

Caroline County DRAFT 2012-2013 Milestones For Phase II WIP

SUMMARY

The following draft 2012-2013 Milestones represent Caroline County's initial effort to achieve the County's nutrient and sediment reduction targets by 2020. The achievement of a particular strategy will be dependent upon County/municipal staffing levels and the ability to secure funding from the funding source(s) indicated for each strategy. These milestones will be revised as necessary to reflect changes in status of funding, staffing, and/or water quality.

Sector: Urban Nonpoint Source

Scale: County-wide

Recommendations:

1. Plan, design and implement 4 stormwater BMP retrofit projects on publically-owned, high-intensity impervious urban land in towns of Denton and Greensboro.
 - a. Funding Source: Clean Water Act 319(h) grant funds
 - b. Partners: County, Denton and Greensboro Planning and DPW depts, Center for Watershed Protection (CWP)
 - c. Timeline: 7/2012 – 4/2014
 - d. Estimated Cost: \$237,600
 - e. Estimated Reductions: approx. 13 lbs TN/yr, 1.5 lbs TP/yr, 0.2 tons TSS/yr
 - f. Location: Upper Choptank River HUC8 Watershed
2. Plan, design and implement stormwater BMP retrofit on the County's Department of Public Works property on Wilmuth Street.
 - a. Funding Source: Clean Water Act 319(h) grant funds
 - b. Partners: County Planning and Public Works depts.
 - c. Timeline: 2011 – 2012
 - d. Estimated Cost: \$77,400
 - e. Estimated Reductions: approx. 11 lbs TN/yr, 7 lbs TP/yr, 0.9 tons TSS/yr
 - f. Location: Upper Choptank River HUC8 Watershed
3. Review and assess all County roads for feasibility of stormwater management retrofit projects, develop priority list of projects.
 - a. Funding Source: Clean Water Act 319(h) grant funds, MDE, MDOT
 - b. Partners: County Planning DPW depts., CWP
 - c. Timeline: ongoing, beginning 7/2012
 - d. Estimated Cost: \$10,000
 - e. Estimated Reductions: programmatic goal
 - f. Location: County-wide
4. Plan, design and implement stormwater BMPs on unpaved County roads.
 - a. Funding Source: Clean Water Act 319(h) grant funds
 - b. Partners: County Planning and DPW depts, CWP
 - c. Timeline: beginning 2013
 - d. Estimated Cost: unknown

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- e. Estimated Reductions: 3.6 lbs TSS/ft of road/yr (32 miles of unpaved County roads total)
 - f. Location: start Upper Choptank River HUC8 Watershed, ongoing County-wide
5. Identify additional publically-owned buildings and properties suitable for BMP demonstration/education project sites.
- a. Funding Source: Clean Water Act 319(h) grant funds, CBF, NFWF, DNR, CFN
 - b. Partners: County Planning and Education depts., municipalities, CWP
 - c. Timeline: 7/2012 – 10/2012
 - d. Estimated Cost: Staff time
 - e. Estimated Reductions: TN, TP, TSS to be determined
 - f. Location: Upper Choptank River HUC8 Watershed
6. Assess feasibility of initiating a bi-monthly street sweeping/storm drain cleanout program in two or more municipalities utilizing a shared street sweeper and implemented in conjunction with storm drain cleanout and maintenance program.
- a. Funding Source: USDA Rural Development Community Facilities grant/loan program
 - b. Partners: County, municipalities, USDA Rural Development
 - c. Timeline: 11/2011 – 11/2012
 - d. Estimated Cost: \$50,000-\$100,000 (street sweeper); municipal DPW staff time for maintenance and operation
 - e. Estimated Reductions: 25%-60% TSS/linear foot/yr (in conjunction with storm drain cleanout and depending on mechanical or vacuum system and frequency)
 - f. Location: Upper Choptank River, Lower Choptank River, and Tuckahoe Creek HUC8 Watersheds
7. Continue to identify eligible stormwater BMPS implemented in County and municipalities prior to 2010 and submit to MDE for nutrient/sediment credits.
- a. Funding Source: N/A
 - b. Partners: County, municipalities, MDE
 - c. Timeline: ongoing
 - d. Estimated Cost: County Planning staff time
 - e. Estimated Reductions: to be determined
 - f. Location: County-wide
8. Create a County-wide system for tracking installation and monitoring performance of urban BMPs.
- a. Funding Source:
 - b. Partners: County, municipalities, Choptank Riverkeeper
 - c. Timeline: beginning 2012
 - d. Estimated Cost: County Planning staff time
 - e. Estimated Reductions: programmatic goal
 - f. Location: County-wide
9. Identify annual funding sources to implement urban BMPs.
- a. Funding Source: (potential) CBF, CFN, CBT, MDE, DNR, EPA, NFWF

