

## Maryland Phase II WIP Strategies

### DORCHESTER Agriculture - Annual Practices

		2010 Progress	2017 Interim Strategy	2025 Final Strategy
BMP Name	Unit			
Conservation Tillage	Acres/Year	69,197	70,426	70,424
Cover Crop	Acres/Year	18,100	29,501	30,001
Cropland Irrigation Management	Acres/Year	0	27,974	27,974
Nutrient Management (All forms)	Acres/Year	73,374	89,202	93,616
Poultry Litter Incorporation	Acres/Year	0	9,543	15,900
Soil Conservation and Water Quality Plans	Acres/Year	49,695	66,502	74,209

- The BMP values are the amount credited in the Bay watershed model. It is the amount of BMP submitted minus the amount not given credit for (e.g., due to overlapping with other BMPs)

### DORCHESTER Agriculture - Additional BMPs

		2010 Progress	2017 Interim Strategy	2025 Final Strategy
BMP Name	Unit			
Barnyard Runoff Control	Acres	2	8	12
Forest Buffers	Acres	954	963	969
Grass Buffers / Vegetated Open Channel	Acres	6,840	7,357	7,701
Heavy Use Poultry Area Concrete Pads	Acres	0	1	2
Land Retirement	Acres	222	763	1,133
Off Stream Watering Without Fencing	Acres	13	13	13
Prescribed Grazing	Acres	0	36	60
Stream Access Control with Fencing	Acres	2	2	2
Tree Planting / Vegetative Environmental Buffers	Acres	549	549	549
Water Control Structures	Acres	0	840	1,402
Wetland Restoration	Acres	1,335	1,352	1,363

- The BMP values represent the total amount of implementation in place.
- The BMP values are the amount credited in the Bay watershed model. It is the amount of BMP submitted minus the amount not given credit for (e.g., due to overlapping with other BMPs)

Please note: The Agricultural BMP tables represent Land BMPs that can be shown as acres or feet and do not show those BMPs that are based on percentages such as Animal Waste Storage and Poultry Litter Treatment (Alum). Manure Transport is also not represented in these tables.

## DORCHESTER Forest BMPs

			2010 Progress	2017 Interim Strategy	2025 Final Strategy
BMP Name	Zone	Unit			
Forest Harvesting Practices	harvested forest	Acres	1,834	1,810	1,810

- The BMP values represent the total amount of implementation in place.
- The BMP values are the amount credited in the Bay watershed model. It is the amount of BMP submitted minus the amount not given credit for (e.g., due to overlapping with other BMPs)

## DORCHESTER Developed Land BMPs

		2010 Progress	2017 Interim Strategy	2025 Final Strategy
BMP Name	Unit			
Bioretention / Raingardens	Acres	0	0	19
Bioswale	Acres	0	0	52
Dry Detention Ponds and Hydrodynamic Structures	Acres	357	349	341
Dry Extended Detention Ponds	Acres	216	211	207
Impervious Urban Surface Reduction	Acres	0	22	1,156
Stormwater Management Generic BMP (1985 to 2002)	Acres	206	202	198
Stormwater Management Generic BMP (2002 to 2010)	Acres	2,481	2,425	2,382
Urban Filtering Practices	Acres	17	59	7,821
Urban Forest Buffers	Acres	0	556	817
Urban Infiltration Practices	Acres	139	136	196
Vegetated Open Channels	Acres	0	0	522
Wet Ponds and Wetlands	Acres	823	805	867
Erosion and Sediment Control on Construction	Acres/Year	673	673	746
Erosion and Sediment Control on Extractive	Acres/Year	0	0	128
Forest Conservation	Acres/Year	455	456	421
Urban Nutrient Management	Acres/Year	3,552	8,526	10,790

- The BMP values represent the total amount of implementation in place.
- The BMP values are the amount credited in the Bay watershed model. It is the amount of BMP submitted minus the amount not given credit for (e.g., due to overlapping with other BMPs)

