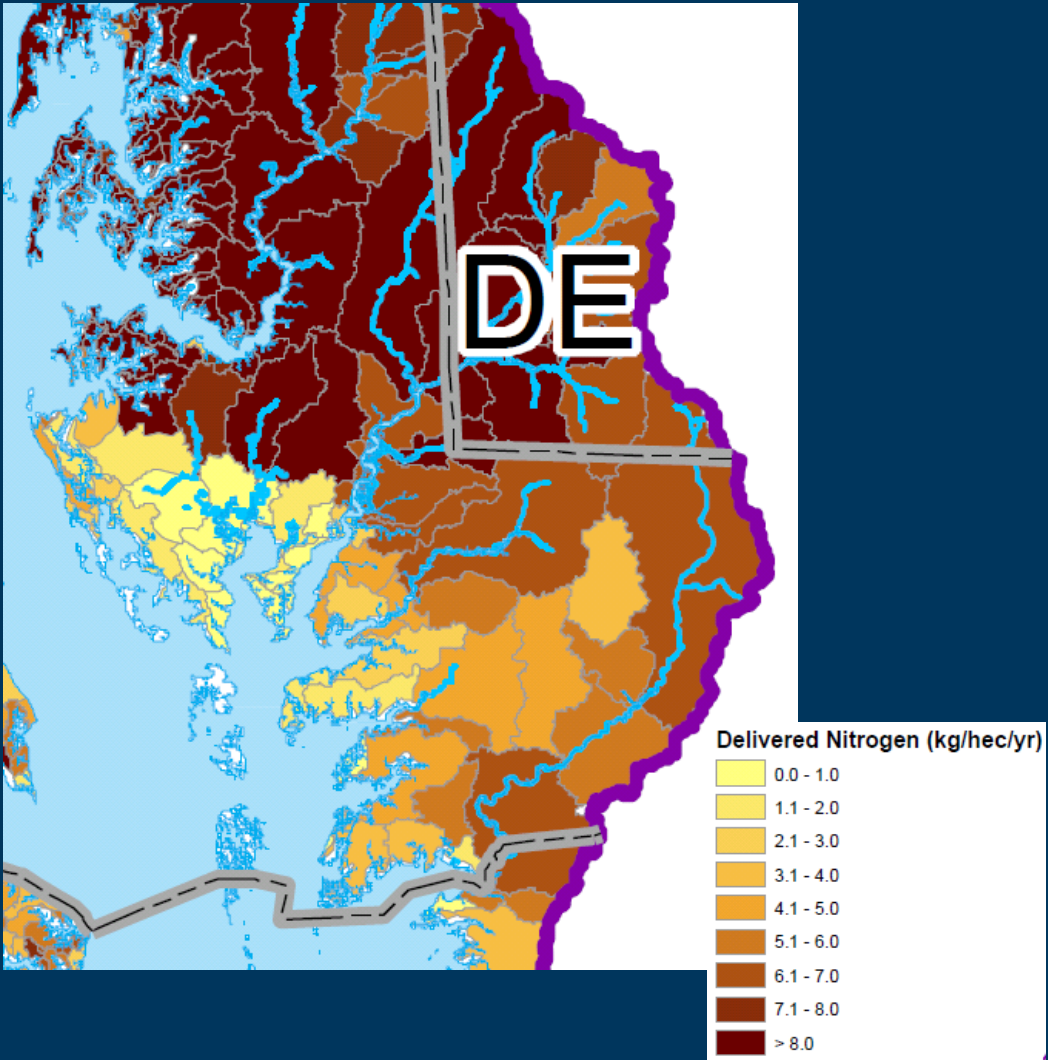


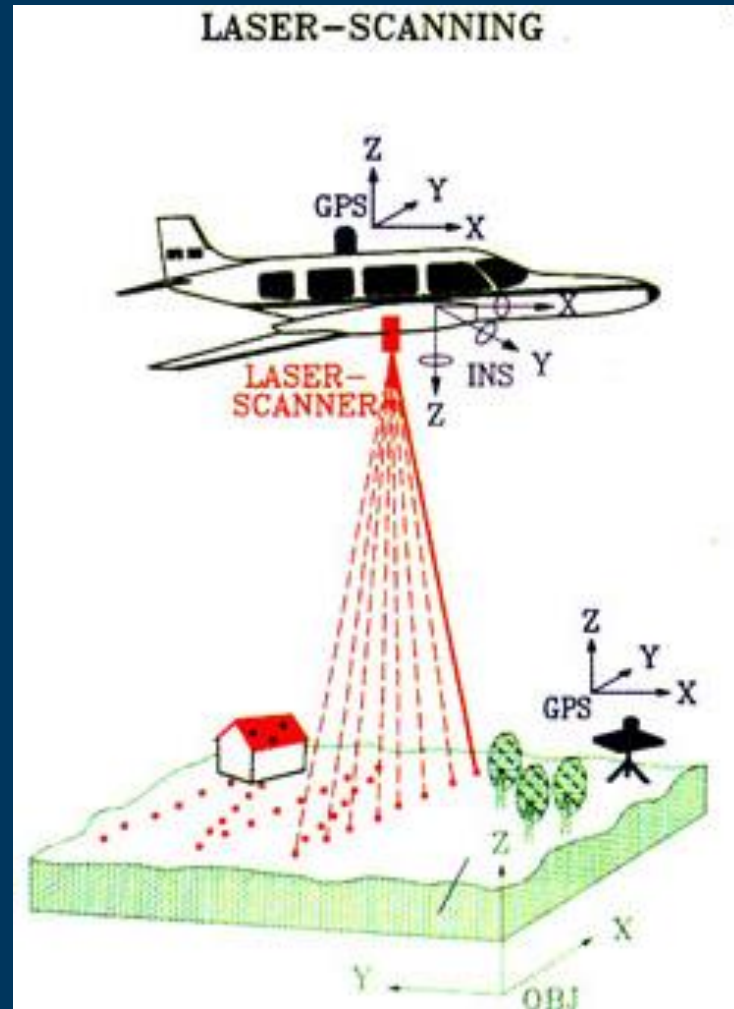
Collaboration to Improve BMP Targeting in Allegany County

