

Appendix C. Local Sector Goals

During the development of the Phase III WIP, the State expended substantial effort to reach out to local government staff, nongovernmental organizations (NGOs), and the interested public to lay out their strategies for meeting 2025 TMDL targets and to ask for feedback on the framework for creating a feasible and balanced approach to creating goals for each jurisdiction, by sector. As part of this process, the State solicited feedback from all parties involved to come up with a plan for 2025 that could likely be implemented within the given timeline.

This section includes plans that were developed among local government, NGOs, and the public to determine 2025 sector goals by county. The sectors include agriculture, developed, septic, and wastewater. We anticipate that over time, the plans will become even more refined as new information, new technologies and additional resources are brought into the planning process. The successful completion of these plans will depend on the full availability of funding and personnel resources.

Agriculture

MDA held individual meetings in 2018 with each of the SCDs that included State and local staff as well as private citizens to establish its proposed Phase III WIP goals. The plan that was created went above and beyond the goals that the agricultural sector established for the Phase II WIP and will rely on continued support to maintain the high pace of BMP implementation and verification that is needed to ensure this sector will meet its goals.

Developed

MDE and MDP participated in one-on-one meetings with county staff in 2018 and participated in a series of follow-up discussions to create local goals for the developed sector, which includes stormwater and those practices associated with meeting MS4 permit goals. These goals reflect a current understanding of each jurisdiction's plan to meet both permit, where applicable, and WIP goals for 2025.

It is anticipated that these goals will change with the availability of additional input from more public outreach, improved reporting of existing BMP data, enhanced verification programs and additional resources brought to this sector.

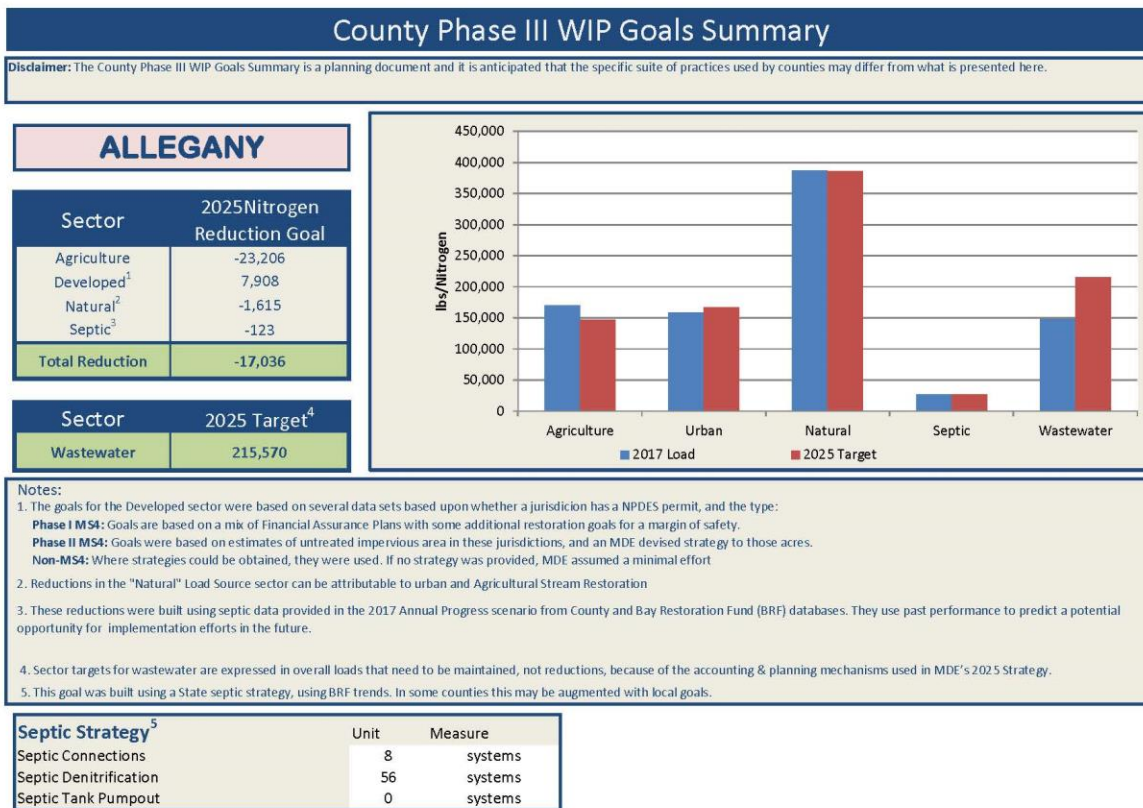
Regional Meetings

MDA, MDE, MDP, and DNR all participated in a round of six regional meetings that were open to industry and citizenry as well. The results of the meetings were collated and distributed by the [Harry Hughes Center for Agroecology](#) in late 2018.

WIP Goals Summaries

The following section reflects changes to the local WIP goals that were provided during the State's 2018 fall regional WIP outreach meetings. It is our current understanding of what each jurisdiction's feasible goals are based on providing adequate resources. This includes providing funding and staff support at an

optimal level incentivize increased restoration efforts and to maintain existing pollution abatement practices and strategies.



Urban BMP Strategy	Unit	Measure	Agriculture BMP Strategy	2017 BMPs	2025 Goal	Unit
Abandon Mine Reclamation	420	acres	Ag Drainage Management	0	0	acres treated
BioSwale	0	acres	Alternative Crops	0	0	acres
Dry Detention Ponds & Hydrodynamic Structures	0	acres	Animal Waste Management - Dairy ¹	0	70	percent ³
Dry Extended Detention Ponds	0	acres	Animal Waste Management - Other			
Erosion and Sediment Control	0	acres	Livestock ¹	15	30	percent ³
Impervious Surface Reduction	3	acres	Animal Waste Management - Poultry ¹	0	100	percent ³
Permeable Pavement	0	acres	Barnyard Runoff Control	43	50	acres
Runoff Reduction	0	acre-feet	Conservation Plans	9,560	10,360	acres
Runoff Reduction	0	acres	ConserveTill (>60% residue)	1,123	1,123	acres
Runoff Reduction	0	impervious acres	ConserveTill (30-60% residue)	337	837	acres
Storm Drain Cleaning	0	lbs tn	Cover Crop - Commodity	206	206	acres
Storm Drain Cleaning	0	lbs tp	Cover Crop - Traditional	581	581	acres
Storm Drain Cleaning	0	lbs tss	Crop Irrigation	0	25	acres
Stormwater Treatment	1	acre-feet	Dairy Precision Feed Management	0	0	AU
Stormwater Treatment	18	acres	DitchFilters (Phosphorus Sorbing)	0	0	acres
Stormwater Treatment	9	impervious acres	Forest Buffer Exclusion	5,079	77,815	feet
Stream Restoration Urban	4,800	feet	Forest Buffers	594	594	acres
Street Sweeping	0	acres	Grass Buffer Exclusion	126,881	77,815	feet
Tree Planting	0	acres	Grass Buffers	30	30	acres
Urban Forest Buffer	48	acres	Horse Pasture Management	37	60	acres
Urban Forest Planting	48	acres	Land Retire (open)	466	515	acres
Urban Nutrient Management Plan	5,700	acres	Land Retire (pasture)	246	300	acres
Urban Shoreline Management	0	feet	Loafing Lot Management	0	5	acres
Wet Extended Detention	0	acres	Manure - incorporation	80	40	acres
			Manure - injection	0	0	acres
			Manure Transport (out of state)	0	0	wet tons
			Mortality Management ¹	0	0	percent ³
			NonUrban Stream Restoration	2,915	5,000	feet
			Nursery CaptureReuse	0	0	acres
			OffStream w/o Fencing ²	5,538	10	percent
			Poultry Litter Amendment	0	0	percent ³
			Prescribed Grazing	914	1,500	acres
			Shoreline Protection	0	0	feet
			Tree Planting	244	250	acres
			Wetland Restoration	2	25	acres

¹ 2017 values are summarized by # of systems
² 2017 Values are summarized in acres
³ Percent of all animals within county

Notes:
 In PI MS4 jurisdictions, an additional 10% treatment goal was added on top of the Financial Assurance Plan scenario provided.
 Stream Restoration in some P1 counties may be over-inflated due to conversion factors used to convert Financial Assurance Plan numbers to WIP number

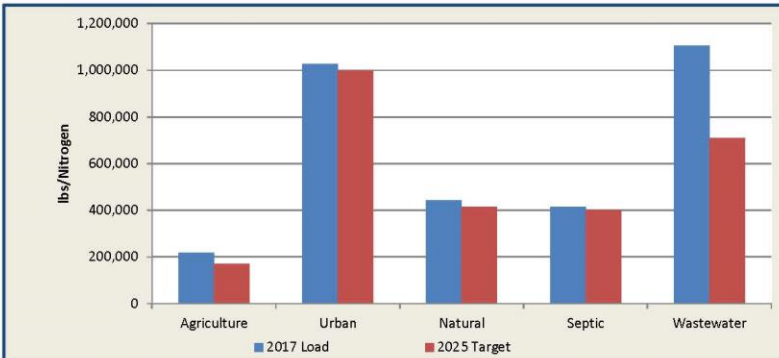
County Phase III WIP Goals Summary

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ANNE ARUNDEL

Sector	2025 Nitrogen Reduction Goal
Agriculture	-47,291
Developed ¹	-26,570
Natural ²	-27,398
Septic ³	-15,432
Total Reduction	-116,691

Sector	2025 Target ⁴
Wastewater	709,368



Notes:

- The goals for the Developed sector were based on several data sets based upon whether a jurisdiction has a NPDES permit, and the type:
 - Phase I MS4:** Goals are based on a mix of Financial Assurance Plans with some additional restoration goals for a margin of safety.
 - Phase II MS4:** Goals were based on estimates of untreated impervious area in these jurisdictions, and an MDE devised strategy to those acres.
 - Non-MS4:** Where strategies could be obtained, they were used. If no strategy was provided, MDE assumed a minimal effort
- Reductions in the "Natural" Load Source sector can be attributable to urban and Agricultural Stream Restoration
- These reductions were built using septic data provided in the 2017 Annual Progress scenario from County and Bay Restoration Fund (BRF) databases. They use past performance to predict a potential opportunity for implementation efforts in the future.
- Sector targets for wastewater are expressed in overall loads that need to be maintained, not reductions, because of the accounting & planning mechanisms used in MDE's 2025 Strategy.
- This goal was built using a State septic strategy, using BRF trends. In some counties this may be augmented with local goals.

Septic Strategy ⁵	Unit	Measure
Septic Connections	403	systems
Septic Denitrification	2024	systems
Septic Tank Pumpout	6213	systems

Urban BMP Strategy	Unit	Measure	Agriculture BMP Strategy	2017 BMPs	2025 Goal	Unit
Abandon Mine Reclamation	0	acres	Ag Drainage Management	26	126	acres treated
BioSwale	0	acres	Alternative Crops	0	0	acres
Dry Detention Ponds & Hydrodynamic Structures	0	acres	Animal Waste Management - Dairy ¹	0	70	percent ³
Dry Extended Detention Ponds	0	acres	Animal Waste Management - Other			
Erosion and Sediment Control	0	acres	Livestock ¹	4	80	percent ³
Impervious Surface Reduction	0	acres	Animal Waste Management - Poultry ¹	0	100	percent ³
Permeable Pavement	0	acres	Barnyard Runoff Control	31	48	acres
Runoff Reduction	28	acre-feet	Conservation Plans	11,380	14,000	acres
Runoff Reduction	704	acres	ConserveTill (>60% residue)	6,405	6,405	acres
Runoff Reduction	352	impervious acres	ConserveTill (30-60% residue)	1,921	1,921	acres
Storm Drain Cleaning	0	lbs tn	Cover Crop - Commodity	1,138	1,138	acres
Storm Drain Cleaning	0	lbs tp	Cover Crop - Traditional	4,667	4,667	acres
Storm Drain Cleaning	0	lbs tss	Crop Irrigation	0	200	acres
Stormwater Treatment	249	acre-feet	Dairy Precision Feed Management	0	0	AU
Stormwater Treatment	6,286	acres	DitchFilters (Phosphorus Sorbing)	0	0	acres
Stormwater Treatment	3,143	impervious acres	Forest Buffer Exclusion	4,097	184,141	feet
Stream Restoration Urban	204,609	feet	Forest Buffers	32	75	acres
Street Sweeping	1,299	acres	Grass Buffer Exclusion	6,865	52,612	feet
Tree Planting	0	acres	Grass Buffers	54	54	acres
Urban Forest Buffer	0	acres	Horse Pasture Management	200	400	acres
Urban Forest Planting	0	acres	Land Retire (open)	538	538	acres
Urban Nutrient Management Plan	0	acres	Land Retire (pasture)	660	1,260	acres
Urban Shoreline Management	13,463	feet	Loafing Lot Management	0	2	acres
Wet Extended Detention	270	acres	Manure - incorporation	246	246	acres
			Manure - injection	0	0	acres
			Manure Transport (out of state)	0	0	wet tons
			Mortality Management ¹	0	100	percent ³
			NonUrban Stream Restoration	2,933	3,933	feet
			Nursery CaptureReuse	0	50	acres
			OffStream w/o Fencing ²	2,304	10	percent
			Poultry Litter Amendment	0	0	percent ³
			Prescribed Grazing	828	1,500	acres
			Shoreline Protection	0	0	feet
			Tree Planting	190	200	acres
			Wetland Restoration	11	11	acres

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² 2017 Values are summarized in acres

³ Percent of all animals within county

Notes:

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Stream Restoration in some P1 counties may be over-inflated due to conversion factors used to convert Financial Assurance Plan numbers to WIP number

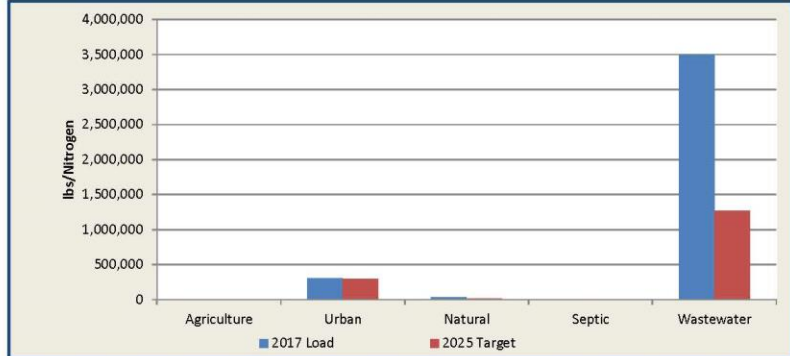
County Phase III WIP Goals Summary

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BALTIMORE CITY

Sector	2025 Nitrogen Reduction Goal
Agriculture	0
Developed ¹	-11,554
Natural ²	-14,614
Septic ³	0
Total Reduction	-26,168

Sector	2025 Target ⁴
Wastewater	1,268,242



Notes:

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 - Phase II MS4:** Goals were based on estimates of untreated impervious area in these jurisdictions, and an MDE devised strategy to those acres.
 - Non-MS4:** Where strategies could be obtained, they were used. If no strategy was provided, MDE assumed a minimal effort
2. Reductions in the "Natural" Load Source sector can be attributable to urban and Agricultural Stream Restoration
3. These reductions were built using septic data provided in the 2017 Annual Progress scenario from County and Bay Restoration Fund (BRF) databases. They use past performance to predict a potential opportunity for implementation efforts in the future.
4. Sector targets for wastewater are expressed in overall loads that need to be maintained, not reductions, because of the accounting & planning mechanisms used in MDE's 2025 Strategy.
5. This goal was built using a State septic strategy, using BRF trends. In some counties this may be augmented with local goals.

