

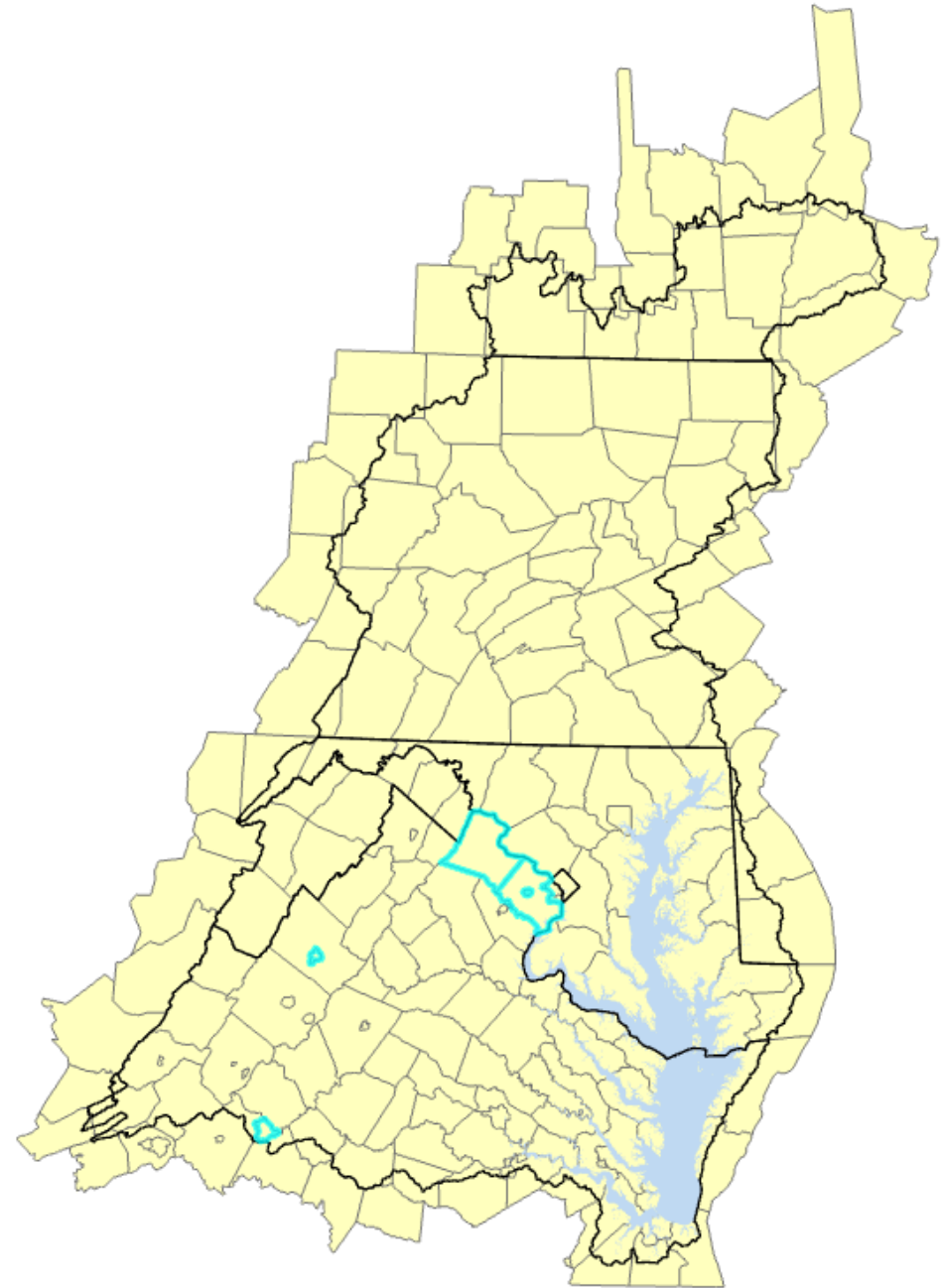
Developed Acreage in CAST-2023

Introduction

- Data provided to the Chesapeake Bay Program Office to map regulated areas in CAST-2017 varied by state and locality, mainly due to differences in the way each state defined regulated areas:
 - 2010 Census Urban Areas as Clusters (PA, NY, DE)
 - Some state highway lands (MD, VA)
 - Other state-owned lands (MD)
 - Public schools, universities, and airports (VA)
 - Some entire counties (MD, WV)
- Only localities were contacted for updates to these data and these data completely replaced previous data within that locality
 - In VA, there are over 100 Phase II permits which are not localities, some of which were excluded in three of the VA jurisdictions that provided updates
 - Public schools, universities, and airports (VA)
 - In VA, this resulted in decreases in regulated lands where updates included only the locality's MS4 areas
 - There were few updates to regulated land use in CAST-2019, so these updates primarily affect CAST-2023

Introduction

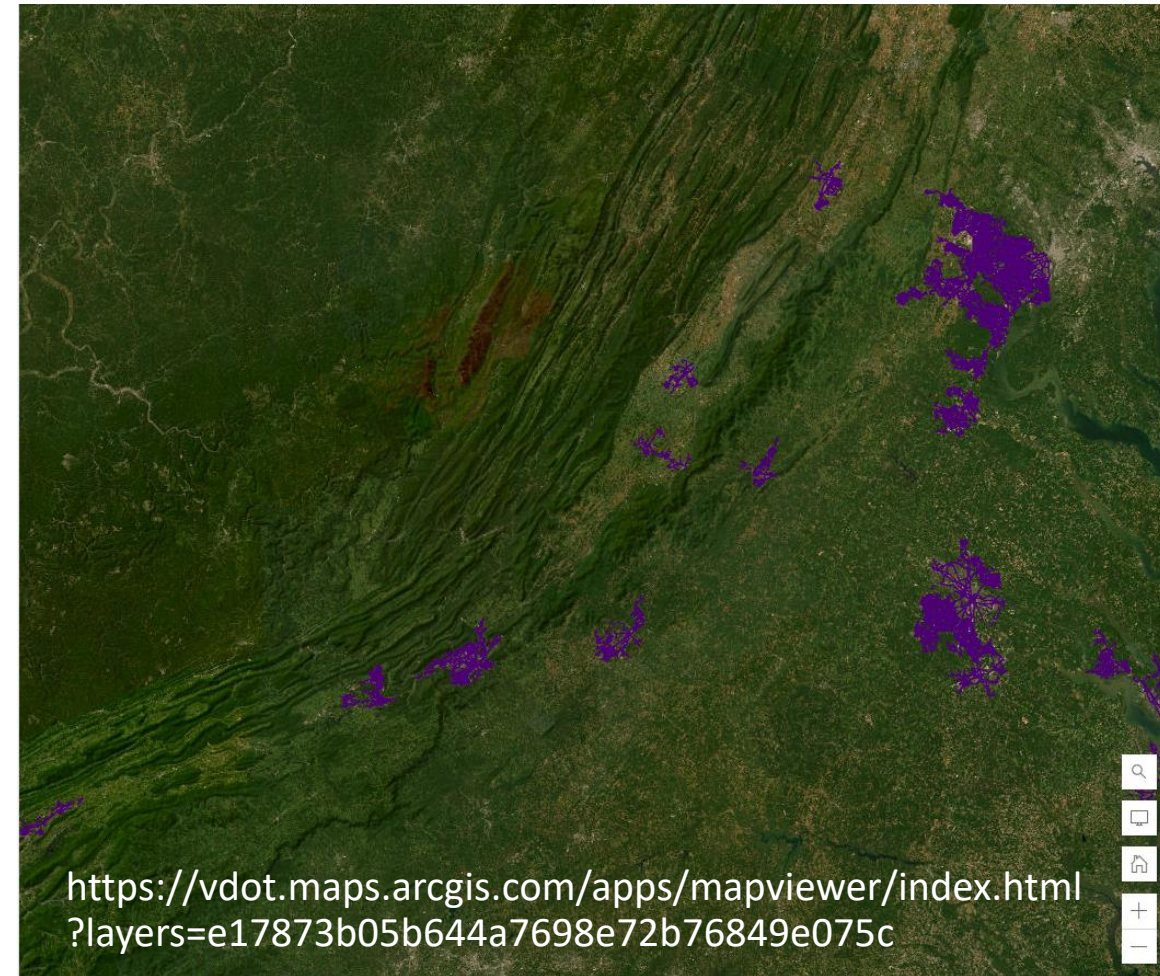
- The main jurisdictions impacted by this area change are:
 - Fairfax County
 - Fairfax City
 - Falls Church City
 - Loudoun County
 - Harrisonburg City
 - Lynchburg City



VDOT Permitted Areas:

