Living Resource Data Manager

Proposal for Position Funding

January 2021

JUSTIFICATION

Living resources in the Habitat Goal Implementation Team (HGIT) are not on target to reach the 2025 goals as outlined in the Chesapeake Bay Watershed Agreement or are lacking the data necessary to track progress towards the Outcomes. This is particularly evident for three Outcomes:

- **Wetlands**:
  - *Goal:* Create or reestablish 85,000 acres of tidal and non-tidal wetlands and enhance function of an additional 150,000 acres of degraded wetlands by 2025.
  - *Current progress*: 16,130 acres of restored wetlands, 74 acres of enhancement
- **Black Duck**:
  - *Goal*: By 2025, restore, enhance and preserve wetland habitats that support a wintering population of 100,000 black ducks, or approximately 717,749 acres. Based on the 2014 baseline of available habitat, we need to conserve or restore and additional 151,272 acres of black duck habitat to reach this goal.
  - *Current progress*: Uncertain – at least an estimated 4,536 acres of restored habitat, but data is lacking
- **Brook Trout**:
  - *Goal*: Restore and sustain naturally reproducing brook trout populations in Chesapeake headwater streams with an eight percent increase in occupied habitat by 2025.
  - *Current progress*: Uncertain – The Brook Trout Workgroup's baseline of 13,500 square kilometers of allopatric ("wild brook trout only") streams was established using 2015 data. This makes the goal to have an additional 1080 kilometers of allopatric streams by 2025 and the group currently relies on the 5-year assessment conducted by the Eastern Brook Trout Joint Venture to measure progress towards the Outcome; however, these data do not capture all activities relevant to the Outcome.

The Wetlands and Black Duck Workgroups have tried, over many years, to get an accurate accounting from the states of restored, created, enhanced, and protected wetlands in the watershed, but have run into multiple issues. One key issue has been the inability to derive wetland acres from water quality BMP data (i.e. urban, tidal) reported for progress toward Watershed Implementation Plan (WIP) goals. The majority of created/restored/enhanced wetland acreage is tracked in agricultural landscapes because there are more direct opportunities and programs that measure areal extent and are linked to financial incentives for these water quality practices. These agricultural BMPs are reported as wetland acres restored/created/enhanced.

As a result, the Bay Program determined the best option for tracking progress toward the wetlands outcome was to use state-reported data in the agricultural sector transferred through the National Environmental Information Exchange Network (NEIEN). This has likely resulted in an undercounting of wetlands restored, created, and enhanced in at least four ways:

1) Projects that are being completed through programs focused on habitat improvement and wetland/community resilience are not necessarily being reported through NEIEN since the focus of the exchange tool has been on transferring data more related to water quality programs.
2) In urban landscapes, wetlands projects fall under stormwater BMP accounting according to partnership decisions. In the NEIEN system, the critical accounting metric is acres treated, not actual acres of wetlands created/restored. This means that we are undercounting the wetlands acres created/restored in urban landscapes.
3) Related to this concern is the need to attribute the area of tidal marshes created through implementation of BMPs along the shoreline. These should be part of the accounting toward living resources goals. This missing information means we are also unable to relate tidal wetland acres created/restored to climate resiliency.
4) Stream restoration practices often involve floodplain reconnection and may result in the expansion of floodplain wetlands. These wetland acres are also not being reported through tracking systems.

The Brook Trout Workgroup relies on the Eastern Brook Trout Joint Venture's 5-year assessment for an accurate metric of the habitat occupied by Brook Trout across the watershed; however, these data only represent state resource agency actions and do not capture all activities relevant to the Outcome. Numerous NGOs and other organizations conduct and/or fund significant conservation and restoration projects. The workgroup does not currently have the capacity or capability to collect and analyze those activities that also contribute to the Outcome. Projects that benefit Brook Trout could be tracked and reported on NEIEN so that all relevant data can be used to document Outcome trajectory or, if necessary, a more suitable method of tracking can be established. The lack of standard reporting and significant data gaps are preventing the Workgroup from accurately measuring progress towards their Outcome.

