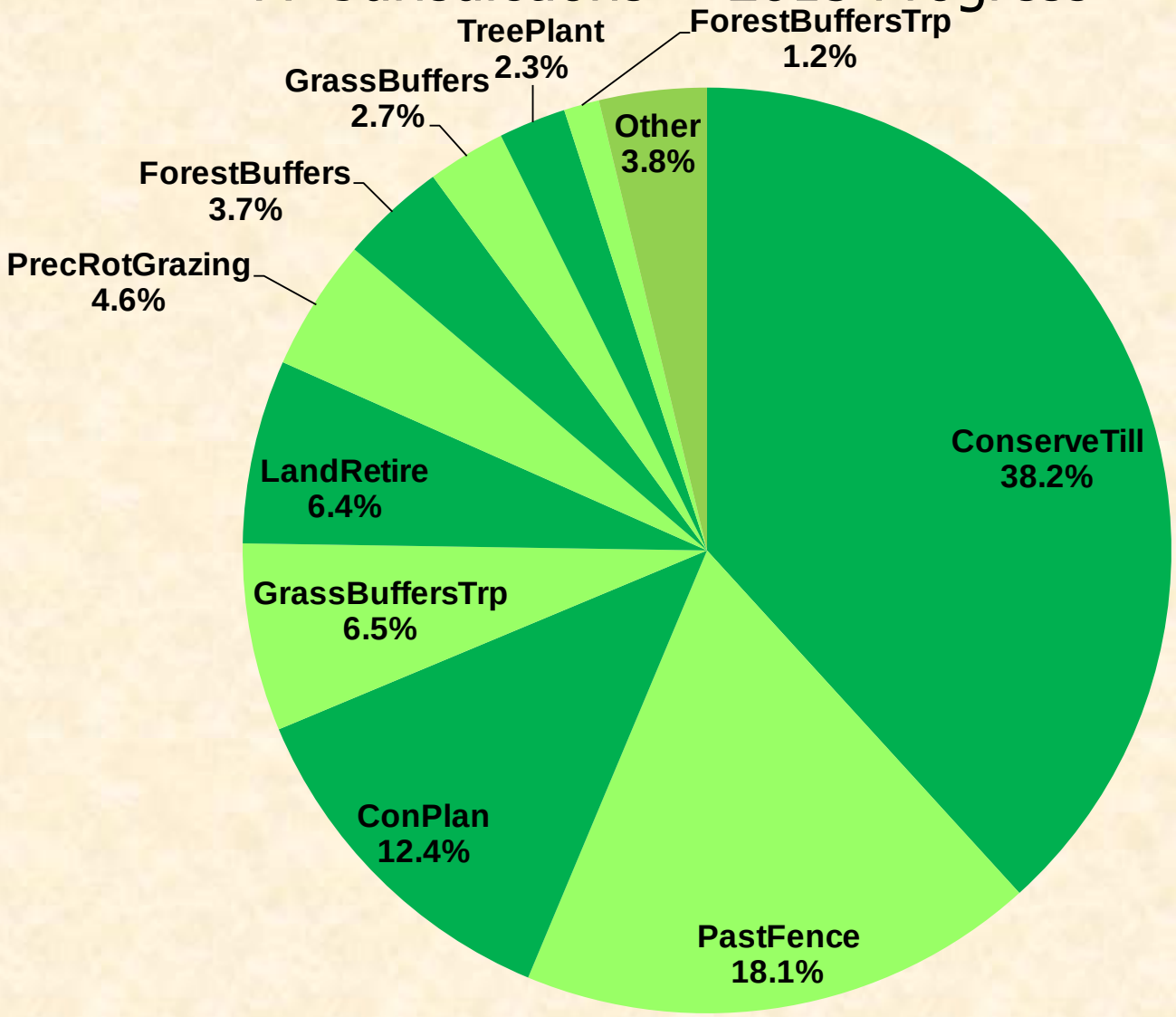


# Agricultural Sediment (Total Suspended Solids) Reductions

Relative influence of 