



1-meter LULC Data Project Update: 2024 ed. preliminary results + stakeholder review

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Land Use Workgroup | 20 March 2024

Tree Canopy Updates: Developed Areas

2022 Edition



2024 Edition



 Forest

 Tree Canopy, Other

 Tree Canopy Over Turf

Tree Canopy Updates: Agricultural Areas

2022 Edition



2024 Edition



 Forest

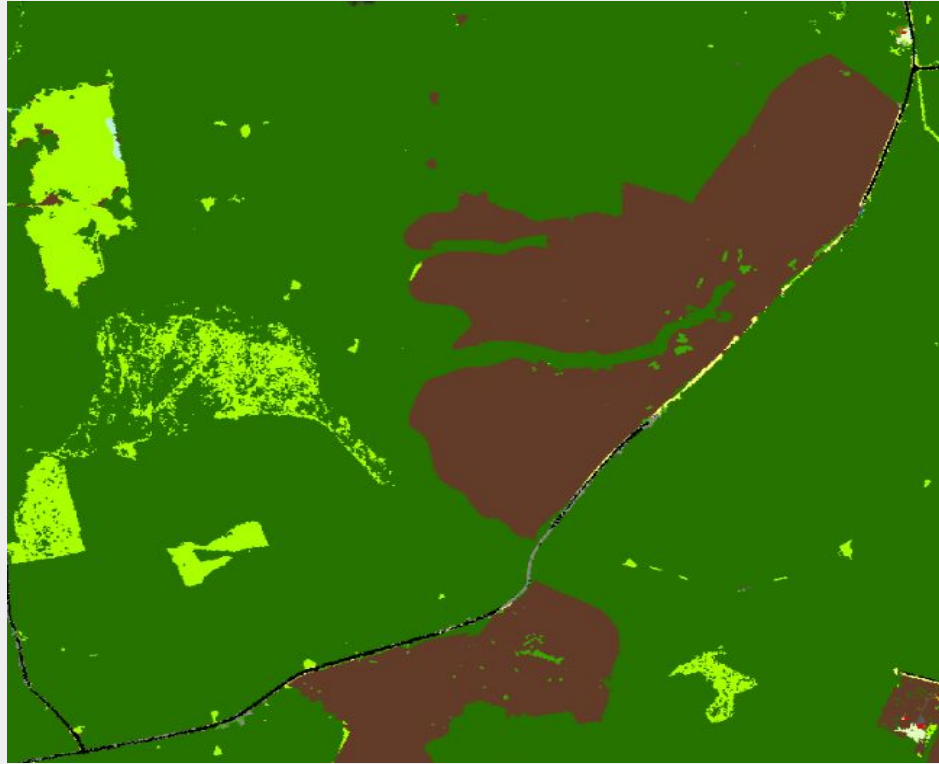
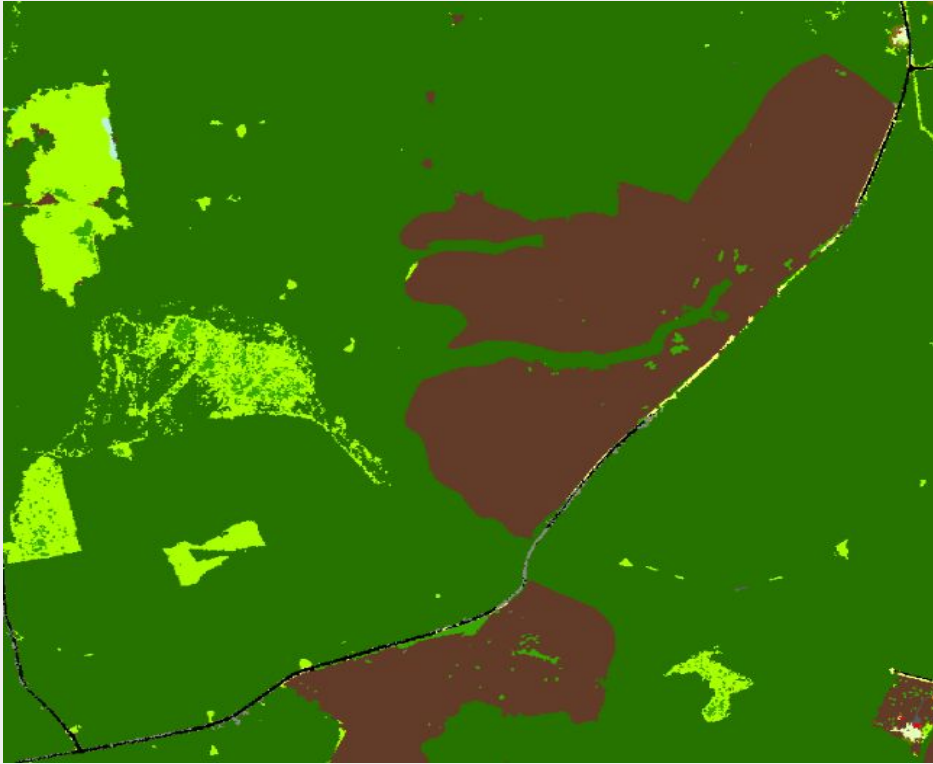
 Tree Canopy, Other