Donnelle Keech
Allegany Forests Project Director
The Nature Conservancy



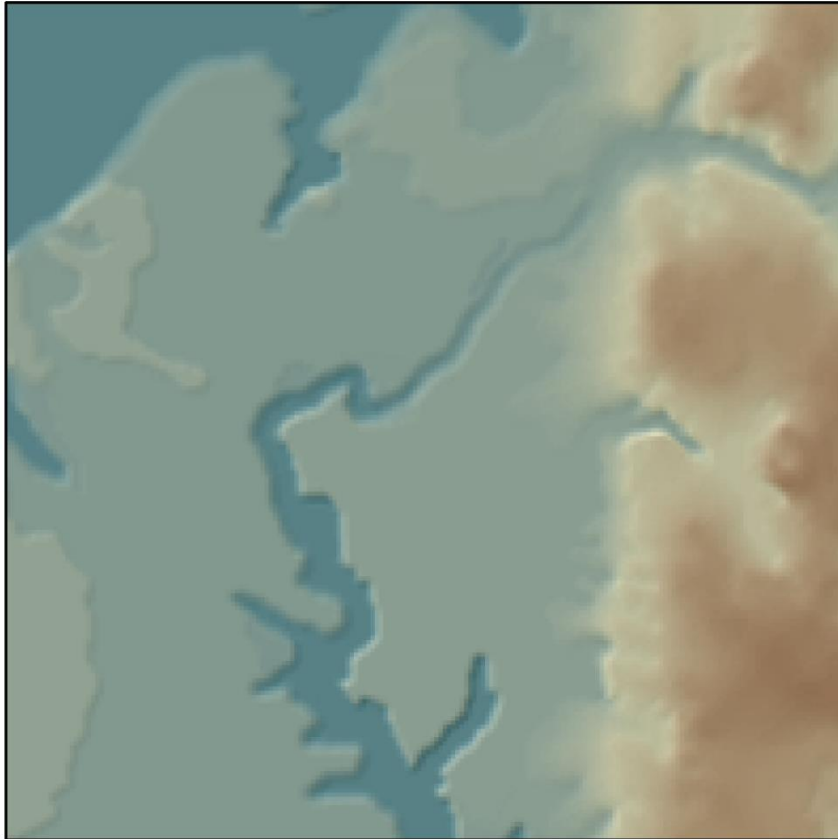
LIDAR

**High Resolution Topography
Data Derived from Light
Detection And Ranging
(LIDAR) Remote Sensing
Data**

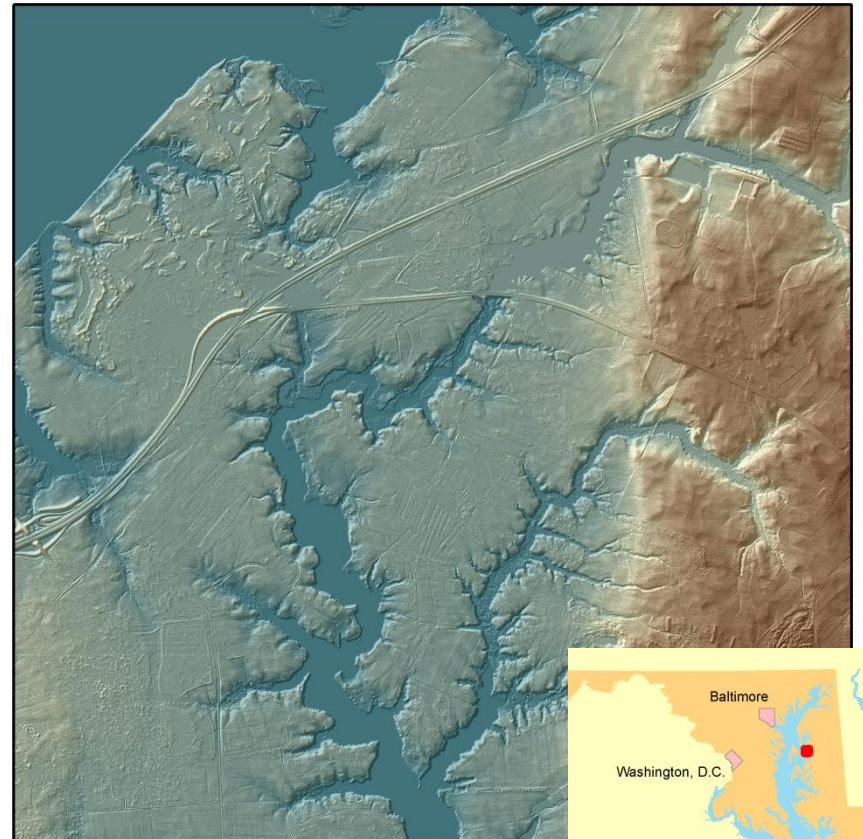


Flood and Gutelius 1997 J. of Photogrammetry & Remote Sensing

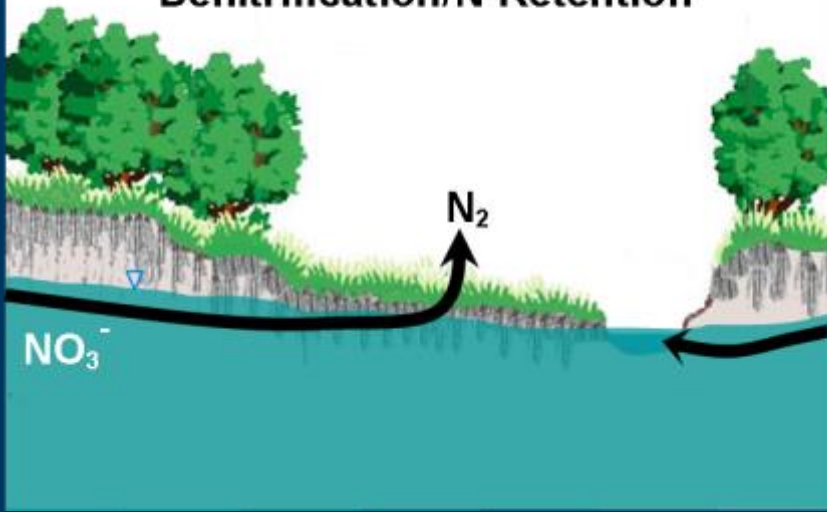
USGS 30 m DEM (7 to 10 m vertical accuracy)



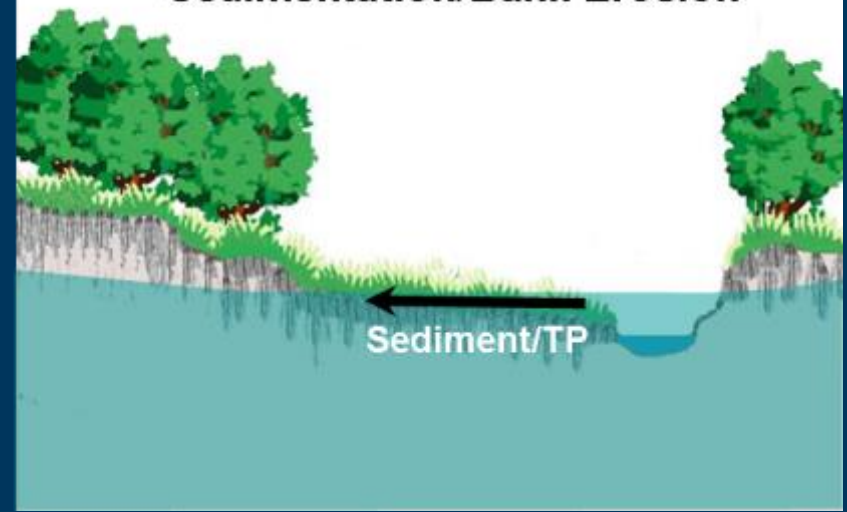
LiDAR 2m DEM (15 cm vertical accuracy)

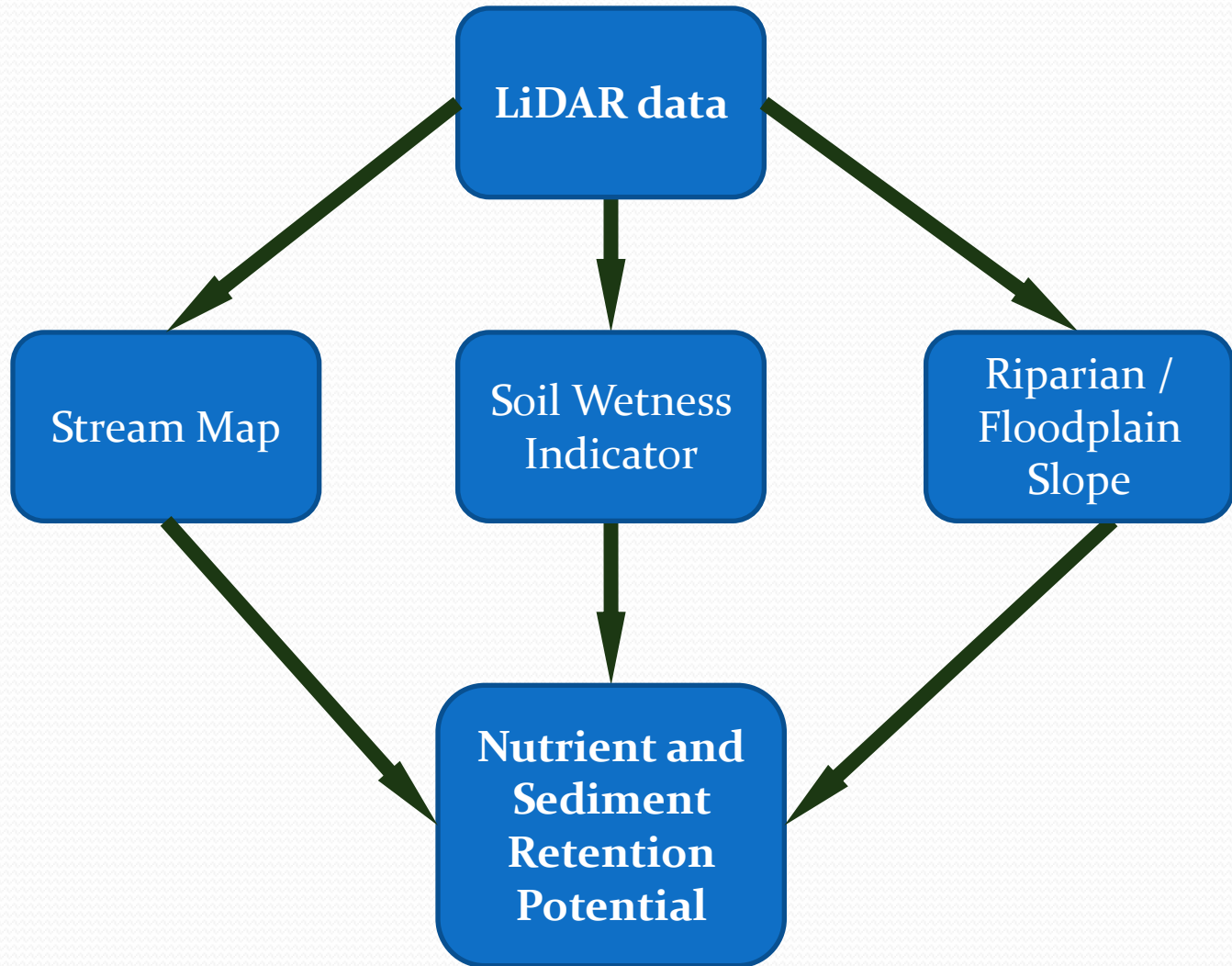


Denitrification/N-Retention

