

Turf Grass v. Mixed Open

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Urban Stormwater Workgroup Meeting

What's the difference between turf and mixed open?

Turf Grass: low vegetation and some barren areas within developed lands and adjacent to non-road impervious surfaces.

Mixed Open: scrub-shrub everywhere and low vegetation and barren that is not turf grass or known to be agriculture (e.g., beaches, vacant lots, transmission line right-of-ways, junkyards, fairgrounds, etc.).



P6 Developed Areas- defined

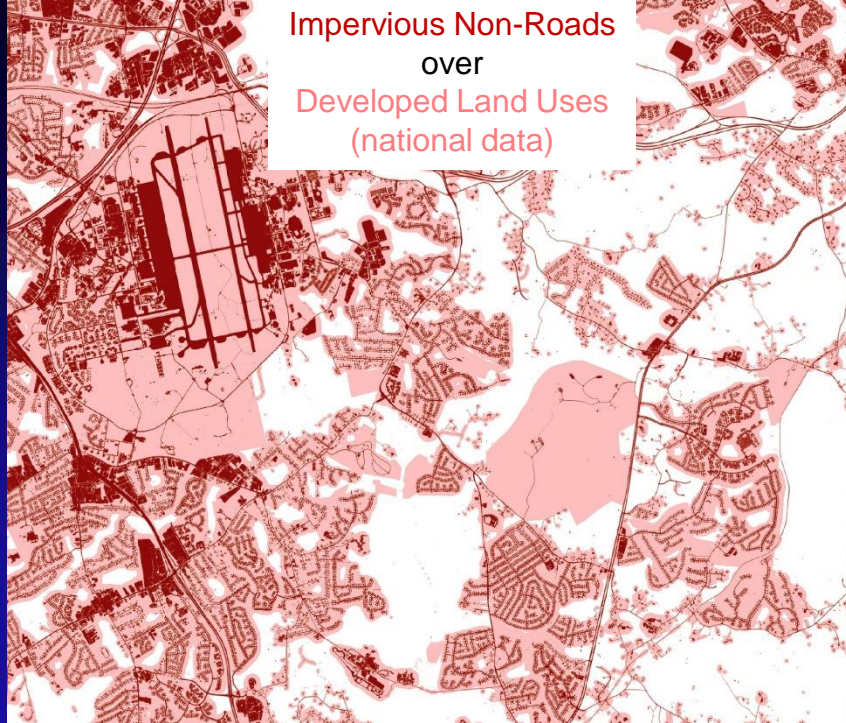
With local data:

- Land Use: residential, commercial, industrial, recreational, institutional and other urban uses.
- Parcels: ≤ 10 acres with $\geq 1\%$ impervious, or > 10 acres with $\geq 10\%$ impervious surfaces.

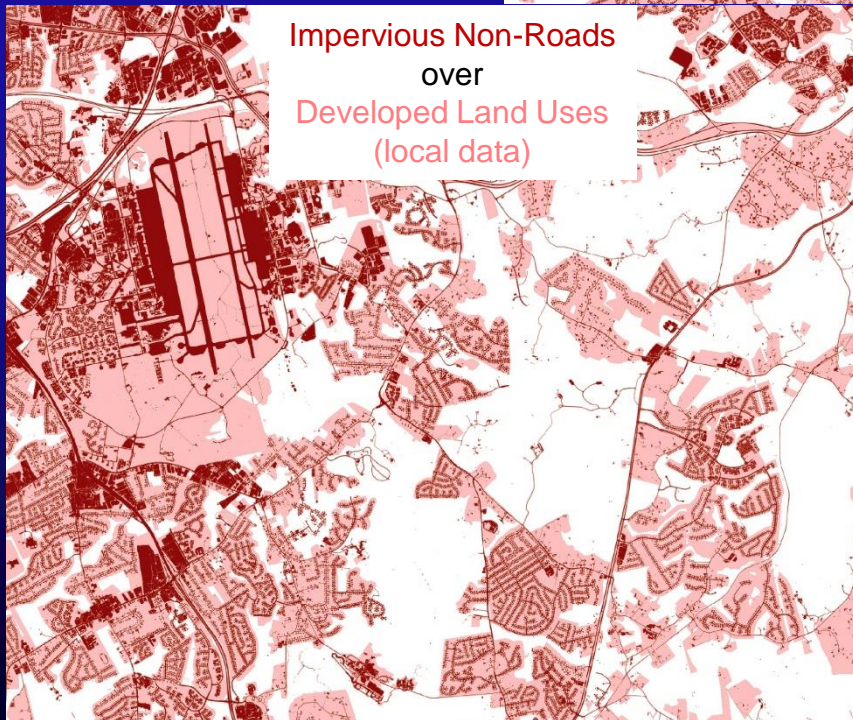
With national data:

- Census Blocks: average housing density ≥ 0.2 dwelling units per acre (e.g., less than 5-acre lots).
- Institutional and recreational areas (NAVTEQ, 2014).