Septic Strategy ⁵	Unit	Measure
Septic Connections	0	systems
Septic Denitrification	0	systems
Septic Tank Pumpout	0	systems

Urban BMP Strategy	Unit	Measure	Agriculture BMP Strategy	2017 BMPs	2025 Goal	Unit
Abandon Mine Reclamation	0	acres	Ag Drainage Management	0	0	acres treated
BioSwale	0	acres	Alternative Crops	0	0	acres
Dry Detention Ponds & Hydrodynamic Structures	0	acres	Animal Waste Management - Dairy ¹	0	0	percent ³
Dry Extended Detention Ponds	0	acres	Animal Waste Management - Other	0	0	percent ³
Erosion and Sediment Control	0	acres	Livestock ¹	0	0	percent ³
Impervious Surface Reduction	0	acres	Animal Waste Management - Poultry ¹	0	0	percent ³
Permeable Pavement	0	acres	Barnyard Runoff Control	0	0	acres
Runoff Reduction	3	acre-feet	Conservation Plans	0	0	acres
Runoff Reduction	88	acres	ConserveTill (>60% residue)	0	0	acres
Runoff Reduction	44	impervious acres	ConserveTill (30-60% residue)	0	0	acres
Storm Drain Cleaning	315	lbs tn	Cover Crop - Commodity	0	0	acres
Storm Drain Cleaning	126	lbs tp	Cover Crop - Traditional	0	0	acres
Storm Drain Cleaning	37,800	lbs tss	Crop Irrigation	0	0	acres
Stormwater Treatment	173	acre-feet	Dairy Precision Feed Management	0	0	AU
Stormwater Treatment	4,361	acres	DitchFilters (Phosphorus Sorbing)	0	0	acres
Stormwater Treatment	2,181	impervious acres	Forest Buffer Exclusion	0	0	feet
Stream Restoration Urban	78,020	feet	Forest Buffers	0	0	acres
Street Sweeping	28,692	acres	Grass Buffer Exclusion	0	0	feet
Tree Planting	33	acres	Grass Buffers	0	0	acres
Urban Forest Buffer	0	acres	Horse Pasture Management	0	0	acres
Urban Forest Planting	0	acres	Land Retire (open)	0	0	acres
Urban Nutrient Management Plan	0	acres	Land Retire (pasture)	0	0	acres
Urban Shoreline Management	0	feet	Loafing Lot Management	0	0	acres
Wet Extended Detention	0	acres	Manure - incorporation	0	0	acres
			Manure - injection	0	0	acres
			Manure Transport (out of state)	0	0	wet tons
			Mortality Management ¹	0	0	percent ³
			NonUrban Stream Restoration	0	0	feet
			Nursery CaptureReuse	0	0	acres
			OffStream w/o Fencing ²	0	0	percent
			Poultry Litter Amendment	0	0	percent ³
			Prescribed Grazing	0	0	acres
			Shoreline Protection	0	0	feet
			Tree Planting	0	0	acres
			Wetland Restoration	0	0	acres

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² 2017 Values are summarized in acres
³ Percent of all animals within county

Notes:
 In PI MS4 jurisdictions, an additional 10% treatment goal was added on top of the Financial Assurance Plan scenario provided.
 Stream Restoration in some P1 counties may be over-inflated due to conversion factors used to convert Financial Assurance Plan numbers to WIP number

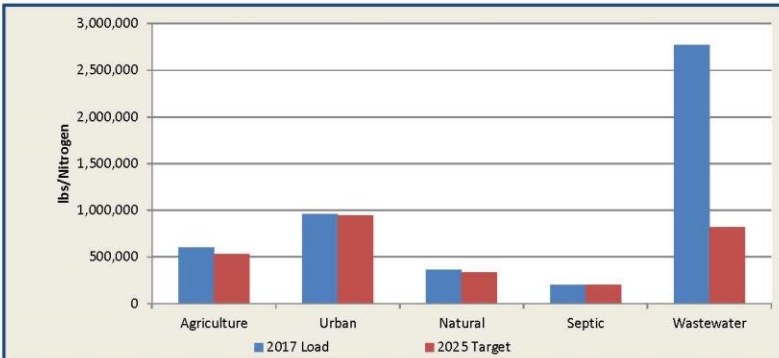
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BALTIMORE

Sector	2025 Nitrogen Reduction Goal
Agriculture	-65,026
Developed ¹	-12,570
Natural ²	-26,916
Septic ³	-361
Total Reduction	-104,873

Sector	2025 Target ⁴
Wastewater	819,786



Notes:

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 - Phase II MS4:** Goals were based on estimates of untreated impervious area in these jurisdictions, and an MDE devised strategy to those acres.
 - Non-MS4:** Where strategies could be obtained, they were used. If no strategy was provided, MDE assumed a minimal effort
- Reductions in the "Natural" Load Source sector can be attributable to urban and Agricultural Stream Restoration
- These reductions were built using septic data provided in the 2017 Annual Progress scenario from County and Bay Restoration Fund (BRF) databases. They use past performance to predict a potential opportunity for implementation efforts in the future.
- Sector targets for wastewater are expressed in overall loads that need to be maintained, not reductions, because of the accounting & planning mechanisms used in MDE's 2025 Strategy.
- This goal was built using a State septic strategy, using BRF trends. In some counties this may be augmented with local goals.

Septic Strategy ⁵	Unit	Measure
Septic Connections	888	systems
Septic Denitrification	376	systems
Septic Tank Pumpout	1956	systems

Urban BMP Strategy	Unit	Measure	Agriculture BMP Strategy	2017 BMPs	2025 Goal	Unit
Abandon Mine Reclamation	0	acres	Ag Drainage Management	0	50	acres treated
BioSwale	0	acres	Alternative Crops	0	0	acres
Dry Detention Ponds & Hydrodynamic Structures	0	acres	Animal Waste Management - Dairy ¹	4	80	percent ³
Dry Extended Detention Ponds	0	acres	Animal Waste Management - Other			
Erosion and Sediment Control	0	acres	Livestock ¹	11	70	percent ³
Impervious Surface Reduction	0	acres	Animal Waste Management - Poultry ¹	1	100	percent ³
Permeable Pavement	0	acres	Barnyard Runoff Control	33	33	acres
Runoff Reduction	2	acre-feet	Conservation Plans	29,867	40,000	acres
Runoff Reduction	47	acres	ConserveTill (>60% residue)	20,864	20,864	acres
Runoff Reduction	24	impervious acres	ConserveTill (30-60% residue)	6,259	10,000	acres
Storm Drain Cleaning	30	lbs tn	Cover Crop - Commodity	3,514	3,514	acres
Storm Drain Cleaning	12	lbs tp	Cover Crop - Traditional	9,509	11,000	acres
Storm Drain Cleaning	3,612	lbs tss	Crop Irrigation	0	425	acres
Stormwater Treatment	253	acre-feet	Dairy Precision Feed Management	0	0	AU
Stormwater Treatment	6,401	acres	DitchFilters (Phosphorus Sorbing)	0	0	acres
Stormwater Treatment	3,200	impervious acres	Forest Buffer Exclusion	500	182,126	feet
Stream Restoration Urban	438,079	feet	Forest Buffers	283	293	acres
Street Sweeping	2,852	acres	Grass Buffer Exclusion	82,635	364,253	feet
Tree Planting	171	acres	Grass Buffers	394	404	acres
Urban Forest Buffer	0	acres	Horse Pasture Management	475	600	acres
Urban Forest Planting	0	acres	Land Retire (open)	167	300	acres
Urban Nutrient Management Plan	0	acres	Land Retire (pasture)	165	165	acres
Urban Shoreline Management	16,956	feet	Loafing Lot Management	0	0	acres
Wet Extended Detention	0	acres	Manure - incorporation	88	88	acres
			Manure - injection	48	100	acres
			Manure Transport (out of state)	0	1,000	wet tons
			Mortality Management ¹	0	100	percent ³
			NonUrban Stream Restoration	0	20,000	feet
			Nursery CaptureReuse	0	130	acres
			OffStream w/o Fencing ²	5,704	10	percent
			Poultry Litter Amendment	0	0	percent ³
			Prescribed Grazing	402	450	acres
			Shoreline Protection	0	0	feet
			Tree Planting	47	47	acres
			Wetland Restoration	3	23	acres

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³ Percent of all animals within county

Notes:
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 Stream Restoration in some P1 counties may be over-inflated due to conversion factors used to convert Financial Assurance Plan numbers to WIP number

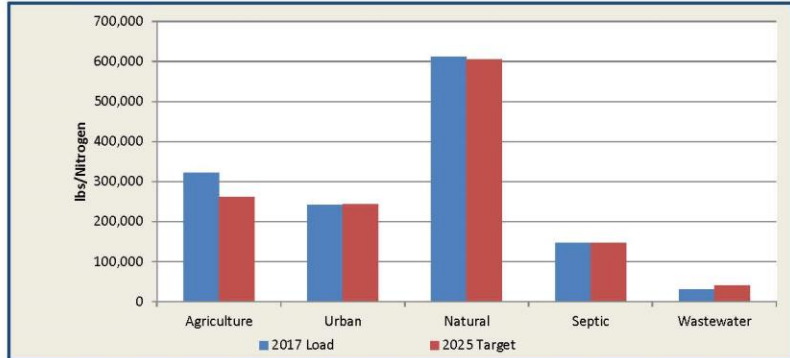
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CALVERT

Sector	2025 Nitrogen Reduction Goal
Agriculture	-59,806
Developed ¹	929
Natural ²	-5,588
Septic ³	-512
Total Reduction	-64,977

Sector	2025 Target ⁴
Wastewater	39,514



Notes:

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 - Phase II MS4:** Goals were based on estimates of untreated impervious area in these jurisdictions, and an MDE devised strategy to those acres.
 - Non-MS4:** Where strategies could be obtained, they were used. If no strategy was provided, MDE assumed a minimal effort
2. Reductions in the "Natural" Load Source sector can be attributable to urban and Agricultural Stream Restoration
3. These reductions were built using septic data provided in the 2017 Annual Progress scenario from County and Bay Restoration Fund (BRF) databases. They use past performance to predict a potential opportunity for implementation efforts in the future.
4. Sector targets for wastewater are expressed in overall loads that need to be maintained, not reductions, because of the accounting & planning mechanisms used in MDE's 2025 Strategy.
5. This goal was built using a State septic strategy, using BRF trends. In some counties this may be augmented with local goals.

Septic Strategy ⁵	Unit	Measure
Septic Connections	0	systems
Septic Denitrification	960	systems
Septic Tank Pumpout	0	systems

Urban BMP Strategy	Unit	Measure	Agriculture BMP Strategy	2017 BMPs	2025 Goal	Unit
Abandon Mine Reclamation	0	acres	Ag Drainage Management	0	0	acres treated
BioSwale	0	acres	Alternative Crops	0	0	acres
Dry Detention Ponds & Hydrodynamic Structures	0	acres	Animal Waste Management - Dairy ¹	0	0	percent ³
Dry Extended Detention Ponds	0	acres	Animal Waste Management - Other			
Erosion and Sediment Control	0	acres	Livestock ¹	1	70	percent ³
Impervious Surface Reduction	0	acres	Animal Waste Management - Poultry ¹	0	0	percent ³
Permeable Pavement	0	acres	Barnyard Runoff Control	17	20	acres
Runoff Reduction	0	acre-feet	Conservation Plans	9,924	12,000	acres
Runoff Reduction	0	acres	ConserveTill (>60% residue)	6,075	6,100	acres
Runoff Reduction	0	impervious acres	ConserveTill (30-60% residue)	1,823	2,000	acres
Storm Drain Cleaning	0	lbs tn	Cover Crop - Commodity	390	1,000	acres
Storm Drain Cleaning	0	lbs tp	Cover Crop - Traditional	3,084	3,084	acres
Storm Drain Cleaning	0	lbs tss	Crop Irrigation	0	124	acres
Stormwater Treatment	0	acre-feet	Dairy Precision Feed Management	0	0	AU
Stormwater Treatment	0	acres	DitchFilters (Phosphorus Sorbing)	0	0	acres
Stormwater Treatment	0	impervious acres	Forest Buffer Exclusion	2,483	104,420	feet
Stream Restoration Urban	0	feet	Forest Buffers	15	15	acres
Street Sweeping	0	acres	Grass Buffer Exclusion	35,579	13,053	feet
Tree Planting	0	acres	Grass Buffers	811	840	acres
Urban Forest Buffer	0	acres	Horse Pasture Management	186	200	acres
Urban Forest Planting	0	acres	Land Retire (open)	506	550	acres
Urban Nutrient Management Plan	0	acres	Land Retire (pasture)	245	350	acres
Urban Shoreline Management	720	feet	Loafing Lot Management	0	1	acres
Wet Extended Detention	0	acres	Manure - incorporation	156	156	acres
			Manure - injection	0	0	acres
			Manure Transport (out of state)	0	0	wet tons
			Mortality Management ¹	0	100	percent ³
			NonUrban Stream Restoration	1,338	1,338	feet
			Nursery CaptureReuse	0	0	acres
			OffStream w/o Fencing ²	3,312	10	percent
			Poultry Litter Amendment	0	0	percent ³
			Prescribed Grazing	534	725	acres
			Shoreline Protection	8,055	12,000	feet
			Tree Planting	13	13	acres
			Wetland Restoration	103	120	acres

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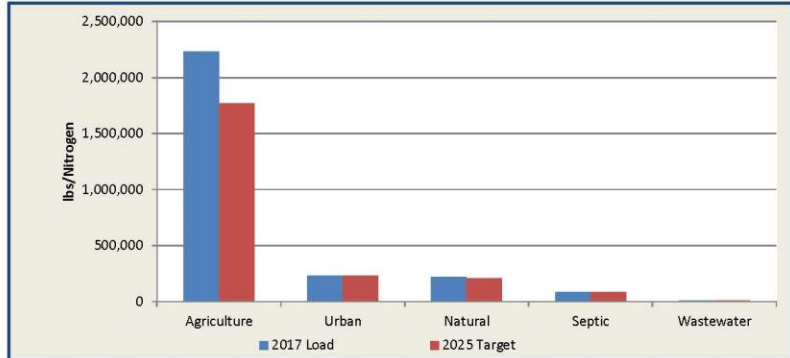
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CAROLINE

Sector	2025 Nitrogen Reduction Goal
Agriculture	-463,701
Developed ¹	1,006
Natural ²	-15,542
Septic ³	-1,613
Total Reduction	-479,850

Sector	2025 Target ⁴
Wastewater	6,371



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5. This goal was built using a State septic strategy, using BRF trends. In some counties this may be augmented with local goals.