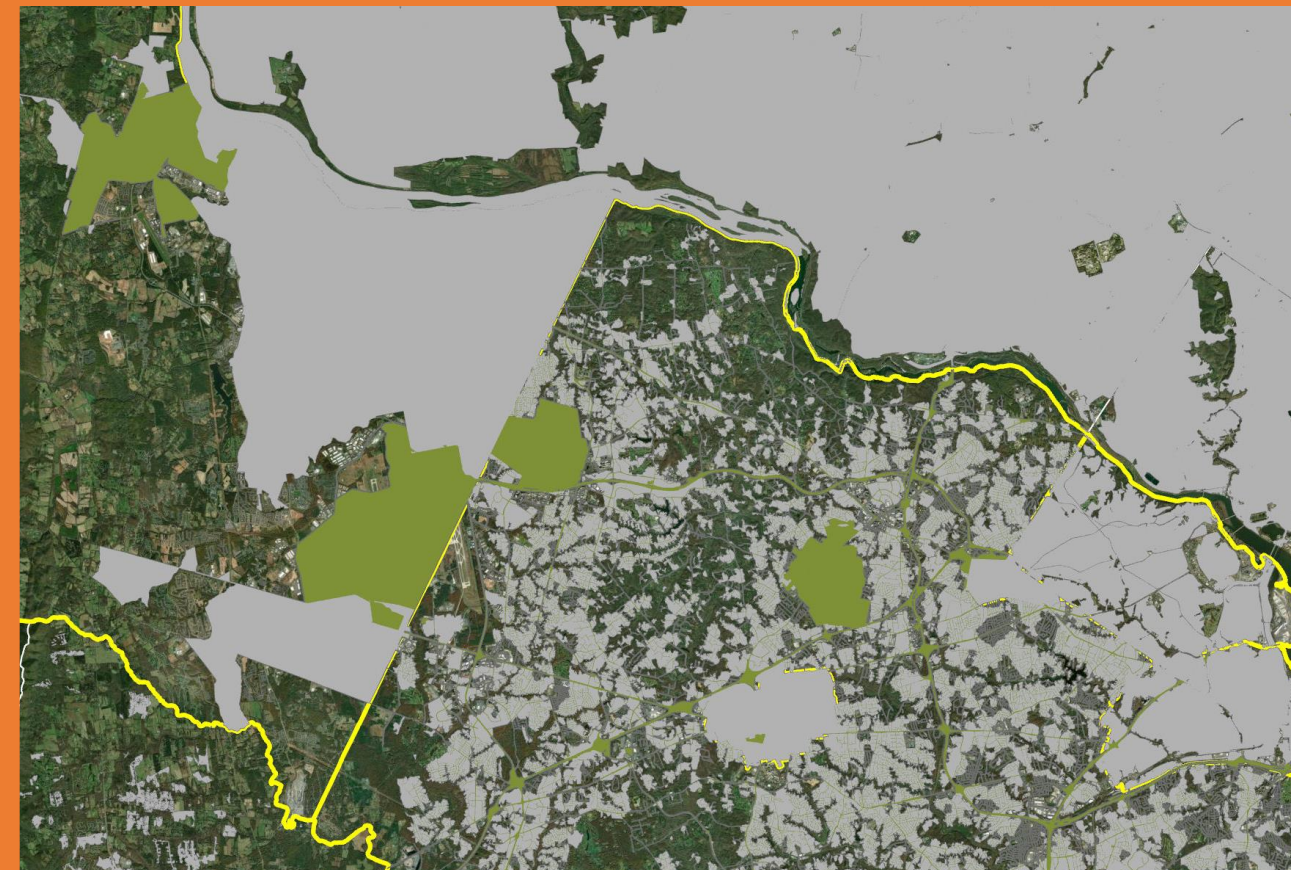
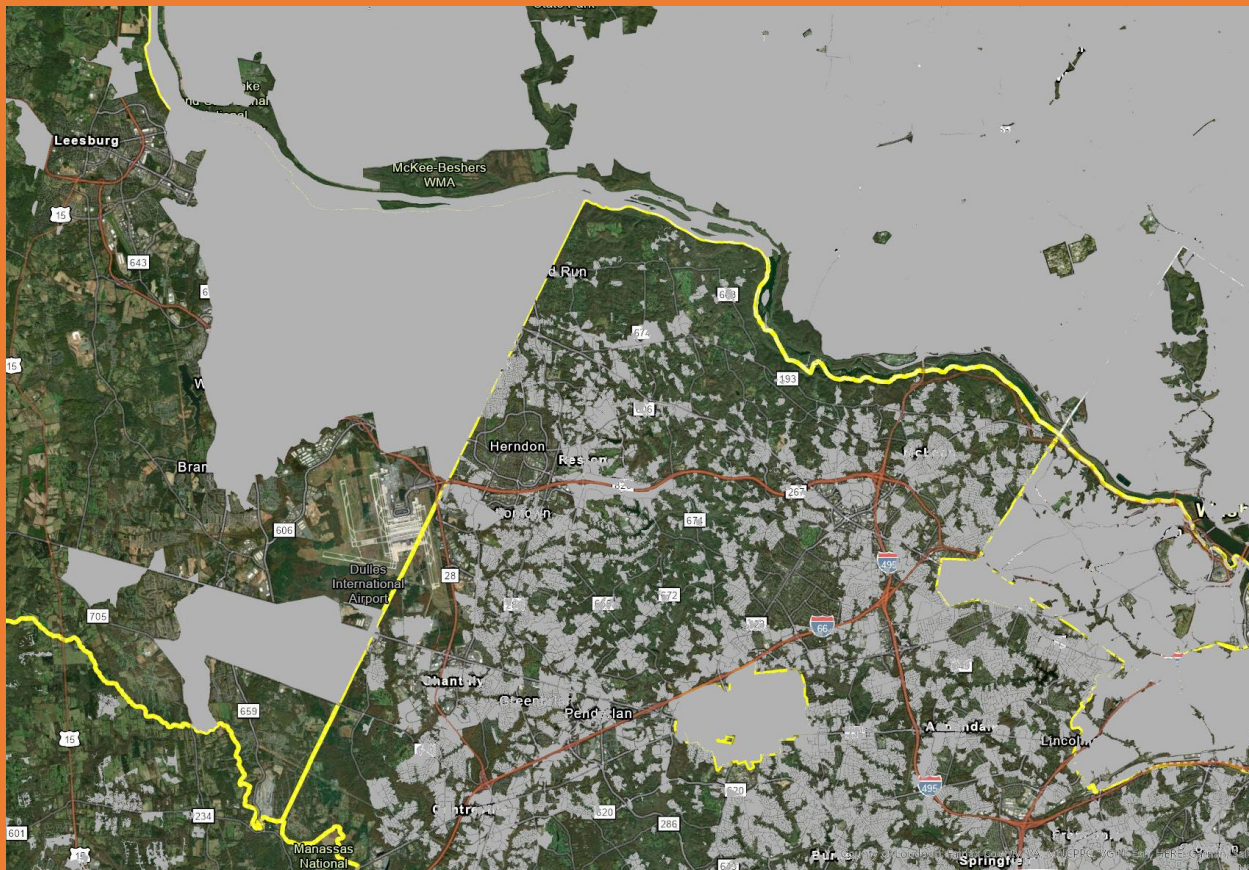
*Does not include other
Phase II permitted areas*