 Tree Canopy Over Turf

Tree Canopy Updates: Forested Areas

2022 Edition

2024 Edition



Forest

Tree Canopy, Other

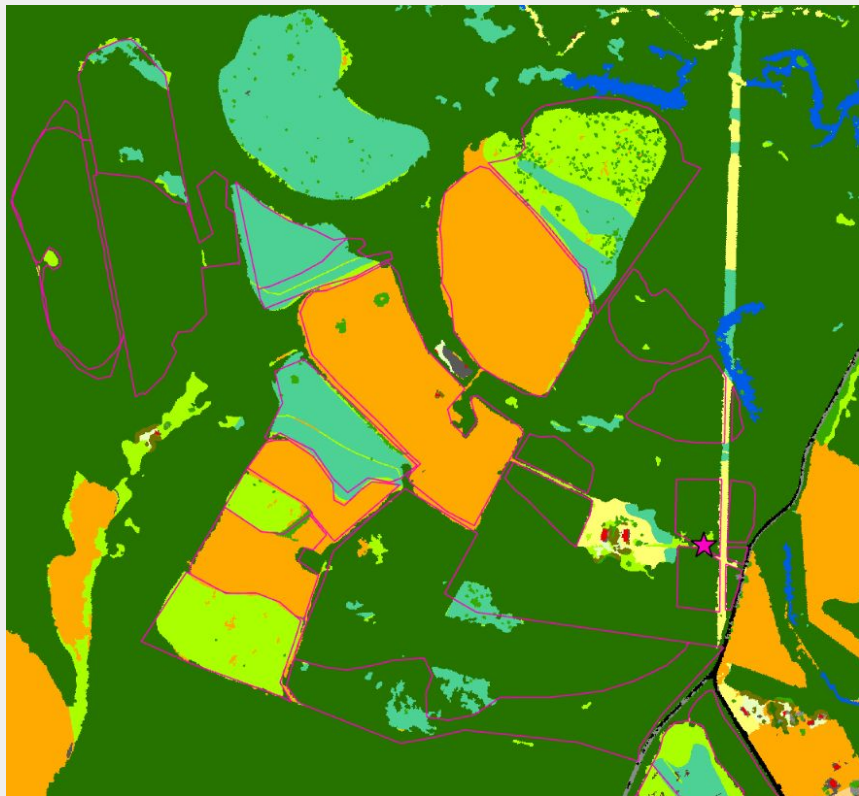
Tree Canopy Over Turf

Tree Canopy Rule change effects: Gloucester, VA 2018 Comparison

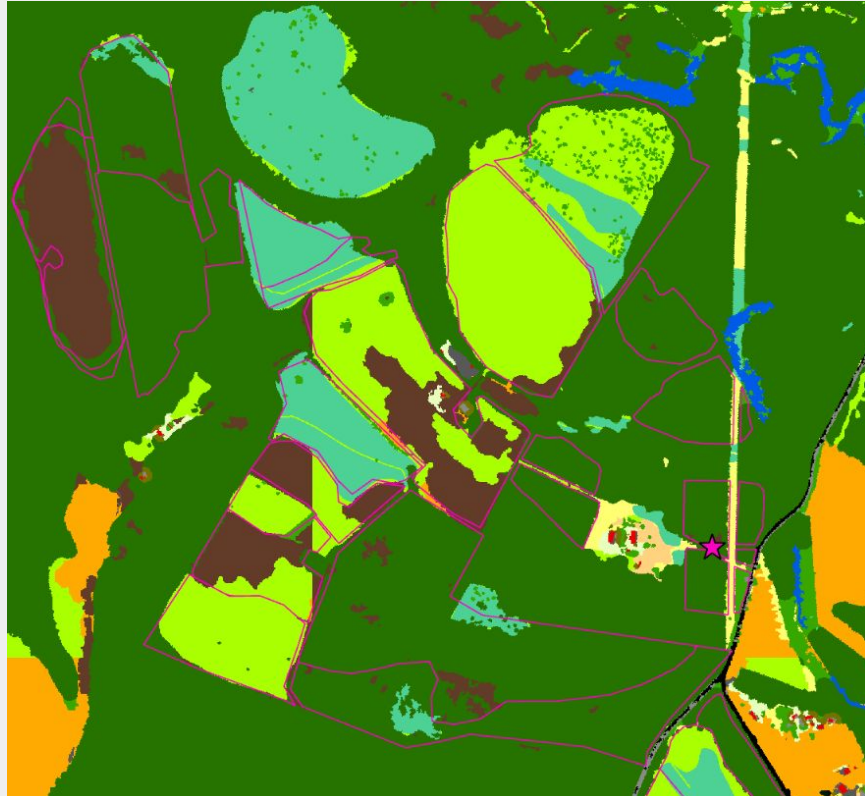
Tree Canopy Class	2024 Edition (Acres)	2022 Edition (Acres)	Difference
Forest (FORE)	87,783	87,023	760
Tree Canopy, Other (TCOT)	4,126	1,366	2,760
Tree Canopy over Turf Grass (TCTG)	2,410	5,930	(3,520)
Total	94,319	94,319	(0)

Timber Harvest

2022 Edition



2024 Edition



NLCD replaced by CDL

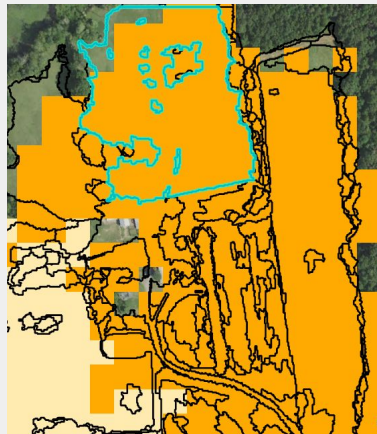
- National Land Cover Dataset (NLCD) replaced by the Cropland Data Layer (CDL) for mapping Pasture and Hay
- NLCD is still used to track change
- CDL best practices recommend aggregating the CDL over time, the LULC model averages 3 years centered on the NAIP acquisition year
- CDL performs well for the separation of Cropland versus Pasture/Hay