Septic Strategy ⁵	Unit	Measure
Septic Connections	150	systems
Septic Denitrification	0	systems
Septic Tank Pumpout	0	systems

Urban BMP Strategy	Unit	Measure	Agriculture BMP Strategy	2017 BMPs	2025 Goal	Unit
Abandon Mine Reclamation	0	acres	Ag Drainage Management	962	3,000	acres treated
BioSwale	3	acres	Alternative Crops	0	0	acres
Dry Detention Ponds & Hydrodynamic Structures	0	acres	Animal Waste Management - Dairy ¹	9	100	percent ³
Dry Extended Detention Ponds	0	acres	Animal Waste Management - Other			
Erosion and Sediment Control	0	acres	Livestock ¹	17	25	percent ³
Impervious Surface Reduction	0	acres	Animal Waste Management - Poultry ¹	133	100	percent ³
Permeable Pavement	2	acres	Barnyard Runoff Control	9	9	acres
Runoff Reduction	0	acre-feet	Conservation Plans	66,417	77,500	acres
Runoff Reduction	0	acres	ConserveTill (>60% residue)	71,622	71,622	acres
Runoff Reduction	0	impervious acres	ConserveTill (30-60% residue)	21,487	21,487	acres
Storm Drain Cleaning	0	lbs tn	Cover Crop - Commodity	6,116	6,116	acres
Storm Drain Cleaning	0	lbs tp	Cover Crop - Traditional	43,740	43,740	acres
Storm Drain Cleaning	0	lbs tss	Crop Irrigation	0	40,000	acres
Stormwater Treatment	0	acre-feet	Dairy Precision Feed Management	0	0	AU
Stormwater Treatment	0	acres	DitchFilters (Phosphorus Sorbing)	0	100	acres
Stormwater Treatment	0	impervious acres	Forest Buffer Exclusion	0	40,216	feet
Stream Restoration Urban	0	feet	Forest Buffers	187	187	acres
Street Sweeping	0	acres	Grass Buffer Exclusion	3,186	140,755	feet
Tree Planting	0	acres	Grass Buffers	3,988	4,500	acres
Urban Forest Buffer	0	acres	Horse Pasture Management	19	19	acres
Urban Forest Planting	7	acres	Land Retire (open)	243	2,243	acres
Urban Nutrient Management Plan	0	acres	Land Retire (pasture)	121	121	acres
Urban Shoreline Management	0	feet	Loafing Lot Management	0	0	acres
Wet Extended Detention	0	acres	Manure - incorporation	21,008	21,008	acres
			Manure - injection	303	303	acres
			Manure Transport (out of state)	490	490	wet tons
			Mortality Management ¹	81	100	percent ³
			NonUrban Stream Restoration	4,097	4,097	feet
			Nursery CaptureReuse	0	0	acres
			OffStream w/o Fencing ²	110	10	percent
			Poultry Litter Amendment	374	75	percent ³
			Prescribed Grazing	144	200	acres
			Shoreline Protection	0	0	feet
			Tree Planting	210	400	acres
			Wetland Restoration	769	1,583	acres

¹ 2017 values are summarized by # of systems

² 2017 Values are summarized in acres

³ Percent of all animals within county

Notes:

In P1 MS4 jurisdictions, an additional 10% treatment goal was added on top of the Financial Assurance Plan scenario provided.
Stream Restoration in some P1 counties may be over-inflated due to conversion factors used to convert Financial Assurance Plan numbers to WIP number

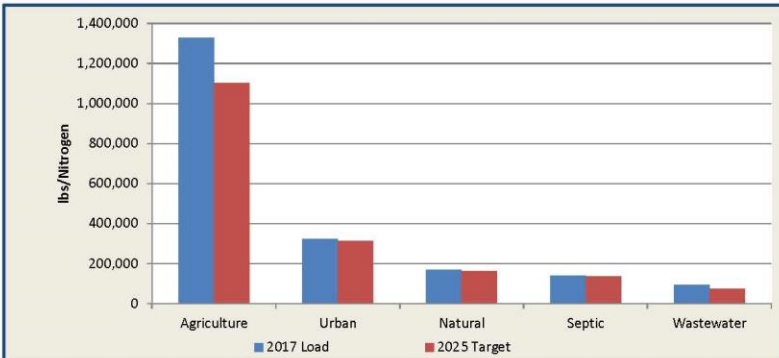
County Phase III WIP Goals Summary

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CARROLL

Sector	2025 Nitrogen Reduction Goal
Agriculture	-223,900
Developed ¹	-8,272
Natural ²	-6,806
Septic ³	-2,991
Total Reduction	-241,970

Sector	2025 Target ⁴
Wastewater	72,673



Notes:

- The goals for the Developed sector were based on several data sets based upon whether a jurisdiction has a NPDES permit, and the type:
 - Phase I MS4:** Goals are based on a mix of Financial Assurance Plans with some additional restoration goals for a margin of safety.
 - Phase II MS4:** Goals were based on estimates of untreated impervious area in these jurisdictions, and an MDE devised strategy to those acres.
 - Non-MS4:** Where strategies could be obtained, they were used. If no strategy was provided, MDE assumed a minimal effort.
- Reductions in the "Natural" Load Source sector can be attributable to urban and Agricultural Stream Restoration
- These reductions were built using septic data provided in the 2017 Annual Progress scenario from County and Bay Restoration Fund (BRF) databases. They use past performance to predict a potential opportunity for implementation efforts in the future.
- Sector targets for wastewater are expressed in overall loads that need to be maintained, not reductions, because of the accounting & planning mechanisms used in MDE's 2025 Strategy.
- This goal was built using a State septic strategy, using BRF trends. In some counties this may be augmented with local goals.

Septic Strategy ⁵	Unit	Measure
Septic Connections	8	systems
Septic Denitrification	544	systems
Septic Tank Pumpout	8671	systems

Urban BMP Strategy	Unit	Measure	Agriculture BMP Strategy	2017 BMPs	2025 Goal	Unit
Abandon Mine Reclamation	0	acres	Ag Drainage Management	0	0	acres treated
BioSwale	0	acres	Alternative Crops	0	0	acres
Dry Detention Ponds & Hydrodynamic Structures	104	acres	Animal Waste Management - Dairy ¹	68	90	percent ³
Dry Extended Detention Ponds	0	acres	Animal Waste Management - Other			
Erosion and Sediment Control	0	acres	Livestock ¹	83	70	percent ³
Impervious Surface Reduction	0	acres	Animal Waste Management - Poultry ¹	3	100	percent ³
Permeable Pavement	0	acres	Barnyard Runoff Control	255	260	acres
Runoff Reduction	0	acre-feet	Conservation Plans	74,934	84,000	acres
Runoff Reduction	0	acres	ConserveTill (>60% residue)	43,670	53,670	acres
Runoff Reduction	0	impervious acres	ConserveTill (30-60% residue)	13,101	13,101	acres
Storm Drain Cleaning	0	lbs tn	Cover Crop - Commodity	4,576	4,576	acres
Storm Drain Cleaning	0	lbs tp	Cover Crop - Traditional	27,637	27,637	acres
Storm Drain Cleaning	0	lbs tss	Crop Irrigation	0	1,535	acres
Stormwater Treatment	126	acre-feet	Dairy Precision Feed Management	0	2,300	AU
Stormwater Treatment	3,180	acres	DitchFilters (Phosphorus Sorbing)	0	0	acres
Stormwater Treatment	1,590	impervious acres	Forest Buffer Exclusion	10,523	153,842	feet
Stream Restoration Urban	0	feet	Forest Buffers	1,964	2,300	acres
Street Sweeping	46	acres	Grass Buffer Exclusion	367,161	538,446	feet
Tree Planting	24	acres	Grass Buffers	2,215	2,315	acres
Urban Forest Buffer	0	acres	Horse Pasture Management	3	3	acres
Urban Forest Planting	0	acres	Land Retire (open)	3,184	3,184	acres
Urban Nutrient Management Plan	0	acres	Land Retire (pasture)	655	655	acres
Urban Shoreline Management	0	feet	Loafing Lot Management	0	22	acres
Wet Extended Detention	1,352	acres	Manure - incorporation	4,240	4,240	acres
			Manure - injection	1,254	1,254	acres
			Manure Transport (out of state)	0	0	wet tons
			Mortality Management ¹	1	100	percent ³
			NonUrban Stream Restoration	6,939	8,939	feet
			Nursery CaptureReuse	0	20	acres
			OffStream w/o Fencing ²	11,408	10	percent
			Poultry Litter Amendment	0	0	percent ³
			Prescribed Grazing	990	1,700	acres
			Shoreline Protection	0	0	feet
			Tree Planting	111	181	acres
			Wetland Restoration	3	10	acres

¹ 2017 values are summarized by # of systems
² 2017 Values are summarized in acres
³ Percent of all animals within county

Notes:
 In PI MS4 jurisdictions, an additional 10% treatment goal was added on top of the Financial Assurance Plan scenario provided.
 Stream Restoration in some P1 counties may be over-inflated due to conversion factors used to convert Financial Assurance Plan numbers to WIP number

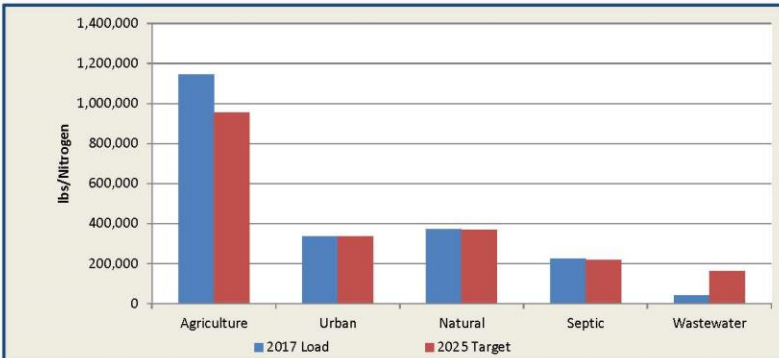
County Phase III WIP Goals Summary

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CECIL

Sector	2025 Nitrogen Reduction Goal
Agriculture	-189,702
Developed ¹	83
Natural ²	-4,138
Septic ³	-6,294
Total Reduction	-200,050

Sector	2025 Target ⁴
Wastewater	161,272



Notes:

- The goals for the Developed sector were based on several data sets based upon whether a jurisdiction has a NPDES permit, and the type:
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 - Phase II MS4:** Goals were based on estimates of untreated impervious area in these jurisdictions, and an MDE devised strategy to those acres.
 - Non-MS4:** Where strategies could be obtained, they were used. If no strategy was provided, MDE assumed a minimal effort.
- Reductions in the "Natural" Load Source sector can be attributable to urban and Agricultural Stream Restoration
- These reductions were built using septic data provided in the 2017 Annual Progress scenario from County and Bay Restoration Fund (BRF) databases. They use past performance to predict a potential opportunity for implementation efforts in the future.
- Sector targets for wastewater are expressed in overall loads that need to be maintained, not reductions, because of the accounting & planning mechanisms used in MDE's 2025 Strategy.
- This goal was built using a State septic strategy, using BRF trends. In some counties this may be augmented with local goals.

Septic Strategy ⁵	Unit	Measure
Septic Connections	48	systems
Septic Denitrification	544	systems
Septic Tank Pumpout	0	systems

Urban BMP Strategy	Unit	Measure	Agriculture BMP Strategy	2017 BMPs	2025 Goal	Unit
Abandon Mine Reclamation	0	acres	Ag Drainage Management	1,976	2,080	acres treated
BioSwale	0	acres	Alternative Crops	0	0	acres
Dry Detention Ponds & Hydrodynamic Structures	0	acres	Animal Waste Management - Dairy ¹	34	85	percent ³
Dry Extended Detention Ponds	0	acres	Animal Waste Management - Other			
Erosion and Sediment Control	0	acres	Livestock ¹	13	70	percent ³
Impervious Surface Reduction	0	acres	Animal Waste Management - Poultry ¹	2	100	percent ³
Permeable Pavement	0	acres	Barnyard Runoff Control	57	90	acres
Runoff Reduction	0	acre-feet	Conservation Plans	44,248	50,000	acres
Runoff Reduction	0	acres	ConserveTill (>60% residue)	26,370	15,000	acres
Runoff Reduction	0	impervious acres	ConserveTill (30-60% residue)	7,911	25,000	acres
Storm Drain Cleaning	0	lbs tn	Cover Crop - Commodity	4,082	4,500	acres
Storm Drain Cleaning	0	lbs tp	Cover Crop - Traditional	20,423	16,500	acres
Storm Drain Cleaning	0	lbs tss	Crop Irrigation	0	1,122	acres
Stormwater Treatment	4	acre-feet	Dairy Precision Feed Management	0	1,400	AU
Stormwater Treatment	91	acres	DitchFilters (Phosphorus Sorbing)	0	0	acres
Stormwater Treatment	45	impervious acres	Forest Buffer Exclusion	2,420	97,968	feet
Stream Restoration Urban	28,000	feet	Forest Buffers	416	420	acres
Street Sweeping	0	acres	Grass Buffer Exclusion	79,090	342,888	feet
Tree Planting	0	acres	Grass Buffers	1,134	1,200	acres
Urban Forest Buffer	0	acres	Horse Pasture Management	51	51	acres
Urban Forest Planting	133	acres	Land Retire (open)	1,575	1,600	acres
Urban Nutrient Management Plan	0	acres	Land Retire (pasture)	380	550	acres
Urban Shoreline Management	0	feet	Loafing Lot Management	0	2	acres
Wet Extended Detention	0	acres	Manure - incorporation	1,852	10,000	acres
			Manure - injection	948	1,000	acres
			Manure Transport (out of state)	0	0	wet tons
			Mortality Management ¹	2	100	percent ³
			NonUrban Stream Restoration	3,164	3,800	feet
			Nursery CaptureReuse	0	0	acres
			OffStream w/o Fencing ²	4,370	10	percent
			Poultry Litter Amendment	0	75	percent ³
			Prescribed Grazing	417	900	acres
			Shoreline Protection	0	0	feet
			Tree Planting	108	120	acres
			Wetland Restoration	53	85	acres

¹ 2017 values are summarized by # of systems
² 2017 Values are summarized in acres
³ Percent of all animals within county

Notes:
 In PI MS4 jurisdictions, an additional 10% treatment goal was added on top of the Financial Assurance Plan scenario provided.
 Stream Restoration in some P1 counties may be over-inflated due to conversion factors used to convert Financial Assurance Plan numbers to WIP number

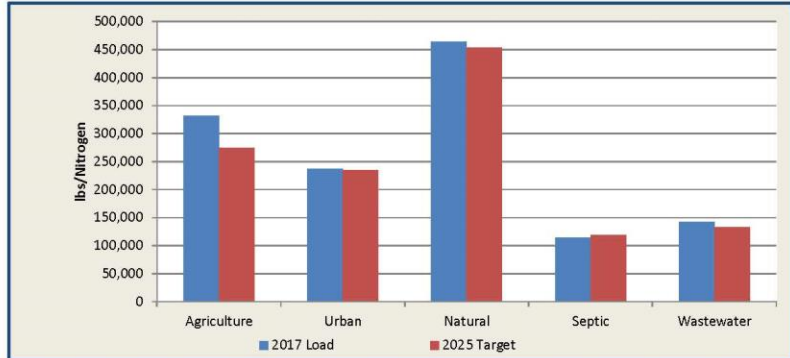
County Phase III WIP Goals Summary

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CHARLES

Sector	2025 Nitrogen Reduction Goal
Agriculture	-56,328
Developed ¹	-2,018
Natural ²	-10,703
Septic ³	4,951
Total Reduction	-64,098

Sector	2025 Target ⁴
Wastewater	132,938



Notes:

1. The goals for the Developed sector were based on several data sets based upon whether a jurisdiction has a NPDES permit, and the type:
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 - Phase II MS4:** Goals were based on estimates of untreated impervious area in these jurisdictions, and an MDE devised strategy to those acres.
 - Non-MS4:** Where strategies could be obtained, they were used. If no strategy was provided, MDE assumed a minimal effort
2. Reductions in the "Natural" Load Source sector can be attributable to urban and Agricultural Stream Restoration
3. These reductions were built using septic data provided in the 2017 Annual Progress scenario from County and Bay Restoration Fund (BRF) databases. They use past performance to predict a potential opportunity for implementation efforts in the future.
4. Sector targets for wastewater are expressed in overall loads that need to be maintained, not reductions, because of the accounting & planning mechanisms used in MDE's 2025 Strategy.
5. This goal was built using a State septic strategy, using BRF trends. In some counties this may be augmented with local goals.