2013 Progress BMPs on load reductions

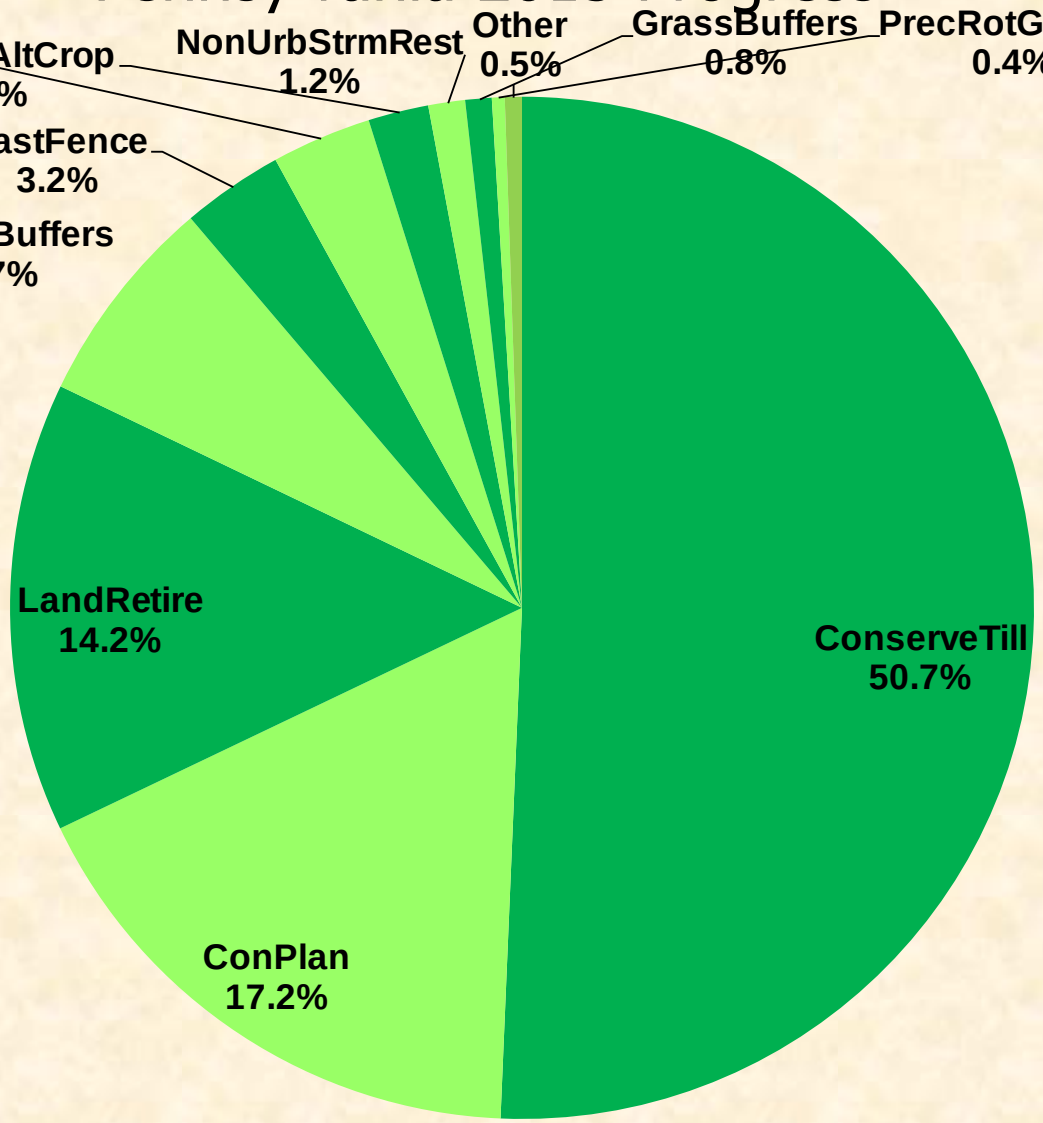
# Agriculture Sediment Load Reduction by BMP