## DORCHESTER Septic System BMPs

			2010 Progress	2017 Interim Strategy	2025 Final Strategy
BMP Name	Zone	Unit			
Septic Connection	Critical Area	Systems	0	0	348
	Outside of the Critical Area, not within 1000 ft of a perennial stream	Systems	0	0	229
	Within 1000 ft of a perennial stream	Systems	0	0	53
<b>Septic ConnectionTotal</b>			<b>0</b>	<b>0</b>	<b>630</b>
Septic Denitrification	Critical Area	Systems	49	1,768	2,600
	Outside of the Critical Area, not within 1000 ft of a perennial stream	Systems	37	37	34
	Within 1000 ft of a perennial stream	Systems	25	25	301
<b>Septic DenitrificationTotal</b>			<b>111</b>	<b>1,831</b>	<b>2,934</b>
Septic Pumping	Critical Area	Systems	0	0	2,600
	Outside of the Critical Area, not within 1000 ft of a perennial stream	Systems	0	0	2,040
	Within 1000 ft of a perennial stream	Systems	0	0	1,469
<b>Septic PumpingTotal</b>			<b>0</b>	<b>0</b>	<b>6,108</b>

- The BMP values represent the total amount of implementation in place.
- The BMP values are the amount credited in the Bay watershed model. It is the amount of BMP submitted minus the amount not given credit for (e.g., due to overlapping with other BMPs)

## Maryland Phase II WIP Strategies

### DORCHESTER Total Nitrogen Loads

		2010 Progress	2017 Interim Strategy	2025 Final Strategy	Final Target
Source Sector	Landuse	Million Lbs/Yr	Million Lbs/Yr	Million Lbs/Yr	Million Lbs/Yr
Agriculture	AFO	0.045	0.043	0.042	0.044
	CAFO	0.041	0.043	0.042	0.044
	Crop	1.073	0.959	0.892	0.774
	Nursery	0.002	0.002	0.002	0.002
	Pasture	0.012	0.014	0.018	0.006
	<b>Subtotal</b>		<b>1.173</b>	<b>1.061</b>	<b>0.996</b>
Forest	Harvested	0.019	0.019	0.019	0.020
	Natural	0.300	0.304	0.305	0.300
	<b>Subtotal</b>	<b>0.319</b>	<b>0.323</b>	<b>0.324</b>	<b>0.320</b>
Non-Tidal Atm	Non-Tidal Atm	0.221	0.221	0.221	0.221
	<b>Subtotal</b>	<b>0.221</b>	<b>0.221</b>	<b>0.221</b>	<b>0.221</b>
Septic	Septic	0.073	0.060	0.041	0.041
	<b>Subtotal</b>	<b>0.073</b>	<b>0.060</b>	<b>0.041</b>	<b>0.041</b>
Stormwater	CSS	0.000	0.000	0.000	0
	Construction	0.010	0.011	0.010	0.010
	Extractive	0.001	0.001	0.001	0.001
	Non-Regulated Developed	0.118	0.110	0.079	0.080
	Regulated Developed	0.004	0.023	0.022	0.003
	<b>Subtotal</b>		<b>0.134</b>	<b>0.145</b>	<b>0.112</b>
Wastewater	CSO	0.035	0.000	0.000	0.000
	Industrial	0.035	0.018	0.012	0.012
	Municipal	0.058	0.061	0.128	0.125
	<b>Subtotal</b>		<b>0.129</b>	<b>0.078</b>	<b>0.140</b>
<b>Total</b>		<b>2.049</b>	<b>1.888</b>	<b>1.833</b>	<b>1.684</b>

- The agricultural sector strategies were set to meet basin targets rather than county targets. Therefore, agricultural strategies are likely to overshoot or undershoot county targets, which can be reflected in the total countywide target results.
- Stormwater sector strategies may overshoot the county target for nitrogen (N) to meet the phosphorus (P) target, or vice versa. This is because the N and P reduction targets differ and the same BMP has different effects on the reduction of N and P.