Septic Strategy ⁵	Unit	Measure
Septic Connections	72	systems
Septic Denitrification	472	systems
Septic Tank Pumpout	833	systems

Urban BMP Strategy	Unit	Measure	Agriculture BMP Strategy	2017 BMPs	2025 Goal	Unit
Abandon Mine Reclamation	0	acres	Ag Drainage Management	0	0	acres treated
BioSwale	0	acres	Alternative Crops	0	0	acres
Dry Detention Ponds & Hydrodynamic Structures	0	acres	Animal Waste Management - Dairy ¹	0	0	percent ³
Dry Extended Detention Ponds	0	acres	Animal Waste Management - Other			
Erosion and Sediment Control	0	acres	Livestock ¹	2	70	percent ³
Impervious Surface Reduction	0	acres	Animal Waste Management - Poultry ¹	0	0	percent ³
Permeable Pavement	0	acres	Barnyard Runoff Control	10	18	acres
Runoff Reduction	4	acre-feet	Conservation Plans	19,637	23,500	acres
Runoff Reduction	95	acres	ConserveTill (>60% residue)	7,214	7,214	acres
Runoff Reduction	47	impervious acres	ConserveTill (30-60% residue)	2,164	2,164	acres
Storm Drain Cleaning	20	lbs tn	Cover Crop - Commodity	1,423	2,000	acres
Storm Drain Cleaning	8	lbs tp	Cover Crop - Traditional	8,512	8,512	acres
Storm Drain Cleaning	2,352	lbs tss	Crop Irrigation	0	650	acres
Stormwater Treatment	66	acre-feet	Dairy Precision Feed Management	0	0	AU
Stormwater Treatment	1,666	acres	DitchFilters (Phosphorus Sorbing)	0	0	acres
Stormwater Treatment	833	impervious acres	Forest Buffer Exclusion	0	110,444	feet
Stream Restoration Urban	29,980	feet	Forest Buffers	269	269	acres
Street Sweeping	615	acres	Grass Buffer Exclusion	13,472	31,556	feet
Tree Planting	42	acres	Grass Buffers	691	700	acres
Urban Forest Buffer	0	acres	Horse Pasture Management	61	115	acres
Urban Forest Planting	0	acres	Land Retire (open)	606	606	acres
Urban Nutrient Management Plan	0	acres	Land Retire (pasture)	397	450	acres
Urban Shoreline Management	9,305	feet	Loafing Lot Management	1	1	acres
Wet Extended Detention	132	acres	Manure - incorporation	180	200	acres
			Manure - injection	0	0	acres
			Manure Transport (out of state)	0	0	wet tons
			Mortality Management ¹	0	100	percent ³
			NonUrban Stream Restoration	567	567	feet
			Nursery CaptureReuse	0	0	acres
			OffStream w/o Fencing ²	1,242	10	percent
			Poultry Litter Amendment	0	0	percent ³
			Prescribed Grazing	251	750	acres
			Shoreline Protection	6,020	10,000	feet
			Tree Planting	261	261	acres
			Wetland Restoration	11	11	acres

¹ 2017 values are summarized by # of systems

² 2017 Values are summarized in acres

³ Percent of all animals within county

Notes:

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Stream Restoration in some P1 counties may be over-inflated due to conversion factors used to convert Financial Assurance Plan numbers to WIP number

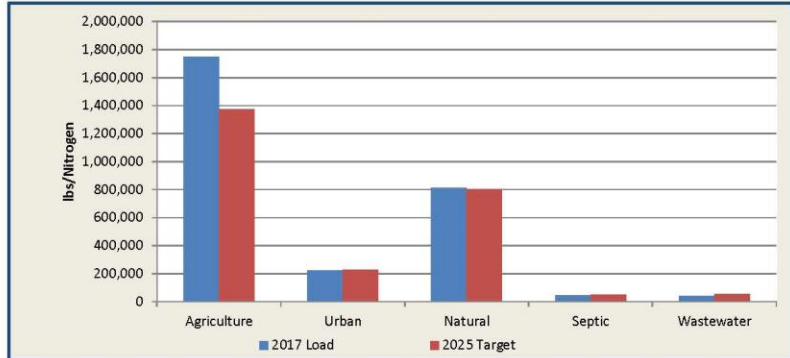
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DORCHESTER

Sector	2025 Nitrogen Reduction Goal
Agriculture	-373,651
Developed ¹	3,980
Natural ²	-12,465
Septic ³	951
Total Reduction	-381,185

Sector	2025 Target ⁴
Wastewater	52,878



Notes:

1. The goals for the Developed sector were based on several data sets based upon whether a jurisdiction has a NPDES permit, and the type:
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 - Phase II MS4:** Goals were based on estimates of untreated impervious area in these jurisdictions, and an MDE devised strategy to those acres.
 - Non-MS4:** Where strategies could be obtained, they were used. If no strategy was provided, MDE assumed a minimal effort
2. Reductions in the "Natural" Load Source sector can be attributable to urban and Agricultural Stream Restoration
3. These reductions were built using septic data provided in the 2017 Annual Progress scenario from County and Bay Restoration Fund (BRF) databases. They use past performance to predict a potential opportunity for implementation efforts in the future.
4. Sector targets for wastewater are expressed in overall loads that need to be maintained, not reductions, because of the accounting & planning mechanisms used in MDE's 2025 Strategy.
5. This goal was built using a State septic strategy, using BRF trends. In some counties this may be augmented with local goals.

Septic Strategy ⁵	Unit	Measure
Septic Connections	400	systems
Septic Denitrification	448	systems
Septic Tank Pumpout	0	systems

Urban BMP Strategy	Unit	Measure	Agriculture BMP Strategy	2017 BMPs	2025 Goal	Unit
Abandon Mine Reclamation	0	acres	Ag Drainage Management	156	3,000	acres treated
BioSwale	3	acres	Alternative Crops	0	0	acres
Dry Detention Ponds & Hydrodynamic Structures	0	acres	Animal Waste Management - Dairy ¹	0	70	percent ³
Dry Extended Detention Ponds	0	acres	Animal Waste Management - Other			
Erosion and Sediment Control	0	acres	Livestock ¹	3	35	percent ³
Impervious Surface Reduction	0	acres	Animal Waste Management - Poultry ¹	70	100	percent ³
Permeable Pavement	0	acres	Barnyard Runoff Control	1	1	acres
Runoff Reduction	0	acre-feet	Conservation Plans	59,207	65,000	acres
Runoff Reduction	0	acres	ConserveTill (>60% residue)	52,338	52,338	acres
Runoff Reduction	0	impervious acres	ConserveTill (30-60% residue)	15,680	15,680	acres
Storm Drain Cleaning	0	lbs tn	Cover Crop - Commodity	6,618	6,618	acres
Storm Drain Cleaning	0	lbs tp	Cover Crop - Traditional	39,063	41,000	acres
Storm Drain Cleaning	0	lbs tss	Crop Irrigation	0	38,000	acres
Stormwater Treatment	0	acre-feet	Dairy Precision Feed Management	0	0	AU
Stormwater Treatment	0	acres	DitchFilters (Phosphorus Sorbing)	0	0	acres
Stormwater Treatment	0	impervious acres	Forest Buffer Exclusion	0	3,666	feet
Stream Restoration Urban	0	feet	Forest Buffers	810	810	acres
Street Sweeping	0	acres	Grass Buffer Exclusion	3,186	12,830	feet
Tree Planting	0	acres	Grass Buffers	7,637	7,637	acres
Urban Forest Buffer	0	acres	Horse Pasture Management	0	0	acres
Urban Forest Planting	7	acres	Land Retire (open)	605	2,000	acres
Urban Nutrient Management Plan	0	acres	Land Retire (pasture)	56	56	acres
Urban Shoreline Management	0	feet	Loafing Lot Management	0	0	acres
Wet Extended Detention	0	acres	Manure - incorporation	13,455	13,455	acres
			Manure - injection	7	0	acres
			Manure Transport (out of state)	0	0	wet tons
			Mortality Management ¹	81	100	percent ³
			NonUrban Stream Restoration	271	500	feet
			Nursery CaptureReuse	0	0	acres
			OffStream w/o Fencing ²	690	10	percent
			Poultry Litter Amendment	0	75	percent ³
			Prescribed Grazing	78	78	acres
			Shoreline Protection	0	0	feet
			Tree Planting	425	450	acres
			Wetland Restoration	511	600	acres

¹ 2017 values are summarized by # of systems

² 2017 Values are summarized in acres

³ Percent of all animals within county

Notes:

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Stream Restoration in some P1 counties may be over-inflated due to conversion factors used to convert Financial Assurance Plan numbers to WIP number

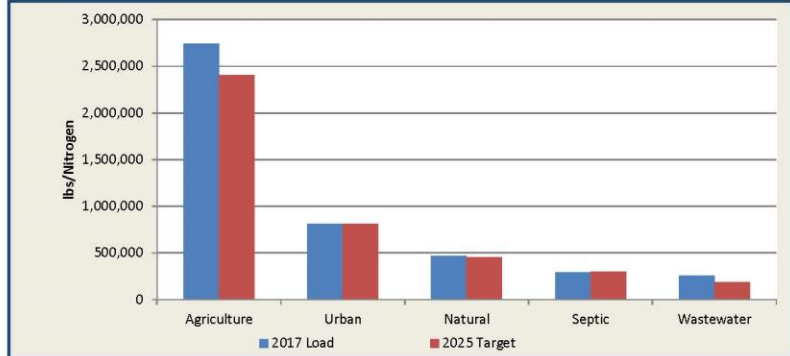
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FREDERICK

Sector	2025 Nitrogen Reduction Goal
Agriculture	-332,438
Developed ¹	-3,113
Natural ²	-15,419
Septic ³	7,257
Total Reduction	-343,712

Sector	2025 Target ⁴
Wastewater	184,806



Notes:

1. The goals for the Developed sector were based on several data sets based upon whether a jurisdiction has a NPDES permit, and the type:
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 - Phase II MS4:** Goals were based on estimates of untreated impervious area in these jurisdictions, and an MDE devised strategy to those acres.
 - Non-MS4:** Where strategies could be obtained, they were used. If no strategy was provided, MDE assumed a minimal effort
2. Reductions in the "Natural" Load Source sector can be attributable to urban and Agricultural Stream Restoration
3. These reductions were built using septic data provided in the 2017 Annual Progress scenario from County and Bay Restoration Fund (BRF) databases. They use past performance to predict a potential opportunity for implementation efforts in the future.
4. Sector targets for wastewater are expressed in overall loads that need to be maintained, not reductions, because of the accounting & planning mechanisms used in MDE's 2025 Strategy.
5. This goal was built using a State septic strategy, using BRF trends. In some counties this may be augmented with local goals.

Septic Strategy ⁵	Unit	Measure
Septic Connections	0	systems
Septic Denitrification	536	systems
Septic Tank Pumpout	667	systems

Urban BMP Strategy	Unit	Measure	Agriculture BMP Strategy	2017 BMPs	2025 Goal	Unit
Abandon Mine Reclamation	0	acres	Ag Drainage Management	0	0	acres treated
BioSwale	0	acres	Alternative Crops	0	0	acres
Dry Detention Ponds & Hydrodynamic Structures	0	acres	Animal Waste Management - Dairy ¹	89	100	percent ³
Dry Extended Detention Ponds	0	acres	Animal Waste Management - Other			
Erosion and Sediment Control	0	acres	Livestock ¹	68	70	percent ³
Impervious Surface Reduction	0	acres	Animal Waste Management - Poultry ¹	5	100	percent ³
Permeable Pavement	0	acres	Barnyard Runoff Control	196	210	acres
Runoff Reduction	3	acre-feet	Conservation Plans	78,723	95,000	acres
Runoff Reduction	84	acres	ConserveTill (>60% residue)	40,871	40,871	acres
Runoff Reduction	42	impervious acres	ConserveTill (30-60% residue)	12,261	20,000	acres
Storm Drain Cleaning	0	lbs tn	Cover Crop - Commodity	3,549	3,549	acres
Storm Drain Cleaning	0	lbs tp	Cover Crop - Traditional	32,385	32,385	acres
Storm Drain Cleaning	0	lbs tss	Crop Irrigation	0	1,000	acres
Stormwater Treatment	64	acre-feet	Dairy Precision Feed Management	0	0	AU
Stormwater Treatment	1,623	acres	DitchFilters (Phosphorus Sorbing)	0	0	acres
Stormwater Treatment	812	impervious acres	Forest Buffer Exclusion	7,160	275,924	feet
Stream Restoration Urban	26,360	feet	Forest Buffers	2,425	3,000	acres
Street Sweeping	171	acres	Grass Buffer Exclusion	333,358	965,733	feet
Tree Planting	385	acres	Grass Buffers	582	582	acres
Urban Forest Buffer	0	acres	Horse Pasture Management	79	79	acres
Urban Forest Planting	0	acres	Land Retire (open)	1,769	1,769	acres
Urban Nutrient Management Plan	0	acres	Land Retire (pasture)	948	1,500	acres
Urban Shoreline Management	0	feet	Loafing Lot Management	0	5	acres
Wet Extended Detention	943	acres	Manure - incorporation	6,669	6,669	acres
			Manure - injection	2,115	2,500	acres
			Manure Transport (out of state)	5,876	5,876	wet tons
			Mortality Management ¹	2	100	percent ³
			NonUrban Stream Restoration	392	1,500	feet
			Nursery CaptureReuse	0	25	acres
			OffStream w/o Fencing ²	16,549	10	percent
			Poultry Litter Amendment	0	0	percent ³
			Prescribed Grazing	1,358	1,900	acres
			Shoreline Protection	0	0	feet
			Tree Planting	174	225	acres
			Wetland Restoration	0	0	acres

¹ 2017 values are summarized by # of systems
² 2017 Values are summarized in acres
³ Percent of all animals within county

Notes:
 In PI MS4 jurisdictions, an additional 10% treatment goal was added on top of the Financial Assurance Plan scenario provided.
 Stream Restoration in some P1 counties may be over-inflated due to conversion factors used to convert Financial Assurance Plan numbers to WIP number

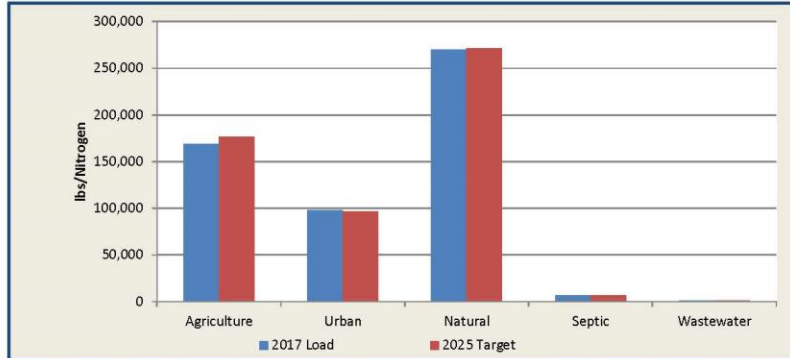
County Phase III WIP Goals Summary

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GARRETT

Sector	2025 Nitrogen Reduction Goal
Agriculture	8,160
Developed ¹	-1,044
Natural ²	1,462
Septic ³	34
Total Reduction	8,611

Sector	2025 Target ⁴
Wastewater	965



Notes:

1. The goals for the Developed sector were based on several data sets based upon whether a jurisdiction has a NPDES permit, and the type:
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 - Phase II MS4:** Goals were based on estimates of untreated impervious area in these jurisdictions, and an MDE devised strategy to those acres.
 - Non-MS4:** Where strategies could be obtained, they were used. If no strategy was provided, MDE assumed a minimal effort
2. Reductions in the "Natural" Load Source sector can be attributable to urban and Agricultural Stream Restoration
3. These reductions were built using septic data provided in the 2017 Annual Progress scenario from County and Bay Restoration Fund (BRF) databases. They use past performance to predict a potential opportunity for implementation efforts in the future.
4. Sector targets for wastewater are expressed in overall loads that need to be maintained, not reductions, because of the accounting & planning mechanisms used in MDE's 2025 Strategy.
5. This goal was built using a State septic strategy, using BRF trends. In some counties this may be augmented with local goals.

