

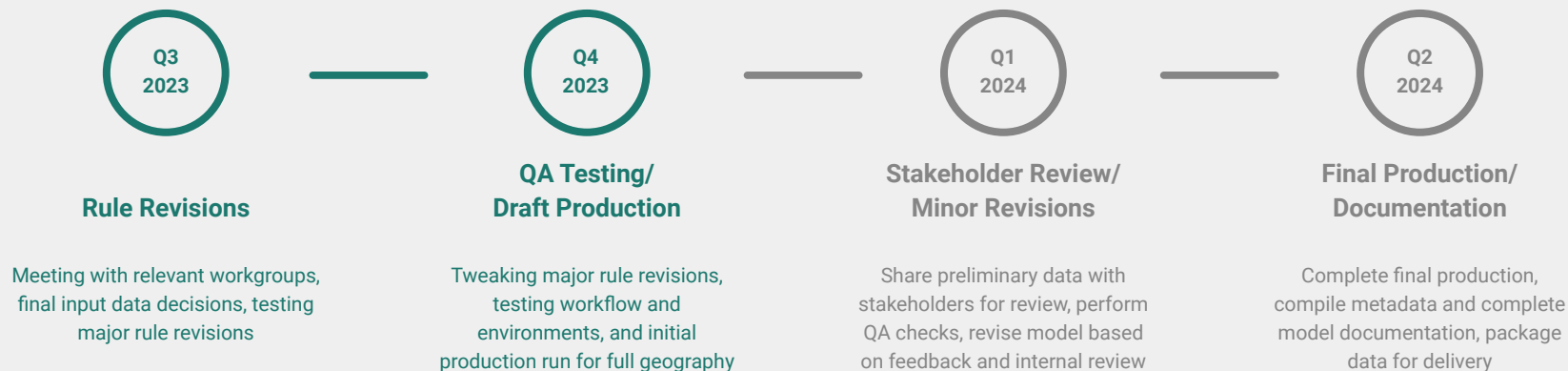


# Agriculture-related classes in 2024 edition of Chesapeake Bay Land Use/Land Cover Data

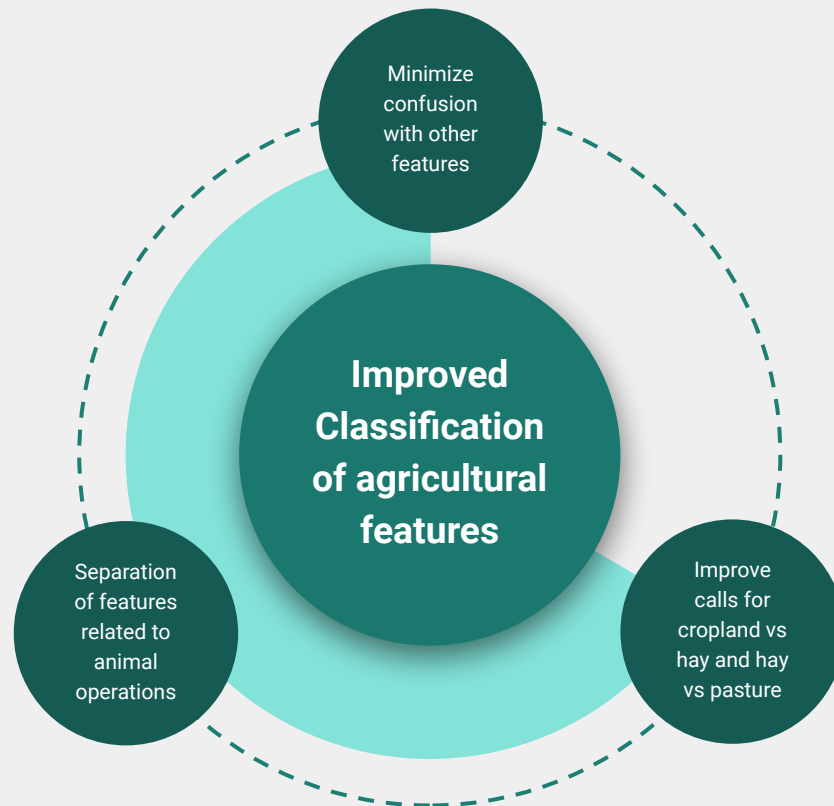
Katie Walker, Chesapeake Conservancy  
Peter Claggett, USGS  
CBP Ag Workgroup | 21 September 2023