**DORCHESTER**  
**Total Phosphorus Loads**

		2010 Progress	2017 Interim Strategy	2025 Final Strategy	Final Target
Source Sector	Landuse	Million Lbs/Yr	Million Lbs/Yr	Million Lbs/Yr	Million Lbs/Yr
Agriculture	AFO	0.007	0.006	0.006	0.006
	CAFO	0.007	0.006	0.006	0.006
	Crop	0.172	0.135	0.123	0.149
	Nursery	0.001	0.001	0.001	0.001
	Pasture	0.001	0.001	0.001	0.001
	<b>Subtotal</b>		<b>0.188</b>	<b>0.149</b>	<b>0.136</b>
Forest	Harvested	0.000	0.000	0.000	0.000
	Natural	0.010	0.010	0.010	0.010
	<b>Subtotal</b>	<b>0.010</b>	<b>0.010</b>	<b>0.010</b>	<b>0.010</b>
Non-Tidal Atm	Non-Tidal Atm	0.015	0.015	0.015	0.015
	<b>Subtotal</b>	<b>0.015</b>	<b>0.015</b>	<b>0.015</b>	<b>0.015</b>
Septic	Septic	0.000	0.000	0.000	0.000
	<b>Subtotal</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>
Stormwater	CSS	0.000	0.000	0.000	0
	Construction	0.002	0.002	0.002	0.002
	Extractive	0.000	0.000	0.000	0.000
	Non-Regulated Developed	0.008	0.007	0.004	0.004
	Regulated Developed	0.000	0.002	0.001	0.000
	<b>Subtotal</b>		<b>0.010</b>	<b>0.011</b>	<b>0.007</b>
Wastewater	CSO	0.004	0.000	0.000	0.000
	Industrial	0.008	0.003	0.002	0.002
	Municipal	0.006	0.005	0.010	0.010
	<b>Subtotal</b>		<b>0.018</b>	<b>0.008</b>	<b>0.012</b>
	<b>Total</b>	<b>0.241</b>	<b>0.193</b>	<b>0.181</b>	<b>0.205</b>

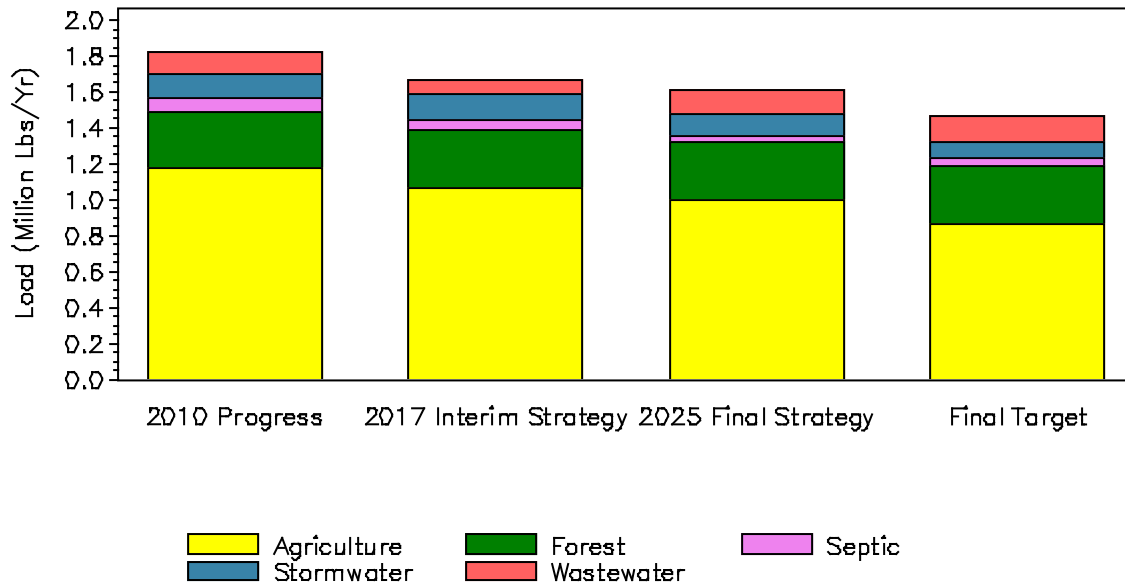
- The agricultural sector strategies were set to meet basin targets rather than county targets. Therefore, agricultural strategies are likely to overshoot or undershoot county targets, which can be reflected in the total countywide target results.
- Stormwater sector strategies may overshoot the county target for nitrogen (N) to meet the phosphorus (P) target, or vice versa. This is because the N and P reduction targets differ and the same BMP has different effects on the reduction of N and P.

