

Maryland’s 2013 Programmatic Two-Year Milestones

Target Date	Milestone	Deliverable	Lead Agency	Comments/Status Updates
(Point Sources/Major Municipal)				
January 2012	Funding for remaining ENR upgrades	Propose amendment to Bay Restoration Fund (BRF) statute to change fee to generate the necessary revenue to complete the ENR strategy commitment.	MDE	COMPLETED: In 2012 the Maryland General Assembly approved legislation to double the BRF fee starting July 1, 2012. The Department has issued bonds that will provide adequate funding for the remaining ENR upgrades.
(Point Sources/Minor Municipal)				
Early 2012	<ul style="list-style-type: none"> –Evaluate feasibility, cost effectiveness, permitting, and funding options. –Consult with local partners. –Identify additional facilities as a contingency. 	<ul style="list-style-type: none"> –Draft list of candidate plants. –Draft supplemental list of plants. 	MDE	COMPLETED: Maryland began working on this in late 2011 at which time a preliminary list of 10 candidate plants was identified. Funding options and feasibility was evaluated, in consultation with local partners and other stakeholders, through the Governor’s Task Force on Sustainable Growth and Wastewater Disposal. The draft list of candidate plants was revised and included in Appendix A of the WIP submitted to EPA on March 30, 2012. A supplemental list was identified as part of the ranked list of candidate plants described below.
Early 2013	Funding for Minor ENR upgrades	Propose amendment to Bay Restoration Fund (BRF) statute to change fee.	MDE	COMPLETED: Amendment to the BRF statute, in the 2012 General Assembly session (HB 446), doubled the BRF fee for most Marylanders effective 7/1/2013. With the increased fee, sufficient grant funds are available to complete ENR upgrades at the 67 major WWTPs and 5 to 10 minor WWTPs by 2017. Beginning July 2017 (FY 2018), in addition to ENR upgrades at WWTPs, the BRF (WWTP fund) is also authorized to fund Septic upgrades & Stormwater BMPs.

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2013	<ul style="list-style-type: none"> –Make final determination regarding upgrade of minor plants. –Notify candidate plants and begin discussing potential upgrades –MDE will seek funding to assist local governments with upgrades. 	<ul style="list-style-type: none"> –Final list of candidate plants –Documentation of correspondence with candidates. –Identify funding sources; 	MDE	<p>COMPLETED:</p> <ul style="list-style-type: none"> –Maryland has developed a list that ranks minor plants. The list was discussed at the 9/26/13 Bay Restoration Fund (BRF) Advisory Committee. The list of minor WWTP targeted for ENR is complete, but is subject to ranking order refinements. . See list at: http://www.mde.state.md.us/programs/Water/BayRestorationFund/Documents/Minor%20ENR%20Priority%20-%20Cost%20Per%20Lb%20Reduction.pdf –The list indicates the status of pre-planning, planning, design, construction and operations, which reflect consultation with local partners. Correspondence with candidates is available upon request –Regarding the identification of funding sources see, “Funding for Minor ENR upgrades” above.
(Point Sources/Minor Industrial)				
2012	<ul style="list-style-type: none"> –Conduct an extensive survey to determine the nature as well as quantity of nutrients produced by minor industrials. –Continue to refine the loading estimates to identify and verify the non-significant industrial discharges of nutrients. 	<ul style="list-style-type: none"> –Draft Survey results –Refinement results 	MDE	<p>COMPLETED:</p> <ul style="list-style-type: none"> –MDE WMA Permits Program completed a draft survey of the nature and quantity of the nutrient loads from all individually permitted industrial facilities. <p>Survey findings led to the following strategy for refinement of results in the future:</p> <ul style="list-style-type: none"> – New or expanded loads will be offset. – Loading levels will be determined or refined during renewal of permits. – Facilities, classified into four groups by size, will be addressed as follows: <ul style="list-style-type: none"> ▪ 1st Level (smallest): After load established, no