# 1-meter Land Use/Land Cover Data Project

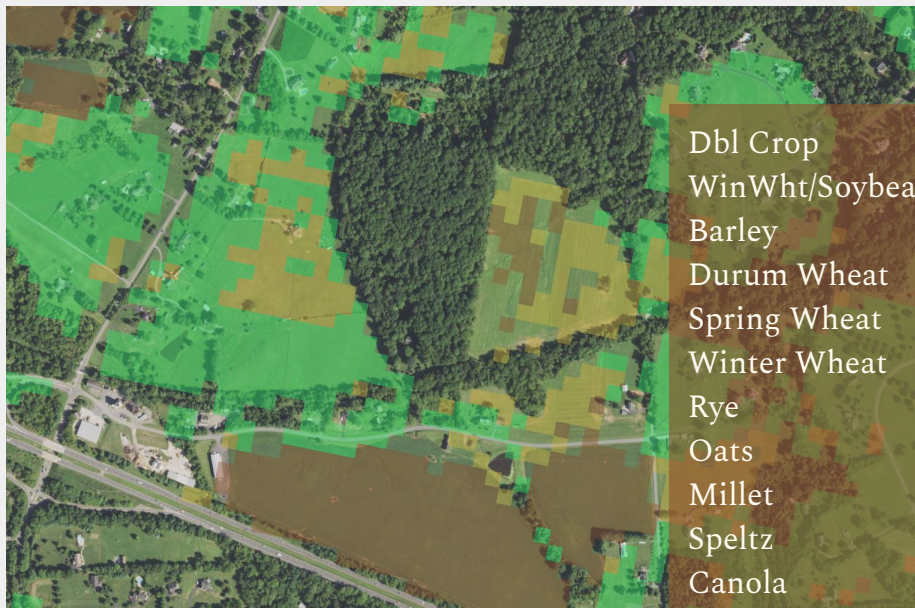
## Overall timeline - 2024 edition



# Ag-related improvements for 2024 edition



# Winter wheats as crop



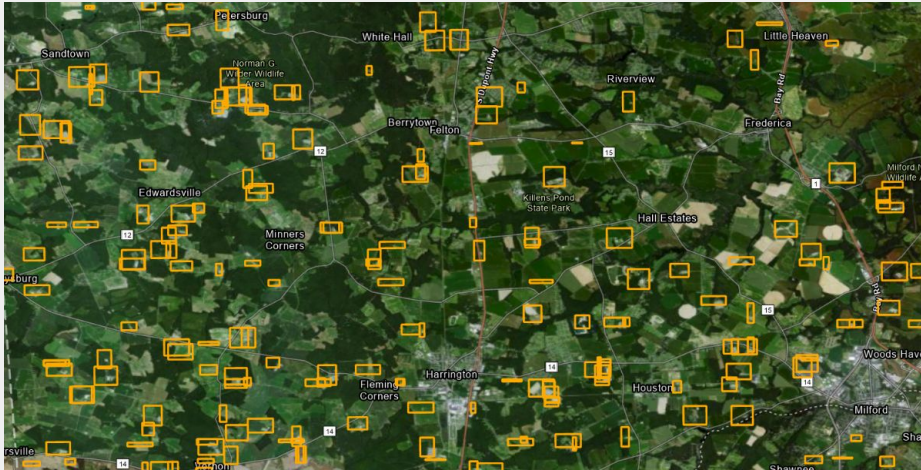
NAIP with CDL overlay



Goal: automate the location of  
animal feeding operations using  
NAIP imagery

# Locating animal operations with AI

Outcome: differentiate and account  
