Virginia Phase III WIP Programmatic Action Template

The Commonwealth has initiated the process for developing the Phase III Watershed Implementation Plan (WIP), which builds on BMPs and programmatic actions developed during the Phase II WIP to meet 2025 goals. As Virginia and local stakeholders move forward in Phase III, this document has been developed to provide a format for building and submitting local Phase III programmatic actions. Localities, PDCs and SWCDs will submit input decks with revised or enhanced BMP data that will be run through the Chesapeake Assessment and Scenario Tool (CAST). Programmatic actions that will facilitate BMP implementation will be submitted to DEQ using this formatted spreadsheet.

Using the table below, enter proposed programmatic actions and quantitative measures of implementation, when applicable. In addition, you may enter funding/capacity needs that can be utilized to implement the programmatic actions. There are also columns to enter co-benefits that will result from the implementation of the programmatic actions and gaps in statutory/regulatory authority that may exist.

Action ID	PROGRAMMATIC ACTIONS TO IMPLEMENT SELECTED BMPS	QUANTITATIVE MEASUREMENT	FUNDING AND CAPACITY NEEDS	LOCALLY IDENTIFIED CO-BENEFITS	GAPS IN STATUTORY/REGULATORY AUTHORITY
Shoreline Management/Stream Restoration					
1	Need a specific tidal wetland enhancement BMP (similar to non-tidal wetland enhancement BMP) and more tidal wetland BMPs to include enhancements and improvements that are already being done in localities.	Increase acres or linear feet of wetland improvements and enhancements placed in tidal areas.	Expert Panel review process or add-on to existing expert panels, experts to participate that understand tidal wetlands in the coastal plain, the variety of designs that can be created, and the nutrient and sediment reductions that can be achieved.	Tidal wetlands, living shorelines, etc. reduce impacts from coastal storm surge, wave-driven erosion, and sea level rise. Increasing plant densities could help mitigate these threats, as wetlands become inundated, densities decrease providing less shoreline stabilization and nutrient reduction. Providing more options and flexibility to rehabilitate shorelines in high-priority flood zones that also provide nutrient reductions and improve water quality	
2	Need dedicated funds for NGO's to educate and obtain buy-in from private property owners to understand the importance of 'soft' shorelines compared to hardened shorelines and expand existing outreach/incentive programs.	Increase shoreline management projects, particularly living shorelines	Dedicated funding source or cost-share program for NGOs to utilize, evaluate the dedicated VMRC funding source established by law (§ 28.2-1204.2. Marine Habitat and Waterways Improvement Fund established), educational resources for NGOs to establish programs for private properties owners, find funding sources to stabilize regional programs	Tidal wetlands, living shorelines, etc. reduce impacts from coastal storm surge, wave-driven erosion, and sea level rise. Increasing plant densities could help mitigate these threats, as wetlands become inundated, densities decrease providing less shoreline stabilization and nutrient reduction. Identifying opportunities at the neighborhood scale and helping incentivize those projects could provide long-term shoreline stabilization of private property.	
3	Consider providing credit for hybrid shorelines that includes hard and soft infrastructure. Many places can't do only living shorelines due to strong wave and wind action, providing a credit for the hybrid could incentivize more 'soft' practices		Advocate for and add on to existing Shoreline Management Expert Panel Report, re-visit VMRC proposal to develop a second living shoreline permit that incorporates structures for exposed shorelines and ensure this becomes eligible for Bay Program credit	This could still provide co-benefits, particularly if other infrastructure like oyster reefs, castles, and living shorelines are incorporated	Current Expert Panel Report does not allow credit for any hardening.
4	Review and promote existing tax incentives for shoreline management and assess whether other write-offs may be politically reasonable			Tidal wetlands, living shorelines, etc. reduce impacts from coastal storm surge, wave-driven erosion, and sea level rise. Increasing plant densities could help mitigate these threats, as wetlands become inundated, densities decrease providing less shoreline stabilization and nutrient reduction. Identifying opportunities at the neighborhood scale and helping incentivize those projects could provide long-term shoreline stabilization of private property.	