Septic Strategy ⁵	Unit	Measure
Septic Connections	0	systems
Septic Denitrification	8	systems
Septic Tank Pumpout	0	systems

Urban BMP Strategy	Unit	Measure	Agriculture BMP Strategy	2017 BMPs	2025 Goal	Unit
Abandon Mine Reclamation	5	acres	Ag Drainage Management	0	0	acres treated
BioSwale	0	acres	Alternative Crops	0	0	acres
Dry Detention Ponds & Hydrodynamic Structures	0	acres	Animal Waste Management - Dairy ¹	16	80	percent ³
Dry Extended Detention Ponds	0	acres	Animal Waste Management - Other			
Erosion and Sediment Control	0	acres	Livestock ¹	28	60	percent ³
Impervious Surface Reduction	0	acres	Animal Waste Management - Poultry ¹	0	100	percent ³
Permeable Pavement	0	acres	Barnyard Runoff Control	64	68	acres
Runoff Reduction	0	acre-feet	Conservation Plans	8,631	9,500	acres
Runoff Reduction	0	acres	ConserveTill (>60% residue)	12,505	10,000	acres
Runoff Reduction	0	impervious acres	ConserveTill (30-60% residue)	3,752	5,000	acres
Storm Drain Cleaning	0	lbs tn	Cover Crop - Commodity	56	56	acres
Storm Drain Cleaning	0	lbs tp	Cover Crop - Traditional	1,266	1,266	acres
Storm Drain Cleaning	0	lbs tss	Crop Irrigation	0	0	acres
Stormwater Treatment	0	acre-feet	Dairy Precision Feed Management	0	2,000	AU
Stormwater Treatment	0	acres	DitchFilters (Phosphorus Sorbing)	0	0	acres
Stormwater Treatment	0	impervious acres	Forest Buffer Exclusion	0	288,565	feet
Stream Restoration Urban	0	feet	Forest Buffers	340	340	acres
Street Sweeping	0	acres	Grass Buffer Exclusion	74,960	288,565	feet
Tree Planting	0	acres	Grass Buffers	13	13	acres
Urban Forest Buffer	0	acres	Horse Pasture Management	0	0	acres
Urban Forest Planting	0	acres	Land Retire (open)	197	300	acres
Urban Nutrient Management Plan	0	acres	Land Retire (pasture)	53	75	acres
Urban Shoreline Management	0	feet	Loafing Lot Management	0	5	acres
Wet Extended Detention	0	acres	Manure - incorporation	758	758	acres
			Manure - injection	0	0	acres
			Manure Transport (out of state)	0	0	wet tons
			Mortality Management ¹	0	0	percent ³
			NonUrban Stream Restoration	100	400	feet
			Nursery CaptureReuse	0	0	acres
			OffStream w/o Fencing ²	6,670	10	percent
			Poultry Litter Amendment	0	0	percent ³
			Prescribed Grazing	184	400	acres
			Shoreline Protection	0	0	feet
			Tree Planting	666	685	acres
			Wetland Restoration	2	2	acres

¹ 2017 values are summarized by # of systems

² 2017 Values are summarized in acres

³ Percent of all animals within county

Notes:

In P1 MS4 jurisdictions, an additional 10% treatment goal was added on top of the Financial Assurance Plan scenario provided.
Stream Restoration in some P1 counties may be over-inflated due to conversion factors used to convert Financial Assurance Plan numbers to WIP number

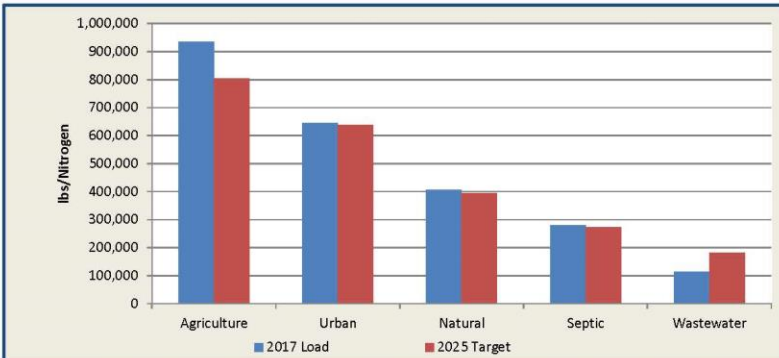
County Phase III WIP Goals Summary

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HARFORD

Sector	2025 Nitrogen Reduction Goal
Agriculture	-131,971
Developed ¹	-8,671
Natural ²	-12,304
Septic ³	-7,453
Total Reduction	-160,399

Sector	2025 Target ⁴
Wastewater	182,162



Notes:

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 - Phase II MS4:** Goals were based on estimates of untreated impervious area in these jurisdictions, and an MDE devised strategy to those acres.
 - Non-MS4:** Where strategies could be obtained, they were used. If no strategy was provided, MDE assumed a minimal effort.
- Reductions in the "Natural" Load Source sector can be attributable to urban and Agricultural Stream Restoration
- These reductions were built using septic data provided in the 2017 Annual Progress scenario from County and Bay Restoration Fund (BRF) databases. They use past performance to predict a potential opportunity for implementation efforts in the future.
- Sector targets for wastewater are expressed in overall loads that need to be maintained, not reductions, because of the accounting & planning mechanisms used in MDE's 2025 Strategy.
- This goal was built using a State septic strategy, using BRF trends. In some counties this may be augmented with local goals.

Septic Strategy ⁵	Unit	Measure
Septic Connections	107	systems
Septic Denitrification	368	systems
Septic Tank Pumpout	10000	systems

Urban BMP Strategy	Unit	Measure	Agriculture BMP Strategy	2017 BMPs	2025 Goal	Unit
Abandon Mine Reclamation	0	acres	Ag Drainage Management	0	0	acres treated
BioSwale	0	acres	Alternative Crops	0	0	acres
Dry Detention Ponds & Hydrodynamic Structures	0	acres	Animal Waste Management - Dairy ¹	8	100	percent ³
Dry Extended Detention Ponds	0	acres	Animal Waste Management - Other			
Erosion and Sediment Control	0	acres	Livestock ¹	23	70	percent ³
Impervious Surface Reduction	0	acres	Animal Waste Management - Poultry ¹	1	100	percent ³
Permeable Pavement	0	acres	Barnyard Runoff Control	89	100	acres
Runoff Reduction	0	acre-feet	Conservation Plans	44,135	44,135	acres
Runoff Reduction	4	acres	ConserveTill (>60% residue)	24,018	24,018	acres
Runoff Reduction	2	impervious acres	ConserveTill (30-60% residue)	7,205	7,205	acres
Storm Drain Cleaning	0	lbs tn	Cover Crop - Commodity	2,319	2,319	acres
Storm Drain Cleaning	0	lbs tp	Cover Crop - Traditional	16,789	17,000	acres
Storm Drain Cleaning	0	lbs tss	Crop Irrigation	0	15	acres
Stormwater Treatment	93	acre-feet	Dairy Precision Feed Management	0	3,000	AU
Stormwater Treatment	2,351	acres	DitchFilters (Phosphorus Sorbing)	0	0	acres
Stormwater Treatment	1,176	impervious acres	Forest Buffer Exclusion	2,482	260,058	feet
Stream Restoration Urban	65,160	feet	Forest Buffers	589	700	acres
Street Sweeping	0	acres	Grass Buffer Exclusion	116,116	260,058	feet
Tree Planting	18	acres	Grass Buffers	110	150	acres
Urban Forest Buffer	0	acres	Horse Pasture Management	5	5	acres
Urban Forest Planting	0	acres	Land Retire (open)	365	500	acres
Urban Nutrient Management Plan	0	acres	Land Retire (pasture)	56	100	acres
Urban Shoreline Management	0	feet	Loafing Lot Management	0	5	acres
Wet Extended Detention	0	acres	Manure - incorporation	1,356	1,356	acres
			Manure - injection	50	50	acres
			Manure Transport (out of state)	0	0	wet tons
			Mortality Management ¹	0	100	percent ³
			NonUrban Stream Restoration	22,511	50,000	feet
			Nursery CaptureReuse	0	200	acres
			OffStream w/o Fencing ²	8,372	10	percent
			Poultry Litter Amendment	0	0	percent ³
			Prescribed Grazing	327	727	acres
			Shoreline Protection	0	0	feet
			Tree Planting	201	225	acres
			Wetland Restoration	114	124	acres

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² 2017 Values are summarized in acres

³ Percent of all animals within county

Notes:

In PI MS4 jurisdictions, an additional 10% treatment goal was added on top of the Financial Assurance Plan scenario provided.

Stream Restoration in some P1 counties may be over-inflated due to conversion factors used to convert Financial Assurance Plan numbers to WIP number

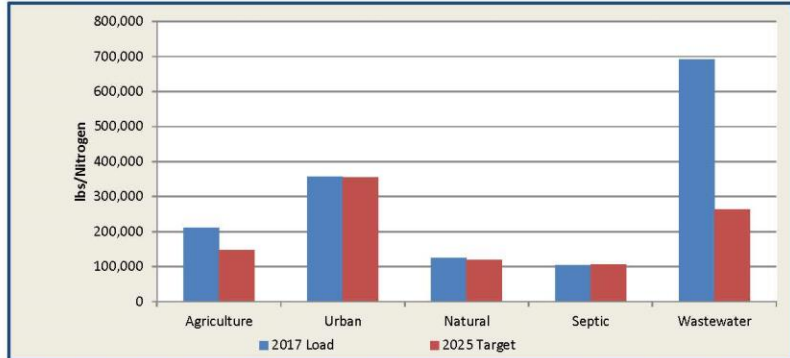
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HOWARD

Sector	2025 Nitrogen Reduction Goal
Agriculture	-63,505
Developed ¹	-2,965
Natural ²	-4,713
Septic ³	1,094
Total Reduction	-70,089

Sector	2025 Target ⁴
Wastewater	263,485



Notes:

1. The goals for the Developed sector were based on several data sets based upon whether a jurisdiction has a NPDES permit, and the type:
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 - Phase II MS4:** Goals were based on estimates of untreated impervious area in these jurisdictions, and an MDE devised strategy to those acres.
 - Non-MS4:** Where strategies could be obtained, they were used. If no strategy was provided, MDE assumed a minimal effort
2. Reductions in the "Natural" Load Source sector can be attributable to urban and Agricultural Stream Restoration
3. These reductions were built using septic data provided in the 2017 Annual Progress scenario from County and Bay Restoration Fund (BRF) databases. They use past performance to predict a potential opportunity for implementation efforts in the future.
4. Sector targets for wastewater are expressed in overall loads that need to be maintained, not reductions, because of the accounting & planning mechanisms used in MDE's 2025 Strategy.
5. This goal was built using a State septic strategy, using BRF trends. In some counties this may be augmented with local goals.

Septic Strategy ⁵	Unit	Measure
Septic Connections	64	systems
Septic Denitrification	664	systems
Septic Tank Pumpout	911	systems

Urban BMP Strategy	Unit	Measure	Agriculture BMP Strategy	2017 BMPs	2025 Goal	Unit
Abandon Mine Reclamation	0	acres	Ag Drainage Management	0	0	acres treated
BioSwale	0	acres	Alternative Crops	0	0	acres
Dry Detention Ponds & Hydrodynamic Structures	52	acres	Animal Waste Management - Dairy ¹	2	50	percent ³
Dry Extended Detention Ponds	0	acres	Animal Waste Management - Other			
Erosion and Sediment Control	0	acres	Livestock ¹	13	60	percent ³
Impervious Surface Reduction	0	acres	Animal Waste Management - Poultry ¹	0	100	percent ³
Permeable Pavement	0	acres	Barnyard Runoff Control	26	30	acres
Runoff Reduction	3	acre-feet	Conservation Plans	15,335	16,200	acres
Runoff Reduction	69	acres	ConserveTill (>60% residue)	11,144	11,144	acres
Runoff Reduction	35	impervious acres	ConserveTill (30-60% residue)	3,343	3,343	acres
Storm Drain Cleaning	56	lbs tn	Cover Crop - Commodity	999	999	acres
Storm Drain Cleaning	22	lbs tp	Cover Crop - Traditional	3,018	3,018	acres
Storm Drain Cleaning	6,720	lbs tss	Crop Irrigation	0	200	acres
Stormwater Treatment	103	acre-feet	Dairy Precision Feed Management	0	0	AU
Stormwater Treatment	2,607	acres	DitchFilters (Phosphorus Sorbing)	0	0	acres
Stormwater Treatment	1,303	impervious acres	Forest Buffer Exclusion	2,115	54,098	feet
Stream Restoration Urban	42,260	feet	Forest Buffers	432	432	acres
Street Sweeping	2,115	acres	Grass Buffer Exclusion	70,445	189,341	feet
Tree Planting	10	acres	Grass Buffers	1,309	1,309	acres
Urban Forest Buffer	0	acres	Horse Pasture Management	60	60	acres
Urban Forest Planting	0	acres	Land Retire (open)	424	424	acres
Urban Nutrient Management Plan	0	acres	Land Retire (pasture)	208	208	acres
Urban Shoreline Management	0	feet	Loafing Lot Management	0	2	acres
Wet Extended Detention	23	acres	Manure - incorporation	367	367	acres
			Manure - injection	0	0	acres
			Manure Transport (out of state)	0	0	wet tons
			Mortality Management ¹	0	100	percent ³
			NonUrban Stream Restoration	0	0	feet
			Nursery CaptureReuse	0	12	acres
			OffStream w/o Fencing ²	6,540	10	percent
			Poultry Litter Amendment	0	100	percent ³
			Prescribed Grazing	1,020	1,100	acres
			Shoreline Protection	0	0	feet
			Tree Planting	88	88	acres
			Wetland Restoration	1	1	acres

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² 2017 Values are summarized in acres
³ Percent of all animals within county

Notes:
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 Stream Restoration in some P1 counties may be over-inflated due to conversion factors used to convert Financial Assurance Plan numbers to WIP number

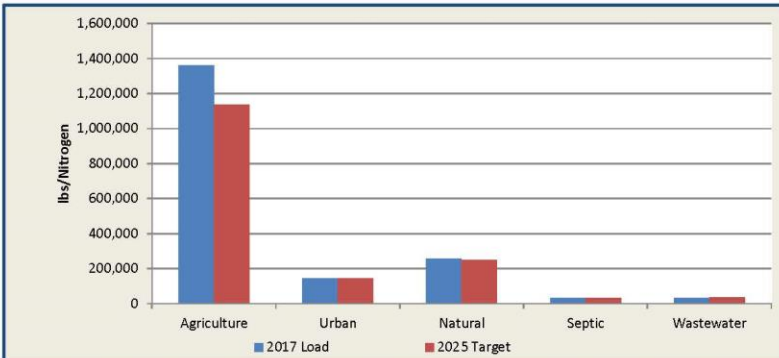
County Phase III WIP Goals Summary

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KENT

Sector	2025 Nitrogen Reduction Goal
Agriculture	-222,043
Developed ¹	-173
Natural ²	-6,963
Septic ³	-26
Total Reduction	-229,204

Sector	2025 Target ⁴
Wastewater	35,415



Notes:

- The goals for the Developed sector were based on several data sets based upon whether a jurisdiction has a NPDES permit, and the type:
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 - Non-MS4:** Where strategies could be obtained, they were used. If no strategy was provided, MDE assumed a minimal effort.
- Reductions in the "Natural" Load Source sector can be attributable to urban and Agricultural Stream Restoration
- These reductions were built using septic data provided in the 2017 Annual Progress scenario from County and Bay Restoration Fund (BRF) databases. They use past performance to predict a potential opportunity for implementation efforts in the future.
- Sector targets for wastewater are expressed in overall loads that need to be maintained, not reductions, because of the accounting & planning mechanisms used in MDE's 2025 Strategy.
- This goal was built using a State septic strategy, using BRF trends. In some counties this may be augmented with local goals.