PROPOSED SOLUTION

Solving these issues is beyond the capability and resources of the workgroups and will require additional support. To address these challenges, the HGIT proposes the creation of a Living Resource Data Manager position, ideally through an existing contract with EPA Chesapeake Bay Program. The use of contractual agreements to address data needs is a process which has been successfully undertaken previously and is currently underway by the CBP partnership. The goals of this position would be two-fold:

Short-Term Goal: Identify where data, already captured on NEIEN, could be used as part of the measures of progress toward the wetland, black duck, and brook trout outcomes, and ultimately, other relevant living resources outcomes. Identify and implement modifications to NEIEN to maximize existing data reporting processes towards living resources outcomes.

Long-Term Goal: To support living resources outcomes, create a process that incentivizes data sources to report quality data through relevant state and federal agencies and ultimately on NEIEN.

a) Develop a training module and streamline processes that helps organizations, localities, states, and the federal government report data that could be accommodated with NEIEN to better track the 2025 Living Resources goals; and
b) Develop incentives for the states to maintain the reporting of quality data.

Specific tasks to address each outcome's unique challenges would include the following:

Wetlands:

1) Review the NEIEN system to determine efficacy for tracking projects toward wetland outcomes. Specifically assess the data for urban stormwater, stream restoration, and agricultural practices to verify accounting for areal extent of practices. Review and correct the inaccuracies such that wetlands are being accurately counted against the established outcomes.
2) Collect data. Identify practitioners in all jurisdictions including regulatory, NGOs, funding entities, etc. Establish communications via phone, email, etc. and gather data. Establish protocols to ensure this communication and data collection remain consistent throughout the remainder of the 2014 agreement.
3) Assess data transfer process. Review existing data formats and collection methods. Create bridging processes to use existing data with modifications as needed.
4) Propose and develop approaches such as forms, calendar reminders, training to improve, and simplification of processes to maximize accounting for both WQ BMP and wetlands outcomes.

Black Duck:

1) Work with partners identified by the Black Duck Action Team (BDAT) to gather and report wetland habitat creation/restoration/enhancement data. Establish protocols to ensure this communication and data collection remain consistent throughout the remainder of the 2014 agreement.
2) Collect data and review. Determine which acreage category (or categories) should be tracked to meet the BDAT outcome and review consolidated data with project partners to ensure there is no duplicate counting. Establish protocols to ensure data collection remain consistent throughout the remainder of the 2014 agreement.
3) Provide data to the BDAT and ensure it is entered through the NEIEN.

Brook Trout

1) Work with the Brook Trout Workgroup (BTWG) to develop a suitable database framework to collect data on brook trout restoration and conservation activities affecting the amount of occupied brook trout habitat in the watershed. Investigate the efficacy of using NEIEN to report on implementation.
2) Work with partners identified by the BTWG to identify, collect, QA/QC, and summarize those data. Ensure data is transferred to appropriate people or systems to report overall progress.

CONTRACT DETAILS

Anticipated Level of Effort:

The anticipated level of effort for the three outcome goals as a composite is 20 hours/week for two years with a limit of $150K (direct + indirect) over the project period. This includes the following:

1) Analyze existing living resources data to determine their accuracy, completeness, and barriers to acquiring better data for the Bay Program from identified sources of the information.
2) Identify and correct issues with transferring data annually from the original sources to the Bay Program at the state and federal levels – whether the work toward the goals is publicly or privately funded.
3) Make defensible comparisons among baselines, progress, and goals.

4) Lead collaborations among living resources data sources, jurisdictional NEIEN leads, and relevant Chesapeake Bay Program GITs and their workgroups over two annual reporting cycles – taking actions to improve the accuracy and completeness of the living resources data reported through the NEIEN.
5) The collaborative work includes training sessions and presentations to states, and stakeholders, including Chesapeake Bay Program GITs and their workgroups, to ensure accurate data reporting.
6) Make connections between improved living resources data and work completed to-date on the quantification of co-benefits of restoration efforts.

Deliverables:

- Written monthly updates to EPA that summarize progress to-date on the project and set priorities for the coming month..
- Quarterly progress meetings with HGIT and workgroup chairs to summarize progress to-date on the project and set priorities for the coming quarter.
- Written notification to EPA of any delays in completing activities.
- Updated NEIEN appendix and/or schema information to accommodate the living resources data.
- Final documentation and compilation of the project, including technology transfer products (e.g., documents, presentations, workshop and webinar summaries, syntheses of feedback from stakeholders) – two years after project commencement.

Required Skills and Experience:

The technical qualifications (experience, expertise, and education) required include a thorough familiarity of data, tools, and processes for tracking and reporting BMPs for assessing progress toward Chesapeake Bay TMDL goals.