## All Jurisdictions' – 2013 Progress



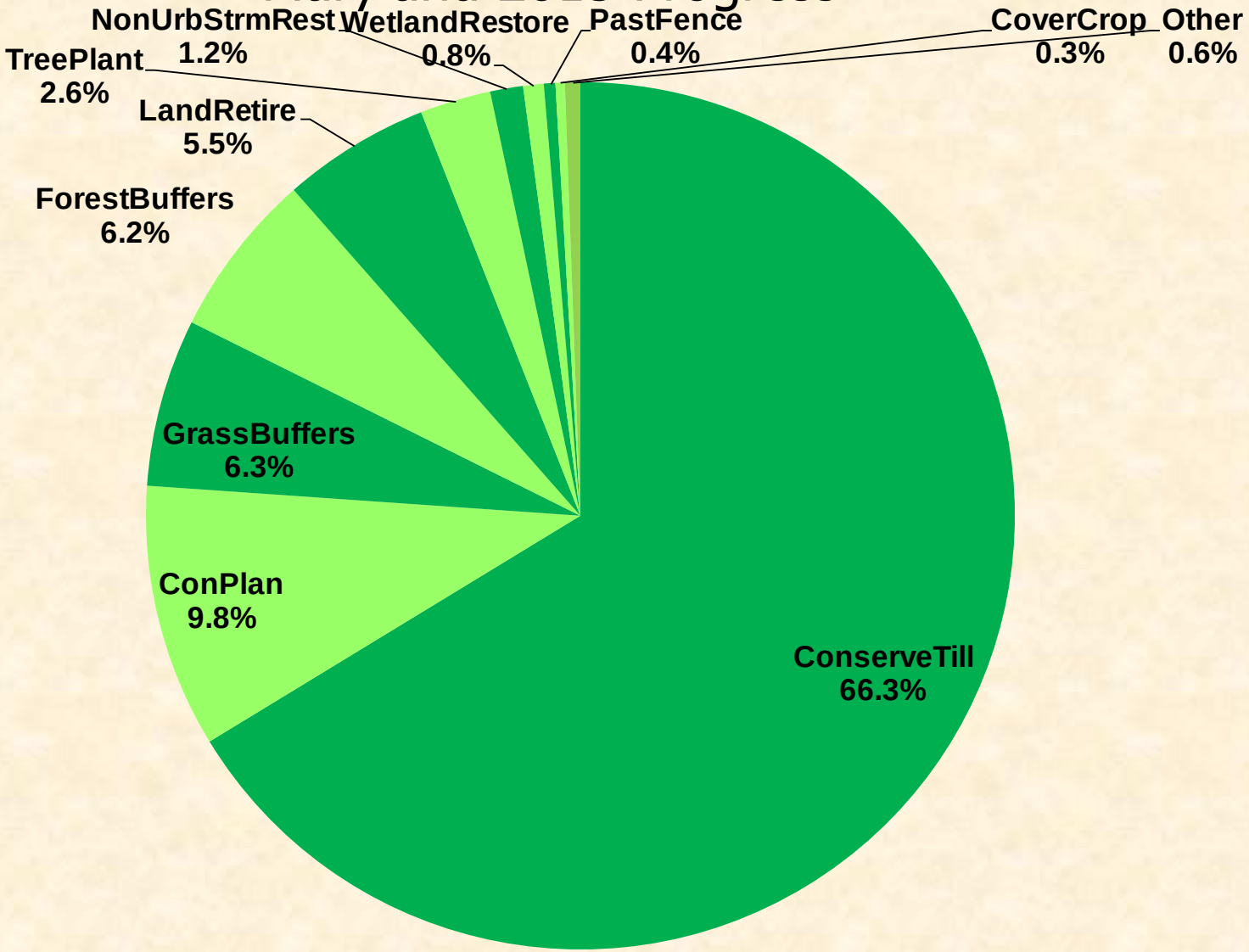
# Agriculture Sediment Load Reduction by BMP