Septic Strategy ⁵	Unit	Measure
Septic Connections	0	systems
Septic Denitrification	0	systems
Septic Tank Pumpout	0	systems

Urban BMP Strategy	Unit	Measure	Agriculture BMP Strategy	2017 BMPs	2025 Goal	Unit
Abandon Mine Reclamation	0	acres	Ag Drainage Management	650	650	acres treated
BioSwale	0	acres	Alternative Crops	14	0	acres
Dry Detention Ponds & Hydrodynamic Structures	0	acres	Animal Waste Management - Dairy ¹	7	100	percent ³
Dry Extended Detention Ponds	0	acres	Animal Waste Management - Other			
Erosion and Sediment Control	0	acres	Livestock ¹	6	50	percent ³
Impervious Surface Reduction	0	acres	Animal Waste Management - Poultry ¹	10	100	percent ³
Permeable Pavement	0	acres	Barnyard Runoff Control	37	37	acres
Runoff Reduction	0	acre-feet	Conservation Plans	69,242	80,000	acres
Runoff Reduction	0	acres	ConserveTill (>60% residue)	58,097	58,097	acres
Runoff Reduction	0	impervious acres	ConserveTill (30-60% residue)	17,429	17,429	acres
Storm Drain Cleaning	0	lbs tn	Cover Crop - Commodity	6,499	6,499	acres
Storm Drain Cleaning	0	lbs tp	Cover Crop - Traditional	54,740	54,740	acres
Storm Drain Cleaning	0	lbs tss	Crop Irrigation	0	10,000	acres
Stormwater Treatment	0	acre-feet	Dairy Precision Feed Management	0	1,500	AU
Stormwater Treatment	4	acres	DitchFilters (Phosphorus Sorbing)	0	0	acres
Stormwater Treatment	2	impervious acres	Forest Buffer Exclusion	0	72,429	feet
Stream Restoration Urban	1,200	feet	Forest Buffers	402	402	acres
Street Sweeping	87	acres	Grass Buffer Exclusion	2,189	253,500	feet
Tree Planting	0	acres	Grass Buffers	2,053	2,150	acres
Urban Forest Buffer	0	acres	Horse Pasture Management	0	50	acres
Urban Forest Planting	0	acres	Land Retire (open)	1,814	2,000	acres
Urban Nutrient Management Plan	0	acres	Land Retire (pasture)	22	122	acres
Urban Shoreline Management	0	feet	Loafing Lot Management	0	0	acres
Wet Extended Detention	3	acres	Manure - incorporation	16,669	16,669	acres
			Manure - injection	1,179	1,179	acres
			Manure Transport (out of state)	0	0	wet tons
			Mortality Management ¹	0	100	percent ³
			NonUrban Stream Restoration	150	150	feet
			Nursery CaptureReuse	0	150	acres
			OffStream w/o Fencing ²	322	10	percent
			Poultry Litter Amendment	0	25	percent ³
			Prescribed Grazing	198	600	acres
			Shoreline Protection	0	0	feet
			Tree Planting	72	72	acres
			Wetland Restoration	415	450	acres

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³ Percent of all animals within county

Notes:
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 Stream Restoration in some P1 counties may be over-inflated due to conversion factors used to convert Financial Assurance Plan numbers to WIP number

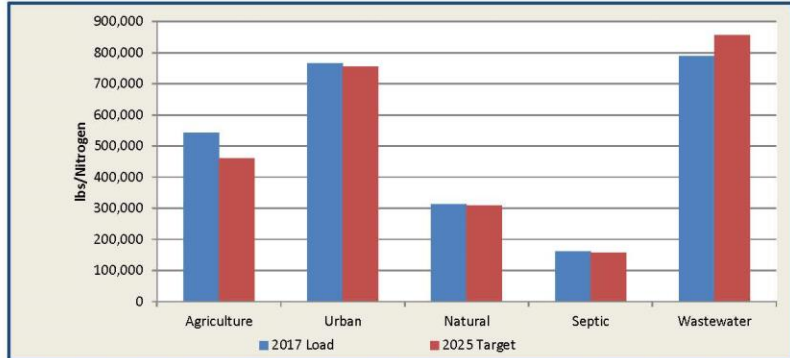
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MONTGOMERY

Sector	2025 Nitrogen Reduction Goal
Agriculture	-83,148
Developed ¹	-10,312
Natural ²	-4,049
Septic ³	-3,909
Total Reduction	-101,419

Sector	2025 Target ⁴
Wastewater	856,363



Notes:

1. The goals for the Developed sector were based on several data sets based upon whether a jurisdiction has a NPDES permit, and the type:
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 - Phase II MS4:** Goals were based on estimates of untreated impervious area in these jurisdictions, and an MDE devised strategy to those acres.
 - Non-MS4:** Where strategies could be obtained, they were used. If no strategy was provided, MDE assumed a minimal effort
2. Reductions in the "Natural" Load Source sector can be attributable to urban and Agricultural Stream Restoration
3. These reductions were built using septic data provided in the 2017 Annual Progress scenario from County and Bay Restoration Fund (BRF) databases. They use past performance to predict a potential opportunity for implementation efforts in the future.
4. Sector targets for wastewater are expressed in overall loads that need to be maintained, not reductions, because of the accounting & planning mechanisms used in MDE's 2025 Strategy.
5. This goal was built using a State septic strategy, using BRF trends. In some counties this may be augmented with local goals.

Septic Strategy ⁵	Unit	Measure
Septic Connections	394	systems
Septic Denitrification	256	systems
Septic Tank Pumpout	2000	systems

Urban BMP Strategy	Unit	Measure	Agriculture BMP Strategy	2017 BMPs	2025 Goal	Unit
Abandon Mine Reclamation	0	acres	Ag Drainage Management	0	0	acres treated
BioSwale	0	acres	Alternative Crops	0	0	acres
Dry Detention Ponds & Hydrodynamic Structures	0	acres	Animal Waste Management - Dairy ¹	2	100	percent ³
Dry Extended Detention Ponds	595	acres	Animal Waste Management - Other			
Erosion and Sediment Control	0	acres	Livestock ¹	19	55	percent ³
Impervious Surface Reduction	0	acres	Animal Waste Management - Poultry ¹	0	100	percent ³
Permeable Pavement	0	acres	Barnyard Runoff Control	26	33	acres
Runoff Reduction	4	acre-feet	Conservation Plans	32,883	36,000	acres
Runoff Reduction	38	acres	ConserveTill (>60% residue)	17,209	17,209	acres
Runoff Reduction	19	impervious acres	ConserveTill (30-60% residue)	5,163	14,000	acres
Storm Drain Cleaning	0	lbs tn	Cover Crop - Commodity	4,065	4,065	acres
Storm Drain Cleaning	0	lbs tp	Cover Crop - Traditional	11,898	17,000	acres
Storm Drain Cleaning	0	lbs tss	Crop Irrigation	0	1,280	acres
Stormwater Treatment	155	acre-feet	Dairy Precision Feed Management	0	130	AU
Stormwater Treatment	3,909	acres	DitchFilters (Phosphorus Sorbing)	0	0	acres
Stormwater Treatment	1,954	impervious acres	Forest Buffer Exclusion	0	105,460	feet
Stream Restoration Urban	0	feet	Forest Buffers	426	500	acres
Street Sweeping	1,409	acres	Grass Buffer Exclusion	57,236	369,111	feet
Tree Planting	108	acres	Grass Buffers	193	234	acres
Urban Forest Buffer	0	acres	Horse Pasture Management	159	268	acres
Urban Forest Planting	0	acres	Land Retire (open)	684	700	acres
Urban Nutrient Management Plan	0	acres	Land Retire (pasture)	153	250	acres
Urban Shoreline Management	0	feet	Loafing Lot Management	0	4	acres
Wet Extended Detention	455	acres	Manure - incorporation	235	235	acres
			Manure - injection	125	0	acres
			Manure Transport (out of state)	0	0	wet tons
			Mortality Management ¹	0	100	percent ³
			NonUrban Stream Restoration	0	0	feet
			Nursery CaptureReuse	0	300	acres
			OffStream w/o Fencing ²	2,300	10	percent
			Poultry Litter Amendment	0	0	percent ³
			Prescribed Grazing	729	800	acres
			Shoreline Protection	0	0	feet
			Tree Planting	97	97	acres
			Wetland Restoration	0	0	acres

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³ Percent of all animals within county

Notes:
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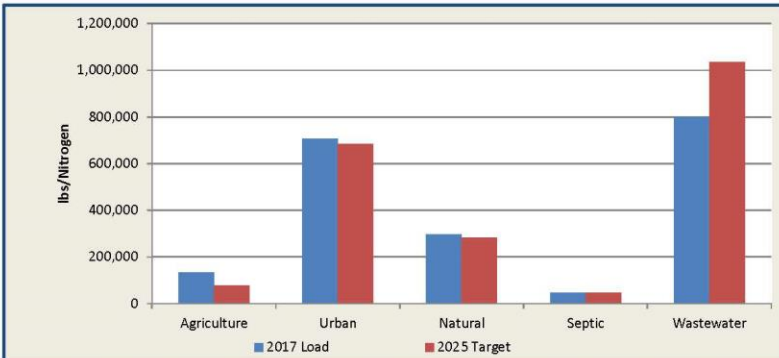
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PRINCE GEORGES

Sector	2025 Nitrogen Reduction Goal
Agriculture	-56,003
Developed ¹	-20,846
Natural ²	-15,241
Septic ³	-652
Total Reduction	-92,742

Sector	2025 Target ⁴
Wastewater	1,033,852



Notes:

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 - Phase II MS4:** Goals were based on estimates of untreated impervious area in these jurisdictions, and an MDE devised strategy to those acres.
 - Non-MS4:** Where strategies could be obtained, they were used. If no strategy was provided, MDE assumed a minimal effort
- Reductions in the "Natural" Load Source sector can be attributable to urban and Agricultural Stream Restoration
- These reductions were built using septic data provided in the 2017 Annual Progress scenario from County and Bay Restoration Fund (BRF) databases. They use past performance to predict a potential opportunity for implementation efforts in the future.
- Sector targets for wastewater are expressed in overall loads that need to be maintained, not reductions, because of the accounting & planning mechanisms used in MDE's 2025 Strategy.
- This goal was built using a State septic strategy, using BRF trends. In some counties this may be augmented with local goals.

Septic Strategy ⁵	Unit	Measure
Septic Connections	328	systems
Septic Denitrification	208	systems
Septic Tank Pumpout	0	systems

Urban BMP Strategy	Unit	Measure	Agriculture BMP Strategy	2017 BMPs	2025 Goal	Unit
Abandon Mine Reclamation	0	acres	Ag Drainage Management	0	75	acres treated
BioSwale	0	acres	Alternative Crops	0	0	acres
Dry Detention Ponds & Hydrodynamic Structures	0	acres	Animal Waste Management - Dairy ¹	1	100	percent ³
Dry Extended Detention Ponds	0	acres	Animal Waste Management - Other			
Erosion and Sediment Control	0	acres	Livestock ¹	4	50	percent ³
Impervious Surface Reduction	0	acres	Animal Waste Management - Poultry ¹	0	100	percent ³
Permeable Pavement	0	acres	Barnyard Runoff Control	38	74	acres
Runoff Reduction	0	acre-feet	Conservation Plans	15,260	18,450	acres
Runoff Reduction	0	acres	ConserveTill (>60% residue)	5,486	5,486	acres
Runoff Reduction	0	impervious acres	ConserveTill (30-60% residue)	1,646	1,646	acres
Storm Drain Cleaning	0	lbs tn	Cover Crop - Commodity	1,189	1,189	acres
Storm Drain Cleaning	0	lbs tp	Cover Crop - Traditional	1,795	1,795	acres
Storm Drain Cleaning	0	lbs tss	Crop Irrigation	0	726	acres
Stormwater Treatment	408	acre-feet	Dairy Precision Feed Management	0	0	AU
Stormwater Treatment	10,083	acres	DitchFilters (Phosphorus Sorbing)	0	0	acres
Stormwater Treatment	5,042	impervious acres	Forest Buffer Exclusion	1,057	270,349	feet
Stream Restoration Urban	86,932	feet	Forest Buffers	98	98	acres
Street Sweeping	0	acres	Grass Buffer Exclusion	16,639	135,175	feet
Tree Planting	2	acres	Grass Buffers	579	679	acres
Urban Forest Buffer	0	acres	Horse Pasture Management	449	550	acres
Urban Forest Planting	0	acres	Land Retire (open)	812	862	acres
Urban Nutrient Management Plan	0	acres	Land Retire (pasture)	1,600	1,700	acres
Urban Shoreline Management	0	feet	Loafing Lot Management	0	0	acres
Wet Extended Detention	0	acres	Manure - incorporation	0	200	acres
			Manure - injection	0	125	acres
			Manure Transport (out of state)	0	0	wet tons
			Mortality Management ¹	0	100	percent ³
			NonUrban Stream Restoration	0	1,000	feet
			Nursery CaptureReuse	0	100	acres
			OffStream w/o Fencing ²	1,380	10	percent
			Poultry Litter Amendment	0	0	percent ³
			Prescribed Grazing	262	450	acres
			Shoreline Protection	0	1,000	feet
			Tree Planting	119	119	acres
			Wetland Restoration	33	33	acres

¹ 2017 values are summarized by # of systems
² 2017 Values are summarized in acres
³ Percent of all animals within county

Notes:
 In PI MS4 jurisdictions, an additional 10% treatment goal was added on top of the Financial Assurance Plan scenario provided.
 Stream Restoration in some P1 counties may be over-inflated due to conversion factors used to convert Financial Assurance Plan numbers to WIP number

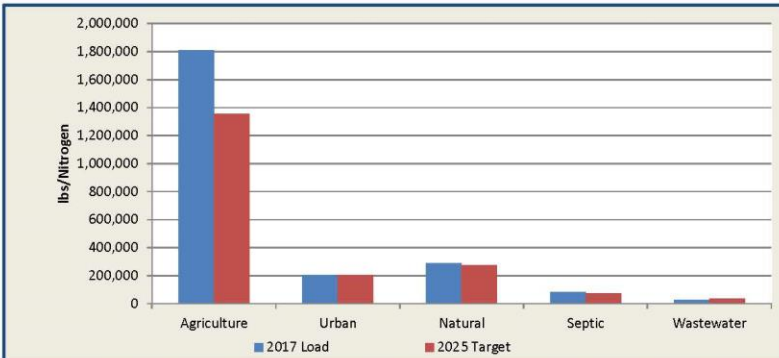
County Phase III WIP Goals Summary

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QUEEN ANNES

Sector	2025 Nitrogen Reduction Goal
Agriculture	-454,652
Developed ¹	746
Natural ²	-12,679
Septic ³	-7,460
Total Reduction	-474,045

Sector	2025 Target ⁴
Wastewater	33,801



Notes:

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 - Non-MS4:** Where strategies could be obtained, they were used. If no strategy was provided, MDE assumed a minimal effort.
- Reductions in the "Natural" Load Source sector can be attributable to urban and Agricultural Stream Restoration
- These reductions were built using septic data provided in the 2017 Annual Progress scenario from County and Bay Restoration Fund (BRF) databases. They use past performance to predict a potential opportunity for implementation efforts in the future.
- Sector targets for wastewater are expressed in overall loads that need to be maintained, not reductions, because of the accounting & planning mechanisms used in MDE's 2025 Strategy.
- This goal was built using a State septic strategy, using BRF trends. In some counties this may be augmented with local goals.

