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Emily Majcher & Greg Allen	PFAS1	Guidance of Selecting PFAS Analytical Approaches	In the absence of regulatory guidance, perform a literature review of approved and draft EPA methods, and develop a decision tree to assist with selecting PFAS analytical approaches to match study objectives while considering Chesapeake Bay specific conditions (e.g., changing salinity, effects on key watershed species). The deliverable resource would emphasize non-drinking water investigations and studies to include analyte lists, and document benefits and limitations of screening tools methods (e.g., total organofluorine, total oxidizable precursors). Where available, average costs will be provided. This resource would aid jurisdictions in designing and executing consistent studies of the PFAS footprint within their boundaries, while maximizing opportunities for leverage and coordination, and cross-boundary interpretation. Where available, current approaches of ongoing studies will be included and considered along with anticipated regulatory thresholds.	Primarily Chesapeake Bay watershed (CB) jurisdictions and workgroup members; however, the resource could be useful to any organization investigating PFAS occurrence.	This effort directly supports the management strategies for the toxic contaminant goal. PFAS has been a part of the TCW Research strategy since 2018 as an emerging issue. In the 2022 SRS process, PFAS were integrated into 3 additional management approaches with emphasis on human fish and shellfish consumption, fish and wildlife health effects, and sources, occurrence and transport. In addition, in response to requests from the workgroup members, the TCW has convened quarterly meetings on prioritized topics to facilitate knowledge transfer, maximize leveraging and collaboration, and to promote unified approaches across the watershed.	Sustainable fisheries, Habitat (stream health) Healthy fish, healthy people	A valuable resource that will help PFAS investigators better match PFAS analytical methods with their data objectives and quality assurance project plans.	Approx. $40k	TCW not aware of any other organization currently working on this need.
Emily Majcher & Greg Allen	PFAS2	Determing PFAS Background Concentrations	Literature review of establishment of background concentrations in different media, including a summary of published background values and scale of effort (e.g., site, watershed, etc.). Project would include determination of the unique considerations for the design of a background study for PFAS in Chesapeake Bay (to include data gaps such as precipitation, stormwater, etc.). Review would include ongoing efforts by jurisdictions within their own boundaries to promote consistency and maximize leverage and coordination.	State and federal investigators; academics advancing PFAS environmental fate model development	The TCW endeavors to find common needs across the Partners that the workgroup can provide an efficient means of addressing thereby saving Partner resources across individual agencies. This knowledge gap has been identified by CB jurisdictions.	Addresses improved performance of PFAS strategies in the water quality goal area and, as a result, leads to improved quality of fisheries and reduced risk to humans from PFAS bioaccumulation in fish.	A summary report that synthesizes published approaches and values of establishing background concentrations for various media. Outlines recommendations and evaluates whether data is available and/or any efforts currently underway to establish PFAS background estimates and makes recommendations for design elements to include in future PFAS background studies.	Approx. $40k	TCW not aware of any other organization currently working on this need.
Emily Majcher & Greg Allen	Toxics-Ed1	PFAS-Modified Fish Consumption Advisory Infographic	Development of an infographic for PFAS in fish highlighting differences in fish preparation techniques required compared to more hydrophobic contaminants such as PCBs. Would include review and incorporating of references to any existing jurisdictional information on the topic (e.g., links to current fish advisories for PFAS).	Jurisdiction fish consumption-program managers, Health and nutrition advisors to watershed residents, watershed environmental organizations.	Follows a priority work item in the Policy and Prevention Outcome management strategy and action plan related to raising awareness on the presence of PCBs and PFAS in the system and taking the next step following the successful first generation of infographics developed by TCW using GIT Funding resources.	WQGIT in its mission to meet water quality standards and designated uses including fishability; Stewardship in the context of the CBP vision of a healthy watershed; Healthy People in the Beyond 2025 context	Greater awareness by all stakeholders, beginning with women of childbearing age and children (the focus of the previous infographic) but also to include leaders and managers across the watershed who might join the effort to reduce inputs of PCB's and other bioaccumulative contaminants as a result of greater awareness.	Approx. $40k	TCW is not aware of any other organization currently working on this need.