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				<p>further monitoring required.</p> <ul style="list-style-type: none"> ▪ 2nd Level: Permit will require monitoring but no reductions. ▪ 3rd Level: 25% reduction in aggregate. ▪ 4th Level: Individual nutrient limits to be established. <p>This strategy was conveyed to the public during the Spring 2013 WIP Regional Workshops, See Slide 14: http://www.mde.state.md.us/programs/Water/TMDL/TMDLImplementation/Documents/Regional_Meetings/Spring2013/Progress_Urban.pdf</p>
2013	<ul style="list-style-type: none"> –Finalize evaluation of the survey –Complete refinement of the loading estimates. 	<ul style="list-style-type: none"> –Final Survey results –Final refinements of estimates 	MDE	<p>COMPLETED:</p> <p>MDE secured consulting services to refine the loading estimates. Those refinements are being used in the 2013 Annual Progress load estimation. As individual permits are renewed in the coming years, the estimates will be updated (See Strategy for Refinement of Results above).</p>
Septic Systems				
2012	<p>Assess options for upgrade of 60% of septic systems in Critical Area by 2017. Complete development of a detailed strategy for implementation setting forth a timeline for expansion of regulatory requirements, the extent to which sizing grant awards based on a property owner's income will increase the number of systems that can be</p>	<p>Assessment & recommendation</p>	MDE	<p>PARTIAL COMPLETION:</p> <p>Although a detailed strategy has not been documented, several significant steps to control septic system loads were taken during the 2012-2013 Milestone period:</p> <ul style="list-style-type: none"> – Maryland began working on this initiative in late 2011 at which time a recommendation to increase Maryland's existing Bay Restoration Fund (BRF) to provide funding for Maryland's septic system strategy was adopted by the Governor's Task Force on Sustainable Growth and Wastewater Disposal. Final recommendations of the Task Force were released in December 2011. See: http://www.mdp.state.md.us/PDF/YourPart/septicSTF/SepticsTF-FinalReport.pdf – State legislation in 2012 (HB 446) doubled the

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	upgraded using BRF funds, and the potential for tax incentives or credits to incentivize upgrades.			<p>BRF, which will double the rate of septic system upgrades from about 600/yr to 1,200/yr.</p> <ul style="list-style-type: none"> – State legislation adopted in 2012 (HB 446) expands the use of the BRF for an increased number of septic upgrades per year beginning in 2018 following completion of all major ENR upgrades. – Effective January 1, 2013, new regulations require best available technology (BAT) septic denitrification systems for new construction in the Chesapeake and Coastal Bays watersheds. – Cost-Effectiveness assessment shows that septic system upgrades within 1,000’ of tidal waters cost about \$100 per pound of nitrogen reduced per year over a 20-year period. See Side 7: http://www.mde.state.md.us/programs/Water/TMDL/TMDLImplementation/Documents/Regional_Meetings/Fall2013/presentations/Cost_Efficiency_WIP_Fall_Workshops_10312013.pdf – State legislation in 2012 (SB 236) limits future development of large lot housing tracts on septic systems. SB236: Sustainable Growth and Agricultural Preservation Act of 2012. See: http://planning.maryland.gov/ourwork/sb236implementation.shtml <p>Maryland will continue to conduct additional analyses, which will consider lower-cost alternatives to BAT upgrades.</p>
2012	Initiate the necessary regulatory and/or legislative changes according to the plan	Legislative and/or regulatory proposal	MDE	<p>PARTIAL COMPLETION: A legislative amendment to the Bay Restoration Fund (BRF) law was made ahead of schedule in the 2012 General Assembly session. The Maryland</p>