Septic Strategy ⁵	Unit	Measure
Septic Connections	0	systems
Septic Denitrification	1500	systems
Septic Tank Pumpout	0	systems

Urban BMP Strategy	Unit	Measure	Agriculture BMP Strategy	2017 BMPs	2025 Goal	Unit
Abandon Mine Reclamation	0	acres	Ag Drainage Management	234	5,000	acres treated
BioSwale	0	acres	Alternative Crops	0	50	acres
Dry Detention Ponds & Hydrodynamic Structures	0	acres	Animal Waste Management - Dairy ¹	13	100	percent ³
Dry Extended Detention Ponds	0	acres	Animal Waste Management - Other			
Erosion and Sediment Control	0	acres	Livestock ¹	10	25	percent ³
Impervious Surface Reduction	0	acres	Animal Waste Management - Poultry ¹	41	100	percent ³
Permeable Pavement	0	acres	Barnyard Runoff Control	17	22	acres
Runoff Reduction	0	acre-feet	Conservation Plans	70,831	90,000	acres
Runoff Reduction	0	acres	ConserveTill (>60% residue)	65,102	65,102	acres
Runoff Reduction	0	impervious acres	ConserveTill (30-60% residue)	19,530	19,530	acres
Storm Drain Cleaning	0	lbs tn	Cover Crop - Commodity	5,829	5,829	acres
Storm Drain Cleaning	0	lbs tp	Cover Crop - Traditional	61,012	61,012	acres
Storm Drain Cleaning	0	lbs tss	Crop Irrigation	0	25,000	acres
Stormwater Treatment	0	acre-feet	Dairy Precision Feed Management	0	500	AU
Stormwater Treatment	0	acres	DitchFilters (Phosphorus Sorbing)	0	0	acres
Stormwater Treatment	0	impervious acres	Forest Buffer Exclusion	1,200	32,344	feet
Stream Restoration Urban	1,028	feet	Forest Buffers	522	522	acres
Street Sweeping	0	acres	Grass Buffer Exclusion	24,035	113,205	feet
Tree Planting	0	acres	Grass Buffers	6,631	7,000	acres
Urban Forest Buffer	0	acres	Horse Pasture Management	11	11	acres
Urban Forest Planting	29	acres	Land Retire (open)	610	1,835	acres
Urban Nutrient Management Plan	0	acres	Land Retire (pasture)	167	167	acres
Urban Shoreline Management	0	feet	Loafing Lot Management	0	10	acres
Wet Extended Detention	0	acres	Manure - incorporation	14,983	20,000	acres
			Manure - injection	280	280	acres
			Manure Transport (out of state)	0	0	wet tons
			Mortality Management ¹	0	100	percent ³
			NonUrban Stream Restoration	0	15,000	feet
			Nursery CaptureReuse	0	200	acres
			OffStream w/o Fencing ²	322	10	percent
			Poultry Litter Amendment	0	95	percent ³
			Prescribed Grazing	275	300	acres
			Shoreline Protection	0	0	feet
			Tree Planting	27	33	acres
			Wetland Restoration	1,705	2,200	acres

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³ Percent of all animals within county

Notes:
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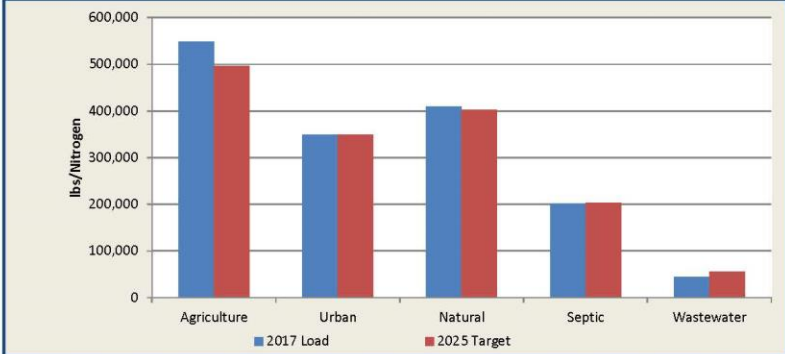
County Phase III WIP Goals Summary

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ST MARYS

Sector	2025 Nitrogen Reduction Goal
Agriculture	-52,655
Developed ¹	616
Natural ²	-6,459
Septic ³	666
Total Reduction	-57,831

Sector	2025 Target ⁴
Wastewater	55,079



Notes:

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- Reductions in the "Natural" Load Source sector can be attributable to urban and Agricultural Stream Restoration
- These reductions were built using septic data provided in the 2017 Annual Progress scenario from County and Bay Restoration Fund (BRF) databases. They use past performance to predict a potential opportunity for implementation efforts in the future.
- Sector targets for wastewater are expressed in overall loads that need to be maintained, not reductions, because of the accounting & planning mechanisms used in MDE's 2025 Strategy.
- This goal was built using a State septic strategy, using BRF trends. In some counties this may be augmented with local goals.

Septic Strategy ⁵	Unit	Measure
Septic Connections	0	systems
Septic Denitrification	808	systems
Septic Tank Pumpout	0	systems

Urban BMP Strategy	Unit	Measure	Agriculture BMP Strategy	2017 BMPs	2025 Goal	Unit
Abandon Mine Reclamation	0	acres	Ag Drainage Management	0	0	acres treated
BioSwale	0	acres	Alternative Crops	0	0	acres
Dry Detention Ponds & Hydrodynamic Structures	0	acres	Animal Waste Management - Dairy ¹	0	0	percent ³
Dry Extended Detention Ponds	0	acres	Animal Waste Management - Other			
Erosion and Sediment Control	0	acres	Livestock ¹	11	85	percent ³
Impervious Surface Reduction	0	acres	Animal Waste Management - Poultry ¹	0	100	percent ³
Permeable Pavement	0	acres	Barnyard Runoff Control	17	34	acres
Runoff Reduction	0	acre-feet	Conservation Plans	26,709	32,351	acres
Runoff Reduction	0	acres	ConserveTill (>60% residue)	17,451	17,451	acres
Runoff Reduction	0	impervious acres	ConserveTill (30-60% residue)	5,235	5,235	acres
Storm Drain Cleaning	0	lbs tn	Cover Crop - Commodity	1,114	5,000	acres
Storm Drain Cleaning	0	lbs tp	Cover Crop - Traditional	8,103	7,500	acres
Storm Drain Cleaning	0	lbs tss	Crop Irrigation	0	358	acres
Stormwater Treatment	0	acre-feet	Dairy Precision Feed Management	0	0	AU
Stormwater Treatment	0	acres	DitchFilters (Phosphorus Sorbing)	0	0	acres
Stormwater Treatment	0	impervious acres	Forest Buffer Exclusion	325	172,937	feet
Stream Restoration Urban	7,539	feet	Forest Buffers	343	350	acres
Street Sweeping	0	acres	Grass Buffer Exclusion	68,258	86,469	feet
Tree Planting	0	acres	Grass Buffers	384	450	acres
Urban Forest Buffer	0	acres	Horse Pasture Management	180	200	acres
Urban Forest Planting	90	acres	Land Retire (open)	461	600	acres
Urban Nutrient Management Plan	0	acres	Land Retire (pasture)	430	470	acres
Urban Shoreline Management	0	feet	Loafing Lot Management	0	10	acres
Wet Extended Detention	0	acres	Manure - incorporation	1,178	1,400	acres
			Manure - injection	0	0	acres
			Manure Transport (out of state)	0	0	wet tons
			Mortality Management ¹	0	100	percent ³
			NonUrban Stream Restoration	0	0	feet
			Nursery CaptureReuse	0	0	acres
			OffStream w/o Fencing ²	2,806	10	percent
			Poultry Litter Amendment	0	0	percent ³
			Prescribed Grazing	742	1,200	acres
			Shoreline Protection	2,370	2,370	feet
			Tree Planting	347	350	acres
			Wetland Restoration	26	26	acres

¹ 2017 values are summarized by # of systems

² 2017 Values are summarized in acres

³ Percent of all animals within county

Notes:

In P1 MS4 jurisdictions, an additional 10% treatment goal was added on top of the Financial Assurance Plan scenario provided.
Stream Restoration in some P1 counties may be over-inflated due to conversion factors used to convert Financial Assurance Plan numbers to WIP number

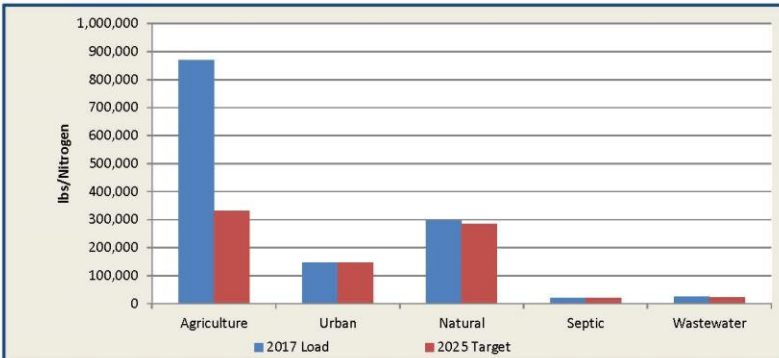
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SOMERSET

Sector	2025 Nitrogen Reduction Goal
Agriculture	-537,624
Developed ¹	196
Natural ²	-11,914
Septic ³	289
Total Reduction	-549,053

Sector	2025 Target ⁴
Wastewater	22,994



Notes:

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 - Non-MS4:** Where strategies could be obtained, they were used. If no strategy was provided, MDE assumed a minimal effort.
- Reductions in the "Natural" Load Source sector can be attributable to urban and Agricultural Stream Restoration
- These reductions were built using septic data provided in the 2017 Annual Progress scenario from County and Bay Restoration Fund (BRF) databases. They use past performance to predict a potential opportunity for implementation efforts in the future.
- Sector targets for wastewater are expressed in overall loads that need to be maintained, not reductions, because of the accounting & planning mechanisms used in MDE's 2025 Strategy.
- This goal was built using a State septic strategy, using BRF trends. In some counties this may be augmented with local goals.

Septic Strategy ⁵	Unit	Measure
Septic Connections	0	systems
Septic Denitrification	232	systems
Septic Tank Pumpout	0	systems

Urban BMP Strategy	Unit	Measure	Agriculture BMP Strategy	2017 BMPs	2025 Goal	Unit
Abandon Mine Reclamation	0	acres	Ag Drainage Management	390	4,411	acres treated
BioSwale	3	acres	Alternative Crops	0	50	acres
Dry Detention Ponds & Hydrodynamic Structures	0	acres	Animal Waste Management - Dairy ¹	0	70	percent ³
Dry Extended Detention Ponds	0	acres	Animal Waste Management - Other	1	70	percent ³
Erosion and Sediment Control	0	acres	Livestock ¹	106	100	percent ³
Impervious Surface Reduction	0	acres	Animal Waste Management - Poultry ¹	0	0	acres
Permeable Pavement	0	acres	Barnyard Runoff Control	32,811	32,811	acres
Runoff Reduction	0	acre-feet	Conservation Plans	17,042	17,042	acres
Runoff Reduction	0	acres	ConserveTill (>60% residue)	5,113	5,113	acres
Runoff Reduction	0	impervious acres	ConserveTill (30-60% residue)	4,739	4,739	acres
Storm Drain Cleaning	0	lbs tn	Cover Crop - Commodity	13,447	13,447	acres
Storm Drain Cleaning	0	lbs tp	Cover Crop - Traditional	0	1,215	acres
Storm Drain Cleaning	0	lbs tss	Crop Irrigation	0	0	AU
Stormwater Treatment	0	acre-feet	Dairy Precision Feed Management	0	0	acres
Stormwater Treatment	0	acres	DitchFilters (Phosphorus Sorbing)	0	0	acres
Stormwater Treatment	0	impervious acres	Forest Buffer Exclusion	0	2,606	feet
Stream Restoration Urban	0	feet	Forest Buffers	1,989	2,200	acres
Street Sweeping	0	acres	Grass Buffer Exclusion	0	9,121	feet
Tree Planting	0	acres	Grass Buffers	1,577	2,378	acres
Urban Forest Buffer	0	acres	Horse Pasture Management	0	0	acres
Urban Forest Planting	7	acres	Land Retire (open)	12	107	acres
Urban Nutrient Management Plan	0	acres	Land Retire (pasture)	0	200	acres
Urban Shoreline Management	0	feet	Loafing Lot Management	0	0	acres
Wet Extended Detention	0	acres	Manure - incorporation	7,066	3,200	acres
			Manure - injection	0	0	acres
			Manure Transport (out of state)	25,984	50,000	wet tons
			Mortality Management ¹	98	100	percent ³
			NonUrban Stream Restoration	0	0	feet
			Nursery CaptureReuse	0	0	acres
			OffStream w/o Fencing ²	0	10	percent
			Poultry Litter Amendment	0	75	percent ³
			Prescribed Grazing	30	200	acres
			Shoreline Protection	0	1,000	feet
			Tree Planting	25	100	acres
			Wetland Restoration	1,801	2,800	acres

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² 2017 Values are summarized in acres
³ Percent of all animals within county

Notes:
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 Stream Restoration in some P1 counties may be over-inflated due to conversion factors used to convert Financial Assurance Plan numbers to WIP number

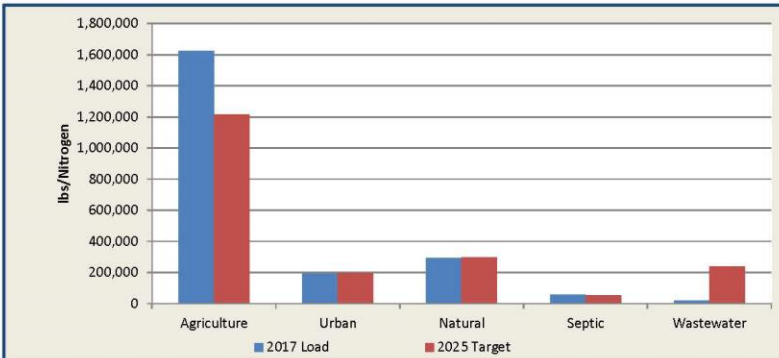
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TALBOT

Sector	2025 Nitrogen Reduction Goal
Agriculture	-406,231
Developed ¹	981
Natural ²	2,536
Septic ³	-780
Total Reduction	-403,494

Sector	2025 Target ⁴
Wastewater	239,545



Notes:

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 - Non-MS4:** Where strategies could be obtained, they were used. If no strategy was provided, MDE assumed a minimal effort.
- Reductions in the "Natural" Load Source sector can be attributable to urban and Agricultural Stream Restoration
- These reductions were built using septic data provided in the 2017 Annual Progress scenario from County and Bay Restoration Fund (BRF) databases. They use past performance to predict a potential opportunity for implementation efforts in the future.
- Sector targets for wastewater are expressed in overall loads that need to be maintained, not reductions, because of the accounting & planning mechanisms used in MDE's 2025 Strategy.
- This goal was built using a State septic strategy, using BRF trends. In some counties this may be augmented with local goals.

Septic Strategy ⁵	Unit	Measure
Septic Connections	144	systems
Septic Denitrification	392	systems
Septic Tank Pumpout	0	systems

Urban BMP Strategy	Unit	Measure	Agriculture BMP Strategy	2017 BMPs	2025 Goal	Unit
Abandon Mine Reclamation	0	acres	Ag Drainage Management	208	2,000	acres treated
BioSwale	3	acres	Alternative Crops	0	0	acres
Dry Detention Ponds & Hydrodynamic Structures	0	acres	Animal Waste Management - Dairy ¹	4	100	percent ³
Dry Extended Detention Ponds	0	acres	Animal Waste Management - Other			
Erosion and Sediment Control	0	acres	Livestock ¹	2	20	percent ³
Impervious Surface Reduction	0	acres	Animal Waste Management - Poultry ¹	12	100	percent ³
Permeable Pavement	0	acres	Barnyard Runoff Control	1	1	acres
Runoff Reduction	0	acre-feet	Conservation Plans	70,014	75,000	acres
Runoff Reduction	0	acres	ConserveTill (>60% residue)	51,217	51,217	acres
Runoff Reduction	0	impervious acres	ConserveTill (30-60% residue)	0	0	acres
Storm Drain Cleaning	0	lbs tn	Cover Crop - Commodity	6,101	10,000	acres
Storm Drain Cleaning	0	lbs tp	Cover Crop - Traditional	47,061	48,000	acres
Storm Drain Cleaning	0	lbs tss	Crop Irrigation	0	5,000	acres
Stormwater Treatment	0	acre-feet	Dairy Precision Feed Management	0	100	AU
Stormwater Treatment	0	acres	DitchFilters (Phosphorus Sorbing)	0	0	acres
Stormwater Treatment	0	impervious acres	Forest Buffer Exclusion	0	21,795	feet
Stream Restoration Urban	0	feet	Forest Buffers	363	400	acres
Street Sweeping	0	acres	Grass Buffer Exclusion	2,150	76,282	feet
Tree Planting	0	acres	Grass Buffers	3,309	5,000	acres
Urban Forest Buffer	0	acres	Horse Pasture Management	0	0	acres
Urban Forest Planting	7	acres	Land Retire (open)	820	1,000	acres
Urban Nutrient Management Plan	0	acres	Land Retire (pasture)	0	0	acres
Urban Shoreline Management	0	feet	Loafing Lot Management	0	0	acres
Wet Extended Detention	0	acres	Manure - incorporation	9,825	9,100	acres
			Manure - injection	183	200	acres
			Manure Transport (out of state)	0	0	wet tons
			Mortality Management ¹	13	100	percent ³
			NonUrban Stream Restoration	1,525	2,500	feet
			Nursery CaptureReuse	0	4	acres
			OffStream w/o Fencing ²	736	10	percent
			Poultry Litter Amendment	0	75	percent ³
			Prescribed Grazing	8	8	acres
			Shoreline Protection	0	6,000	feet
			Tree Planting	68	80	acres
			Wetland Restoration	1,875	2,200	acres

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³ Percent of all animals within county

Notes:
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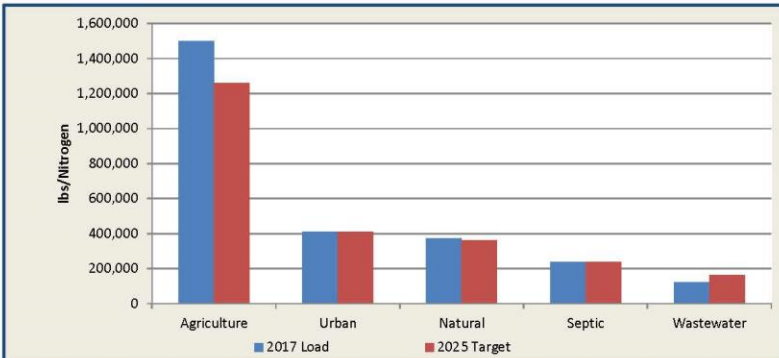
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WASHINGTON

Sector	2025 Nitrogen Reduction Goal
Agriculture	-237,070
Developed ¹	-2,411
Natural ²	-9,882
Septic ³	-1,982
Total Reduction	-251,345

Sector	2025 Target ⁴
Wastewater	162,183



Notes:

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- This goal was built using a State septic strategy, using BRF trends. In some counties this may be augmented with local goals.