Stormwater Management					
5	For all publicly funded BMPs outside of an MS4 service area, provide incentives and/or technical assistance to report BMPs to the BMP Warehouse and perform inspections for verification.	Increase the reporting of BMPs already in the ground in unregulated developed areas	Dedicated DEQ staff person, funding for locality staff, or funding for competitive bid for consultants		

6	Develop a program to implement retrofits on unregulated developed lands		Dedicated program for a BMP cost-share program (similar to the Agriculture cost-share program), incentives to provide funds for implementing, reporting, and verifying retrofits	Because there are little to no retrofits in unregulated developed areas, there is an opportunity to provide cost effective treatment (low hanging fruit).	BMPs for retrofits need to be verified and maintained for incorporation into the Bay model however these practices must remain voluntary so an incentive program must be the driver to implement, report, maintain, and verify these practices
7	Prioritize placement of BMPs in unregulated developed acres that will result in the highest reducitons, place in more effective basins		Dedicated program for BMPs in unregulated developed areas that are the most effective to reduce nitrogen	Could be more cost-effective solution, possibly address other water quality issues, and incorporate flooding concerns based on strategic placement.	
8	The state should take the lead in financing, developing, and constructing BMPs in unregulated communities.		Dedicated DEQ staff to perform this work.	This would be more cost-effective as funding acquisition, planning, implementation, verification, etc. would all happen at the state level. Many BMPs, when positioned strategically in the undeveloped regulated sector, can reduce impacts from sea level rise and recurrent flooding.	
9	Homeowner BMPs - Increase funding for VCAP, including SWCD staff to administer the program, technical assistance, and cost-share.	Private property BMPs will be implemented at an increased rate, providing opportunities for implementing more Bioretention (rain gardens), filtering practices, and infiltration	Convene a stakeholder advisory group to: 1) Assess VCAP funding, how/where it's being spent, and funding sources, 2) Determine the demand by SWCDs, 3) Use formula similar to Ag Program to determine costs for technical assistance, distribute funds at district level rather than at state level, 4) Provide additional and consistent funding for the VCAP program and SWCD/DCR staff	VCAP has proven to be a valuable and successful program, educating private citizens while implementing BMPs for nutrient and sediment reductions. Many BMPs, when positioned strategically in the undeveloped regulated sector, can reduce impacts from sea level rise and recurrent flooding.	VCAP does not have stable funding, the demands exceed the funding provided and there are not enough SWCD staff to fund the program. $500 for technical assistance per practice that is implemented for 10 years is not enough.
10	Homeowner BMPs - Expand VCAP to allow localities that are not a part of SWCDs to participate	Private property BMPs will be implemented at an increased rate, providing opportunities for implementing more bioretention (rain gardens), filtering practices, and infiltration	A separate program or funding mechanism must be implemented.	VCAP has proven to be a valuable and successful program, educating private citizens while implementing BMPs for nutrient and sediment reductions.	Allow a portion of VCAP funds to be administered to PDCs, extension offices, or NGOs to allow cities that are not part of SWCDs to participate in the program.
11	Homeowner BMPs - Provide a tool for easy verification and reporting, follow up on the SMART tool being developed by the Alliance for the Chesapeake Bay	Private property BMPs will be implemented at an increased rate, providing opportunities for implementing more Bioretention (rain gardens), filtering practices, and infiltration	Additional funding for SMART tool development, training, and dissemination		
12	Homeowner BMPs - Modify the requirements for inspection/verification of parcel-level BMPs on private property.		Commonwealth allows approved partners such as Master Gardeners, CBLPs, or NGOs to inspect these practices without a full Stormwater Inspector certification.	This may encourage more to be reported and allow them to stay in the system after the first five years.	

13	Allow manufactured treatment devices (MTDs) to be counted for Bay Program credit	Currently 400+ acres of MTDs are being omitted from the Bay model on unregulated developed lands in Hampton Roads, resulting in N and P reductions not being accounted for	The Stormwater BMP Clearinghouse must have dedicated time and effort towards moving this process forward, which has been stalled for a number of years.	Many MTDs can be used to reduce a variety of pollutants, and can be used in small urban areas that do not have space for larger traditional BMPs. Including MTDs for Bay Program credit may also increase innovation and drive down overall costs.	The Commonwealth must be an advocate to the Bay Program to allow for MTDs to be included in the Bay model.
14	Create a cost-share program that promotes BMPs for the purposes of improving water quality through stormwater control and addressing flooding concerns.	Increase BMPs in unregulated areas, including individual and general VPDES permittees, that treat for both quantity and quality	Commonwealth develop a cost-share program for localities similar to SLAF that funds BMP implementation that must address both stormwater/water quality concerns and flooding concerns.	Addresses direct co-benefits of water quality improvement and flooding concerns	
15	Reduce blight, unused impervious surfaces, and abandoned properties by implementing green infrastructure BMPs on brownfield sites		Enhance DEQ's Brownfields Program to include prioritization for stormwater projects, add more funds to this program	Directly benefits aesthetics, quality of life, water quality, and impacts from sea level rise and recurrent flooding.	
