

BIENNIAL STRATEGY REVIEW SYSTEM
Chesapeake Bay Program



Logic and Action Plan: Post Quarterly Progress Meeting

2025 WIP Outcome—have all practices and controls installed to achieve the Bay’s water quality standards.

2020-2021

Long-term Target: (the metric for success of Outcome)

Two-year Target: (increment of metric for success)

Instructions: Before your quarterly progress meeting, provide the status of individual actions in the table below using this color key.
Action has been completed or is moving forward as planned.
Action has encountered minor obstacles.
Action has not been taken or has encountered a serious barrier.

Additional instructions for completing or updating your logic and action plan can be found on [ChesapeakeDecisions](#).

Factor	Current Efforts	Gap	Actions	Metrics	Expected Response and Application	Learn/Adapt
<i>What is impacting our ability to achieve our outcome?</i>	<i>What current efforts are addressing this factor?</i>	<i>What further efforts or information are needed to fully address this factor?</i>	<i>What actions are essential (to help fill this gap) to achieve our outcome?</i>	<i>What will we measure or observe to determine progress in filling identified gap?</i>	<i>How and when do we expect these actions to address the identified gap? How might that affect our work going forward?</i>	<i>What did we learn from taking this action? How will this lesson impact our work?</i>
<i>Need to add why these factors are important to achieving our 2025 WIP outcome</i>						

Factor	Current Efforts	Gap	Actions	Metrics	Expected Response and Application	Learn/Adapt
Best Management Practice (BMP) Implementation: Technical assistance with implementing, tracking, reporting, and verifying source control and mitigation practices	Convening a BMP Verification Ad-hoc Action Team, which includes the development of a task statement, schedule, and deliverables	A) Need additional technical assistance providers, and specificity on what assistance is needed, in the agricultural sector at the local scale	More “boots on the ground” support. (A, B,) Consider expanding circuit rider type programs to deliver technical assistance. (A, B) BMP verification and Data Dashboard training (B)	Number of staff increases or providers to deliver technical assistance (A) Number of trainings for the Data Dashboard (B) Number of BMP verification trainings provided (B)	Increased delivery of technical assistance to support and accelerate BMP implementation, particularly in the agricultural sector (A,B)	
	An optimization framework and tool is under development in CAST to help plan and target implementation efforts	B) Training to technical assistance providers on BMP verification and the Data Dashboard.				
	The Chesapeake Bay Watershed Data Dashboard is available for use that provides comprehensive support for planning implementation efforts, such as BMP targeting and monitoring trends analyses	C) An evaluation of BMP implementation and maintenance costs	The last update of implementation and update costs was in 2019. These costs will continue to be updated on a regular basis (C)	Updated costs in CAST 2021 (c)		
		D) Updates needed to the BMP verification framework to recognize resource limited verification programs	Potential refinements to the partnership’s BMP Verification framework document (D) Development and approval of alternative verification methodologies. (D) Explore alternatives to BMP reverification (D) Reassess and update BMP credit durations (D)	Adoption of revisions to BMP verification framework document (D) Completion and release of the optimization framework and tool (A)	Revisions to BMP verification and panel protocols that adheres to a robust scientific process and framework while recognizing application challenges (D,F)	

Commented [PL1]: Comment from Loretta Collins: I am still very unclear on this: what? how? when? Is credit duration based on science and monitoring or programmatic capacity? If the ability of a state to verify is the issue- than let’s be sure to separate that from EP recommendation. More recent panels have provided credit duration recommendations. These changes would require revising approved recommendations.

Factor	Current Efforts	Gap	Actions	Metrics	Expected Response and Application	Learn/Adapt
			<p>Explore lesser-used approaches to BMP verification (D)</p> <p>Review recommendations from ongoing BMP verification work undertaken by the CBP (D)</p> <p>Understand how volunteers or citizen stewardship can be used to alleviate capacity shortfalls for BMP verification (D)</p>	<p>Percent and number of BMPs verified per year (D)</p> <p>Number of BMPs with lost credit due to inspection and maintenance lapse (D)</p>		
		E) Funding for BMP Panels	CBP partnership to explore setting aside some funding to continue supporting BMP expert panels (E)	The CBP partnership to identify a mechanism or opportunities to fund BMP expert panels over this two-year period		
		F) Streamlined BMP expert panel process to incorporate new creditable BMPs into framework	Potential refinements to the partnership's BMP Expert Panel Protocols (F)	Adoption of revisions to BMP Expert Panel Protocols (F)		
			Work with the GITs and workgroups to identify new BMPs using expert panels (F)	Start and finish at least one BMP expert panel process by the end of this 2 yr period (F)		
			Build awareness (e.g., outreach/communication materials; trainings) of			

Commented [PL3]: Comment from Loretta Collins: We have a capacity issue with this. There may be tweaks that can be made to current EP recommendations, but blank slate issues might need to be teed up for Phase 7.