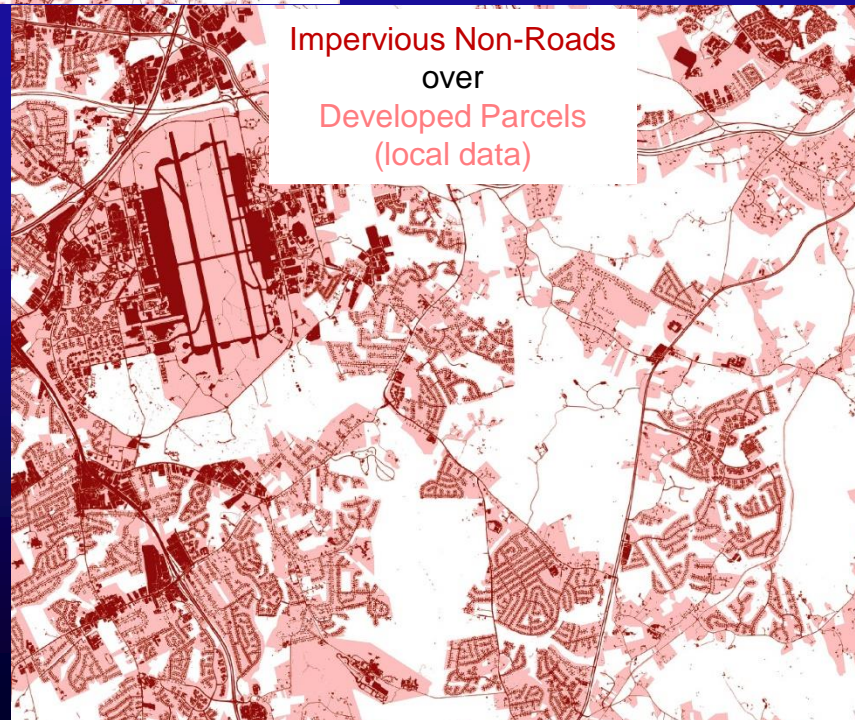
Impervious Non-Roads
over
Developed Land Uses
(national data)



Impervious Non-Roads
over
Developed Land Uses
(local data)



Impervious Non-Roads
over
Developed Parcels
(local data)