## Pennsylvania 2013 Progress



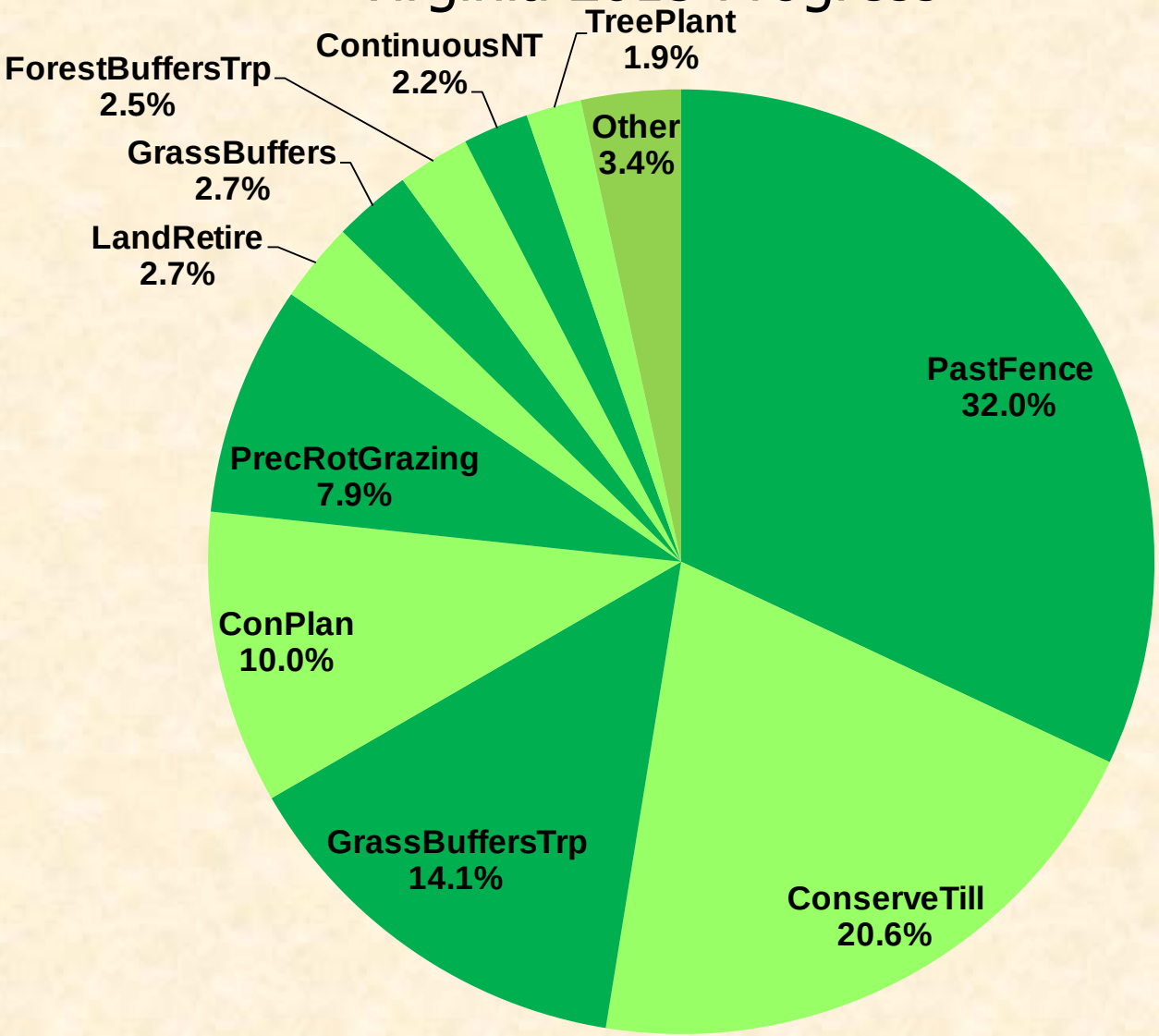
# Agriculture Sediment Load Reduction by BMP