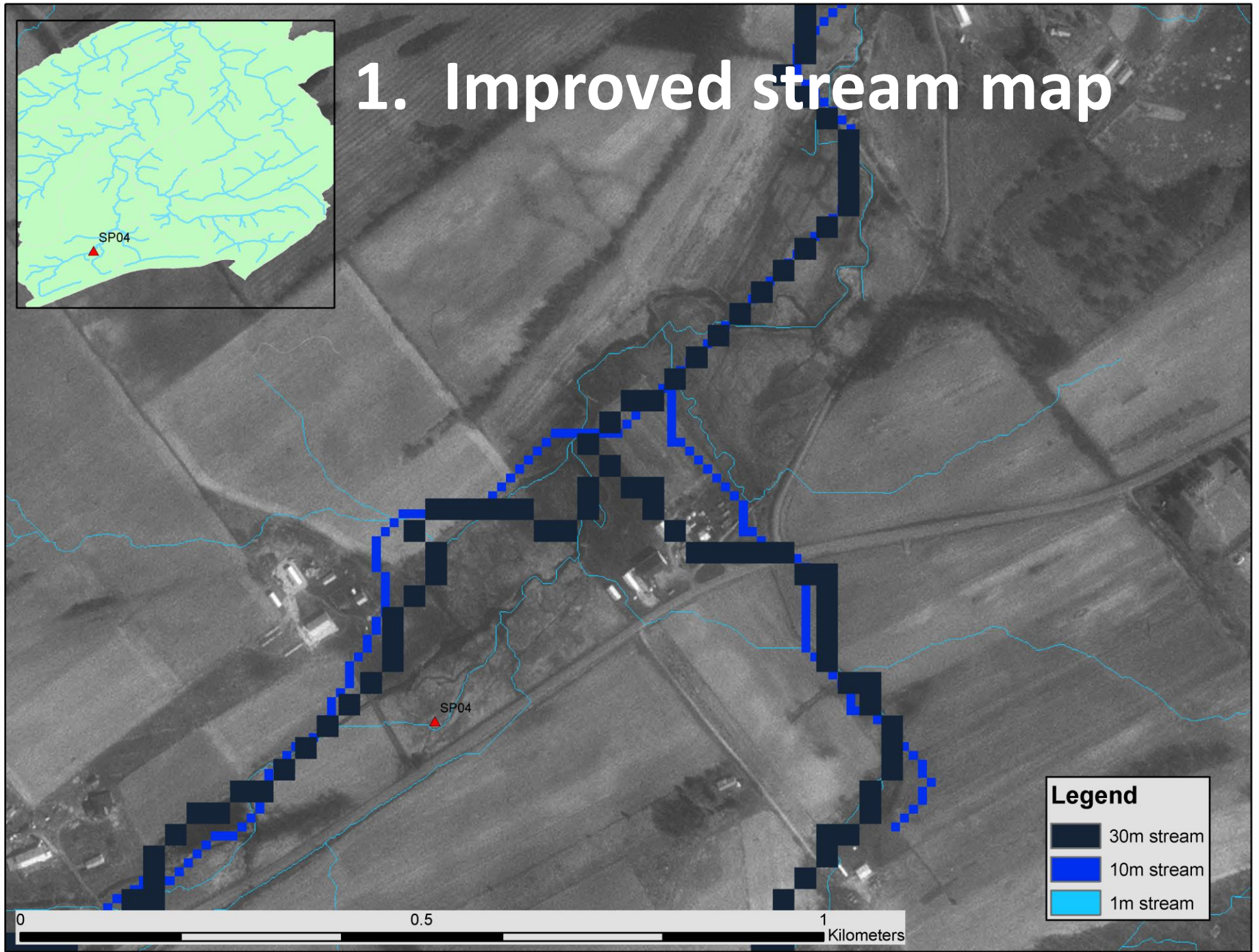
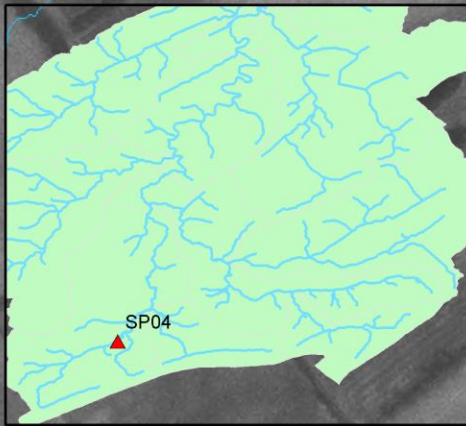