LandUse	2022e	2024e	Difference
Cropland	115	626	510.9
Natural Succession	1891	812	1079.23
Pasture and Hay	59	649	589.88
Suspended Succession	381	32	349.59
Turf	476.41	102	373.94

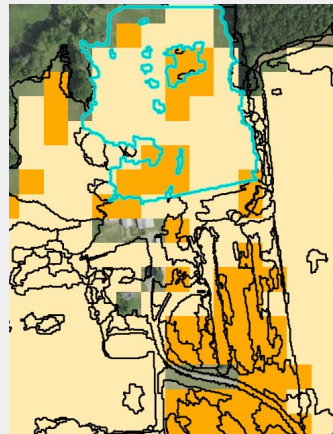
T3 NAIP



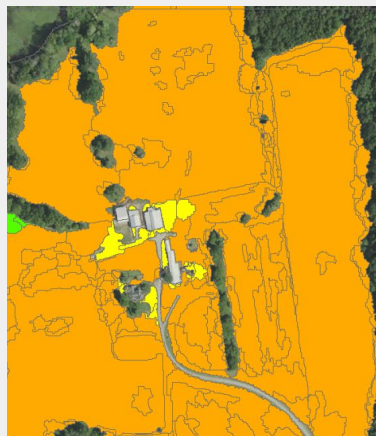
2021 NLCD



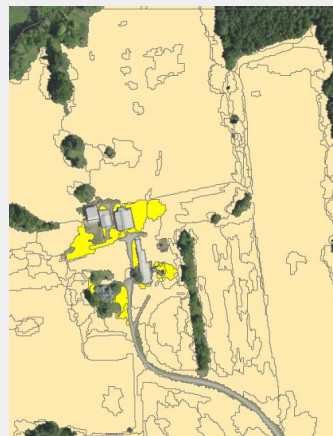
T3 CDL





2022 ed. LULC



2024 ed. LULC



-  Cropland
-  Pasture/Hay
-  Turf
-  Natural Succession

Adjacency Fill

- The Adjacency fill method is replacing the previous Majority fill functionality
- Both methods are used to assign Land Use to segments that lack ancillary data
- The Majority fill method relied on parcel attributes
 - Was error prone due to the variability of the relationships between parcels and segments
 - Over Classified turf, especially in large forested residential parcels
- The Adjacency fill method assigns LU based on the attributes and context of the surrounding segments