## Maryland 2013 Progress



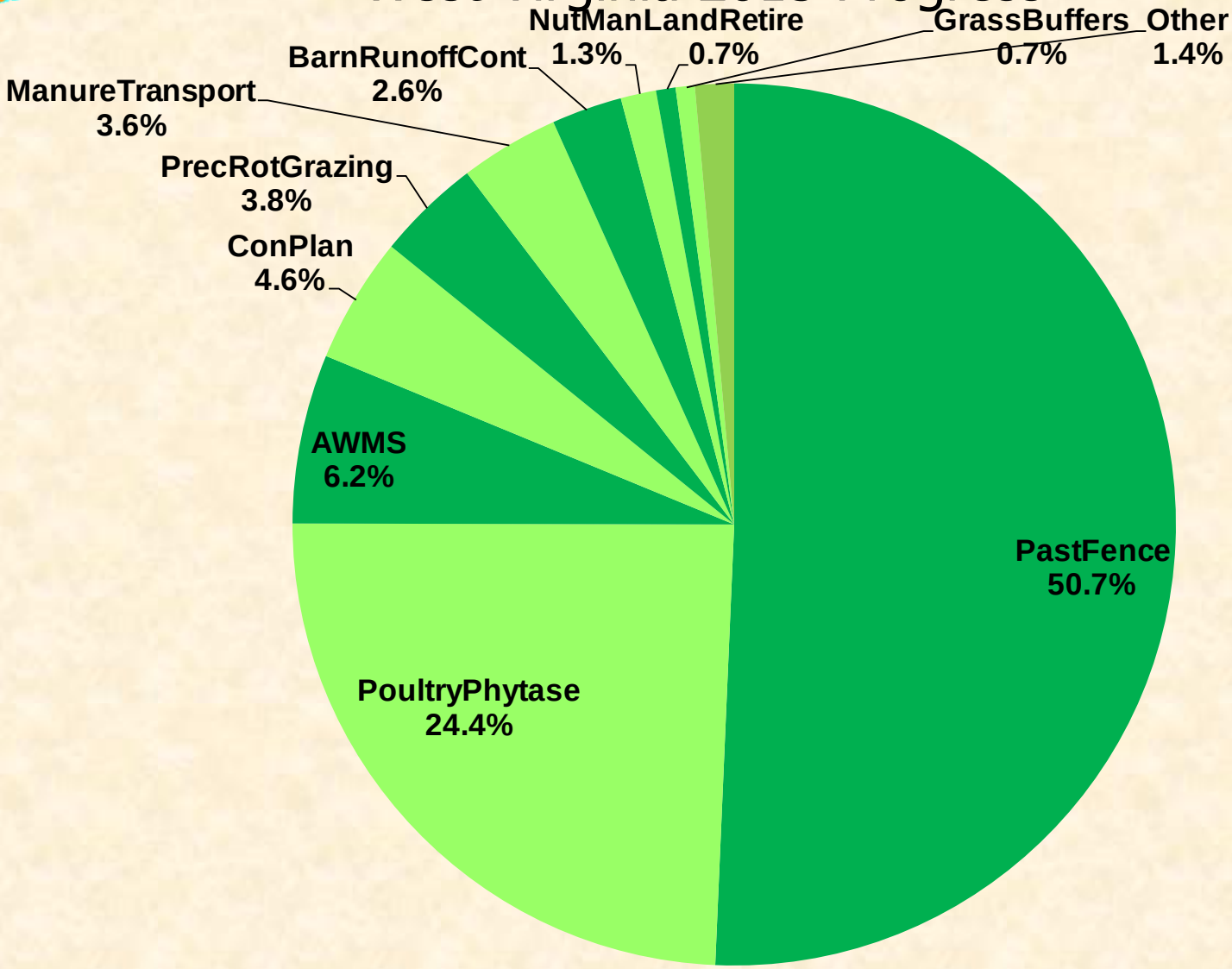
# Agriculture Sediment Load Reduction by BMP