Sedimentation/Bank Erosion

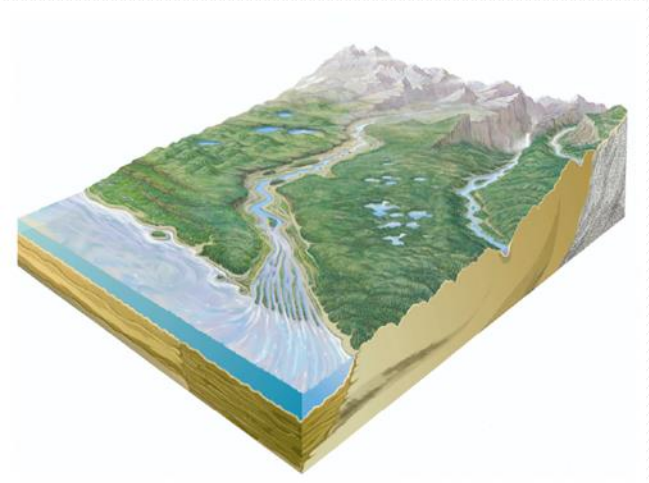




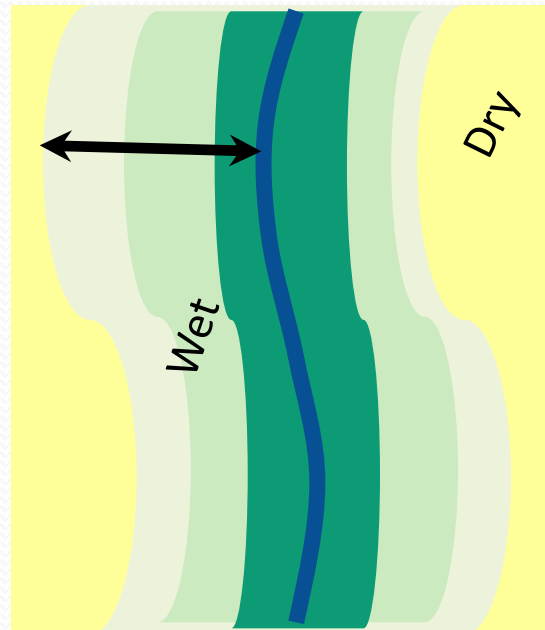
1. Improved stream map



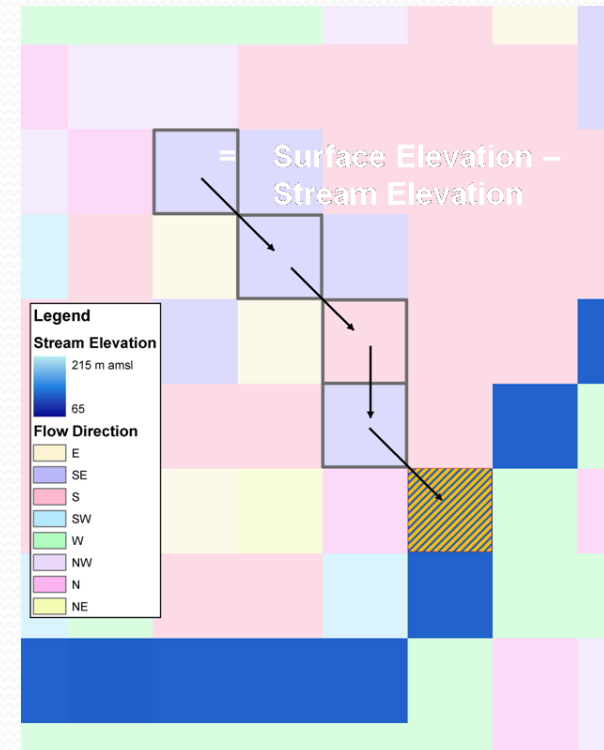
2. Mapping soil wetness



If surface waters considered watertable outcrops (e.g., Winter 1999)...

