DESKTOP BMP (Best Management Practices) ANALYSIS with NON-INTRUSIVE FIELD VERIFICATION

LDG Architecture Engineering & Consulting

Larson Design Group (LDG) developed a remote sensing-based agricultural Best Management Practices (BMP) methodology to collect and account for Resource Improvement Practices not captured by the Chesapeake Bay (CB) model.

This methodology meets County Government officials' needs for landowner privacy and reduces verification time for Conservation District employees. It can be completed by third-party consultants using publicly accessible data and observations, eliminating the need for access to private property.

The GIS platform used allows counties to identify and re-verify BMPs, tracking them digitally for future verification. This has reduced BMP verification time by 75%, improving efficiency, especially for districts with limited staff.
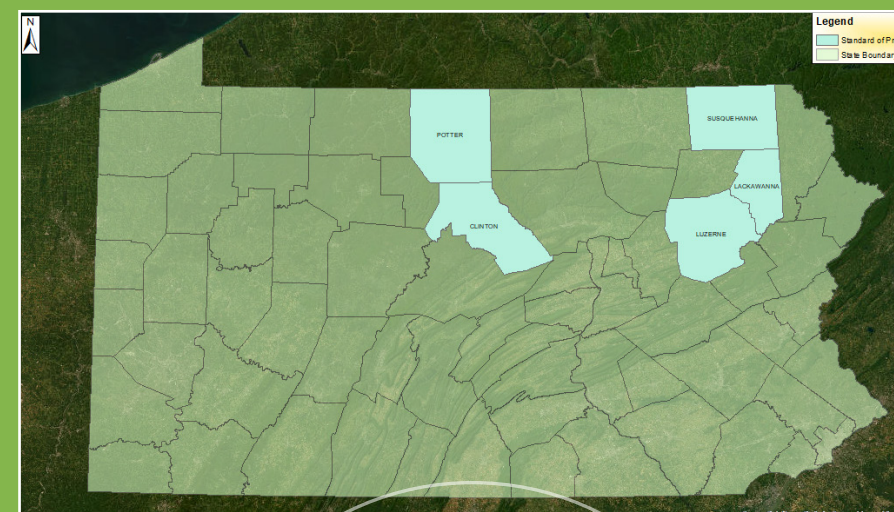
The methodology underwent federal approval for use by all CB States, passing through the Program Agricultural Workgroup and third-party review. In August 2023, it was approved as a BMP Verification Method for all CB states.

The methodology identified 1,100 Agricultural BMPs not accounted for in the CB model, aiding in nutrient and sediment reduction to the bay and helping Pennsylvania achieve federal goals.
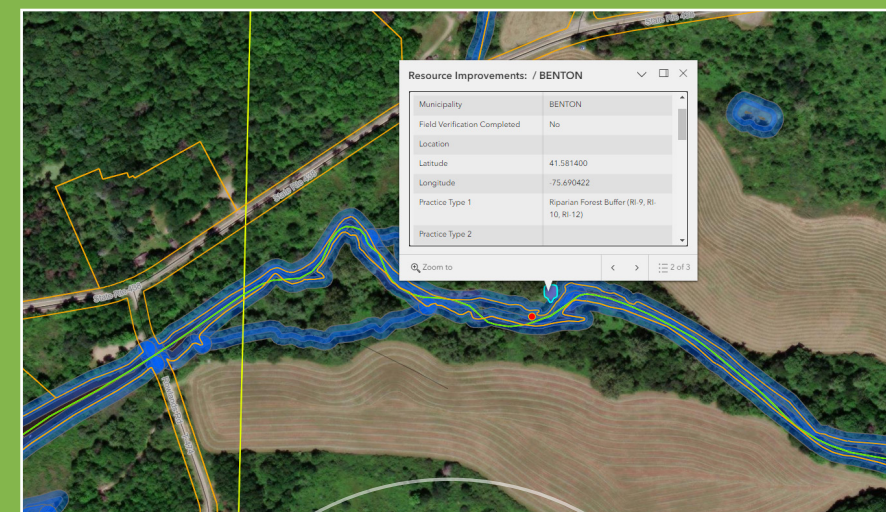
DEVELOPMENT OF THE PROGRAM