Commented [PL2]: Comment from Lee McDonnell: Would the Gap here be "Getting new BMPs and associated efficiencies included in the model?" Can we include new BMPs in the model without expert panels? Can we rely on NRCS/USDA for things? Can we revisit and expert panel for the purpose of implementation?

Commented [PL5]: Comment from Loretta Collins: Without a dedicated support structure for this- I don't know how we can accommodate additional Expert Panels. Additionally, do we need to start clarifying the focus of these panels? Should such endeavors be assumed to apply to Phase 7 CBWM? The focus now needs to be implementing what we already know.

Commented [PL4]: Concerned that this will happen without dedicated funding.

Factor	Current Efforts	Gap	Actions	Metrics	Expected Response and Application	Learn/Adapt
			Natural Resource BMPs with WQ co-benefits that are lagging in implementation (wetlands and tree planting) (E,F)	Adoption and implementation of Natural Resource BMPs (via annual progress submissions)		
		G) Needs assessment to target implementation to improve water quality	Updates to CAST to incorporate optimization tool (C, G) Identification of specific technical assistance needs by the state and local jurisdictions	Strategies to address technical assistance needs to better target implementation (e.g., finer scale GIS support tools; more “boots on the ground” to assist with implementation and compliance with requirements)		
		H) Targeting lands that produce disproportionate pollutant loads, incentivize treatment by selecting cost-effective control measures	Increase number of CAST training and users with a focus on showing how to target BMPs. (H) Provide annual funding to target implementation in the most effective basins (H)	Number of CAST trainings and number of times recorded trainings are used. (H) Allocation of funds toward most effective basins	BMPs implemented in areas with higher loads and/or on land uses with higher loads as evaluated by comparing implementation to loads over time. (H) Increased targeting of implementation to high loading lands with cost effective BMPs. (H)	
Funding for implementation: Assistance in the major source sectors to implement local-	Continued federal funding through EPA Grant Programs (CBIG, CBRAP, 319, SRF),	(A) Opportunities to leverage funding and resources to increase implementation	Increase awareness (e.g., providing presentations and resource materials to the CBP partnership) of the SRF program to increase coordination	Increased leveraging of available funding resources	Accelerated implementation in the agricultural sector	

Factor	Current Efforts	Gap	Actions	Metrics	Expected Response and Application	Learn/Adapt
scale programs, plans, and practices. Likely emphasis will be in the agricultural sector.	Watershed Implementation Plan assistance, state programs, and USDA Farm Bill and NRCS grant programs Exploring pay for performance programs at various scales. Learning from Conowingo WIP financing strategy	rate of on-the-ground practices	and leveraging opportunities for NPS implementation. (A,C, D, E)	Increased funding for technical assistance delivery in the agricultural sector	Innovative financing approaches to attract private sector funding	
			Dedicated funding stream for technical assistance providers. (A,B,C)			
			Continue to support implementing Phase III WIPs and 2-year milestones (A,C,D)			
	B) CBRAP funding to reduce and prevent pollution and improve living resources					
	C) Innovative technical and financial solutions and assistance to implement practices, plans, and programs	Identify lessons learned from the Conowingo WIP financing strategy and determine if there are opportunities elsewhere in the watershed (C,D,E,F)	Create pay for performance program proposal (C)			
			Identify full-scale regional case studies to			

Commented [PL6]: Comment from EPA: What is the gap here?