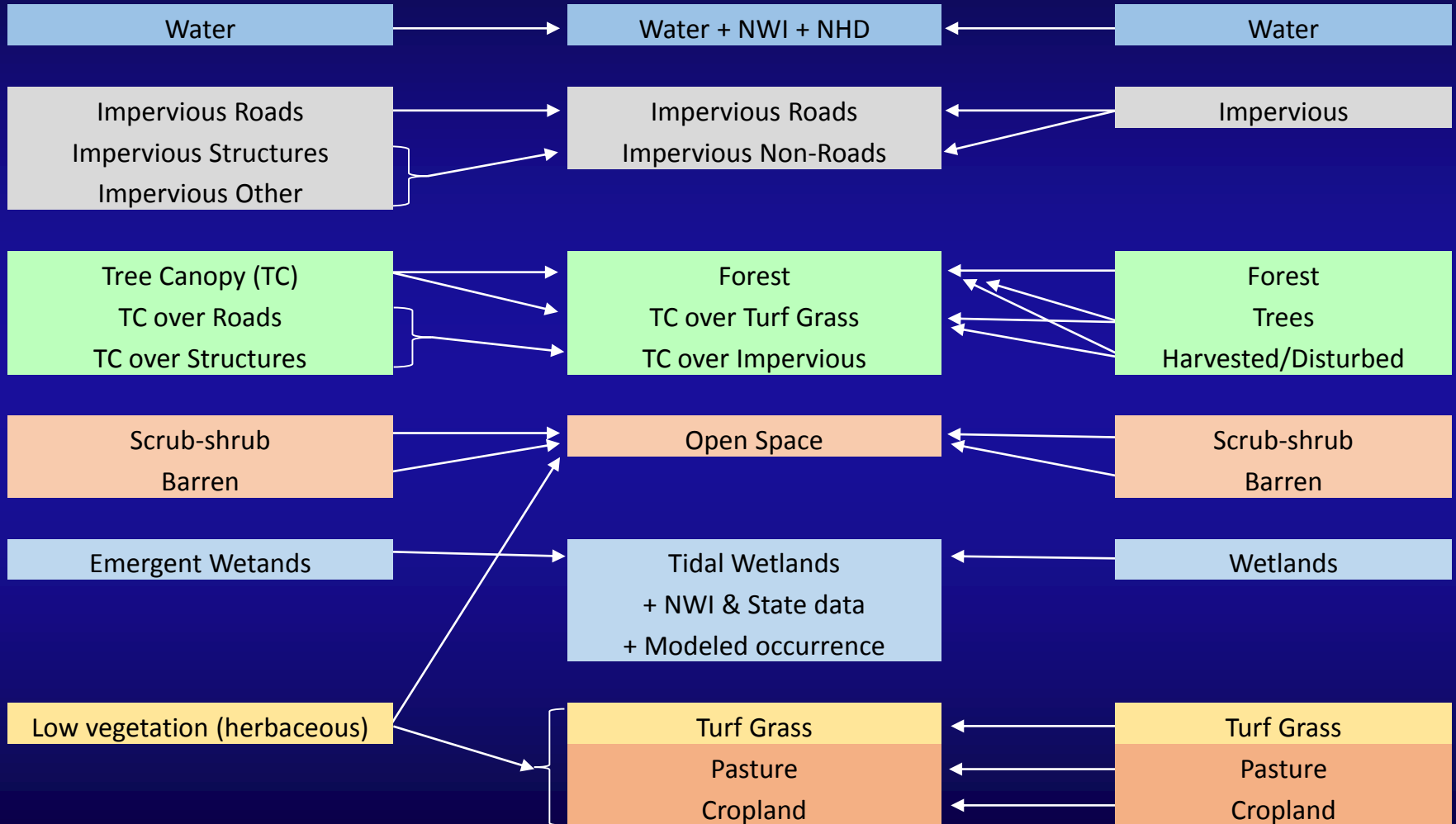


Land Cover to Land Use Crosswalk

Chesapeake Conservancy/ UVM

Phase 6 CBP

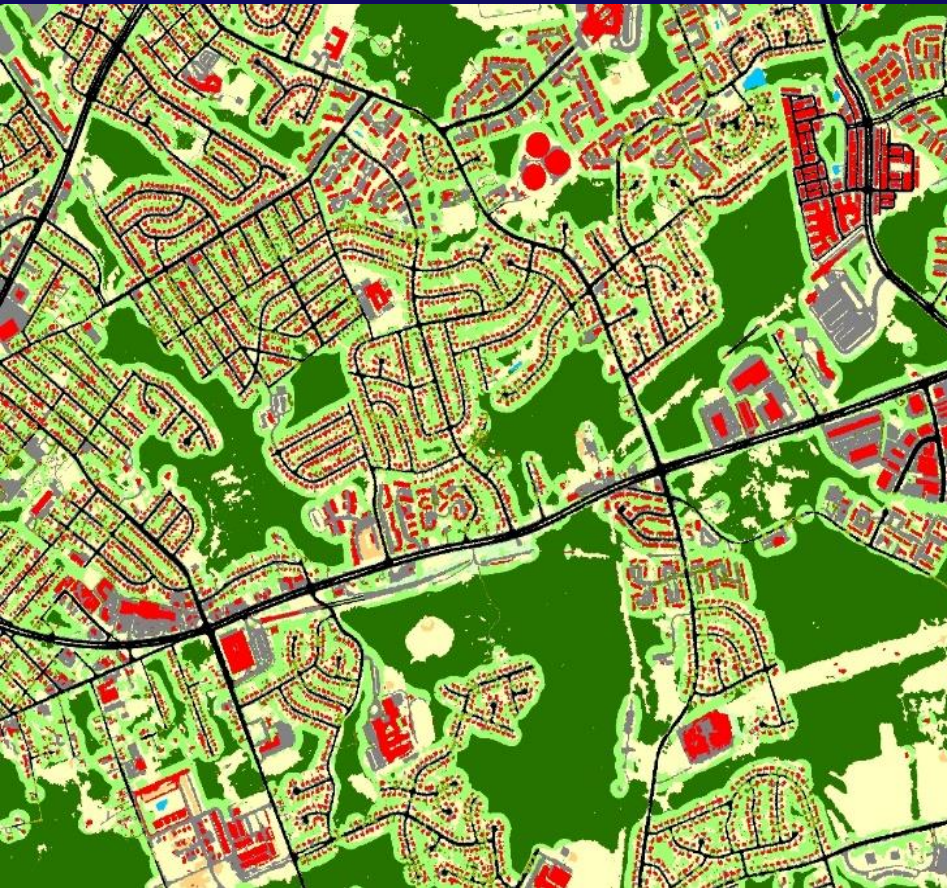
Worldview Solutions Inc.