16	Assess number of industrial facilities that should be regulated by VPDES but do not have permits		Increase capacity at DEQ to follow-up on those facilities that require state-administered industrial VPDES permits but do not have one		
17	Determine how to incentivize industrial VPDES facilities to calculate stormwater run-off loads of N and P based on their impervious surface that does not drain to an MS4 and that is not just related to their industrial activity, develop TMDL Action Plans, and report implementation practices in the BMP Warehouse	100% of all permitted industrial VPDES facilities	Develop a study or workgroup to evaluate the level of impact, review GIS data, and develop new incentive program or expand on the existing VA Environmental Excellence Program (VEEP) to implement and track a voluntary BMP program.	Currently, industrial VPDES permittees are included in the unregulated developed loads in Hampton Roads, MS4s do not include them in their service area. By asking VPDES permittees to account for stormwater run-off on their impervious surface areas that do not drain to an MS4, and not just their industrial activities, another source of non-point source pollution would be addressed and treated, localities could also partner with permittees to make improvements	
18	Efforts should be given to further advance the standards and specifications of linear BMPs under the Virginia Runoff Reduction Methodology. VDOT should be viewed as a resource to assist with development of standards and specifications, as well as for demonstration of implementation practicality		Incentivize VDOT to facilitate the implementation of linear BMPs on roadways that better treat roadway run-off closer to the roads, provide funding for demonstration projects (for example planting or leaving existing trees, swales, and vegetated filter strips) on how to retrofit existing roadways not effectively treating run-off	Providing demonstration projects on roadways would give more exposure to linear BMPs, adding an educational component could help spread their use, also they would directly reduce impacts from recurrent flooding as well as treat for water quality.	Address this issue prior to project development, must be incorporated into initial design specifications.
19	DEQ will gather post-construction BMP data form the Construction General Permit Database and incorporate this into the BMP Warehouse.	Ensures all eligible BMPs are entered into the BMP Warehouse and tracked accordingly.	Dedicate DEQ staff to update and maintain the BMP Warehouse, not all localities are using the system yet, more staff will need to be on hand to keep track of this system and make sure all BMPs are being accounted for.	Accurate BMP accounting will reflect real reductions being made at the local level and not being accounted for, benefiting all sectors and the Commonwealth as a whole.	
			Septic		
20	Expand 5-year pump-out requirement in CBPA Act requirements to localities within the entire Chesapeake Bay watershed	Increase septic pump-out frequency	State-level funding for VDH and DEQ to administer the CBPA program watershed-wide, dedicated funding for DEQ or VDH to administer to PDCs or SWCDs for cost-share programs, similar to Middle Peninsula PDC's program and/or proposed VDH program for some localities in the James River watershed	Improvement of local water quality for bacteria TMDLs.	Pump-outs are only required in localities with a CBPA designation, septic tanks are not limited to these localities, DEQ does not have regulatory authority beyond the CBPA, VDH does not have any regulatory or enforcement capabilities other than maintenance requirements, DEQ's regulatory authority should be expanded to regulate Bay watershed-wide pump-out requirements

21	Require retrofits for failing septic systems to increase upgrades to alternative/denitrifying systems and decrease number of waivers authorized		Dedicated funding for DEQ or VDH to administer to PDCs or SWCDs for cost-share programs, similar to Middle Peninsula PDC's program and/or proposed VDH program for some localities in the James River watershed, amend code to limit ability to provide waivers	Improvement of local water quality for bacteria TMDLs.	Current code of VA allows for waivers for failing systems
22	Establish tax credits for upgrade or replacement of conventional systems to nitrogen reduction systems or connections to sewer		Dedicated funding for DEQ or VDH to administer to PDCs or SWCDs for cost-share programs, similar to Middle Peninsula PDC's program and/or proposed VDH program for some localities in the James River watershed, amend code to limit ability to provide waivers	Improvement of local water quality for bacteria TMDLs.	
23	Grant counties authority to require sanitary sewer connections			Improvement of local water quality for bacteria TMDLs.	Currently counties do not have this authority
24	Allow for 319 funding to be allocated to the entire Chesapeake Bay watershed, since there is an approved IP for the Chesapeake Bay TMDL			Improvement of local water quality for bacteria TMDLs.	Currently 319 funding is not allowed to be used for Chesapeake Bay TMDL initiatives, even though there are approved IPs
	Land Conservation				
25	Commonwealth should promote land conversion from vacant urban lots or fallow agriculture fields to urban tree canopy	Supports increased tree canopy in HRPDC localities	Include land purchase in SLAF or other funding mechanism for the purpose of land use conversion, implement a more robust state urban forestry program	Increased tree canopy and decreasing impervious surfaces provides nutrient reduction benefits, flood control benefits, health benefits, and reduces blight	
26	Incentivize local planning and fund conservation programs to conserve 4.5% of local lands by 2025, current statewide conserved local lands is 3.78%, increasing this value at the local level will help VA get closer to its overall goal of conserving 20% of the Commonwealth's land	Conserve additional acres of local lands in Hampton Roads by 2025	Refine the Governor's goal to prioritize land conservation within the Bay watershed, strengthen land trusts in Virginia, need conservation easement ordinances in all localities (see #26), and funds to incentivize (see #24)	Conserved land benefits water quality in the long-term and helps to guide development strategies	Currently there is no mechanism in the model to account for this load reduction, unclear the extent of nutrient benefits it would generate.
27	Develop conservation easement ordinances in localities that do not already have one and/or broaden conservation easement requirements at the local level	Conserve additional acres of local lands in Hampton Roads by 2025	Develop conservation easement ordinances in localities that don't already have one	Conserved land benefits water quality in the long-term and helps to guide development strategies	Expand annual DCR data call for conservation easements to capture smaller easements that aren't protected or tracked, broadening conservation easements may require enabling legislation, develop ordinances that provide more information on what the easement is, how to maintain it, and what is and is not allowed
28	Develop protocols to provide credit for developable land that is placed under a permanent easement and thus cannot ever be developed, particulalry if they have recurrent flooding issues.		Commonwealth should encourage the Bay Program to develop these protocols to promote land conservation, link to FEMA's repetitive loss properties to provide a basis for taking properties out of use	Conserved land benefits water quality in the long-term and helps to guide development strategies, by linking to repetitive loss properties there is also cost avoidance for repairing or replacing flooded structures	
	State Specific				
29	Effort should be given to further segregate unregulated state-owned lands from locality-owned lands and provide a state local area planning goal, currently state lands are included in locality loads unless excluded from the MS4 service area, the state could implement BMPs on a percentage of these lands by 2025 and use them as demonstration projects. This would allow better identification of retrofit opportunities and area of responsibility.	BMP Implementation on a percentage of state-owned lands by 2025	State staff and funds to do a GIS exercise to separate out unregulated state-owned lands, funds to implement projects, as well as staff to perform the implementation and maintain/verify/report BMPs	Demonstration projects could address a variety of co-benefits, as well as showing localities that the state is leading by example. It would provide the state with an opportunity to gain more insight on the BMP construction/development process and could be more cost-effective.	

30	While this process has been primarily focused on the unregulated developed sector, it has brought attention to the fact that the MS4 sector has been complying with state permits but much of the efforts and implementation practices have not been recorded at the state level and reflected in the model. The projections for the future indicated growth in this sector, however if state-wide compliance is achieved, this sector should remain steady or decrease in terms of nutrient loads		Dedicated staff at the state level to review the MS4 Annual Reports and Action Plans and adequately translate reductions being made to be reflected in the Phase 6 model.		
31	Continue to encourage the Commonwealth to adhere to the MS4 permit requirements long-term approach of 5%, 35%, and 60% reductions over 3 5-year permit cycles		While 2025 is the end goal for the Bay TMDL, the Commonwealth must continue to recognize that MS4 programs will continue to make improvements to water quality long after 2025, and adaptive management over time will be key to this success		
32	Expand CBPA requirements to the entire Bay watershed			Significant progress was made prior to the Bay TMDL through the implementation of the CBPA in the eastern part of the Watershed where it is applicable, extending requirements throughout Virginia's Bay watershed is an effective way to improve water quality. It would also provide equity among MS4s, and be beneficial for local water quality state-wide.	Currently CBPA and associated programs are limited in geography to Tidewater VA and do not include localities in the entire Bay watershed
33	Address funding deficiencies in CBPA program		All aspects of the CBPA program (Agriculture Assessments, septic pump-out program, etc.) are under-funded, resulting in under-reporting and mis-representation of the benefits of the program.		
