The Virginia Agricultural BMPs Cost-Share Program:

Using Geographical Information Systems (GIS) to examine field attributes of Colonial District farms

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Why are Field Attributes Important?

- Examining potential fields for cost-share
  - Greatest increase in water quality per dollar

- Examining cost-share applicants
  - Decision-making when funding is scarce
## Farm Field Attributes

- Historical cost-share BMP data
- Watershed
- Soil types
- Slopes
- Distance to water body
- Distance to impaired water body
- Distance to coastline
30B = 9.45%
31A = 2.33%
38A = 82.54%
3A = 5.68%
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31A = 2.33%
38A = 82.54%
3A = 5.68%

38A:
- Tetotum Loam
- 0 top 2 percent slopes
- Prime farmland
- Poorly drained
- Frequently ponded

Legend
Ag Soil Union Polygons
Distance to nearest water = 613.60m
Water type = Stream/River
Water name = Pamunkey River
Category 5A Impairment (DEQ)
- Field Acreage = 43
- Dogue silt loam (0 to 2% slopes) = 39.85%
- New flat silt loam (0 to 2% slopes) = 36.17%
- Poorly drained and frequently flooded, very high surface runoff
- Nearest to Swamp/Marsh = 450m
- Nearest Impaired Stream = 540m
- Nearest Coastline = 802m

- Field Acreage = 41
- Pamunkey loam (2 to 6% slopes) = 74.11%
- Prime farmland, low surface runoff
- Nearest to Swamp/Marsh = 157m
- Nearest Impaired Stream = 169m
- Nearest Coastline = 197m
Major Contributions

- Help decision makers better allocate cost-share funding in regard to maximizing water quality in a cost-efficient manner.
- Help decision makers target Colonial District fields for cost-share funding.
- Help decision makers better analyze cost-share tradeoffs when funds are scarce.
- Help decision makers examine cost-share funding on a field by field basis.
THANK YOU!

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