Factor	Current Efforts	Gap	Actions	Metrics	Expected Response and Application	Learn/Adapt
			bring to the CBP partnership for presentation (C) Discuss development of incentive structures, working with NRCS, to launch pay-for-performance programs (C)			
Communication and Coordination: Consistent efforts with diverse stakeholders. Other potential audiences include states and DC; local jurisdictions; and federal agencies, such as USDA and EPA	The Diversity Equity, Inclusion, and Justice (DEIJ) Initiative Consulting with Tribes within the Bay watershed	A) Participation from under-represented groups in the WQGIT and source sector workgroups	Work with the DEIJ Action Team to identify and engage under-represented groups (A) Solicit membership (e.g., LGAC and others) from under-represented groups to participate in the WQGIT and its source sector workgroups. (A)	Number of tribal consultations Begin institutionalizing DEIJ approaches into WQGIT decisions Increased funding opportunities and awareness for underserved areas (A)	Increased engagement from under-represented communities Greater understanding and application of social science in addressing implementation barriers	
		B) Clear and concise communication with the agricultural and urban communities	Host trainings in underserved agricultural areas on the Chesapeake Bay TMDL and WIPs process, including an overview of funding opportunities. (B, C, D) Develop factsheets or webinars to explain local water quality trends for			

Factor	Current Efforts	Gap	Actions	Metrics	Expected Response and Application	Learn/Adapt
			underserved areas of the watershed (B, D) Hire extension agents (B)			
		C) Integrating the Partnerships social science strategy to support water quality goal implementation. What are the barriers to greater implementation and how to create behavior change?	Explore opportunities to advance DELJ values into grant funding opportunities. (C, D) Develop and implement a CBP social science strategy	Achievement of objectives in social science strategy Incorporation of DELJ principles in ranking criteria for implementation projects		
		D) Strengthen coordination between federal, state, and local levels to accelerate implementation.	Identify a WQGIT representative(s) to participate on the Community Advisory Board (D, E) Identify a WQGIT representative(s) to contribute to the DELJ implementation plan (D, E) Engage and coordinate with LGAC (D) Focus a GIT meeting to identify ways to strengthen coordination between all levels of government. (D)	Number of meetings with LGAC Increased implementation as a result of engagement		

Commented [TS7]: Could DELJ be added to ranking criteria for implementation projects?

Can we talk with NFWF about providing support to DELJ areas for developing environmental grant proposals?

If so a metric could be increased funding opportunities and awareness for underserved areas.

Commented [TS8]: Or can we leave a generic place holder action to review the DELJ implementation plan and see how we can incorporate actions into the WQGIT and how we run the group.

Factor	Current Efforts	Gap	Actions	Metrics	Expected Response and Application	Learn/Adapt
		E) Coordinating efforts to achieve consensus-based decisions	Using innovative online tools to quicken pace to consensus-based decision making (E)			
		F) Establishment of a viable means for those most needed for implementation (farmers and landowners) to accomplish needed land use practices	Promote the inter-connectedness with other CBP goals (F) Build awareness using the Communication Workgroup, LGAC, and other outlets including the PSC, NGOs, etc (G)			
CAST and other Model Updates: Incorporating new science and data into models and decision support tools.	Drafted and now implementing a Chesapeake Assessment Scenario Tool (CAST) workplan for 2021 (Charge by the Management Board to the WQGIT)	A) Understanding and communicating how model update changes apply to milestone development and implementation	Work with communication team to assist in explaining the various model updates and the impacts and post updates or factsheets to Bay.net. (A) Once CAST 21 is updated host webinars for more novice users to explain the potential changes that result. (A) Incorporate the explicit land cover/land use data into CAST for planning purposes (B)	Finalization and release of CAST 2021 for application Release CAST with new functionality to create and evaluate plans with BMPs at a fine scale.	Updated decision support tool with the latest scientific information and data to support implementation efforts	

Factor	Current Efforts	Gap	Actions	Metrics	Expected Response and Application	Learn/Adapt
		C) Methods for identifying spatial variation in pollutant source areas and BMP effectiveness and implementing BMPs based on this spatial analyses	Incentivize implementation on landscapes more susceptible to N,P,SS losses (C) Propose options for crediting nutrient management on soybeans.			
		D) Spatial resolution of the Chesapeake Bay TMDL accounting system	Accommodate data for Hillendale Farms, PA.			
		E) How to assess progress toward nutrient targets using a common currency	Build in Partnership-approved products of the BMP Verification Ad-Hoc Action Team related to credit duration.			
		F) Lack of nutrient transformation and transport from land uses to receiving waters	Request that STAR and the Modeling Workgroup investigate methods of refining the spatial resolution of the TMDL accounting system, refine nutrient speciation accounting, and begin development of an estuarine model with improved shallow water simulation			
		G) Constraints on Bay model to assess dissolved oxygen water quality attainment in the				

Commented [PL9]: Perhaps the following gaps and associated actions as it relates to model updates should be captured in the Management Strategy – does it apply to Phase 7?