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	developed in 2011 for the upgrade of 60% of septic systems in the Critical Area by 2017.			General Assembly approved legislation to double the BRF starting July 2012. The legislation and regulations do not attempt to fund the entire 60% upgrade in the critical area by 2017. See other legislative and regulatory actions above.
(Urban Stormwater/Phase I MS4)				
2012	Maryland will ask its Congressional delegation to work to pursue the authorization for federal funding for the Chesapeake Bay jurisdictions through either pending or new legislation.	Correspondence	MDE	COMPLETED: SSA worked through the MDE Congressional Legislative Liaison to reflect WIP priorities in the annual federal request made by Maryland to the US Congress.
2012	<ul style="list-style-type: none"> –Work directly with federal agency representatives to refine cost estimates. –Conduct local financial feasibility analyses. –Determine the federal share of stormwater costs. –Develop a strategy with a time line to secure federal share of funds. 	<ul style="list-style-type: none"> –Cost Study –Revenue Potential Study –Estimation of share –Strategy & timeline 	MDE	<p>PARTIALLY COMPLETED:</p> <ul style="list-style-type: none"> –MDE funded the King and Hagan study in 2011 and participated with EPA’s cost estimate process in coordination with EPA’s 2012 Clean Water Needs Survey. –MDE funded a study of revenue generation potential and received draft findings in 2011. – On-going – On-going <p>MDE Science Services Administration (SSA) has communicated its cost estimates to EPA for WIP implementation and developed local area cost estimates. SSA has researched and BMP costs & effectiveness estimates through its regional outreach workshops in November 2013. See: http://www.mde.state.md.us/programs/Water/TMDL/TMDLImplementation/Documents/Regional_Meeting</p>

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				s/Fall2013/presentations/Cost_Efficiency_WIP_Fall_Workshops_10312013.pdf
2012	Request that the U.S. Army Corps of Engineers (ACOE) formally pursue the necessary prioritization of stormwater projects in Maryland within its capital project improvement plan.	Correspondence	MDE	COMPLETED: MDE advocated with the Maryland Congressional delegation to secure more funding for stormwater retrofits - specifically through amendment to the Water Resources Development Act (WRDA). No direct correspondence with ACOE.
July 1, 2012	Submit all draft Phase I MS4 permits to EPA	Draft Permits for Phase I MS4 jurisdictions	MDE	COMPLETED: MDE has drafted and submitted all outstanding draft Phase I MS4 permits to EPA based on several meetings with Phase I localities, environmental stakeholders and EPA comments.
November 1, 2012	Provide tentative determinations to EPA for all Phase I MS4 permits	Tentative Determination for Phase I MS4 permits	MDE	ONGOING: Final determinations to issue permits: –Baltimore County's determination reached on 12/23/2013. –Baltimore City's determination reached on 12/27/2013. –Prince George's County's determination reached on 1/2/2014. – Ann Arundel County determination reached on 2/12/2014. Tentative determination to issue permits: –All of the above. - MDE to issue tentative determinations to MS4 permits for medium sized jurisdictions: Carroll, Charles, Harford, Howard, and Frederick Counties in 2014. These will be based on agreement with EPA to lift all objections.

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				For Current Status See: http://www.mde.maryland.gov/programs/water/stormwatermanagementprogram/pages/programs/waterprograms/sedimentandstormwater/storm_gen_permit.aspx
2013	Finalize the stormwater retrofit guidance; make it consistent with forthcoming recommendations from the CBP's Urban Stormwater Work Group.	Revised guidance	MDE	ONGOING: MDE incorporated the MS4 guidance in draft permits and will finalize a version in tandem with the promulgation of the permits. MDE continues to participate in CBP's Urban Stormwater Work Group and will incorporate any 2013 recommendations into an updated version of the MS4 restoration guidance.
(Urban Stormwater/Phase II MS4)				
December 31, 2012	Submit all draft Phase II MS4 permits to EPA for review	Draft Phase II MS4 permits	MDE	ONGOING: Phase II MS4 permits will be promulgated as soon as all Phase I MS4 permits have gone to final determination and include the list of potential permittees to EPA.
1/1/2014	General Permit For Stormwater Discharges Associated With Industrial Activity	Permit	MDE	This was not identified as a milestone; however, the accomplishment is noteworthy. MDE has issued, as Final, the General Permit For Stormwater Discharges Associated With Industrial Activity, Permit No. 12-SW (NPDES No. MDR00), with an effective date of January 1, 2014. See, http://www.mde.state.md.us/programs/Permits/WaterManagementPermits/WaterDischargePermitApplications/Pages/Permits/watermanagementpermits/water_applications/stormwater.aspx
Stormwater – Other				
2012	Regenerative SW Conveyance: A State-	DNR's Guiding Principles for	DNR	DNR role Completed. The lead role on this has been adopted by EPA.