1. Develop GIS HUB site and Survey 123 forms for all Pilot Counties
2. Complete Desktop aerial review for BMP's on targeted watersheds
3. Compile Driving routes for selected areas and identified BMP's
4. Complete Non-Intrusive Windshield surveys for identified BMP and complete digital forms for each BMP
5. Complete Practice Keeper Data entry for each BMP
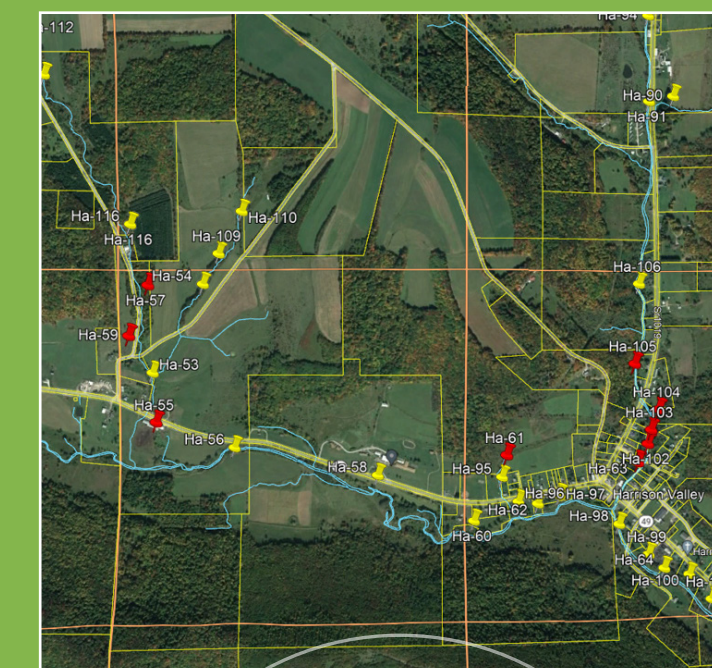6. Complete Data Analysis Review for each BMP

TIMELINE OF EVENTS

APRIL 2022

DEP provides funding to counties for BMP Verification.

Development of Protocol begins to address Release of Records requirements and respect farmers' privacy, driven by County Board of Directors.

LDG is contracted by several counties to complete BMP Verification.

LDG develops Non-Intrusive Protocol to satisfy counties' wishes and complete BMP Verification in larg

LDG completes Pilot program, collecting data on over 1100 BMPs in five pilot counties

JUNE 2022 - MARCH 2023

APRIL 2023

LDG presents the protocol to EPA representatives.

LDG develops SOP document, collaborating with PA DEP and EPA staff to finalize BMP Verification Procedure

SOP Document undergoes third-party review and is presented at the Agricultural Workgroup for comments.

JUNE - JULY 2023

AUGUST 2023
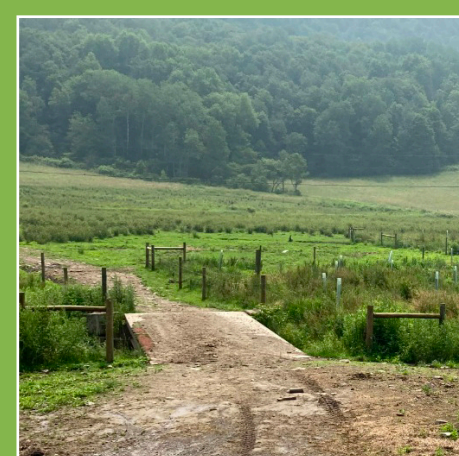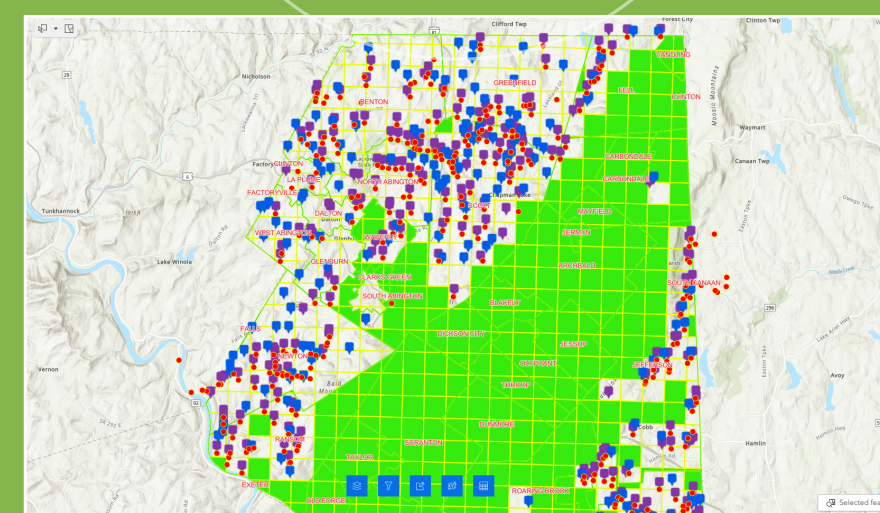
BMP Verification Methodology approved for use in all Chesapeake Bay states as a recognized Verification method.

LDG's BMP Methodology awarded the Environmental Business Journal Information Technology Award.

FEBRUARY 2024

APRIL 2024

Awarded the Governor's Award for Environmental Excellence.

Governor's Award for ENVIRONMENTAL Excellence 2024

ENVIRONMENTAL BUSINESS JOURNAL®
BUSINESS ACHIEVEMENT AWARD
This certificate hereby witness that
Larson Design Group
has been selected for the honor of
Information Technology: Non-Intrusive BMP Verification
awarded by Environmental Business Journal® for outstanding business achievement in the environmental industry in 2023
San Diego, California, USA
March 25, 2024
Grant Ferrier
CEO & Editor