**DORCHESTER**  
**Total Sediment Loads**

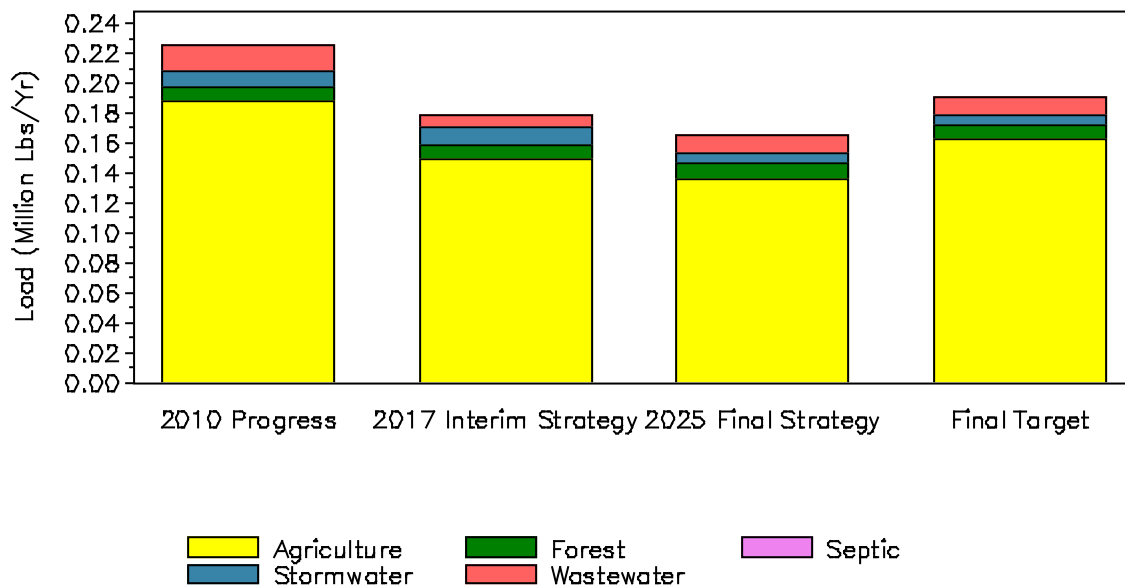
		2010 Progress	2017 Interim Strategy	2025 Final Strategy
Source Sector	Landuse	Million Lbs/Yr	Million Lbs/Yr	Million Lbs/Yr
Agriculture	AFO	0.001	0.001	0.001
	CAFO	0.001	0.001	0.001
	Crop	12.425	10.992	10.767
	Nursery	0.001	0.001	0.001
	Pasture	0.017	0.015	0.016
	<b>Subtotal</b>		<b>12.446</b>	<b>11.010</b>
Forest	Harvested	0.296	0.322	0.322
	Natural	2.562	2.596	2.601
	<b>Subtotal</b>	<b>2.858</b>	<b>2.918</b>	<b>2.923</b>
Non-Tidal Atm	Non-Tidal Atm	0.000	0.000	0.000
	<b>Subtotal</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>
Septic	Septic	0.000	0.000	0.000
	<b>Subtotal</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>
Stormwater	CSS	0.000	0.000	0.000
	Construction	1.062	1.187	1.079
	Extractive	0.130	0.130	0.087
	Non-Regulated Developed	2.436	2.447	1.009
	Regulated Developed	0.099	0.530	0.489
	<b>Subtotal</b>		<b>3.728</b>	<b>4.294</b>
Wastewater	CSO	0.575	0.000	0.000
	Industrial	0.044	0.053	0.053
	Municipal	0.049	0.418	0.950
	<b>Subtotal</b>		<b>0.667</b>	<b>0.471</b>
<b>Total</b>		<b>19.698</b>	<b>18.693</b>	<b>17.375</b>

• The State did not distribute EPA's state and basin targets at the county or sector scale for sediment. Hence a Final Target column is not shown.