for land uses more accurately







# Animal Operations



Kent County, DE

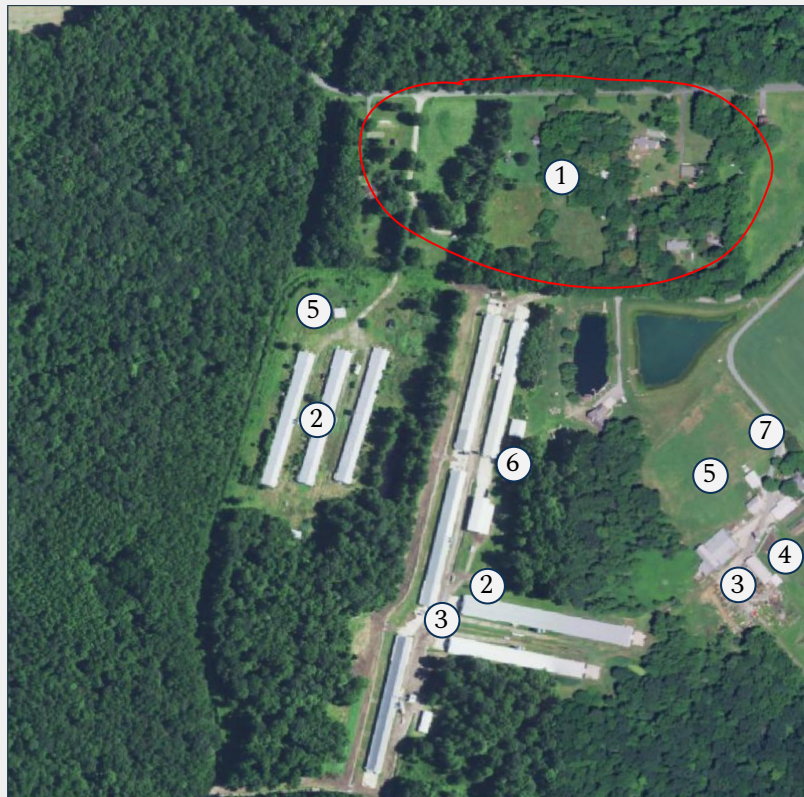


- Water
- TC
- Scrub
- Low Veg
- Barren
- Imp Structures
- Other Imp
- Imp Roads
- TC/Structures
- TC/Other Imp
- TC/Imp Roads

Land Cover 2022e



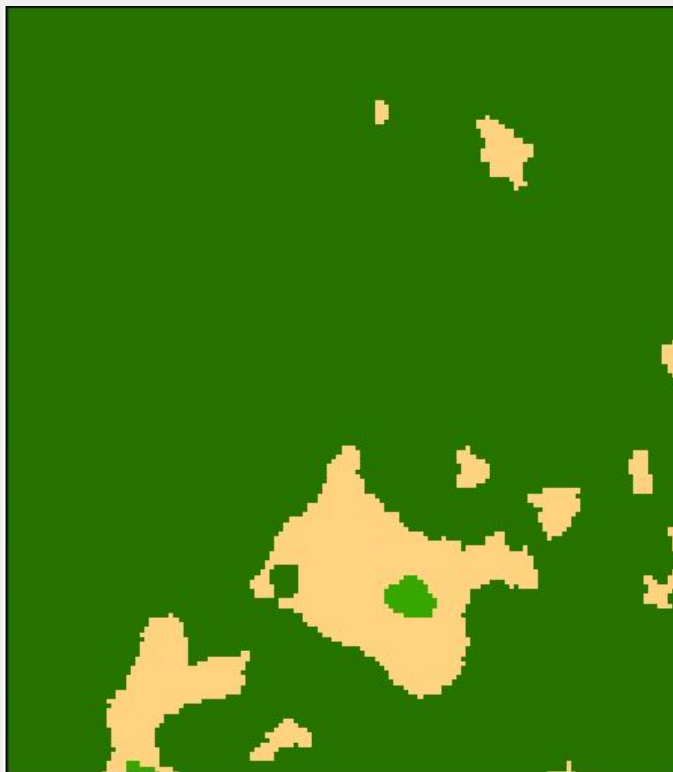
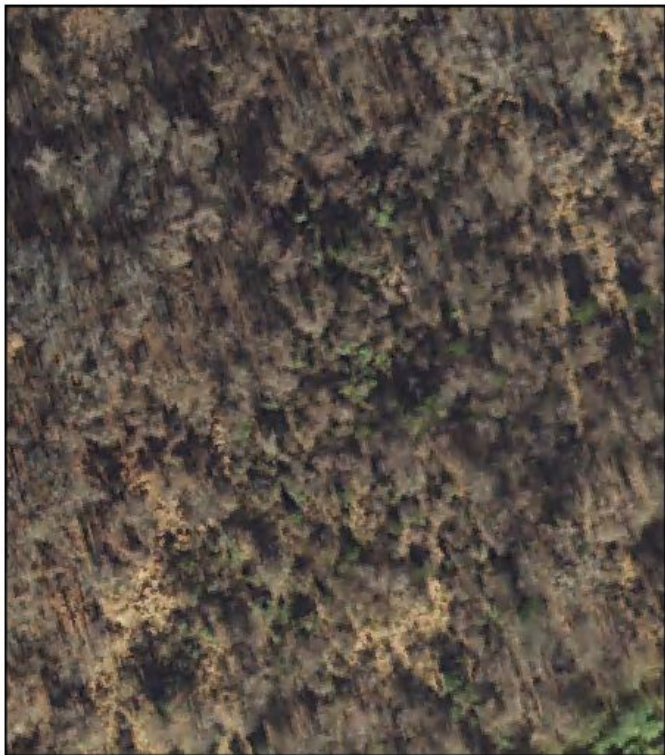
# Land Use Classes in Animal Operations