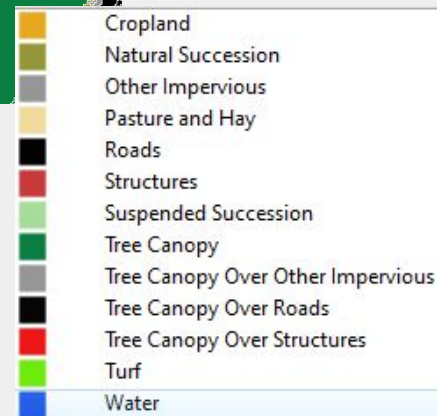


2022 ed. LULC



2024 ed. LULC

Rule: $4\text{m} < (\text{Low veg}) > 200\text{m}$ in area &
shares border $> 50\%$ TC



Chesapeake Bay Land Use/Cover Classification (2024 edition, 56 planned)

Water and Water Margins

10 Tidal Waters

Lentic

- 11 Lakes & Reservoirs
- 12 Riverine Ponds
- 13 Terrene Ponds

Lotic

- 14 Streams and Rivers

Water Margins

- 15 Bare Shore

Forest

Tree Canopy

- 40 Forest
- 41 Tree Canopy Other

Open Space (temporary)

- 42 Natural Succession Barren
- 43 Natural Succession Herbaceous
- 44 Natural Succession Shrubland
- 45 Harvested Forest Barren
- 46 Harvested Forest Herbaceous

Agriculture

Productive Lands

- 80 Cropland Barren
- 81 Cropland Herbaceous
- 82 Orchards and Vineyards Barren
- 83 Orchards and Vineyards Herbaceous
- 84 Orchards and Vineyards Shrubland
- 85 Pasture and Hay Barren
- 86 Pasture and Hay Herbaceous

Development

Impervious

- 20 Roads
- 21 Structures
- 22 Other Impervious (Parking lots, driveways)
- 23 TC over Roads
- 24 TC over Structures
- 25 TC over Other Impervious
- 31 Extractive Impervious
- 32 Solar Field Panel Arrays (impervious)

Pervious

- 26 Tree Canopy over Turf Grass
- 27 Turf Grass
- 28 Bare Developed
- 30 Extractive Barren
- 33 Solar Field Barren
- 34 Solar Field Herbaceous
- 35 Solar Field Shrubland
- 36 Suspended Succession Barren
- 37 Suspended Succession Herbaceous
- 38 Suspended Succession Shrubland

Wetlands

Riverine

- 50 Riverine Wetlands Barren
- 51 Riverine Wetlands Herbaceous
- 52 Riverine Wetlands Shrubland
- 53 Riverine Wetlands Tree Canopy
- 54 Riverine Wetlands Forest
- 55 Riverine Wetlands Harvested Forest

Terrene

- 60 Terrene Wetlands Barren
- 61 Terrene Wetlands Herbaceous
- 62 Terrene Wetlands Shrubland
- 63 Terrene Wetlands Tree Canopy
- 64 Terrene Wetlands Forest
- 65 Terrene Wetlands Harvested Forest

Tidal

- 70 Tidal Wetlands Barren
- 71 Tidal Wetlands Herbaceous
- 72 Tidal Wetlands Shrubland
- 73 Tidal Wetlands Tree Canopy
- 74 Tidal Wetlands Forest
- 75 Tidal Wetlands Harvested Forest

Agricultural Facilities*

- 90 Agricultural Structure
- 91 Animal Operation Impervious
- 92 Animal Operation Barren
- 93 Animal Operation Herbaceous
- 94 TC over Agricultural Structure
- 95 TC over Animal Operation Impervious

*are being mapped and identified, but are not currently intended for integrating into the final classification

1-meter Land Use/Land Cover Data Project

Updated timeline - 2024 edition



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Questions? Feedback?