DORCHESTER  
Total Nitrogen Loads

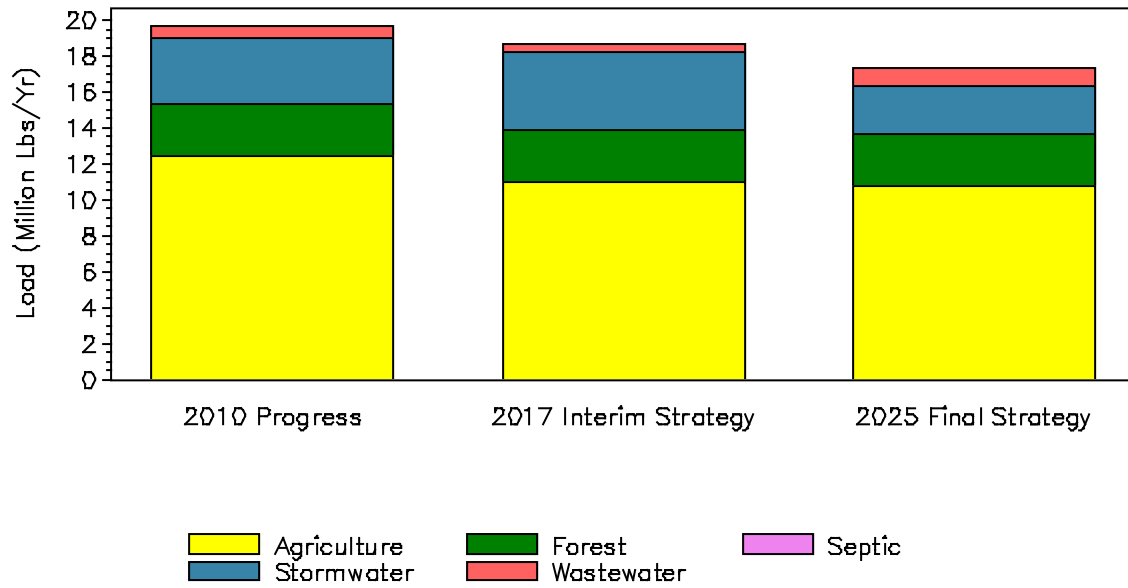


DORCHESTER  
Total Phosphorus Loads





DORCHESTER  
Total Sediment Loads



• The State did not distribute EPA's state and basin targets at the county or sector scale for sediment. Hence a Final Target bar is not shown.

## Maryland Phase II WIP Team MAST Submittals

### DORCHESTER Developed Land BMPs

		2010 Progress	2017 WIP Team	2017 Interim Strategy	2025 WIP Team	2025 Final Strategy	Change in 2017 Submittal	Change in 2025 Submittal
BMP Name	Unit							
Bioretention / Raingardens	Acres	0	0	0	25	19	0	-6
Bioswale	Acres	0	0	0	73	52	0	-21
Dry Detention Ponds and Hydrodynamic Structures	Acres	357	357	349	356	341	-8	-15
Dry Extended Detention Ponds	Acres	216	216	211	216	207	-5	-8
Impervious Urban Surface Reduction	Acres	0	0	22	0	1,156	22	1,156
Stormwater Management Generic BMP (1985 to 2002)	Acres	206	206	202	207	198	-5	-9
Stormwater Management Generic BMP (2002 to 2010)	Acres	2,481	2,481	2,425	2,489	2,382	-56	-107
Urban Filtering Practices	Acres	17	17	59	97	7,821	42	7,724
Urban Forest Buffers	Acres	0	0	556	0	817	556	817
Urban Infiltration Practices	Acres	139	139	136	223	196	-3	-27
Vegetated Open Channels	Acres	0	0	0	735	522	0	-213
Wet Ponds and Wetlands	Acres	823	823	805	916	867	-18	-49
Erosion and Sediment Control on Construction	Acres/Year	673	673	673	746	746	0	0
Erosion and Sediment Control on Extractive	Acres/Year	0	0	0	0	128	0	128
Forest Conservation	Acres/Year	455	455	456	391	421	1	30
Urban Nutrient Management	Acres/Year	3,552	3,552	8,526	3,025	10,790	4,974	7,765

