

Activity 3: Tracking, Verifying, and Reporting Implementation of Conowingo WIP and Two-year Milestones

Lead Grantee: Chesapeake Conservancy

Sub-Activities: Tracking, Verifying, and Reporting Progress on Conowingo WIP and Two-year Milestone Implementation

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Other Project Partners: Chesapeake Commons and Center for Watershed Protection

The Conowingo Watershed Implementation Plan (CWIP) adds an additional challenge to the tracking, monitoring and verification of Best Management Practices (BMPs) being implemented through the existing framework of jurisdictions' Watershed Implementation Plans (WIP) to meet the Total Maximum Daily Load (TMDL) of pollutants under the Chesapeake Bay Watershed Agreement. For the first time, jurisdictions, states, and the Chesapeake Bay Program (CBP) must track efforts to mitigate sediment, nitrogen, and phosphorus pollution and identify practices and programs as part of the jurisdictions' WIPs or the CWIP and ensure there is no multiple counting.

The Conservancy and the Commons, with guidance from CWP, will address the unique challenge of addressing managing and tracking progress toward both jurisdiction specific WIPs and the CWIP by enhancing tracking, verification and monitoring tools within a system already in development for CBP to streamline the reporting of progress toward the CWIP to CBP. Together, this team will springboard off their current CBP grant, BMP Planning and Reporting: Scaling Precision Conservation in the Chesapeake Bay Watershed, to build enhancements to Chesapeake Commons' FieldDoc platform. These enhancements will be focused on making an easy-to-use interface that allows partners to attribute implementation towards either the CWIP or jurisdictions' WIPs and build in a number of semi-automated and automated checks to ensure projects are not being counted toward multiple WIPs simultaneously. The Conowingo framework will build trust and confidence in the BMPs being implemented not only for the Conowingo WIP but for jurisdictional WIPs as well. Managers will be able to clearly understand and communicate what BMPs have been implemented and where and to which WIP they are counted.

Through this project, the project partners will:

- Establish processes for data verification through coordination with refined feature sets and a focus on tracking actions on the ground;
- Develop a process and the technology to verify BMP implementation via a tiered audit system using automated and semi-automated checks from a general site level assessment up to and including in-field staff inspection; and
- Host periodic webinars each year, complemented as needed with in-person workshops, to inform stakeholders of tool enhancements and solicit feedback. We will also develop online tutorials for using the tool and Conservancy staff will be available to aid partners who need additional support.

Refine Tracking and Verification Requirements (December 2019)

Conservancy, CWP, and Commons staff will work with CBP staff and CWIP Steering Committee members to determine the requirements for a framework that will help track progress towards the CWIP and CWIP Milestone action plans and increase accountability within a system that will need to simultaneously track activity that could be associated with either the CWIP or a jurisdictional WIP. This

process will ensure that the tracking and verification system developed for the Conowingo WIP meets CBP verification and reporting requirements and addresses the concerns of the Steering Committee.

Write a Quality Assurance Project Plan (QAPP) (December 2019)

This document will detail the proposed work plan and general approach for the 6-year project. Specific information in the QAPP will include a project management plan, including personnel working on the project and organizational information; a BMP Verification Program Plan detailing how BMP data will be collected and submitted annually to the CBP office; information about proposed methods, literature supporting the chosen methods, and how the source data will be collected; a plan for how we will ensure all activities are completed correctly; and a plan for how we intend to review and interpret the data before it is incorporated into secondary analyses.

Develop FieldDoc functionality to track individual projects towards either the Conowingo WIP or jurisdictions' WIPs (December 2019)

Building on existing infrastructure upgrades to FieldDoc, new functionality will be made available to all projects within the Chesapeake Bay Watershed to allow users to specify whether a project should be tracked as part of the Conowingo WIP or jurisdictions' WIPs. This capability will be a critical first step at accurately tracking Conowingo WIP implementation and progress towards the CWIP and 2-year Milestones.

Create draft audit framework for review by CWIP steering committee members and CBP Staff (December 2019)

Conservancy, CWP, and Commons staff will draft a proposed audit framework that will be used to ensure that projects being tracked towards the Conowingo WIP are being implemented and do not overlap with other BMPs being tracked for jurisdictions' WIPs. This draft will help CBP staff and CWIP steering committee members understand how an automated and semi-automated series of audit steps can increase accountability and lower verification costs. The draft framework will be developed to be compatible with existing CBP verification requirements.