Emily Majcher & Greg Allen	Toxics-Ed2	Enhance PFAS Communication Tools	Develop a compendium of communication tools on PFAS in Chesapeake Bay and the watershed. Deliverables would include a set of summary communications pieces based on data review and incorporating existing jurisdiction communication of PFAS in the environment.	jurisdiction agencies, federal partners, EPA region 3, management groups in CBP including Management Board, PSC, EC.	An improved understanding of the occurrence of PFAS in the system has created an urgency in federal state and local government response. The information has accumulated so quickly it is difficult for partners to assimilate into a summary of what is known. This compendium would provide a highly efficient means of briefing Chesapeake Bay stakeholders.	WQGIT in its mission to meet water quality standards and designated uses including fishability; Healthy People, Healthy fish, Healthy Ecosystem	Continuing the Chesapeake Bay Program's leadership in communicating the state of the science and knowledge of occurrence, sources, concentrations, and effects of PFAS in the environment. This began with a recent STAC workshop on PFAS, which made a unique contribution by assessing the occurrence of PFAS in ecosystem compartments beyond drinking water. This project would provide a visible resource that could be referenced across the Bay watershed.	Approx. $25k	TCW not aware of any other organization currently working on this need.
Emily Majcher & Greg Allen	Toxics-BT	Investigating the Presence of 6PPD/Q in Brook Trout Habitat	Assess the potential for 6PPD/Q presence and risks posed in critical Brook Trout habitat using land use assessment tools that might indicate overlap of risk factors (e.g., impervious surface, traffic density, bridge crossings, etc.) with critical habitat areas. New studies suggest Brook trout are highly sensitive to the tire-related pollutant 6PPD/Q (add ref); however, an understanding of presence in the Chesapeake Bay waterways in unknown and a full watershed assessment is cost prohibitive. The project would include a literature review and development of recommendations for an environmental monitoring study design that is considerate of implications for other Chesapeake Bay species. A minimum of one pilot study area for sample collection and analysis would be covered by project funds; however, it is expected that other partners will contribute to the project and, all-together, the study can include sampling and analysis in more than one high priority brook trout habitat area.	Brook Trout Workgroup, public agencies involved in environmental monitoring. Substantial interest has been expressed by leaders of the brook trout and other fish health researchers.	6PPD/Q is an emerging contaminant that TCW is making space for following recent publication of effects thresholds that indicate brook trout are among the most sensitive species for this pollutant.	Brook trout abundance outcome	Synthesize literature and conduct land use assessment to identify overlapping areas of the watershed at highest risk to 6PPD/Q effects and critical habitats, such as Brook Trout. This land use analysis would identify areas of highest sampling priority, considering Brook Trout and other critical species and potential effects. Static maps could be generated and used to summarize the priority areas and outline appropriate sampling and analysis approaches to assess presence of 6PPD/Q in surface water and fish. Consideration will be taken to determine any ongoing fish studies or sampling ongoing in these areas to facilitate leveraging. Reliable data that will indicate whether this pollutant is a stressor that may be limiting the abundance of brook trout and may be a factor influencing achieving the brook trout goal.	Approx. $125k	TCW leadership is actively engaged with other federal agencies working on this topic in other watersheds. Some opportunity for collaboration or leveraging may result if awarded.