- The BMP values represent the total amount of implementation in place.
- The BMP values are the amount credited in the Bay watershed model. It is the amount of BMP submitted minus the amount not given credit for (e.g., due to overlapping with other BMPs)
- Acres of BMPs might be observed to decrease in subsequent scenarios for several reasons:
  - To meet the countywide sector target, the State supplemented the Team scenarios with a generic set of BMPs.
  - Some aspects of the State strategies were automated, such that BMP levels were computed as a percentage of available acres. The application of some BMPs convert the acres of developed land to forest land, or impervious to pervious. This reduces/increases the available acres so that, if the same percentage level of other BMPs is applied to these lands, then a decrease/increase in BMP acreage might be observed even though the implementation level was intended to remain equal.
  - Because the Bay watershed model is not able to account for BMPs that treat overlapping areas (nested BMPs), the acreage available for BMPs can be used up before the Final Target is achieved. In such cases the State gave precedence to the more effective BMPs.
- The columns labeled Team include the State Highway Administration (SHA) strategies as well as 2010 Progress levels for other entities.
- The columns for Interim and Final strategies include numbers for SHA, federal facilities, State lands, industrial facilities, Phase I and II MS4 and non-regulated stormwater where applicable. They also reflect changes made by the State.

## DORCHESTER Septic System BMPs

			2010 Progress	2017 WIP Team	2017 Interim Strategy	2025 WIP Team	2025 Final Strategy	Change in 2017 Submittal	Change in 2025 Submittal
BMP Name	Zone	Unit							
Septic Connection	Critical Area	Systems	0	0	0	348	348	0	0
	Outside of the Critical Area, not within 1000 ft of a perennial stream	Systems	0	0	0	229	229	0	0
	Within 1000 ft of a perennial stream	Systems	0	0	0	53	53	0	0
<b>Septic ConnectionTotal</b>			<b>0</b>	<b>0</b>	<b>0</b>	<b>630</b>	<b>630</b>	<b>0</b>	<b>0</b>
Septic Denitrification	Critical Area	Systems	49	49	1,768	2,600	2,600	1,720	0
	Outside of the Critical Area, not within 1000 ft of a perennial stream	Systems	37	37	37	34	34	0	0
	Within 1000 ft of a perennial stream	Systems	25	25	25	294	301	0	7
<b>Septic DenitrificationTotal</b>			<b>111</b>	<b>111</b>	<b>1,831</b>	<b>2,927</b>	<b>2,934</b>	<b>1,720</b>	<b>7</b>
Septic Pumping	Critical Area	Systems	0	0	0	2,600	2,600	0	0
	Outside of the Critical Area, not within 1000 ft of a perennial stream	Systems	0	0	0	2,040	2,040	0	0
	Within 1000 ft of a perennial stream	Systems	0	0	0	1,469	1,469	0	0
<b>Septic PumpingTotal</b>			<b>0</b>	<b>0</b>	<b>0</b>	<b>6,108</b>	<b>6,108</b>	<b>0</b>	<b>0</b>

- The BMP values represent the total amount of implementation in place.
- The BMP values are the amount credited in the Bay watershed model. It is the amount of BMP submitted minus the amount not given credit for (e.g., due to overlapping with other BMPs)