1	Area excluded from Animal ops thru ancillary data
2	Classed as Agricultural Structures
3	Classed as Animal Operation Impervious
4	Classed as Animal Operation Barren
5	Classed as Animal Operation herbaceous
6	Classed as TC over Agricultural Structures
7	Classed as TC over Animal Operation Impervious

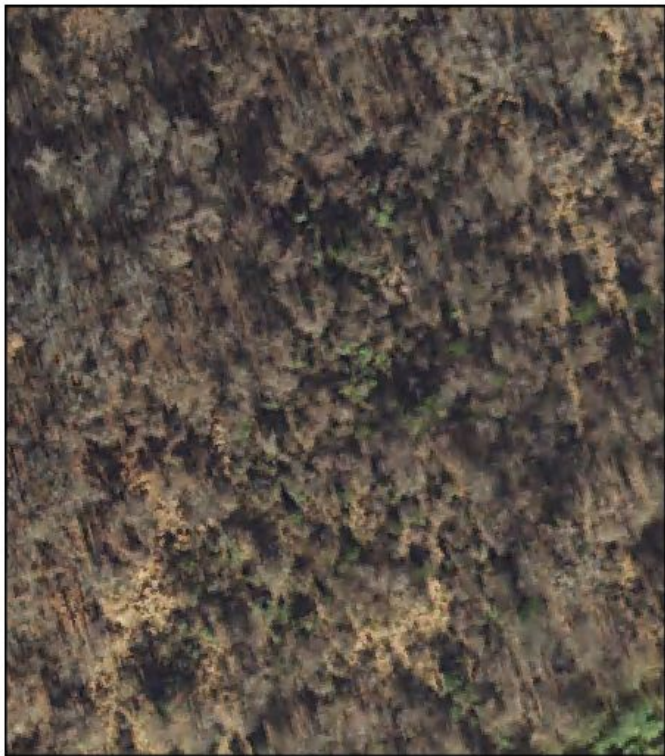


# Forest Gaps - Natural Succession (2022 ed.)



-  Forest
-  Tree Canopy, Other
-  Natural Succession
-  Pasture/Hay

# Forest Gaps - Natural Succession (2024 ed.)

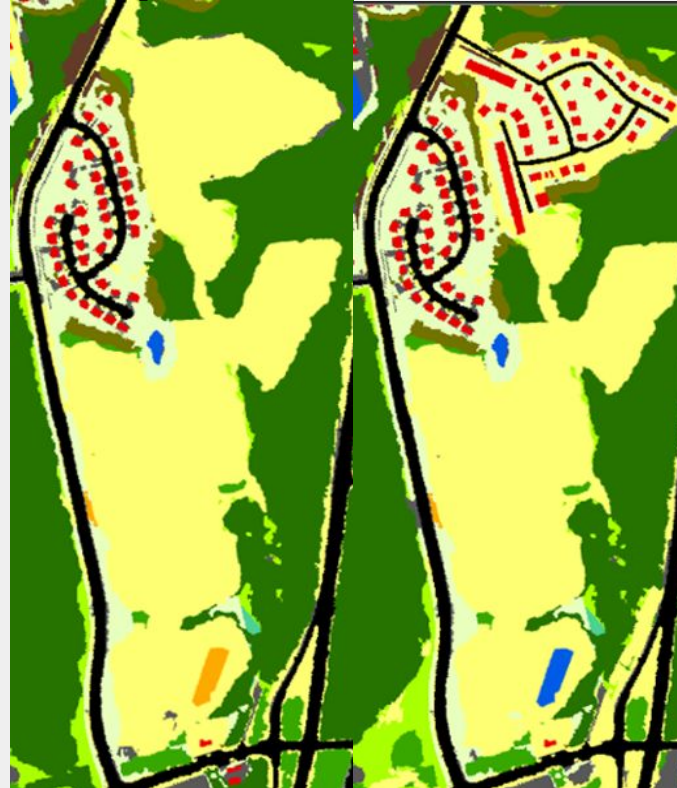


-  Forest
-  Tree Canopy, Other
-  Natural Succession
-  Pasture/Hay

# Change - Construction and Ag Confusion

2022 Ed. Construction classed as cropland

2024 Ed. Construction classed as Bare Developed



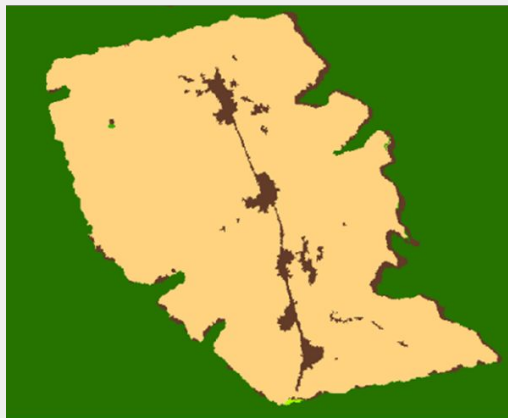
## GenLandUse

- Water
- Impervious Roads
- Impervious Structures
- Impervious, Other
- Tree Canopy over Impervious
- Turf Grass
- Pervious Developed, Other
- Tree Canopy over Turf Grass
- Forest
- Tree Canopy, Other
- Harvested Forest
- Natural Succession