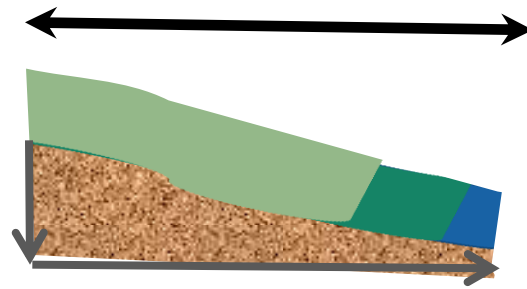
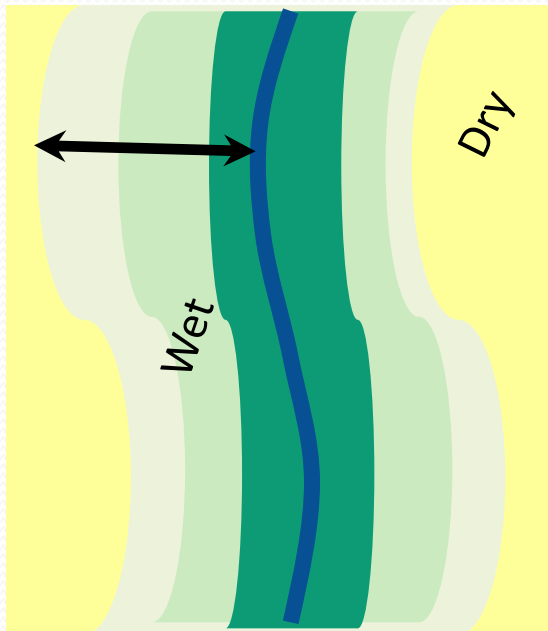


... then land areas within 1.5m elevation of surface water more likely wet.



→ Map land surface relative to surface water





3. Riparian/Floodplain Slope

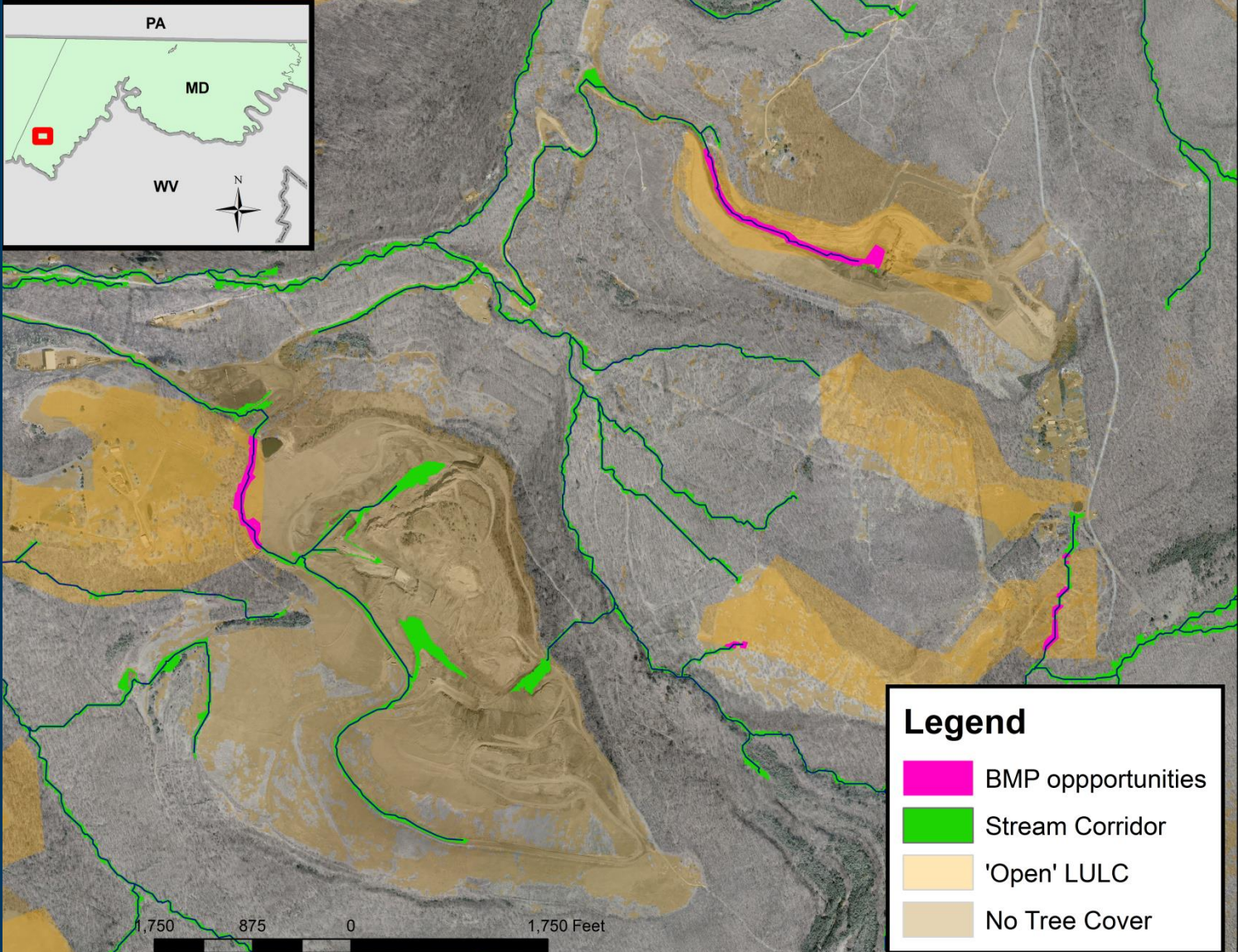
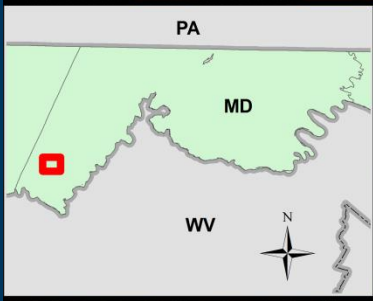