VDOT MS4 Service Area - APPROXIMATE		
15 records, 0 selected		
	Name	area_sq_mi
<input type="checkbox"/>	NoVA - North	57.49
<input type="checkbox"/>	NoVA - South	26.14
<input type="checkbox"/>	Williamsburg	5.12
<input type="checkbox"/>	VA Beach	21.52
<input type="checkbox"/>	Staunton	2.31
<input type="checkbox"/>	Roanoke	10.09
<input type="checkbox"/>	Richmond	39.75
<input type="checkbox"/>	Lynchburg	4.30
<input type="checkbox"/>	Kingsport	0.49
<input type="checkbox"/>	Harrisonburg	2.08
<input type="checkbox"/>	Fredericksburg	7.63
<input type="checkbox"/>	Charlottesville	2.40
<input type="checkbox"/>	Bristol	2.34
<input type="checkbox"/>	Blacksburg	5.04
<input type="checkbox"/>	Winchester	3.84



<https://vdot.maps.arcgis.com/apps/mapviewer/index.html?layers=e17873b05b644a7698e72b76849e075c>

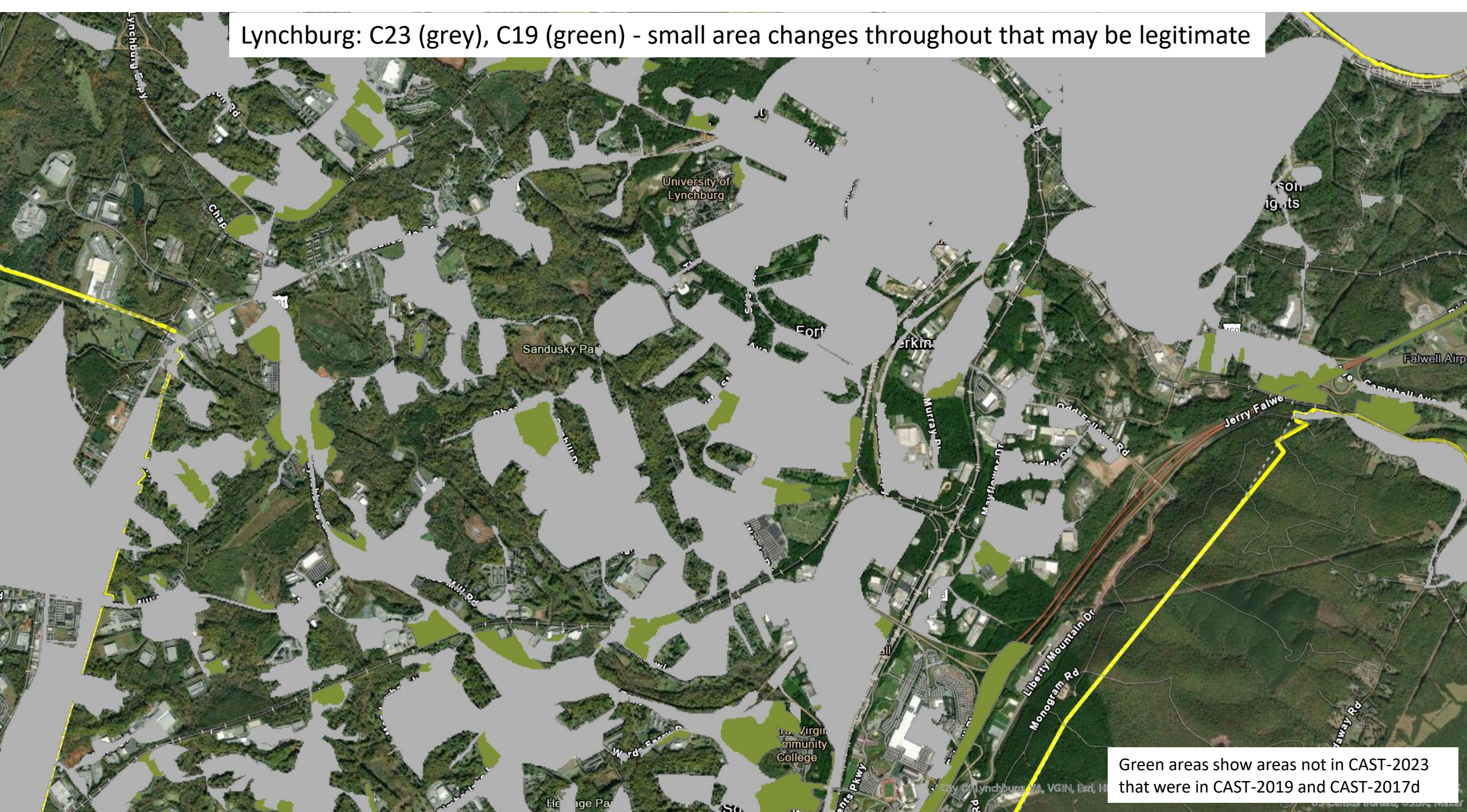
Purple areas are MS4s.
VDOT permitted roads fall within these areas.