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- b. Partners: County, municipalities, UMD Sea Grant Extension, Choptank Riverkeeper, CWP
 - c. Timeline: beginning 2012
 - d. Estimated Cost: County/municipal staff time
 - e. Estimated Reductions: programmatic goal
 - f. Location: County-wide
10. Assist municipalities, communities and Home Owners Associations with development of voluntary urban nutrient management plans for homeowners/businesses.
- a. Funding Source: USDA Rural Development Community Facilities grant/loan program
 - b. Partners: County, municipalities, HOAs
 - c. Timeline: beginning 2012
 - d. Estimated Cost: County/municipal staff time w/possible assistance from UMD Ag and Sea Grant Extension offices.
 - e. Estimated Reductions: programmatic goal, nutrient/sediment reductions TBD.
 - f. Location: County-wide

**Sector: Urban and Agricultural Nonpoint Source
Scale: County-wide**

1. Develop program to tie economic development/community partner opportunities to reduction projects. Work with towns to develop resources list of contractors, potential labor pools, organizations with members willing to pitch in as volunteers, and schools willing to partner students with projects. Determine training needs for small businesses and local labor force in areas of environmental site design, best management practices (BMPs) for urban and agricultural lands, stormwater retrofit and non-structural stormwater management techniques, and maintenance of BMPs. Work with County economic development organizations and MD DBED on funding opportunities for demonstration projects/training workshops.
 - a. Funding Source: MD DBED
 - b. Partners: County/municipal economic development organizations, MD DBED, CWP, Choptank Tributary Team
 - c. Timeline: ongoing
 - d. Estimated Cost: Unknown at this time
 - e. Estimated Reductions: Programmatic goal
 - f. Location: Countywide

2. Continue in-stream, non-tidal water quality monitoring quarterly of 17 sites in Oakland, Greensboro, and Denton HUC12 subwatersheds in the Upper Choptank River Watershed, and expand testing sites to 3 additional subwatersheds.
 - a. Funding Source: Chesapeake Bay Trust, NFWF
 - b. Partners: CWP, Mid-Shore Riverkeeper Conservancy, Choptank Tributary Team

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- c. Timeline: ongoing
- d. Estimated Cost: \$15,500/17 sites
- e. Estimated Reductions: Programmatic goal
- f. Location: Countywide

Sector: Septics

Scale: County-wide

1. Upgrade 44 (22 in 2012, 22 in 2013) conventional septic systems to BAT systems.
 - a. Funding Source: Bay Restoration Fund (BRF)
 - b. Partners: County Planning dept, State Environmental Health dept.
 - c. Timeline: 2012 – 2013
 - d. Estimated Cost: \$594,000
 - e. Estimated Reductions: 420 lbs TN/yr
 - f. Location: 34 systems in CA, 10 systems non CA

2. Assess feasibility of establishing septic districts to manage regular inspection and pump-out program of septic systems. Explore potential of funding through Bay Restoration Fund (BRF).
 - Apply to State/MDE for BRF funding of septic inspections/pumpouts
(comparison of cost per lb of TN reduced – BAT upgrade vs pumpout)
 - Determine existing capacity of local septage inspection/hauling companies, receiving facilities, and management/oversight entities. Study feasibility of expanding local capacity (including County department) to serve program.
 - Delineate districts to encompass all on-site septic systems in County. Critical Area to serve as District 1 (priority). Remaining districts to follow election district boundaries?
 - Determine feasible rotating schedule of inspections/pump outs for districts (eg., 2 yrs per district).
 - Establish system for evaluating and addressing clusters of failing septics within districts (i.e., what is feasibility of implementing a shared or community system in areas of multiple, failing or non-conforming systems).
 - a. Funding Source: Bay Restoration Fund (BRF); MDE
 - b. Partners: County Planning dept, State Environmental Health dept., WWTP facilities, private contractors
 - c. Timeline: study 2012 – 2013
 - d. Estimated Cost: \$300-\$400/system inspection, \$100-\$200/tank pumpout
 - e. Estimated Reductions: 1-3 lbs TN/septic system/yr, approx. 8,000 systems in County (1100 in CA)
 - f. Location: priority CA, and County-wide

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3. Assess density and condition of septic systems located adjacent to municipal sewer service areas for feasibility of connecting failing/non-conforming properties to municipal WWTPs.
 - a. Funding Source: Bay Restoration Fund (BRF)
 - b. Partners: County Planning dept, State Environmental Health dept.
 - c. Timeline: study 2012 – 2013
 - d. Estimated Cost: \$4,000-\$5,000 to decommission septic and connect property to sewer main at street, plus capital cost for user.
 - e. Estimated Reductions: 15-30 lbs TN/septic system/yr
 - f. Location: priority CA, and County-wide