$$\text{Slope} = \Delta\text{Elevation} / \Delta\text{Distance}$$







Legend

-  Open Water
-  Floodplain Area (0 to 3° slope)
-  Riparian Area (3 to 15° slope)
-  Incised Area (> 15° slope)



Legend

-  BMP opportunities
-  Stream Corridor
-  'Open' LULC
-  No Tree Cover

Alleghany_hyd.mxd - ArcMap - ArcInfo

File Edit View Bookmarks Insert Selection Geoprocessing Customize Windows Help

1:275.392

41%

Editor

Table Of Contents

- Inset
 - cnty2010
 - MD_PA_WV
- Layers
 - ESRI_MajorRoads
 - cnty2010
 - MD_PA_WV
 - BMP opportunities**
 - USGS NHD+
 - LiDAR-derived str
 - Stream Corridor
 - Stream Corridc
 - Restoration Sites
 - md_lulc_open
 - 'Open' LULC
 - non_forest
 - No Tree Cover
 - MDP 2010 LULC
 - Alle_2010LULC
 - Treed/Forest Cov
 - EHA function
 - rip_mask

Table

BMP opportunities

ID	Acres
162	171.709
169	97.606102
177	71.3936
196	63.751598
193	61.7626
841	60.6726
183	56.6945
196	50.209999
894	50.1203
976	40.438301
173	33.034401
130	27.0331
155	26.238701
154	25.625401
340	24.198999
118	23.877399
185	23.6157
690	22.211201
181	19.478001
520	17.5681
169	17.4986
147	17.390301
161	17.194901
176	16.9011
137	16.317801

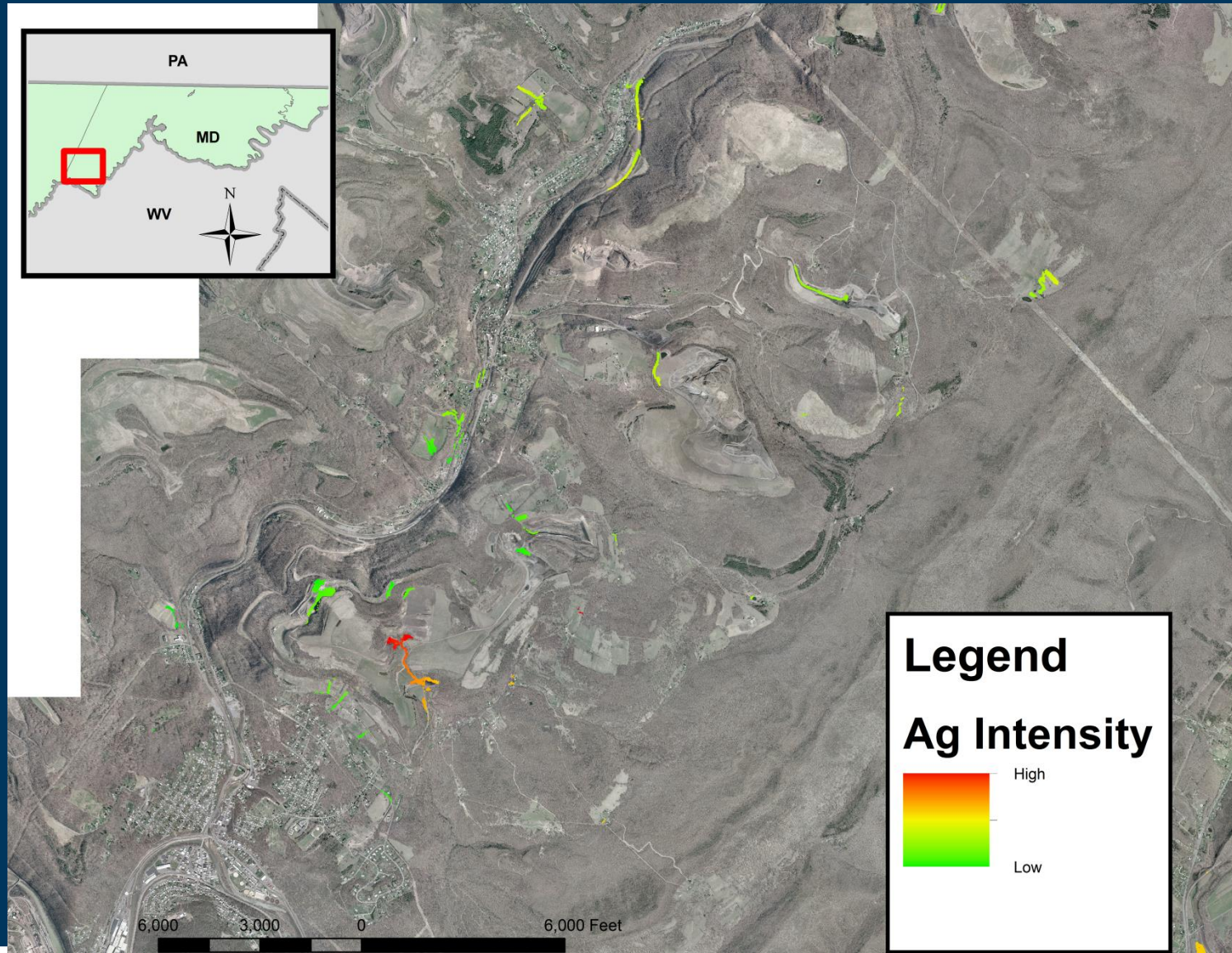
(0 out of 3900 Selected)