## Maryland Phase II WIP Team MAST Submittals

### DORCHESTER Total Nitrogen Loads

		2010 Progress	2017 WIP Team	2017 Interim Strategy	2025 WIP Team	2025 Final Strategy	Final Target
Source Sector	Landuse	Million Lbs/Yr	Million Lbs/Yr	Million Lbs/Yr	Million Lbs/Yr	Million Lbs/Yr	Million Lbs/Yr
Stormwater	CSS	0.000	0.000	0.000	0.000	0.000	0
	Construction	0.010	0.010	0.011	0.010	0.010	0.010
	Extractive	0.001	0.001	0.001	0.001	0.001	0.001
	Non-Regulated Developed	0.118	0.119	0.110	0.116	0.079	0.080
	Regulated Developed	0.004	0.004	0.023	0.004	0.022	0.003
	<b>Subtotal</b>		<b>0.134</b>	<b>0.135</b>	<b>0.145</b>	<b>0.131</b>	<b>0.112</b>
Septic	Septic	0.073	0.073	0.060	0.041	0.041	0.041
	<b>Subtotal</b>	<b>0.073</b>	<b>0.073</b>	<b>0.060</b>	<b>0.041</b>	<b>0.041</b>	<b>0.041</b>

- The columns labeled Team include the State Highway Administration (SHA) strategies as well as 2010 Progress levels for other entities.
- The columns for Interim and Final strategies include numbers for SHA, federal facilities, State lands, industrial facilities, Phase I and II MS4 and non-regulated stormwater where applicable. They also reflect changes made by the State.

### DORCHESTER Total Phosphorus Loads

		2010 Progress	2017 WIP Team	2017 Interim Strategy	2025 WIP Team	2025 Final Strategy	Final Target
Source Sector	Landuse	Million Lbs/Yr	Million Lbs/Yr	Million Lbs/Yr	Million Lbs/Yr	Million Lbs/Yr	Million Lbs/Yr
Stormwater	CSS	0.000	0.000	0.000	0.000	0.000	0
	Construction	0.002	0.001	0.002	0.001	0.002	0.002
	Extractive	0.000	0.000	0.000	0.000	0.000	0.000
	Non-Regulated Developed	0.008	0.008	0.007	0.007	0.004	0.004
	Regulated Developed	0.000	0.000	0.002	0.000	0.001	0.000
	<b>Subtotal</b>		<b>0.010</b>	<b>0.010</b>	<b>0.011</b>	<b>0.009</b>	<b>0.007</b>
Septic	Septic	0.000	0	0.000	0	0.000	0.000
	<b>Subtotal</b>	<b>0.000</b>	<b>0</b>	<b>0.000</b>	<b>0</b>	<b>0.000</b>	<b>0.000</b>

- The columns labeled Team include the State Highway Administration (SHA) strategies as well as 2010 Progress levels for other entities.
- The columns for Interim and Final strategies include numbers for SHA, federal facilities, State lands, industrial facilities, Phase I and II MS4 and non-regulated stormwater where applicable. They also reflect changes made by the State.

**DORCHESTER**  
**Total Sediment Loads**

		<b>2010 Progress</b>	<b>2017 WIP Team</b>	<b>2017 Interim Strategy</b>	<b>2025 WIP Team</b>	<b>2025 Final Strategy</b>
<b>Source Sector</b>	<b>Landuse</b>	<b>Million Lbs/Yr</b>	<b>Million Lbs/Yr</b>	<b>Million Lbs/Yr</b>	<b>Million Lbs/Yr</b>	<b>Million Lbs/Yr</b>
Stormwater	CSS	0.000	0.000	0.000	0.000	0.000
	Construction	1.062	1.062	1.187	0.997	1.079
	Extractive	0.130	0.130	0.130	0.130	0.087
	Non-Regulated Developed	2.436	2.498	2.447	2.098	1.009
	Regulated Developed	0.099	0.101	0.530	0.101	0.489
	<b>Subtotal</b>	<b>3.728</b>	<b>3.793</b>	<b>4.294</b>	<b>3.327</b>	<b>2.664</b>
Septic	Septic	0.000	0	0.000	0	0.000
	<b>Subtotal</b>	<b>0.000</b>	<b>0</b>	<b>0.000</b>	<b>0</b>	<b>0.000</b>

- The columns labeled Team include the State Highway Administration (SHA) strategies as well as 2010 Progress levels for other entities.
- The columns for Interim and Final strategies include numbers for SHA, federal facilities, State lands, industrial facilities, Phase I and II MS4 and non-regulated stormwater where applicable. They also reflect changes made by the State.