Update FieldDoc's geospatial analysis capabilities to highlight potentially duplicate projects (March 2019)

FieldDoc is already being used to facilitate BMP planning and tracking throughout the Chesapeake Bay watershed and has recently adopted more site-specific tracking of project footprints as part of a separate cooperative agreement. Importantly, FieldDoc has the ability to track specific project locations, as submitted by implementation partners, without making this information publicly accessible to protect privacy. To automate the identification of potentially problematic project proposals, new functionality will be integrated that will run a spatial check as a background process on all new projects to ensure that they a) do not match the project parameters of another project and b) are not overlapping with any existing project footprints or within a specified distance of other projects. For projects that do not have a specific project location, a suite of project parameters, such as county and cost or acreage of implementation, will be compared to other projects in the database to flag projects that are potentially being counted multiple times as it is unlikely to two projects will have identical parameters.

Create Final Audit Framework for approval by CWIP steering committee members and CBP Staff (March 2020)

After incorporating feedback from the CWIP steering committee members and CBP staff on the draft framework, project partners will create a final audit framework that will be presented to and adopted by

CWIP steering committee members and CBP staff. The Final Audit Framework will determine the specific elements developed in later steps as the framework is implemented.

Deploy Conowingo WIP dashboard in FieldDoc to track progress towards 2-year Milestones developed as part of Activity 1 (June 2020)

As the draft Conowingo WIP is finalized by the project team from Activity 1, the overall CWIP and 2-year Milestone goals will be incorporated into a dedicated Conowingo WIP dashboard in FieldDoc that will allow CBP staff, Conowingo WIP Steering Committee members, and any other relevant partners to see how progress towards the CWIP and CWIP milestones are occurring in real-time. This dashboard will incorporate the final CWIP's CAST scenario as practice-specific "goals" and will track implementation toward each goal in real time as projects are implemented and submitted through the FieldDoc platform. FieldDoc is already building connections to other repositories of data, such as PracticeKeeper and the BMP warehouse in Pennsylvania to associate projects tracked through other platforms into the overall progress towards the CWIP and milestones.

Develop Level 1 Audit capabilities for automated project review (Oct 2020)

To facilitate an increased level of accountability with regard to the implementation of the CWIP and jurisdictions' WIPs, new functionality will be developed that creates a spatial review of photos uploaded by project partners to ensure projects have been implemented as claimed. This protocol will leverage EXIF data, information about where and when a photo was taken that is included in most smartphone pictures, to track time, location and bearing of uploaded photos. This information can then be used for verification as part of an audit process.

Conduct outreach & training for users on the new tracking tools (Oct 2020)

Project partners and CBP will engage stakeholders through their existing network of local, state and regional contacts to explain how to use the tool enhancements and ensure they meet user needs; review the tools and beta test them once available; and refine the tools and processes after a period of deployment. The team will also develop a set of online tutorials to be housed in an online user library to allow users to maximize FieldDoc's capabilities.

Implement Final Audit Protocol (Years 2-6)

Conservancy staff will implement the Final Audit Protocol, once it has been approved and all additional functionality enhancements have been integrated. While the overall methodology will be confirmed as part of the Year 1 work plan, the protocol may include a combination of spot checking 5-10% of projects through a visual inspection of submitted photos, a manual review of project documentation and site characteristics to ensure a project has been completed as claimed for projects that are ambiguous, or a field inspection to ensure that a project has been completed as claimed.

Assess User Feedback and make adjustments to platform capabilities (Years 2-6)

Conservancy and Commons staff will conduct an annual survey, combined with regular feedback provided by users, to determine enhancements that could be incorporated to improve user experience or the overall functionality of the platform. Once enhancements have been identified, they will be proposed to CBP staff for adoption and implemented.

Provide technical support and troubleshooting (Years 2-6)

Dedicated Conservancy and/or Commons staff will be available to end users to provide support on the functioning of the platform and to troubleshoot any issues that may arise. In addition to being an on-call

staff resource, staff will also work to update and create new training materials and user guides to aid end users in the nuances of the platform.

Provide annual report to CBPO (December 1 of each year)

The Conservancy will provide to CBPO staff an annual report detailing nutrient and sediment pollutant load reducing practices that have been implemented as a result of the Conowingo WIP and two-year milestones by December 1 of each year, using CBP partnership-approved protocols