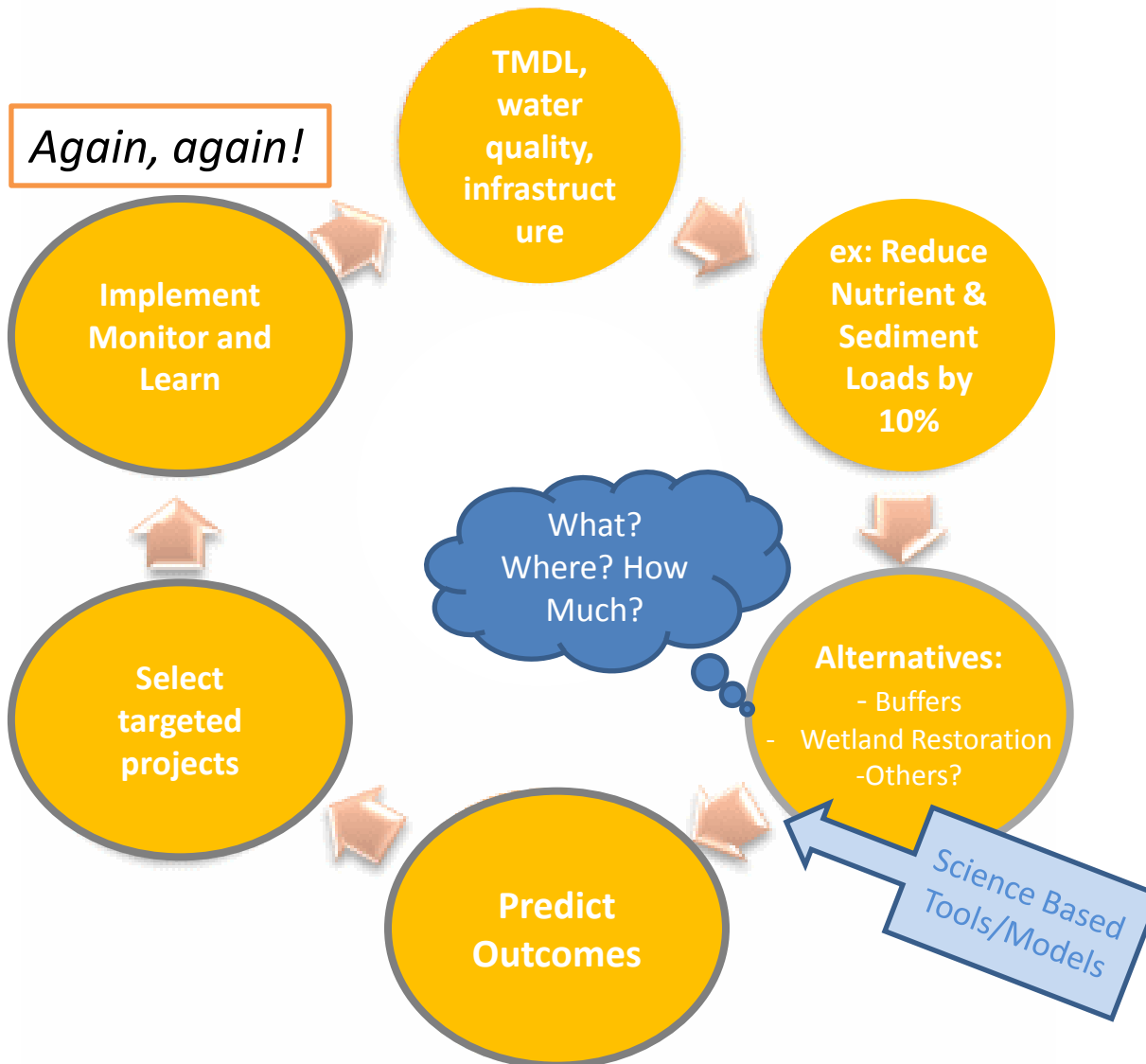
BMP opportunities

0

777115.985 771563.058 Feet

Nutrient and Sediment Source Strength





[SDM Link to citation](#)

DONNELLE KEECH
DKEECH@TNC.ORG
301-722-0313