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	convened workgroup is to evaluate design options to yield pollution reduction and habitat creation or improvement. This workgroup will also produce site selection criteria for determining the most appropriate locations for the spring of 2011 and be adopted into State policy by the end of the year.	Management of Maryland's Streams and Rivers		Maryland DNR convened an internal workgroup that began consultations in 2011 and completed their work in 2012. These guidelines describe how DNR will review proposals for projects with objectives to restore, rehabilitate, stabilize or enhance the structure and/or function of stream systems in Maryland. DNR will continue to work with MDE, EPA and Army Corps to address RSC permitting issues and revise the guidelines as appropriate.
2012	Rural Residential Reforestation: Begin GIS analysis to identify the opportunities for planting.	Documentation on Assessment	DNR	COMPLETED Initiated analysis in 2011.
2012	Rural Residential Reforestation: Work with existing local government programs on opportunities for transferring their concepts to other jurisdictions. Choose a pilot area and cluster potential planting areas in high priority watersheds.	Choose pilot project area	DNR	COMPLETED Pilot project area chosen.
2012	Rural Residential Reforestation: Begin implementation in pilot	Documentation on acres planted	DNR	COMPLETED Frederick County has a program with grant funding from NFWF.

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	area, continue outreach to transfer existing local program concepts to other jurisdictions.			
2013	Rural Residential Reforestation: Program expansion.	Documentation on identification of additional planting areas	DNR	COMPLETED
Agriculture				
2012	Propose changes to nutrient management regulations which are phased into effect between adoption and 2016. Changes effective during 2012/2013 milestones include: 1. Restricting fall fertilization of all small grain crops unless a soil nitrate test indicates soil nitrate levels below certain thresholds; 2. Requiring incorporation of organic nutrient sources with certain exceptions; 3. Limiting fall applications of organic nutrient sources and 4. Requiring a cover crop following fall applications of organic nutrient sources. Phased	Promulgate regulatory changes with phased implementation dates.	MDA	<p>COMPLETED</p> <p>Regulations were sent to MD AELR committee; to be published in Maryland Register for 45 day public comment period June, 2012.</p> <p>On October 15, 2012, MDA’s revised nutrient management regulation became effective. The revised regulations modify how a farm nutrient management plan is developed and implemented and change the way organic nutrient sources and other materials are managed. The new requirements will be phased in over the next several years.</p>

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	<p>in requirements; 1. Nutrient application setbacks of 10—35 feet dependent on application methods; (2014), 2. Require stream protection best management practices where livestock are adjacent to streams (2014), 3. Prohibit winter application of all organic nutrient sources (2016)</p>			
2013	<p>MDA will adopt a revised Phosphorus Site Index as part of the MD regulatory nutrient management program in 2012. The new PSI will be incorporated into nutrient management plan development occurring in the winter of 2012/2013 in preparation for the 2013 crop season. Nutrient management plans for the 2013 crop season will be written using the new revised PSI.</p> <p>Beginning with the 2013 crop season data, the State will report</p>	<p>Nutrient management regulations to modify phosphorus site index; implementation of new instrument beginning spring 2013</p>	MDA	<p>PARTIALLY COMPLETED</p> <p>University of Maryland has completed revisions of phosphorus site index (P-index) tool to better account for risk of phosphorus movement in spring 2011.</p> <p>Regulations to implement use of the new phosphorus site index tool were developed and made available for public comment.</p> <p>The regulations were withdrawn for modification in response to public comments. This topic will be addressed in Maryland’s 2014-2014 Programmatic Milestones.</p>