Factor	Current Efforts	Gap	Actions	Metrics	Expected Response and Application	Learn/Adapt
		<p>Bay's shallow waters.</p> <p>H) Understanding how to exchange between nitrogen and phosphorus reductions to meet planning targets.</p> <p>I) Understanding how to use CAST to determine the number, type, and mix of BMPs that can be used to address new reduction planning targets</p>	<p>Assess the time it takes for different tidal segments to achieve water-quality standards to better understand responses to restoration efforts in the watershed</p> <p>Provide CAST and other training to empower individuals with these skills (H,I)_</p>			
<p>Water Quality Monitoring: Sustain and enhance monitoring and interpretation of results to help understand water quality response to management actions. It is important to demonstrate progress towards</p>	<p>Ongoing loads and trends project in the Chesapeake Bay nontidal monitoring network</p> <p>Ongoing work in the USGS/CBPO being undertaken by STAR and associated science partners</p>	<p>A) Monitoring trends and loads data into assessing progress toward outcome</p>	<p>Provide technical assistance to Bay jurisdictions to understand water quality monitoring trends in priority watersheds to further target implementation efforts. (A)</p> <p>Coordinate with the Communications Team to develop fact sheets for explaining water quality trends with a focus on underserved areas. (links</p>	<p>Increased implementation in targeted areas to achieve water quality standards, using monitoring trends information.</p> <p>Reporting from jurisdictions regarding how monitoring data is incorporated into decisions</p>		

Commented [PL10]: Comment from EPA: Can STAC or another group provide this type of analysis? Or are there contractor funds to address this gap in knowledge of time between restoration actions and WQ improvement?

Factor	Current Efforts	Gap	Actions	Metrics	Expected Response and Application	Learn/Adapt
attainment of water quality standards.			to Coordination section) (A) Incorporate more monitoring trends and loads data into assessment of progress toward outcome (Bay Barometer, etc) (A)	regarding implementation		
		B) Translate monitoring findings to management implications, e.g., targeting source control and mitigation programs	Use monitoring data to target practices to demonstrate success (B)			
Using Co-Benefits as a catalyst to increase implementation by aligning with priorities and goals beyond water quality: characterization of benefits beyond water quality improvements associated with existing BMPs to identify new funding	Projects underway to understand and quantify ecosystem services (e.g., Wetland Workgroup project to recognize the value of wetland protection and restoration to a variety of State initiatives and programs)	A) Understanding the science to support including co-benefits into BMPs, plans, and programs B) Understanding the carbon sequestration and toxic contaminant retention from Bay restoration efforts. Link to carbon markets and private financial markets	Work with greater intention across GITs and workgroups to integrate climate resiliency and habitat protection, and reductions of contaminants into the implementation of water quality BMPs. (A,B) Engage financial experts to monetize cost savings by implementing projects with co-benefits. Develop a few specific examples as a	Quantification and integration of co-benefits into CAST and optimization decision support tools	Stronger cross-GIT coordination Increased understanding of those practices that have benefits beyond water quality for living resources, public safety, property protection, etc.	

Factor	Current Efforts	Gap	Actions	Metrics	Expected Response and Application	Learn/Adapt
opportunities and opportunities to increase implementation that meet goals beyond water quality improvements – Climate Resilience, Contaminant Treatment, Natural Resources, etc.		C) Understand and ascribe monetary value to cost savings from implementing projects with co-benefits.	demonstration using projects with low implementation levels (wetlands, tree planting, etc) (C)			
Land Use: understanding land use change and cover through time	Updating the high-resolution land cover and land use datasets of the Chesapeake Bay watershed.	A) Modeling enhancements to support finer scale targeting of practices	Partnership review and approval of updated land use and high-resolution land cover data (A)	Incorporation of updated land use data into CAST 2021	Decision support tools available with latest land use data support more targeted BMP implementation	
Climate Change Tracking: understanding and allocating impacts of climate change induced watershed loads for 2022-2023 milestones.	Modelling to understand Bay's response for climate change in 2025 and future years.	A) Understanding how to incorporate climate change impacts into 2022-2023 programmatic and numeric milestones.		Specific and programmatic milestones to address climate effects.	Greater understanding of climate resilient BMPs to help mitigate climate effects	
	Understanding and communicating climate resilient BMPs	B) Understanding changes in BMP effectiveness under climate changes (e.g., as temperature rises,	Work with greater intention across GITs and workgroups to integrate climate resiliency and habitat protection into the	Specific BMPs to address climate effects		