## Virginia 2013 Progress



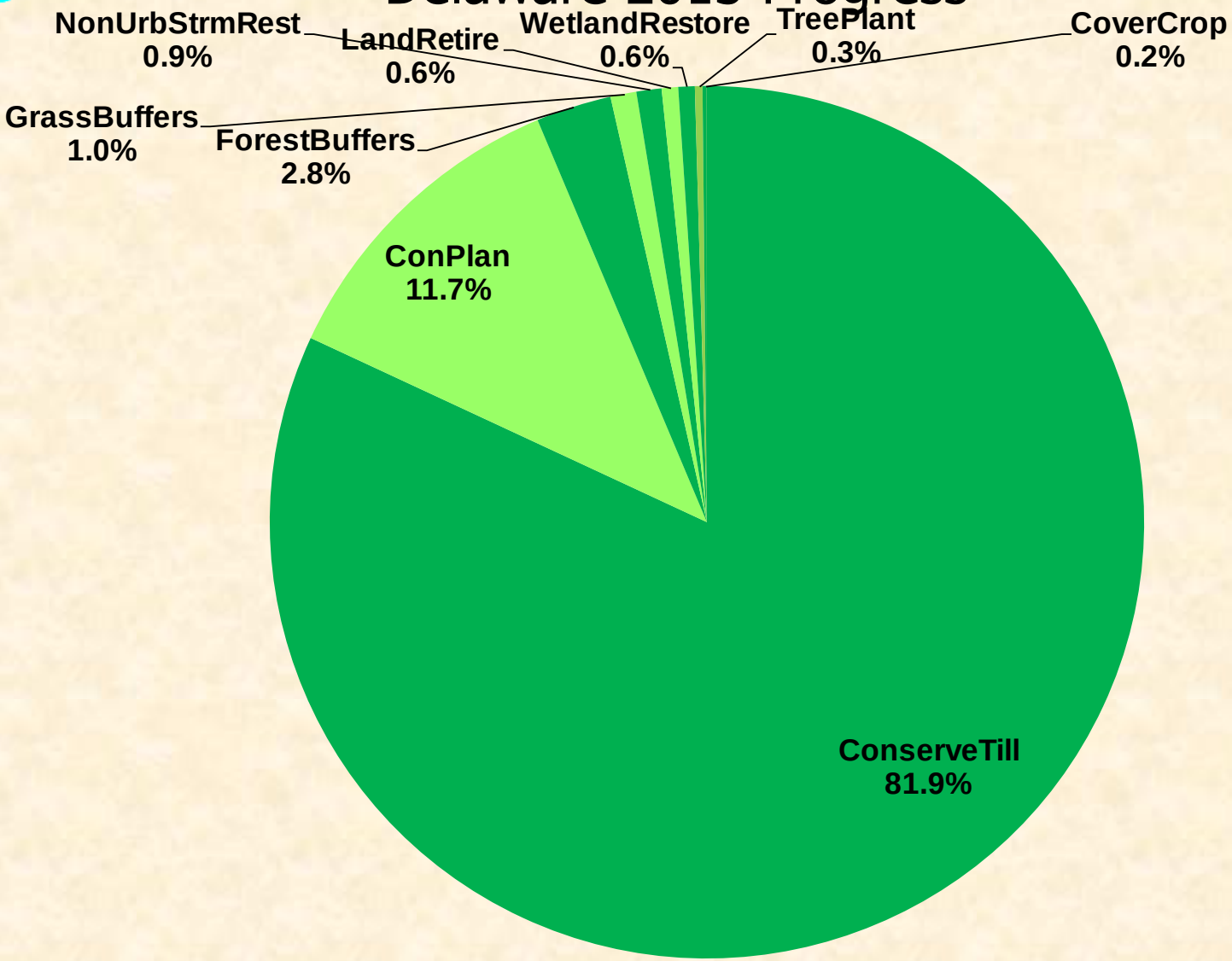
# Agriculture Sediment Load Reduction by BMP

## West Virginia 2013 Progress



# Agriculture Sediment Load Reduction by BMP

## Delaware 2013 Progress



# Agriculture Sediment Load Reduction by BMP

## New York 2013 Progress