Jeremy Hanson & Katie Brownson	Temps	Assessment of BMPs as heaters and coolers for local waters	The STAC Rising Water Temperatures report identified a need to better consider the impacts of water quality BMPs on water temperature. As rising water temperatures are having negative ecological impacts on stream ecosystems and sensitive species like brook trout, it is important to better understand the temperature impacts of BMPs to inform BMP selection, particularly in sensitive coldwater watersheds. The STAC report was able to use existing research to identify some BMPs that are "heaters" and others that are "coolers", and confirmed that watershed-wide, we are implementing far more heater BMPs than cooler BMPs. However, there are several BMPs where we did not have sufficient information to draw conclusions regarding temperature implications. This project would use an expert elicitation process to more systematically evaluate the effects of BMPs on water temperature throughout the watershed. This project would support convening an expert elicitation workshop, analyzing the data from the workshop and synthesizing findings into a communications product for managers regarding the temperature impacts of BMPs. This project would build on current USGS research efforts to evaluate the co-benefits of BMPs for stream health, including water temperature impacts, by improving and expanding out an expert elicitation process currently being conducted in smaller watersheds.	Managers deciding on BMPs for implementation	Warming water temperatures will impact ability to achieve WQS and affects multiple Watershed Agreement outcomes.	Habitat-Stream Health, Brook Trout; STAR-Climate Resiliency	Workshop to host experts on BMP characterization; Communication product for managers to help them which BMPs to implement based on their various benefits or hindrances. This will specifically support recommendations from the STAC Rising Water Temperature Workshop by helping identify BMPs that are considered heaters or coolers.	Costs would vary depending on whether funds were going into an existing cooperative agreement with USGS (who is already fully embedded in this work) or to an outside contractor (who would need to come up the learning curve). To support USGS, we estimate this would take $200k-$300K. To support an outside contractor, we estimate this would take $300k-$400K.	N/A. This would build on prior STAC workshop and the expert elicitation is beyond capacity of what a STAC workshop budget could offer.

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Sarah McDonald & Katie Brownson	FWG1	Improving projections of timber harvest land use trajectories	The Timber Harvest Task Force has been meeting to develop recommendations to improve mapping and modeling of timber harvest in the land use data and in Phase 7 of the watershed model. In the most recent round of land use data, across the watershed, the largest changes observed were those associated with timber harvest. It is therefore important to better evaluate how quickly the land will recover after timber harvest, which lands are likely to stay in timber rotation (as opposed to being converted to development or other land uses post-harvest) to better forecast post-harvest trajectories and understand potential water quality and habitat implications. This project would pull in multiple data sources, including geospatial data on timber harvest compiled by USGS, forest markets data, FIA trends, protected lands, and other landscape data to inform the development of more accurate forecasting of post-harvest land use/land cover trajectories. Based on these trajectories, the project would identify places most vulnerable to permanent conversion of forest lands out of harvesting in need of additional regulation or incentives to help keep forests as forests.	See detailed description	Informing improvements to the Phase 7 watershed model is a current priority for the Water Quality GIT. The most recent two-year workplan for 2023-2024 highlights the need to incorporate new science and data into CAST and other models and decision support tools.	multiple outcomes within the Water Quality GIT (including Land Use Methods and Metrics, Land Use Options Evaluation, and the WIP2025). It would also benefit the Protected Lands outcome by identifying forested lands in greatest need of conservation in the near-term, and the Healthy Watersheds GIT by helping prevent the conversion of forests in healthy watersheds to other land uses that would negatively impact watershed health.	More accurate forecasts of post-timber harvest land use trajectories in the Land Use Change Model and associated improvements in the accuracy of water quality modeling in CAST; Maps (and associated geospatial data) showing where working forests are most vulnerable to conversion to other land uses	$80k, 1 year	None, but the project would leverage previous CBP funding for the land use change data and investments in the land use change model and the watershed model. USFS and USGS are also providing staff time to convene the Timber Harvest Task Force.