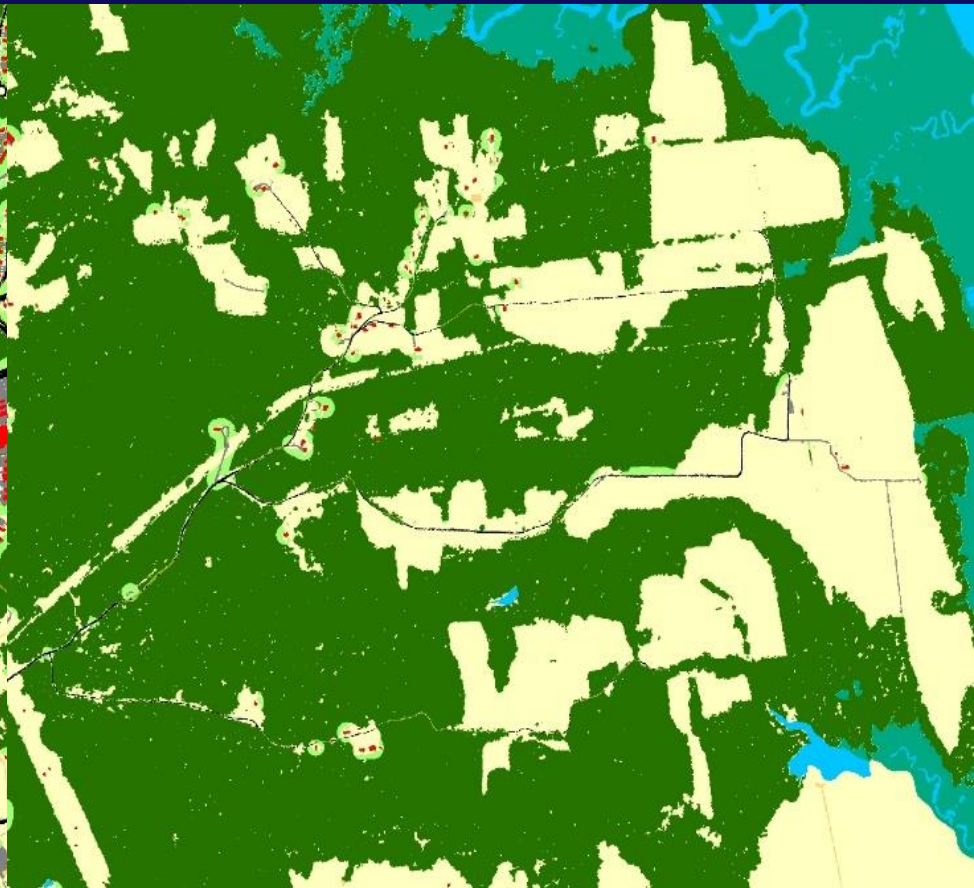
Shrubbery from High-res Imagery and LiDAR: quintessential “mixed open”



“Turf Grass” and “Tree Canopy over Turf” are near buildings, driveways, and parking lots