- Cropland
- Pasture/Hay
- Extractive
- Wetlands, Tidal Non-forested
- Wetlands, Riverine Non-forested
- Wetlands, Terrene Non-forested



# Change - Timber Harvest over Time

2022 Ed. Pasture to Harvest



Google Earth Imagery:  
2012 - Spring 2015 -  
Summer 2015



2024 Ed. Harvest to Natural Succession



## GenLandUse

- Water
- Impervious Roads
- Impervious Structures
- Impervious, Other
- Tree Canopy over Impervious
- Turf Grass
- Pervious Developed, Other
- Tree Canopy over Turf Grass
- Forest
- Tree Canopy, Other
- Harvested Forest
- Natural Succession
- Cropland
- Pasture/Hay
- Extractive
- Wetlands, Tidal Non-forested
- Wetlands, Riverine Non-forested
- Wetlands, Terrene Non-forested

Katie Walker (she/her/hers)  
Geospatial Program Manager  
Chesapeake Conservancy  
[kwalker@chesapeakeconservancy.org](mailto:kwalker@chesapeakeconservancy.org)  
(443) 345-5985

---

Peter Claggett (he/him/his)  
Research Geographer  
U. S. Geological Survey  
[pclagget@chesapeakebay.net](mailto:pclagget@chesapeakebay.net)



# Questions? Feedback?

---