Commented [PL11]: This might not be a stand-alone factor; instead consider including under the CAST updates

Commented [PL12]: This has already been done.

Factor	Current Efforts	Gap	Actions	Metrics	Expected Response and Application	Learn/Adapt
		<p>biological process rates change and can affect efficiencies (+ or -))</p> <p>C) Understanding potential changes in agricultural projections into the future based on adaptation to climate change.</p> <p>How will states allocate additional reductions to federal agencies?</p> <p>D) Identification and promotion of climate projects with co-benefits.</p>	<p>implementation of water quality BMPs (A,B)</p> <p>Continue to encourage the STAC technical synthesis on climate resilient and adapted BMPs and management actions (A,B,C)</p> <p>Continue to work through the USWG, Modeling WG, and CRWG to develop updated and forward-looking Intensity Duration, and Frequency curves (IDFs) for all counties in the Chesapeake watershed and to encourage the adoption and implementation of the updated IDFs for stormwater and other applications (A,B,C,D)</p>			
2035 Climate Change Watershed Model Assessment	A fine scale model of the Chesapeake watershed is being developed. The model will have 50 times more spatial resolution than	A) The next generation fine scale watershed model simulation coupled with the consideration of cobenefits and a fully integrated optimization	Provide for WQGIT direction to, and progress reporting from, the Modeling Workgroup, as determined by the WQGIT. (A)	<p>A fully operational fine scale model for CBP decision makers' use in the 4th quarter of 2023.</p> <p>Intermediate improvements</p>	A decision support tool available with latest land use, atmospheric deposition, and climate change assessment ability at a spatial scale 50 times greater than Phase 6 Model allowing for spatially targeted	

Commented [PL13]: Is this referring to federal facility targets and updating those targets to account for climate effects?

Commented [PL14]: Comment from Loretta Collins: Is this the "Phase 7 Model" or a refined version of the current CBWM? How is this being communicated to the partnership at this point? This seems like a big change before 2025. Will this have any ramifications on BMP effectiveness and progress in the past, present, or future?

Commented [PL15R14]: I have the same questions. I believe the partnership decided to use the Phase 6 model through 2025. Should this section be in the Management Strategy since this work plan is addressing 2020-2021?

Factor	Current Efforts	Gap	Actions	Metrics	Expected Response and Application	Learn/Adapt
	the current Phase 6 CAST. The fine scale model will allow improved spatial assessment of BMPs, allowing application of recent scientific discoveries that the location of BMPs in the watershed are a prime determinant of their nutrient and sediment removal efficiency.	capability in CAST will be used to provide the least cost/most environmentally protective management in response to the ongoing challenges of climate change and other headwinds post 2025.		available for consideration for the 2022-2023 and 2024-2025 milestone application.	BMP implementation to provide least cost, highest environmental protection. Cobenefits and optimization tolls will further assist in lower cost more efficient CBP management.	
2035 Climate Change Tidal Bay Model Assessment	Beginning in 2021 an unstructured grid model of the tidal Chesapeake will be developed which will allow for the complete assessment of all of the tidal Chesapeake with a single model which will streamline and improve TMDL assessments in all tidal waters of the Chesapeake Bay.	A) The current Bay Model is incapable of assessing the Open Water Dissolved Oxygen water quality standard in shallow tidal waters under climate change. The Phase 7 Bay Model that will address ongoing challenges to Bay water quality standards post 2025 will address that shortcoming. In addition, the	Provide for WQGIT direction to, and progress reporting from, the Modeling Workgroup, as determined by the WQGIT. (A)	Fully operational model for CBP decision makers use in 3rd quarter 2025 and application to 2035 climate targets in 2025-2026.	Improved tidal Bay management will be achieved with a state-of-the-art water quality model using an unstructured grid. In addition, the CBO mission critical need of assessment of Open Water Dissolved Oxygen water quality standard under climate change in shallow waters will be resolved, which is a task the current Bay Model is incapable of. The refined Bay model will be ready for operations and use by the WQGIT	

Commented [PL16]: Similar to the above comment, should this factor instead be included in the Management Strategy since it goes beyond this work plan period?