Septic Strategy ⁵	Unit	Measure
Septic Connections	0	systems
Septic Denitrification	280	systems
Septic Tank Pumpout	0	systems

Urban BMP Strategy	Unit	Measure	Agriculture BMP Strategy	2017 BMPs	2025 Goal	Unit
Abandon Mine Reclamation	0	acres	Ag Drainage Management	0	0	acres treated
BioSwale	0	acres	Alternative Crops	0	0	acres
Dry Detention Ponds & Hydrodynamic Structures	0	acres	Animal Waste Management - Dairy ¹	70	85	percent ³
Dry Extended Detention Ponds	0	acres	Animal Waste Management - Other			
Erosion and Sediment Control	0	acres	Livestock ¹	19	30	percent ³
Impervious Surface Reduction	0	acres	Animal Waste Management - Poultry ¹	0	100	percent ³
Permeable Pavement	0	acres	Barnyard Runoff Control	75	85	acres
Runoff Reduction	0	acre-feet	Conservation Plans	52,397	65,000	acres
Runoff Reduction	0	acres	ConserveTill (>60% residue)	28,713	28,713	acres
Runoff Reduction	0	impervious acres	ConserveTill (30-60% residue)	8,617	18,617	acres
Storm Drain Cleaning	0	lbs tn	Cover Crop - Commodity	4,044	4,044	acres
Storm Drain Cleaning	0	lbs tp	Cover Crop - Traditional	8,964	5,800	acres
Storm Drain Cleaning	0	lbs tss	Crop Irrigation	0	857	acres
Stormwater Treatment	19	acre-feet	Dairy Precision Feed Management	0	12,000	AU
Stormwater Treatment	477	acres	DitchFilters (Phosphorus Sorbing)	0	0	acres
Stormwater Treatment	238	impervious acres	Forest Buffer Exclusion	11,635	702,122	feet
Stream Restoration Urban	32,951	feet	Forest Buffers	1,153	1,400	acres
Street Sweeping	0	acres	Grass Buffer Exclusion	170,235	877,653	feet
Tree Planting	0	acres	Grass Buffers	246	246	acres
Urban Forest Buffer	0	acres	Horse Pasture Management	0	0	acres
Urban Forest Planting	366	acres	Land Retire (open)	855	855	acres
Urban Nutrient Management Plan	0	acres	Land Retire (pasture)	316	1,000	acres
Urban Shoreline Management	0	feet	Loafing Lot Management	0	10	acres
Wet Extended Detention	0	acres	Manure - incorporation	4,429	4,429	acres
			Manure - injection	235	235	acres
			Manure Transport (out of state)	0	0	wet tons
			Mortality Management ¹	0	100	percent ³
			NonUrban Stream Restoration	8,877	16,877	feet
			Nursery CaptureReuse	0	0	acres
			OffStream w/o Fencing ²	8,775	10	percent
			Poultry Litter Amendment	0	0	percent ³
			Prescribed Grazing	2,075	4,075	acres
			Shoreline Protection	0	0	feet
			Tree Planting	204	244	acres
			Wetland Restoration	14	16	acres

¹ 2017 values are summarized by # of systems

² 2017 Values are summarized in acres

³ Percent of all animals within county

Notes:

In P1 MS4 jurisdictions, an additional 10% treatment goal was added on top of the Financial Assurance Plan scenario provided.
Stream Restoration in some P1 counties may be over-inflated due to conversion factors used to convert Financial Assurance Plan numbers to WIP number

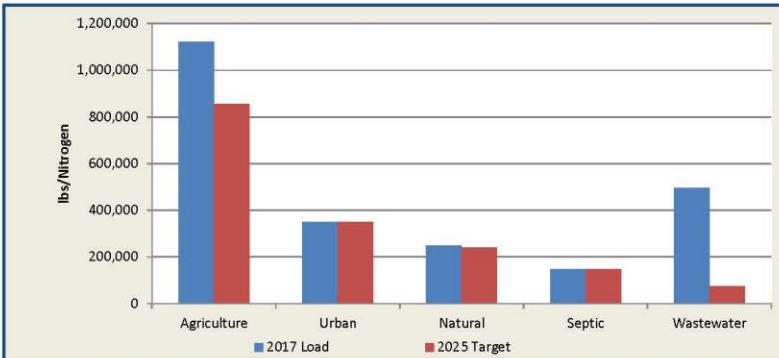
County Phase III WIP Goals Summary

Disclaimer: The County Phase III WIP Goals Summary is a planning document and it is anticipated that the specific suite of practices used by counties may differ from what is presented here.

WICOMICO

Sector	2025 Nitrogen Reduction Goal
Agriculture	-267,338
Developed ¹	-905
Natural ²	-6,230
Septic ³	-1,030
Total Reduction	-275,503

Sector	2025 Target ⁴
Wastewater	73,248



Notes:

- The goals for the Developed sector were based on several data sets based upon whether a jurisdiction has a NPDES permit, and the type:
 - Phase I MS4:** Goals are based on a mix of Financial Assurance Plans with some additional restoration goals for a margin of safety.
 - Phase II MS4:** Goals were based on estimates of untreated impervious area in these jurisdictions, and an MDE devised strategy to those acres.
 - Non-MS4:** Where strategies could be obtained, they were used. If no strategy was provided, MDE assumed a minimal effort.
- Reductions in the "Natural" Load Source sector can be attributable to urban and Agricultural Stream Restoration
- These reductions were built using septic data provided in the 2017 Annual Progress scenario from County and Bay Restoration Fund (BRF) databases. They use past performance to predict a potential opportunity for implementation efforts in the future.
- Sector targets for wastewater are expressed in overall loads that need to be maintained, not reductions, because of the accounting & planning mechanisms used in MDE's 2025 Strategy.
- This goal was built using a State septic strategy, using BRF trends. In some counties this may be augmented with local goals.

Septic Strategy ⁵	Unit	Measure
Septic Connections	31	systems
Septic Denitrification	364	systems
Septic Tank Pumpout	0	systems

Urban BMP Strategy	Unit	Measure	Agriculture BMP Strategy	2017 BMPs	2025 Goal	Unit
Abandon Mine Reclamation	0	acres	Ag Drainage Management	182	400	acres treated
BioSwale	0	acres	Alternative Crops	0	0	acres
Dry Detention Ponds & Hydrodynamic Structures	0	acres	Animal Waste Management - Dairy ¹	1	70	percent ³
Dry Extended Detention Ponds	0	acres	Animal Waste Management - Other			
Erosion and Sediment Control	0	acres	Livestock ¹	11	15	percent ³
Impervious Surface Reduction	0	acres	Animal Waste Management - Poultry ¹	139	100	percent ³
Permeable Pavement	0	acres	Barnyard Runoff Control	1	1	acres
Runoff Reduction	0	acre-feet	Conservation Plans	40,954	43,000	acres
Runoff Reduction	0	acres	ConserveTill (>60% residue)	28,509	28,509	acres
Runoff Reduction	0	impervious acres	ConserveTill (30-60% residue)	8,553	8,553	acres
Storm Drain Cleaning	0	lbs tn	Cover Crop - Commodity	813	813	acres
Storm Drain Cleaning	0	lbs tp	Cover Crop - Traditional	27,358	27,358	acres
Storm Drain Cleaning	0	lbs tss	Crop Irrigation	0	8,500	acres
Stormwater Treatment	1	acre-feet	Dairy Precision Feed Management	0	0	AU
Stormwater Treatment	34	acres	DitchFilters (Phosphorus Sorbing)	0	0	acres
Stormwater Treatment	17	impervious acres	Forest Buffer Exclusion	0	32,466	feet
Stream Restoration Urban	13,097	feet	Forest Buffers	1,705	1,705	acres
Street Sweeping	0	acres	Grass Buffer Exclusion	1,879	113,630	feet
Tree Planting	0	acres	Grass Buffers	2,674	2,674	acres
Urban Forest Buffer	0	acres	Horse Pasture Management	42	42	acres
Urban Forest Planting	146	acres	Land Retire (open)	365	365	acres
Urban Nutrient Management Plan	0	acres	Land Retire (pasture)	19	19	acres
Urban Shoreline Management	0	feet	Loafing Lot Management	0	0	acres
Wet Extended Detention	0	acres	Manure - incorporation	10,159	5,000	acres
			Manure - injection	1,204	0	acres
			Manure Transport (out of state)	22,118	25,000	wet tons
			Mortality Management ¹	127	100	percent ³
			NonUrban Stream Restoration	0	0	feet
			Nursery CaptureReuse	0	500	acres
			OffStream w/o Fencing ²	0	10	percent
			Poultry Litter Amendment	3,634	75	percent ³
			Prescribed Grazing	20	20	acres
			Shoreline Protection	0	0	feet
			Tree Planting	121	121	acres
			Wetland Restoration	1,031	1,300	acres

¹ 2017 values are summarized by # of systems
² 2017 Values are summarized in acres
³ Percent of all animals within county

Notes:
 In PI MS4 jurisdictions, an additional 10% treatment goal was added on top of the Financial Assurance Plan scenario provided.
 Stream Restoration in some P1 counties may be over-inflated due to conversion factors used to convert Financial Assurance Plan numbers to WIP number

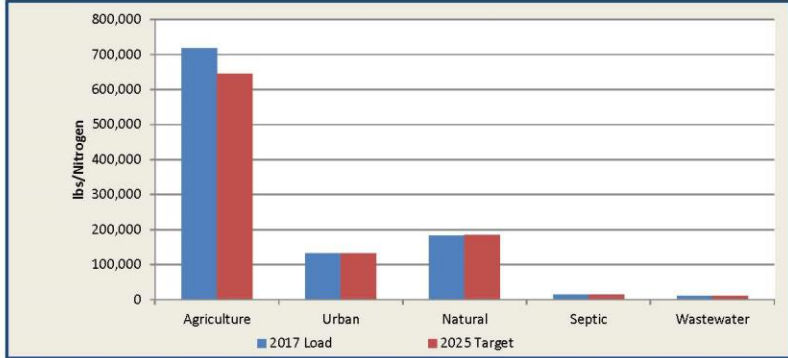
County Phase III WIP Goals Summary

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WORCESTER

Sector	2025 Nitrogen Reduction Goal
Agriculture	-73,945
Developed ¹	-13
Natural ²	1,975
Septic ³	-219
Total Reduction	-72,202

Sector	2025 Target ⁴
Wastewater	11,361



Notes:

1. The goals for the Developed sector were based on several data sets based upon whether a jurisdiction has a NPDES permit, and the type:
 - Phase I MS4:** Goals are based on a mix of Financial Assurance Plans with some additional restoration goals for a margin of safety.
 - Phase II MS4:** Goals were based on estimates of untreated impervious area in these jurisdictions, and an MDE devised strategy to those acres.
 - Non-MS4:** Where strategies could be obtained, they were used. If no strategy was provided, MDE assumed a minimal effort
2. Reductions in the "Natural" Load Source sector can be attributable to urban and Agricultural Stream Restoration
3. These reductions were built using septic data provided in the 2017 Annual Progress scenario from County and Bay Restoration Fund (BRF) databases. They use past performance to predict a potential opportunity for implementation efforts in the future.
4. Sector targets for wastewater are expressed in overall loads that need to be maintained, not reductions, because of the accounting & planning mechanisms used in MDE's 2025 Strategy.
5. This goal was built using a State septic strategy, using BRF trends. In some counties this may be augmented with local goals.

Septic Strategy ⁵	Unit	Measure
Septic Connections	0	systems
Septic Denitrification	176	systems
Septic Tank Pumpout	0	systems

Urban BMP Strategy	Unit	Measure	Agriculture BMP Strategy	2017 BMPs	2025 Goal	Unit
Abandon Mine Reclamation	0	acres	Ag Drainage Management	52	2,500	acres treated
BioSwale	3	acres	Alternative Crops	0	0	acres
Dry Detention Ponds & Hydrodynamic Structures	0	acres	Animal Waste Management - Dairy ¹	1	100	percent ³
Dry Extended Detention Ponds	0	acres	Animal Waste Management - Other			
Erosion and Sediment Control	0	acres	Livestock ¹	3	40	percent ³
Impervious Surface Reduction	0	acres	Animal Waste Management - Poultry ¹	114	100	percent ³
Permeable Pavement	0	acres	Barnyard Runoff Control	1	10	acres
Runoff Reduction	0	acre-feet	Conservation Plans	40,798	40,800	acres
Runoff Reduction	0	acres	ConserveTill (>60% residue)	34,089	34,089	acres
Runoff Reduction	0	impervious acres	ConserveTill (30-60% residue)	10,227	10,250	acres
Storm Drain Cleaning	0	lbs tn	Cover Crop - Commodity	3,229	3,229	acres
Storm Drain Cleaning	0	lbs tp	Cover Crop - Traditional	31,349	31,349	acres
Storm Drain Cleaning	0	lbs tss	Crop Irrigation	0	6,500	acres
Stormwater Treatment	0	acre-feet	Dairy Precision Feed Management	0	0	AU
Stormwater Treatment	0	acres	DitchFilters (Phosphorus Sorbing)	0	0	acres
Stormwater Treatment	0	impervious acres	Forest Buffer Exclusion	0	10,762	feet
Stream Restoration Urban	0	feet	Forest Buffers	3,262	3,262	acres
Street Sweeping	0	acres	Grass Buffer Exclusion	0	37,668	feet
Tree Planting	0	acres	Grass Buffers	2,249	3,161	acres
Urban Forest Buffer	0	acres	Horse Pasture Management	0	50	acres
Urban Forest Planting	7	acres	Land Retire (open)	157	200	acres
Urban Nutrient Management Plan	0	acres	Land Retire (pasture)	73	400	acres
Urban Shoreline Management	0	feet	Loafing Lot Management	0	0	acres
Wet Extended Detention	0	acres	Manure - incorporation	18,720	15,000	acres
			Manure - injection	0	0	acres
			Manure Transport (out of state)	11,839	15,000	wet tons
			Mortality Management ¹	111	100	percent ³
			NonUrban Stream Restoration	0	0	feet
			Nursery CaptureReuse	0	0	acres
			OffStream w/o Fencing ²	414	10	percent
			Poultry Litter Amendment	0	75	percent ³
			Prescribed Grazing	73	400	acres
			Shoreline Protection	0	0	feet
			Tree Planting	47	100	acres
			Wetland Restoration	922	2,000	acres

¹ 2017 values are summarized by # of systems
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³ Percent of all animals within county

Notes:
 In PI MS4 jurisdictions, an additional 10% treatment goal was added on top of the Financial Assurance Plan scenario provided.
 Stream Restoration in some P1 counties may be over-inflated due to conversion factors used to convert Financial Assurance Plan numbers to WIP number