Fairfax and Loudoun Counties: C-23 (grey), C19 (green)

Green areas show areas not in CAST-2023
that were in CAST-2019 and CAST-2017d

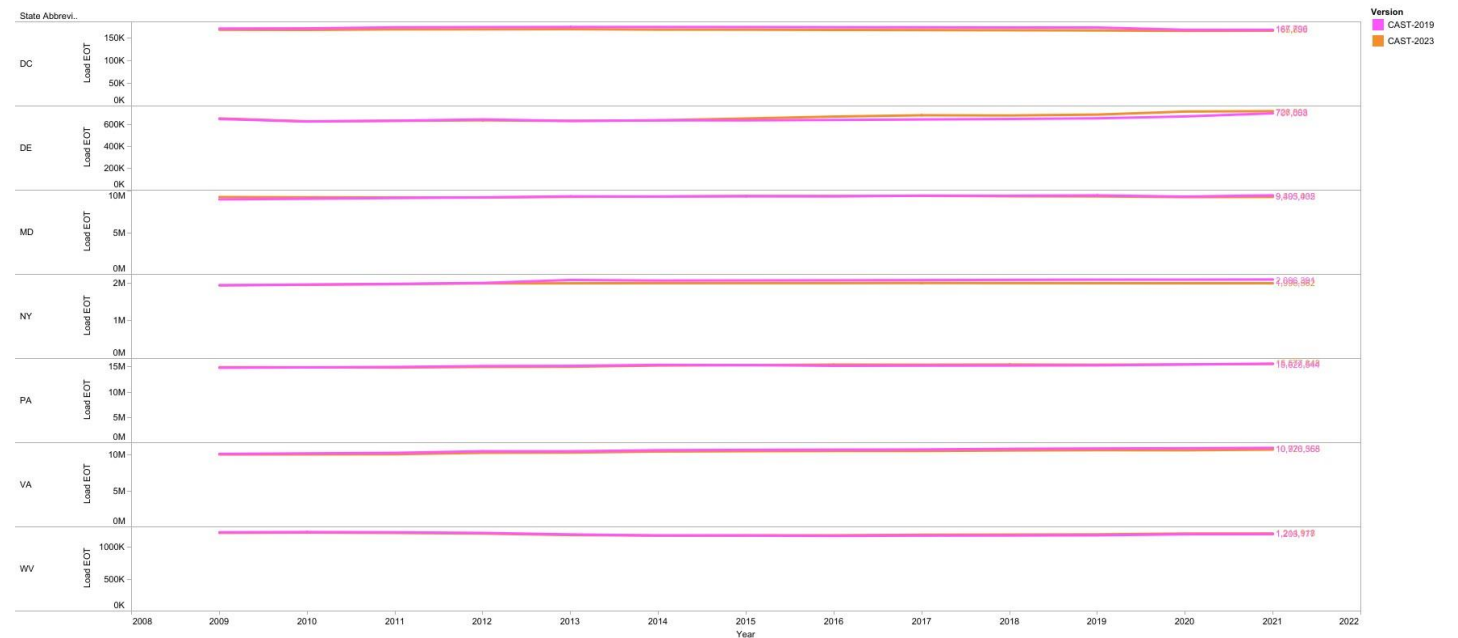
Lynchburg: C23 (grey), C19 (green) - small area changes throughout that may be legitimate



No Substantial Impact on Loads

- Land does not know if it is regulated so the pollution runoff does not change based on its classification
- BMPs can be targeted toward one of the categories of developed land classifications: regulated, nonregulated, or combined sanitary and stormwater sewer (CSS)
- Incorrect classification can affect the amount of land available for BMPs for tracking progress and planning implementation in the future
- The reduction in regulated lands resulted in an excess of BMP acres treated in Fairfax County (2,521) and Fairfax City (7) in the 2022 Progress Scenario
- The reduced regulated areas did not result in excess BMP acres in any other jurisdictions

Edge of Tide Nitrogen Loads by State: Developed Sector



Proposed Solution for Developed Acreage

- Determine the CAST-2019 ratio of unregulated/regulated lands
- The ratio will be determined for each:
 - Modeling segment (land-river segment)
 - Load source: buildings and other, roads, tree canopy over turfgrass, and tree canopy over impervious
 - Nonfederal and each federal agency type
 - Each year after 2012, e.g., 2013 – 2025
- The VA Partner decides if/where this ratio is applied to CAST-23 developed lands:
 - a) Fairfax, Loudoun, and Harrisonburg; or
 - b) All Virginia jurisdictions; or
 - c) All jurisdictions; or
 - d) Something else
- This approach limits the unintended effects that are likely to transpire if recreating the entire land use and/or regulated land overlay
- This is the proposed correction for VA, if other jurisdictions have found a similar issue, same solution can be applied
- Partnership determines who is responsible for submitting, updating, reviewing, and approving regulated land geospatial data for Phase 7
- CBP geospatial team institutes updated QA procedures to examine for potential outliers in resulting products before partnership review