Urban Area

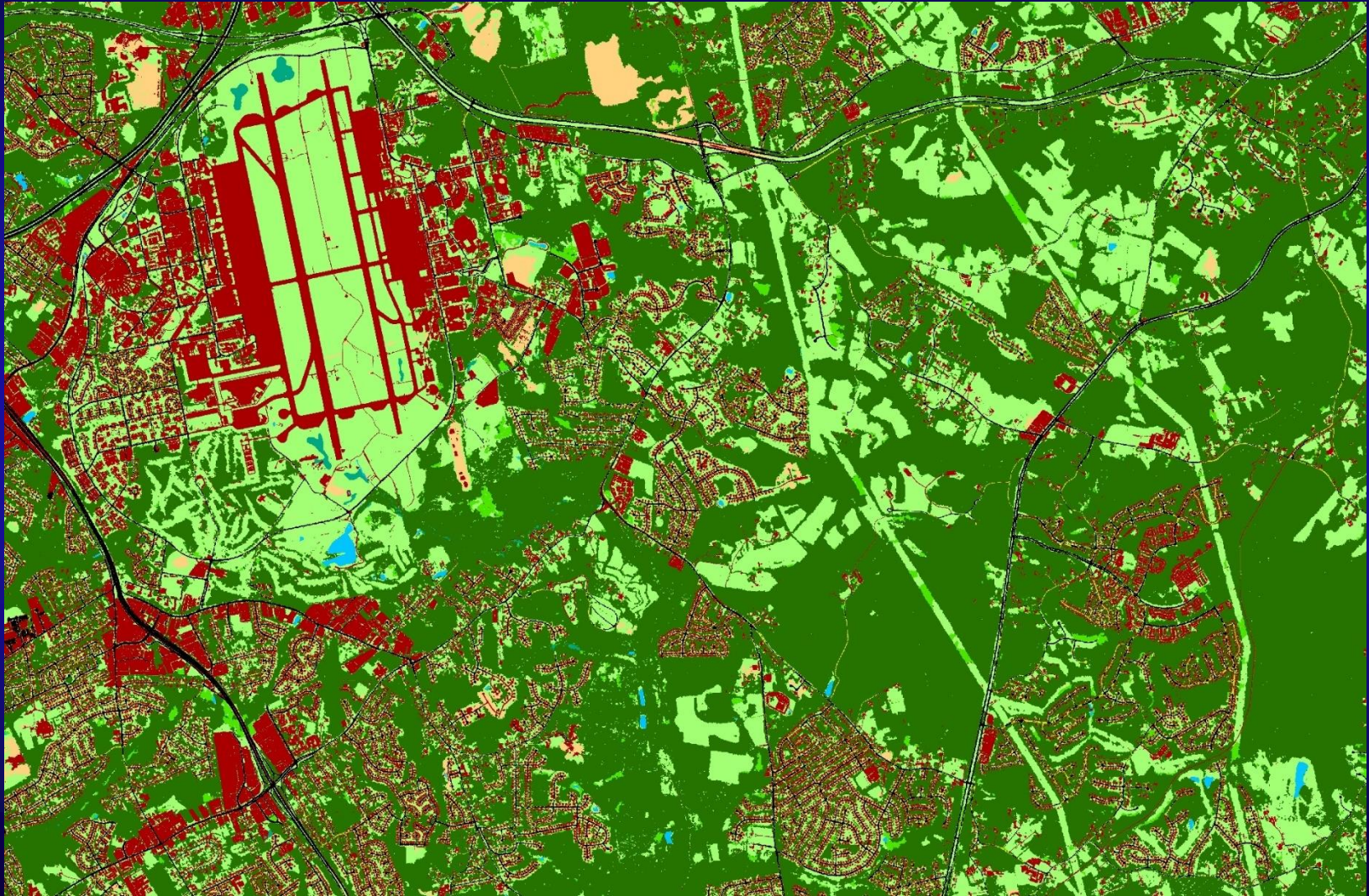


Rural Area

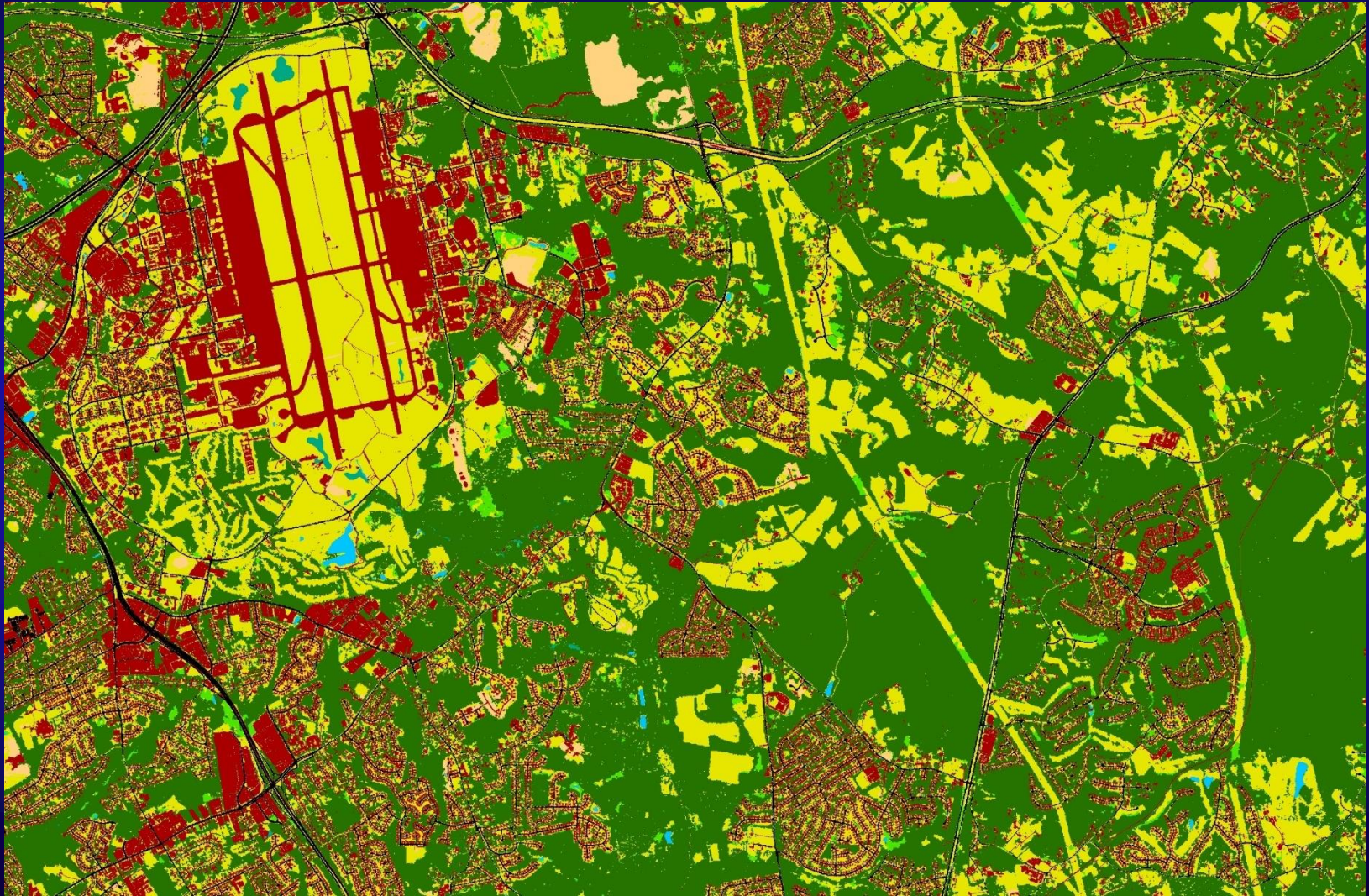
Forest

Tree Canopy over Turf

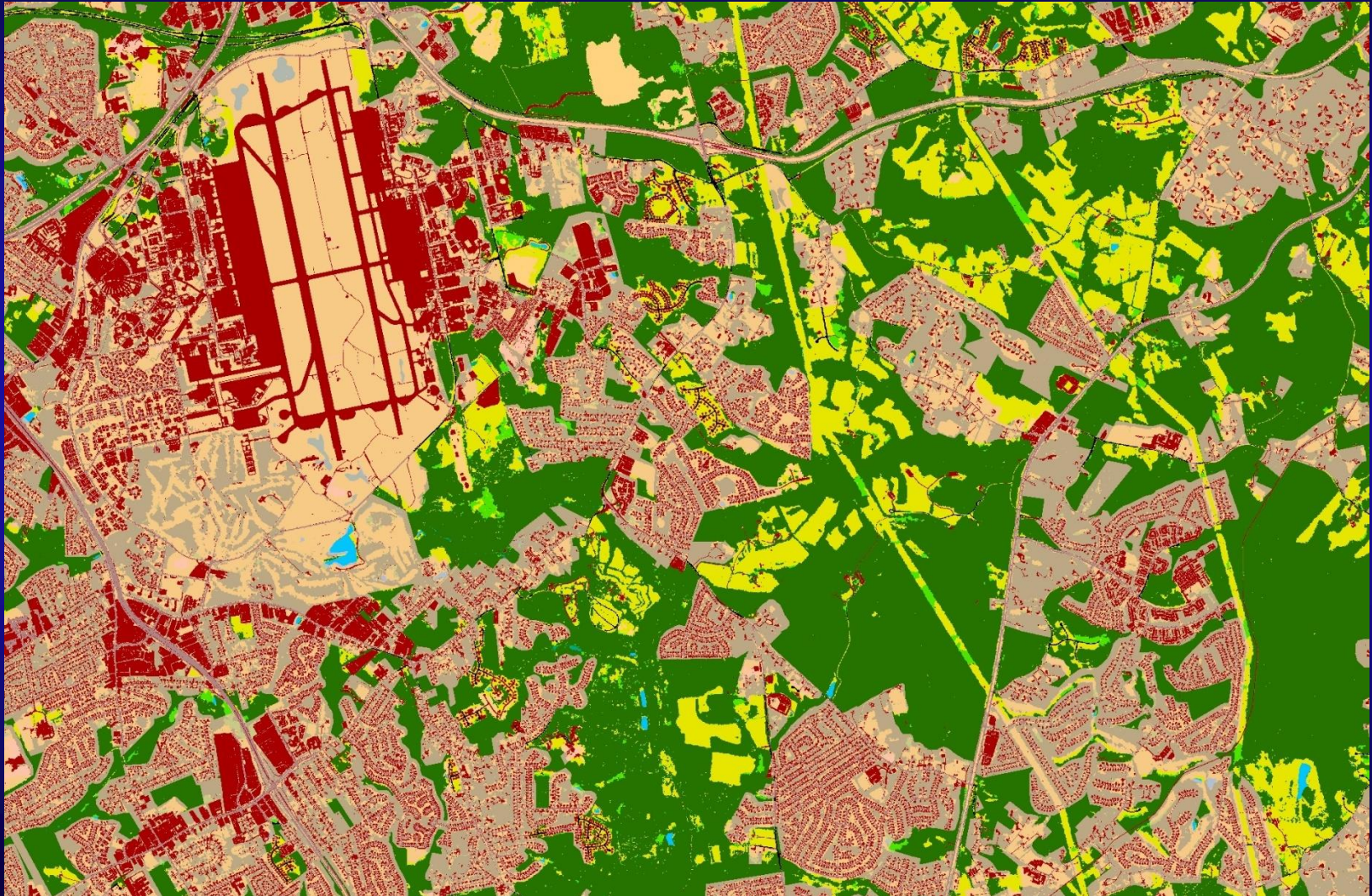
Turf Grass vs Agriculture (land cover)



Turf Grass vs Agriculture (low vegetation)



Turf Grass vs Agriculture (developed land use overlay)



Definition Challenges

What are the defining characteristics of turf grass?

- fertilized?
- mowed?
- compacted?
- minimal organic A soil horizon?
- all of the above?

What are the defining characteristics of mixed open?

- maintained in early successional state (e.g., bush hogged)?
- minimally compacted/disturbed?
- not fertilized?
- potentially barren?
- outside developed areas?

Definition Challenges

How do we classify low vegetation and barren land within complex land uses:

- Institutional campuses
- Military installations
- County, State, and National Parks
- Dirt and gravel roads
- Highway right-of-ways
- Railroad right-of-ways
- Commercial/industrial barren areas
- Quarries and surface mines
- Landfills
- Vacant lots
- Sandy and rocky waterbody margins
- Adjacent to rural buildings

Solution

Low vegetation and barren lands = X% mixed open and X% turf grass:

- Institutional grounds/campuses
- Military installations and other Federal Facilities
- County, State, and National Parks
- Commercial/industrial areas
- Quarries and surface mines

Low vegetation and barren lands = turf grass:

- Highway right-of-ways
- Airports
- Areas adjacent to buildings, driveways, and parking lots

Low vegetation and barren lands = mixed open:

- Landfills
- Vacant lots
- Sandy/rocky outcrops and waterbody margins
- Beaches

Railroad right-of-ways (4m width) = impervious non-roads.

Dirt and gravel roads = impervious roads.

Given how turf grass and mixed open are mapped, are the current target loading rates and input assumptions accurate?