34	Create flexibility in CBPA requirements such that limitations in regulations do not prohibit effective environmentally-friendly practices that may also address flooding concerns		Evaluate CBPA regulations and requirements	Addresses direct co-benefits of water quality improvement and flooding concerns	Ease up on temporary disturbances and filling in the Resoruce Protection Area (RPA) for those areas in the CBPA in order to facilitate brownfield conversion to green infrastructure
35	Remove the baseline requirements for MS4 credit collection of BMPs implemented on unregulated lands.		Revise Chesapeake Bay TMDL action plan guidance to reflect this action, address the geographic limits by limiting implementation by HUC or segment.	If an MS4 implements BMPs on unregulated land, they can receive full credit towards their MS4 requirements, and it will allow for tracking BMPs on unregulated land and promote overall reductions in the developed sector, regardless if it is regulated or not. This would incentivize localities to implement beyond their delineated service areas, and ensure these BMPs are being maintained and verified.	Baseline restrictions are currently addressed in DEQ's Chesapeake Bay TMDL Action Plan Guidance. Revise the guidance to remove this requirement.
36	Re-evaluate 0.41 lbs P/acre/year nutrient nuetral criteria for stormwater standards for new development		Regulations require DEQ to re-visit this criteria after the mid-point assessment, nutrient neutral development is likely not being achieved and the criteria should be re-evaluated and lowered to ensure phosphorus and nitrogen are not increasing as a result of new development	In efforts to reduce phosphorus, nitrogen, the more limiting nutrient in the Coastal Plain, will also be reduced	
37	Conduct land use/land change analysis of the entire state to show changes since the 2013 analysis conducted by Worldview Solutions, analyze for hot spots of change, and verify conservation efforts and growth patterns		Provide more GIS resources to DEQ for VGIN to support statewide analysis including regular collection of land cover data	Provides tools for all types of analyses not just related to the Bay Program, but helpful to identify land use patterns, hot spots for development, coastal inundation patterns, targeted areas for redevelopment, green infrastructure devleopment, etc. See Applications of the Virginia Statewide Land Cover Database, by Worldview Solutions, for detailed co-benefits.	
38	Overall recognition of the voluntary nature of efforts in unregulated developed areas.		Provide funding outside of the regulatory capacity needs to implement these voluntary actions		Phase III WIP discussions have recognized that strategies being implemented on unregulated land may become regulatory requirements. We would like the state to provide a statement of assurance that actions on unregulated developed lands will continue to be voluntary.

BMPs					
39	Encourage the Bay Program to finalize the oyster restoration BMP. The Expert Panel is on-going, localities in Hampton Roads have restored many acres of oyster reefs, and are unable to take any credit for nutrient reductions.	80 acres of oyster reef have been restored already in the Lafayette River, more are planned.	Be proactive in supporting the oyster restoration BMP in the Expert Panel Report process	Oyster restoration provides a variety of co-benefits, oysters filter the water, decreasing particulates and nutrients in the water, reducing bacteria, improving water clarity, and providing valuable habitat for other organisms.	
40	Re-evaluate and promote the Boater Pump-out BMP, this is another tool for tidal localities in Hampton Roads that improves local water quality		Be proactive in supporting the Boater pump-out BMP in the Expert Panel Report process	Boat pump-outs remove nutrients and bacteria that may be discharged overboard from Type I and II treatment systems	
41	Improve floatable removal and litter prevention programs		Provide support for an Expert Panel to develop Bay Program credit for floatable removals, expand funding for floatable removal programs	Nutrient loads may be attributed to trash in waterways, removing floatables improves water quality and aesthetics	
42	Provide more options for retrofitting roadside ditches.		Expert panel additions are on-going, need to be finalized and incorporated for inclusion in DEQ's BMP Warehouse. Encourage VDOT to implement and provide demonstration projects.	Linear BMPs directly reduce impacts from recurrent flooding as well as treat for water quality.	
43	Conduct research on BMPs that improve water quality and address flooding concerns, quantify nitrogen and phosphorus efficiencies for specific BMPs that can be placed in the Coastal Plain		Encourage STAC to conduct more rigorous research on this, provide Water Quality Goal Implementation Team funding for specific Coastal Plain research, develop expert panel or add-on to existing expert panels to allow for reductions to be credited in the Bay Program model	Directly addresses the co-benefits of water quality improvements and water quantity management	