Lorenzo Cinalli, Julie Mawhorter & Katie Brownson	FWG2	Advancing conservation of riparian forest buffers and urban tree canopy	Despite recent increases in planting rates for riparian forest buffers and urban trees, the high-resolution land use change data has demonstrated we are experiencing significant net reductions in tree cover. Between 2013/14 and 2017/18, over 106,000 acres of tree cover was lost to development and draft data suggests that over 21,000 acres of riparian forest was lost watershed wide. An increased focus on riparian forest buffer and community tree canopy conservation is urgently needed. This project would research conservation policies and incentive programs used in the Chesapeake Bay and other states/localities to reduce forest buffer and tree canopy loss. It would also identify best practices and model policies and easement programs that could be replicated. These models and best practices would address approaches for reducing tree cover loss both to more traditional development as well as emerging challenges, including the rapid growth of utility-scale solar installations and data warehouses. For forest buffers, the project would further evaluate the potential to develop a Bay-wide Buffer Easement Program.	[See detailed description] State and local government planners, policy-makers and decision-makers. We would work with the Local Government Advisory Committee, the Local Leadership Workgroup and the Strategic Engagement Team to get input from a broader suite of people to help determine the best format for the final deliverables. We want to deliver information on incentive-based and regulatory approaches to protect riparian forest buffers and urban tree canopy in a format that would be readily usable. This may require developing more tailored products for particular states that reflect different policy contexts.	[See detailed description] For Forest Buffers, it would directly address priorities in the current workplan to expand availability of buffer conservation easement programs and to strengthen regulations to reduce forest buffer loss. For Tree Canopy, it would address a recommendation that emerged from the 2023 Tree Canopy Funding and Policy Roundtable to “share models and best practices for effective incentive-based and regulatory approaches to protect urban tree canopy”. Both Forest Buffers and Tree Canopy have been identified as priority outcomes for the partnership, as outcomes that are lagging in attainability but critical for meeting water quality, living resource, and climate resilience goals.	[See detailed description] Habitat: Stream Health & Brook Trout; Healthy Watersheds; Stewardship: Protected Lands; GIT6: Local Leadership	Although both forestry outcomes would be addressed, separate deliverables would likely be developed based on input from LGAC/LLWG on the most effective format for dissemination. The goal would be for this project to result in the development and implementation of additional policies and incentives to reduce tree cover loss, and ultimately to reduce the rate of tree cover loss in the watershed.	$100k, over 1.5 years	None, the Forest Service does not have discretionary budget for supporting projects of this nature.
Lorenzo Cinalli, Julie Mawhorter & Katie Brownson	FWG3	Developing a trees & climate resilience strategy guide for local governments	The Tree Canopy Funding & Policy Roundtable identified a need to provide guidance for local governments on how to integrate trees for climate resilience into comprehensive plans (and other local plans) with specific goals, and how to include climate resilience strategies in urban forest plans and projects. At the same time, the Rising Water Temperatures STAC report highlighted the critical role forest buffers play in moderating rising water temperatures and increasing climate resilience for aquatic ecosystems. This project would therefore take a comprehensive approach, identifying approaches for integrating both urban tree canopy and riparian forest buffers for climate resilience into comprehensive plans and other local plans. It would leverage multiple recent or ongoing efforts in this area, including a current GIT funding project on optimizing RFB implementation for climate adaptation and resilience. Key tasks would include pulling together the latest tools from the Northern Institute for Applied Climate Science (NIACS) and other partners, as well as other resources and real-world examples of localities that have integrated trees for climate resilience into local plans. These materials would be packaged together into a “trees for climate resilience” guide for local governments.	[See detailed description] local planners and policy-makers. We would work with the Local Government Advisory Committee, the Local Leadership Workgroup and the Strategic Engagement Team to get input from a broader suite of people to help determine the best format for the final deliverables.	[See detailed description] For Forest Buffers, it would directly address priorities in the current workplan to increase awareness of how forest buffers can help with climate adaptation and resilience and advance opportunities to improve forest buffer design and siting to maximize climate benefits. For Tree Canopy, it would address a recommendation that emerged from the 2023 Tree Canopy Funding and Policy Roundtable to “Integrate trees for climate resilience into comprehensive plans (and other local plans) with specific goals; include climate resilience strategies in urban forest plans and projects”. Both Forest Buffers and Tree Canopy have been identified as priority outcomes for the partnership, as outcomes that are lagging in attainability but critical for meeting water quality, living resource, and climate resilience goals.	[See detailed description] Habitat: Stream Health & Brook Trout; STAR: Climate Resiliency; GIT6: Local Leadership	Although both forestry outcomes would be addressed, separate deliverables would likely be developed based on input from LGAC/LLWG on the most effective format for dissemination. The goal would be for this project to result in the integration of trees for climate resilience into local planning documents and ultimately increase the pace and impact of tree canopy restoration and conservation in the watershed.	$80k, 1 year	None, the Forest Service does not have discretionary budget for supporting projects of this nature.
David Wood, Norm Goulet & KC Filippino	USWG1	Beyond Bean Counting: Assessment of BMP Tracking and Accounting Procedures for More Wholistic Restoration Goals	This project would support a detailed, third-party evaluation of BMP tracking and reporting under the Chesapeake Bay TMDL framework. The evaluation would identify opportunities to reduce process inefficiencies, strive to better integrate multiple outcomes into progress assessments, and seek ways to improve engagement with external partners and stakeholders to ensure the Bay Program is working with the best available information. The project would be limited in scope to the stormwater sector, but could serve as a pilot that would be replicable in other sectors. The project would involve the following tasks: CBP Stakeholder Interviews – At a minimum, this task would involve a series of interview with each jurisdiction, the Chesapeake Bay Program CAST team, EPA, MS4 program staff (Phase 1 & Phase 2), large scale implementation funders (NFWF, CBT), and community-based organizations/NGO implementers; Review of existing QAPPs for BMP reporting and verification; Review of existing tracking and reporting tools outside of the WQGIT (e.g. Healthy Watersheds Assessment 2.0, Habitat Tracker, etc.); Evaluation of a subset of asset management systems and internal data management processes; Identification of barriers to more wholistic progress accounting – available datasets, capacity for outreach to planners/implementation partners, etc.; Presentation to the USWG and WQGIT and Healthy Watersheds GIT and/or Habitat GIT on interview and evaluation findings; Development of final report and recommendations	The most direct audience would be jurisdictional partners involved in the collection of BMP implementation data, implementation partners responsible for collecting and reporting implementation data, and CBP staff responsible for the assessment of progress toward TMDL outcomes. However, this assessment could ultimately benefit a wide range of other partners if the findings result in an accountability framework that allows for better accounting of non-nutrient and sediment outcomes.	[See detailed description]	The direct outcomes of the project would benefit the WQGIT by providing the ability to better account for aligning the benefits of multiple outcomes, allowing for cross-GIT collaboration with the Habitat and Healthy Watersheds GITs. STAR and the Climate Resilience Workgroups would also be potential beneficiaries.	The ultimate goal for this work would be to help provide a bridge to a better framework for more wholistic accounting of the benefits of different resource allocation strategies and management actions, including links to living resource, climate resilience, and human-focused outcomes. Simultaneously, the project could help to provide more confidence in water quality monitoring and modeling outcomes and provide ideas for enhancing the cost-effectiveness and reducing administrative hurdles associated with BMP data tracking and reporting.	$75k-100k	Funding has not been pursued from other sources. However, USWG considered the topic for a STAC Workshop before determining a third-party evaluation would be more beneficial.
Peter Claggett & Sarah McDonald	LULC1	Improving communication of high-resolution land cover/use data	Improve communication of high-resolution land use and land cover data by developing county-wide fact sheets displaying impervious surface cover (similar to the Tree Canopy fact sheets developed in 2021) based on stakeholder feedback to communicate information on the impervious surface characteristics, extent, and patterns and how they relate to stormwater runoff, water quality, and stream health.	Local organizations involved in stormwater management, watershed protection, and stream restoration.	Maintain healthy watersheds	Land Use Methods and Metrics, Land Use Options Evaluation, and WIP2025.	Increased awareness of the environmental implications of impervious surfaces and urban development.	$90,000	USGS intern hired in spring 2024 to explore content for these fact sheets.

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Peter Claggett & Sarah McDonald	LULC2	Estimating the pollutant loads from "mixed open" lands.	The "Mixed Open" class in the Phase 6 model is considered to load slightly more than forests and represents a catch-all for herbaceous lands that don't qualify as turf grass, cropland, pasture, or wetlands. This is concerning because a diverse array of land use classes are encompassed in the "mixed open" category, many of which probably load much higher than forests. In the latest 62-class high-res land use data, mixed open is composed of construction, timber harvests, solar pervious lands, natural succession, and suspended succession (e.g., road and utility right-of-ways, landfills, reclaimed mines, junkyards, etc.). Of these classes, only natural succession loads similar to forests. All other component classes are either somewhat compacted or require BMPs to not yield loads significantly higher than forests. This project would come up with an expert-based process to determine the loading rates for the major component classes of mixed open as recommendations to the WQGIT for consideration in Phase 7.	CAST users	Phase 7 model development	Land Use Methods and Metrics, Land Use Options Evaluation, and WIP2025.	Improve the accuracy of the Phase 7 model	$60,000	None to date.