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	<p>aggregated data reflecting phosphorus applications to cropland within specifically defined geographic areas. Data will be gathered from annual nutrient management reporting information and will reflect phosphorus applications by crop type before and after changes to the P-site index. Additionally, the entire P-site index will be peer reviewed every five years by a scientific panel of subject matter experts, appointed by BayStat, beginning in 2017. This review of the P-site index will be based on the pounds of reduction of phosphorus applied for crop production as it relates to achieving the intended goal of minimizing transport and reducing phosphorus reserve levels in soil.</p>			
2012	Urban Nutrient	Regulations finalized to	MDA	COMPLETED

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	<p>Management</p> <p>Develop regulations to implement Fertilizer Use Act, which limits (nitrogen & phosphorus) fertilizer content and use on non-agricultural land; requires certification and training programs for non-agricultural applicators; requires certain fertilizer product labeling and requires outreach and education program for homeowner fertilizer use.</p>	<p>implement Fertilizer Use Act.</p> <p>Education programs initiated</p>		<p>Fertilizer Use Act signed into law May, 2011. Requirements phased in. MDA initiated an education program in 2013.</p> <p>A grant was secured from the Chesapeake Bay Trust to establish the training program and develop a database to track urban progress. Regulations to implement the certification program and fertilizer application requirements were published in the <i>Maryland Register</i> January 25, 2013. Homeowner publications were produced to reflect the new requirements, information on the program and updates is available on MDA’s web site, and a training manual and classes were released in spring of 2013.</p>
Accounting for Growth and Nutrient Trading Program				
<p>The Maryland Bay Cabinet and Bay Workgroup commits to work with EPA to address, from EPA’s final assessment report of Maryland’s Trading and Offset Program, all unresolved Maryland-specific Tier 1 recommendations (by the end of 2012) and other unresolved recommendations common to all jurisdictions (by the end of 2013).</p> <p>In addition, the Maryland Bay Cabinet and Bay Workgroup will meet the following milestones to ensure the development of a fully implementable growth offset program in Maryland by the end of 2013.</p> <p>Throughout the milestone period, the Bay Workgroup will meet with EPA leads and participate in WQGIT Trading and Bay Workgroup meetings to provide periodic updates to EPA and to obtain feedback on necessary adjustments.</p>				
Spring to Fall 2012	Complete research and develop more detailed approaches for offsets.	Documentation of Evaluation	Bay Wkrgrp	COMPLETED Additional research was conducted and the results were presented to the Bay Cabinet at meetings on [add dates]
Spring to	Public process and	Documentation of	Bay	COMPLETED

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Fall 2012	stakeholder review of draft growth offset policy and implementation strategy	meetings	Wkrgrp	A draft discussion document, draft regulations, and slide presentation were posted on MDE’s website. The Agencies (MDE, MDA, DNR and MDP) held 8 regional meetings throughout the state. Transcripts of the regional meetings were posted on MDE’s website. The agencies also met with stakeholders individually. Numerous comments were submitted at the meetings and in writing.
Remainder of 2012	Review results from the public process and make recommended edits to the strategy. Finalize the development of the offset policies and procedures. Evaluate current and begin development of the State tracking/accounting for growth process.	Documentation of policies and procedures Draft SOP for tracking/accounting for growth and offsets	Bay Wkrgrp Bay Wkrgrp	COMPLETED Public comments revealed a lack of consensus on key issues. The policies and procedures could not be finalized. COMPLETED The State secured a grant to develop a tracking/accounting system and developed a variety of analysis tools to support the policy development.
Remainder of 2012	Evaluate the need for statutory and/or regulatory changes. Take next steps needed for initiating the offset policy and implementation strategy		Bay Wkrgrp	COMPLETED Public comments revealed a lack of consensus on key issues. The policies and procedures could not be finalized.
Beginning of 2013	Legislation if needed. Continue to work with EPA/Bay Program Trading and Offset workgroup to	Documentation of proposed bill	Bay Wkrgrp	COMPLETED Currently it is our judgment that legislation is not needed. ONGOING State agency representatives have participated in the EPA Bay Program Trading and Offsets workgroup. In December 2013 State agency representatives and EPA

