|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Management Approach 1:** | | | | | | | | |
| **Key Action**  *Description of work/project. Define each major action step on its own row. Identify specific program that will be used to achieve action.* | **Performance Target(s)**  *Identify incremental steps to achieve Key Action* | **Partners**  **Responsible**  *Identify responsible partner for each step.* | **Geographic Location** | **Timeline**  *Identify completion date (month and year) for each step.* | **Estimated Project Cost** *Best estimate total cost of project (need)* | **Available funding by Partner** | **Total**  **Available Funding**  *Roll up of estimated funding* | **Factors Influencing and/or Gap**  *ID related factor or gap in Mgmt. Strat* |
| 1. Develop method to track and report Chessie BIBI in stream miles | 1. Provide stream representation comparable to CBWM Phase 6 including 1st-4th order streams (also reconcile differences in scale from various sampling programs, 1:24K v 1:100k) 2. Method to translate point biological sampling data to stream reach that accounts for variability and distribution of data 3. Create map and metrics of Chessie BIBI based on stream reach | (Suggested)  ICPRB  USGS  SHWG rep | Chesapeake Bay |  |  |  |  | Chessie BIBI currently not reported in stream miles *(not included as a factor influencing or gap but necessary metric to be developed for outcome)* |
| 1. Align metrics of functional lift with stream restoration protocols crediting projects for the Chesapeake Bay TMDL for nutrient and sediment reduction by incorporating recommendations from BMP Verification Committee for stream restoration into state Verification Plans | 1. Stream Health Work Group continue to work with Habitat GIT to review future drafts of state Verification Program Plans to assure states incorporate Verification Committee recommendations. | Suggested  BMP Verification Committee, Habitat GIT, SHWG, state agencies | Bay wide | January 2016 – onging (need to check with Verification Committee) | Funding for SHWG coordinator,  In-kind | NA | NA | Robust stream restoration monitoring to evaluate the potential functional lift or improvement in stream functions from BMP implementation |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Management Approach 2:** | | | | | | | | |
| **Key Action**  *Description of work/project. Define each major action step on its own row. Identify specific program that will be used to achieve action.* | **Performance Target(s)**  *Identify incremental steps to achieve Key Action* | **Partners**  **Responsible**  *Identify responsible partner for each step.* | **Geographic Location** | **Timeline**  *Identify completion date (month and year) for each step.* | **Estimated Project Cost** *Best estimate total cost of project (need)* | **Available funding by Partner** | **Total**  **Available Funding**  *Roll up of estimated funding* | **Factors Influencing and/or Gap**  *ID related factor or gap in Mgmt. Strat* |
| 1. Secure funding source to implement pooled monitoring approach throughout Chesapeake Bay watershed | 1. Work with joint Stream Health and Urban Stormwater Work Group (see also Strategy 4, Action 8) to review and expand current pooled monitoring research agenda. 2. Develop strategy for monitoring database/clearinghouse 3. Meet with Chesapeake Bay Funders Network to identify funding sources 4. Hold Bay wide stream monitoring charrette to align existing monitoring efforts and inform pooled monitoring approach 5. Continue to work with CBT Pooled Monitoring funding sources & results | Work Group identified in Strategy 4, Action 8  Maryland Water Monitoring Council  Maryland Stream restoration Association  Membership of CBT Pooled Monitoring work Group | Bay wide | **December 2017** |  |  |  | Sufficiency of data to demonstrate effectiveness of stream restoration practices |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Management Approach 3:** | | | | | | | | |
| **Key Action**  *Description of work/project. Define each major action step on its own row. Identify specific program that will be used to achieve action.* | **Performance Target(s)**  *Identify incremental steps to achieve Key Action* | **Partners**  **Responsible**  *Identify responsible partner for each step.* | **Geographic Location** | **Timeline**  *Identify completion date (month and year) for each step.* | **Estimated Project Cost** *Best estimate total cost of project (need)* | **Available funding by Partner** | **Total**  **Available Funding**  *Roll up of estimated funding* | **Factors Influencing and/or Gap**  *ID related factor or gap in Mgmt. Strat* |
| 1. Develop a “Stream Restoration Permit Committee” of the Stream Health Work Group that brings practitioners and the regulated community together in a consensus-building forum to identify actions to streamline the stream restoration project permit review process | 1. Identify members of the Stream Health Work Group to form the Committee 2. Develop meeting schedule 3. Review latest synopsis of permit issues, recommendations and actions. 4. Review and analysis of stream restoration permits and process (TBD) 5. Provide recommendations to Stream Health Work Group (and Bay Program Partnership) on priority actions to streamline stream restoration project permit review process | Stream Health Work Group/suggested membership of Committee  US ACE (North Atlantic Division)  EPA  MDE  VA DEQ, VMRC  Anne Arundel County  Fairfax County  PA DEP  DC DOEE  Other jurisdictional rep (DE, WV, NY) | Bay wide | January 2016 - ongoing |  |  |  | Information needs to support innovative, effective design approaches to identify restoration potential and success for different land uses, stream types, and current and future site constraints, causes of impairment/stressors |
| 1. Work with federal and state regulatory agencies to develop recommendations to accept site identification in a WIP, MS4 restoration plan or other relevant site analyses as sufficient for a feasibility analysis for stream restoration permits | 1. Convene Stream Health Restoration Permit Committee  2. Develop case study permit examples  3. Review criteria and guidance for site selection and design alternatives analysis  4. Review example WIPs and other watershed or site level analyses to provide information needs for site and design alternative analysis  5. Recommend guidance for using WIPs, or other documentation to satisfy site alternatives analysis requirement for permits  6. Identify steps to implement recommended guidance | Stream Health Work Group/  - may be membership of Stream Restoration Permit Committee | Chesapeake Bay Basin | January 2016 – June 2016 |  |  |  | Information needs to support innovative, effective design approaches to identify restoration potential and success for different land uses, stream types, and current and future site constraints, causes of impairment/stressors |