Factor	Current Efforts	Gap	Actions	Metrics	Expected Response and Application	Learn/Adapt
		new model will improve management by having one state-of the art linked airshed watershed, and tidal Bay model to address all of the different tidal TMDLs in the Chesapeake.			and other CBP decision makers in time to assess what's required to address 2035 climate change conditions.	

ACTIONS – 2020-2021					
Action #	Description	Performance Target(s)	Responsible Party (or Parties)	Geographic Location	Expected Timeline
Management Approach 1:					
1	BMP verification training.	Increased number of trainings available to support verification program implementation and reporting	Jurisdictions, EPA	Watershed-wide	2021
2	Increased staffing support to provide technical assistance.			Watershed-wide	
3	Development and approval of alternative verification methodologies.	Updated partnership's BMP verification framework	BMP Verification Ad-hoc Action Team; Source Sector Workgroups; WQGIT	Watershed-side	2020-2021

Commented [PL17]: Comment from PA: (1) Do these action items correspond to the CAST 2021 Work Plan? (2) Need further details for empty blocks before we can commit to these actions. Need more detail around each of these items – each one of these could be a management approach. (3) Are these actions listed in order of priority?

Commented [PL18R17]: The CAST 2021 Work Plan is a stand-alone action. These are not in the order of priority. What details would PA like to see included?

4	Work with the GITs and workgroups to identify new BMPs using expert panels.	Final recommendations for BMP efficiencies	WQGIT and Source Sector Workgroups	Watershed-wide	2020-2021
5	Explore alternatives to BMP reverification.	Case study on animal waste management systems	BMP Ad-hoc Verification Action Team	BMP Ad-hoc Verification Action Team	
6	Reassess and update BMP credit durations.	Recommendations to source sector groups and the WQGIT.	BMP Ad-hoc Verification Action Team, WQGIT, and Source sector workgroups	Watershed wide	1 year through fall of 2021
7	Explore lesser-used approaches to BMP verification.				
8	Review recommendations from ongoing BMP verification work undertaken by the CBP.	Approved revised BMP verification protocols pending Partnership decisions on BMP credit duration	BMP Ad-hoc Verification Action Team, WQGIT, and workgroups	Watershed-wide	
9	Convene Expert Panels on dredging and freshwater mussels	Approved panel recommendations by the partnership and incorporated into CAST 2023	BMP Ad-hoc Verification Action Team, WQGIT, and workgroups	Watershed-wide	~1-2 years over the 2021-2022 timeframe
10	Continue updates to data and methods associated with CAST.	Findings presented to responsible party for decision Recommendations in a report Revised reported BMP history from jurisdictions	BMP Ad-hoc Verification Action Team, WQGIT, and workgroups (e.g., agriculture,	Watershed-wide	1 year, September 2021

Commented [PL19]: Comment from Loretta Collins: First, Expert Panels are established based on the proposal and level of priority of a potential new BMP. EPs are not established to find new BMPs. Second, if a new EP was established in the near future there is no way the process would be completed by the end of 2021 unless there is staff and expert dedicated in large part to accomplishing such as talk. It would have to be a defined portion of reasonable work duties and probably necessitate stipends for LGU faculty and grant allocations for contractors.

Commented [DE(20): Actions 5 through 8 come from BMP action team task statement.

Commented [PL21]: Comment from Loretta Collins: I still have MAJOR concerns about this. Who is doing this? What are we assessing? Credit durations were determined in the AgWG only four years ago and there has been no issue brought up in the AgWG related to credit durations. I would expect this needs to be worked out at the policy level, as I struggle to accept that the expertise at the AgWG will have changed their opinion about the assigned credit durations in the last four years. The challenge is how to reliably verify practices as they reach the end of credit duration. If the partnership wants to induce more flexibility into the verification program based on experience from the last two years, my inclination is that this is a conversation at the GIT/MB level.

Commented [PL22]: Is this alternative methodologies? Might want to reference work underway in some jurisdictions.

			forestry, land use, stormwater)		
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