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	discuss/address, where needed, EPA recommendations common to all jurisdictions by the end of 2013.			discussed Maryland’s program relative to EPA recommendations common to all jurisdictions.
Remainder of 2013	<p>Regulations if needed.</p> <p>Outreach to local governments to advance implementation of effective offset program for sectors.</p> <p>Finalize development of the comprehensive State tracking/accounting for growth and offsets system.</p>	Documentation of proposed regulations, meetings, tracking growth/offsets system, alternatives	Bay Wkrgrp	<p>ONGOING Sept-Dec 2013 - Agencies developed internal draft regulations and policies for Accounting for Growth. Stakeholder objections resulted in a demand for a work group. January 2013 – Agencies appointed and convened a representative stakeholder Work Group that included representatives of local governments and charged them with clarifying issues in dispute and finding common ground. August 2013 – Work Group recommendations, provided to the State. There was no consensus on some key issues and the agencies continue to explore options with stakeholders.</p> <p>ONGOING January 2013 – Stakeholder Work Group included representatives of local governments. Additional outreach will occur before the program is implemented. October 2013 – Agencies briefed Legislative Committees. Another briefing is scheduled for January 14, 2014.</p> <p>ONGOING The development of a tracking/accounting system is contingent on resolving the specifics of the regulation.</p>

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	Alternative – demonstrate that a specific sector will not experience growth in loading.			COMPLETED Demonstration of a sector growth analysis was discussed with EPA in October 2013.
<p>New or increased loadings that occur prior to offset program implementation in 2013 will be addressed as described in Maryland’s final Phase I WIP. Specifically:</p> <p>To forecast “new development acres”, MDP uses the most recent data of actual acres developed from the MDPropertyView database and other applicable Maryland State Data Center information and then forecasts acres developed through the 2-Year Milestone. The forecasts are used to estimate additional nutrient and sediment loadings expected for each 2-Year Milestone.</p> <p>To forecast “new septic tanks”, MDE surveys sanitarians statewide to determine the actual number of septic tanks installed in the year previous to the 2-Year Milestone and assumes that number will be installed each year during the milestone (also, MDP uses the most recent data of residential units built to estimate the number of septic tanks installed based on the current percentage of single-family homes in Maryland that are served by septic tanks).</p> <p>After each 2-Year Milestone is complete, data on actual amounts of new development acres and septic tanks installed will be determined by MDP and MDE. The difference between actual and estimated amounts will be carried over into the next 2-Year Milestone either as a credit or deficit.</p> <p>Also, to facilitate the gathering of more timely data on new development, MDP will request this information through annual reports that local governments must submit to MDP. 2009 legislation requires the reporting of additional measures/indicators. MDPropertyView is updated annually by each local government tax and assessment office.</p>				
<p>* As part of the adaptive management process for achieving water quality goals, jurisdictions may submit programmatic milestones that modify, are in place of, or are in addition to milestones listed in their Phase I WIPs so long as the jurisdiction can demonstrate that they will be as effective toward meeting water quality goals.</p>				

DNR – Maryland Department of Natural Resources

MDA – Maryland Department of Agriculture

MDE – Maryland Department of Environment

MDP – Maryland Department of Planning