| 1. Develop an administrative review process that sets a 90 day turn-around time for permit issuance given specific administrative criteria | 1. Convene Stream Health Restoration Permit Committee 2. Identify barriers to a 90-day turn-around permit issuance. 3. Develop list of administrative criteria to screen project submittals 4. Recommend guidance for 90 day permit issuance. 5. Identify steps to implement recommended guidance | TBD | Bay wide |  |  |  |  | Information needs to support innovative, effective design approaches to identify restoration potential and success for different land uses, stream types, and current and future site constraints, causes of impairment/stressors |
| 1. Develop separate permit review track for stream restoration project (i.e., non-mitigation). | 1. Convene Stream Health Restoration Permit Committee 2. Identify factors influencing (e.g, laws, regulations, policies) ability to create separate permit track for stream restoration projects. 3. Develop list of criteria to determine project qualifications for separate permit review track 4. Recommend guidance for separate track permitting.   Identify steps to implement recommended guidance | TBD | Bay wide |  |  |  |  | Information needs to support innovative, effective design approaches to identify restoration potential and success for different land uses, stream types, and current and future site constraints, causes of impairment/stressors |
| 1. Establish minimum stability monitoring requirements for restoration projects | 1. Convene Stream Health Restoration Permit Committee 2. Identify minimum stability monitoring assessment parameters and standards 3. Document how higher level performance monitoring assessment parameters (i.e., water quality and biology) will be assessed 4. Recommend guidance for minimum stability monitoring. 5. Identify steps to implement recommended guidance | TBD | Bay wide |  |  |  |  | Sufficiency of data to demonstrate effectiveness of stream restoration practices |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Management Approach 4** | | | | | | | | |
| **Key Action**  *Description of work/project. Define each major action step on its own row. Identify specific program that will be used to achieve action.* | **Performance Target(s)**  *Identify incremental steps to achieve Key Action* | **Partners**  **Responsible**  *Identify responsible partner for each step.* | **Geographic Location** | **Timeline**  *Identify completion date (month and year) for each step.* | **Estimated Project Cost** *Best estimate total cost of project (need)* | **Available funding by Partner** | **Total**  **Available Funding**  *Roll up of estimated funding* | **Factors Influencing and/or Gap**  *ID related factor or gap in Mgmt. Strat* |
| 1. Establish joint SHWG and USWG work group as per STAC recommendation to develop guidance (e.g., via an expert panel) to align how the restoration/enhancement of stream functions translates to nitrogen, phosphorus, and sediment “credit‟ . Also use work group to address other technical issues identified in STAC Workshop on Sustainable Stream Restoration. | 1. Identify work group facilitator and reps from SHWG and USWG. 2. Establish charge for work group 3. Establish list of expected outcomes and deliverables 4. Develop timeline 5. Get approval from SHWG and USWG | Suggested  Possible STAC lead  SHWG reps  USWG reps. | Bay wide | January 2017 | Funding for SHWG coordinator,  In-kind | NA | NA | Uniform design process for stream restoration that can measure change in stream functions and/project success based on a project goals and objectives. Specific to the Bay TMDL, a design process for restoration projects to reduce nutrient and sediments loads delivered downstream while at the same time ensuring optimal habitat conditions restored. |
| 1. Reconciling Sediment TMDLs with other stressors identified by Stressor Identification Methods to assure sediment TMDLs implemented under MS4 permits address multiple stressors | 1. Coordinate with with reps from MDE involving TMDL and MS4 Programs. 2. Review Biological Stressor Identification (BSID) Analysis, sediment TMDLs and MS4 permit wording to determine best way for sediment TMDLs to be implemented to meet other biological stressors identified by the BSID. 3. Work with other states to address issue | Suggested  Liaison from SHWG  Rep from SSA and WMA, DNR, local gov’t.  Other state agencies to be added later | State of MD. | June 2016 | Funding for SHWG coordinator, In-kind | NA | NA | Targeting procedures for cost-effective restoration actions and design approaches that will achieve both water quality and biological functional improvement |
| 1. Provide stream training to regulators and practitioners | 1. Convene joint Stream Health and Urban Stormwater Work Group (see also Strategy 4, Action 8) 2. Identify priority training needs 3. Secure funding for training and training provider (tech lead) 4. Develop training workshop(s) content 5. Identify steps to implement recommended training | Joint work group/identify training provider | TBD based on training needs identified | TBD |  |  |  |  |
| **Management Approach 5:** | | | | | | | | |
| **Key Action**  *Description of work/project. Define each major action step on its own row. Identify specific program that will be used to achieve action.* | **Performance Target(s)**  *Identify incremental steps to achieve Key Action* | **Partners**  **Responsible**  *Identify responsible partner for each step.* | **Geographic Location** | **Timeline**  *Identify completion date (month and year) for each step.* | **Estimated Project Cost** *Best estimate total cost of project (need)* | **Available funding by Partner** | **Total**  **Available Funding**  *Roll up of estimated funding* | **Factors Influencing and/or Gap**  *ID related factor or gap in Mgmt. Strat* |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |