



 USGS



**Chesapeake Bay Program**  
*A Watershed Partnership*

# **2019 Land Use Update for 2020-2021 Milestone Period**

**Peter Claggett**

**Research Geographer, U.S. Geological Survey  
Coordinator, CBP Land Use Workgroup**

**August 19, 2019**

**Water Quality Goal Implementation Team**

**Goal:**

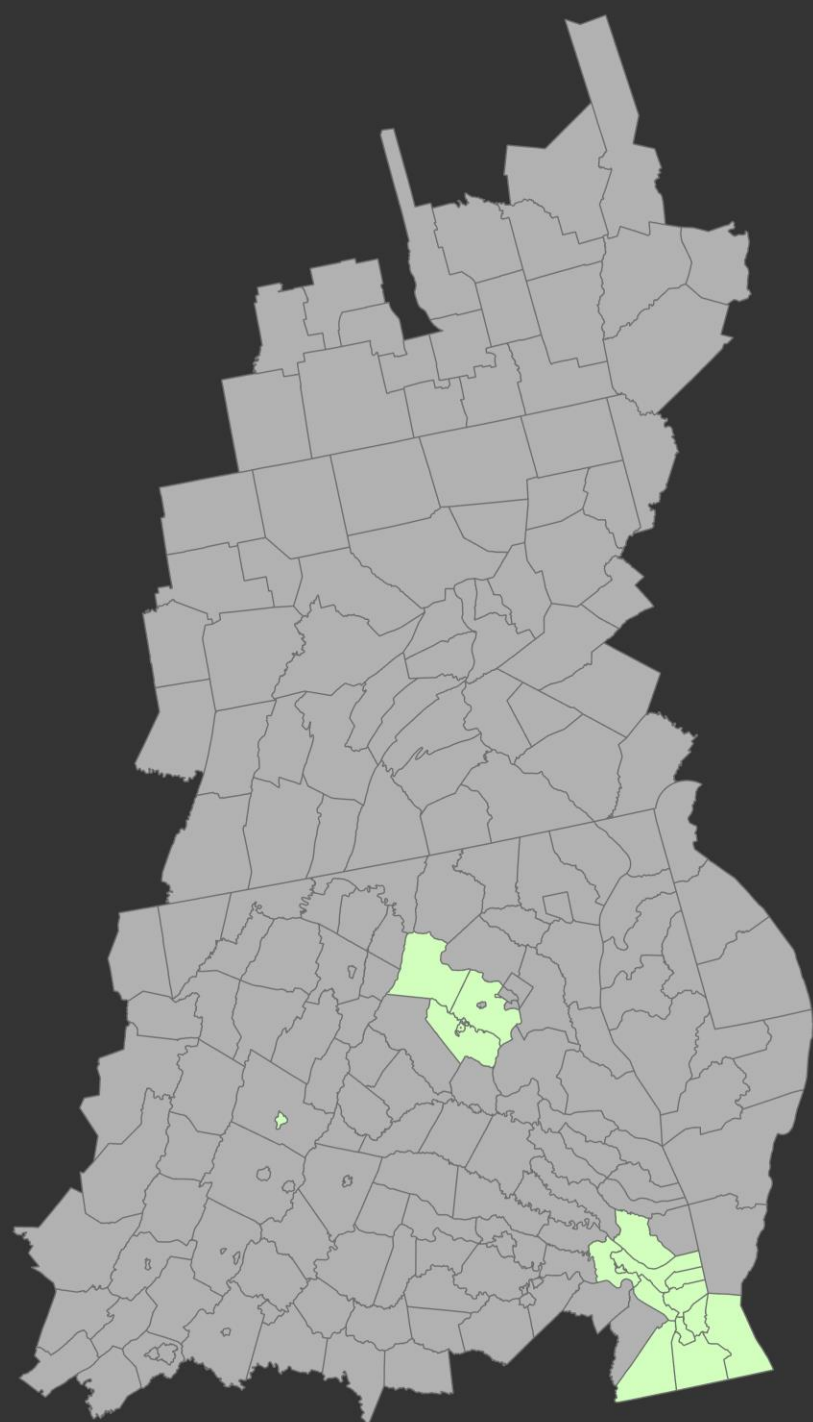
Update 2013, 2017 and 2025 future land use, MS4, and sewer and septic information.

## **MS4 Data:**

**Used updated MS4 areas for 19 local jurisdictions in Virginia.**

## **Result:**

**Changed Phase 6 summary units  
(LRSEGs + Regulated Areas + Federal  
Lands)**

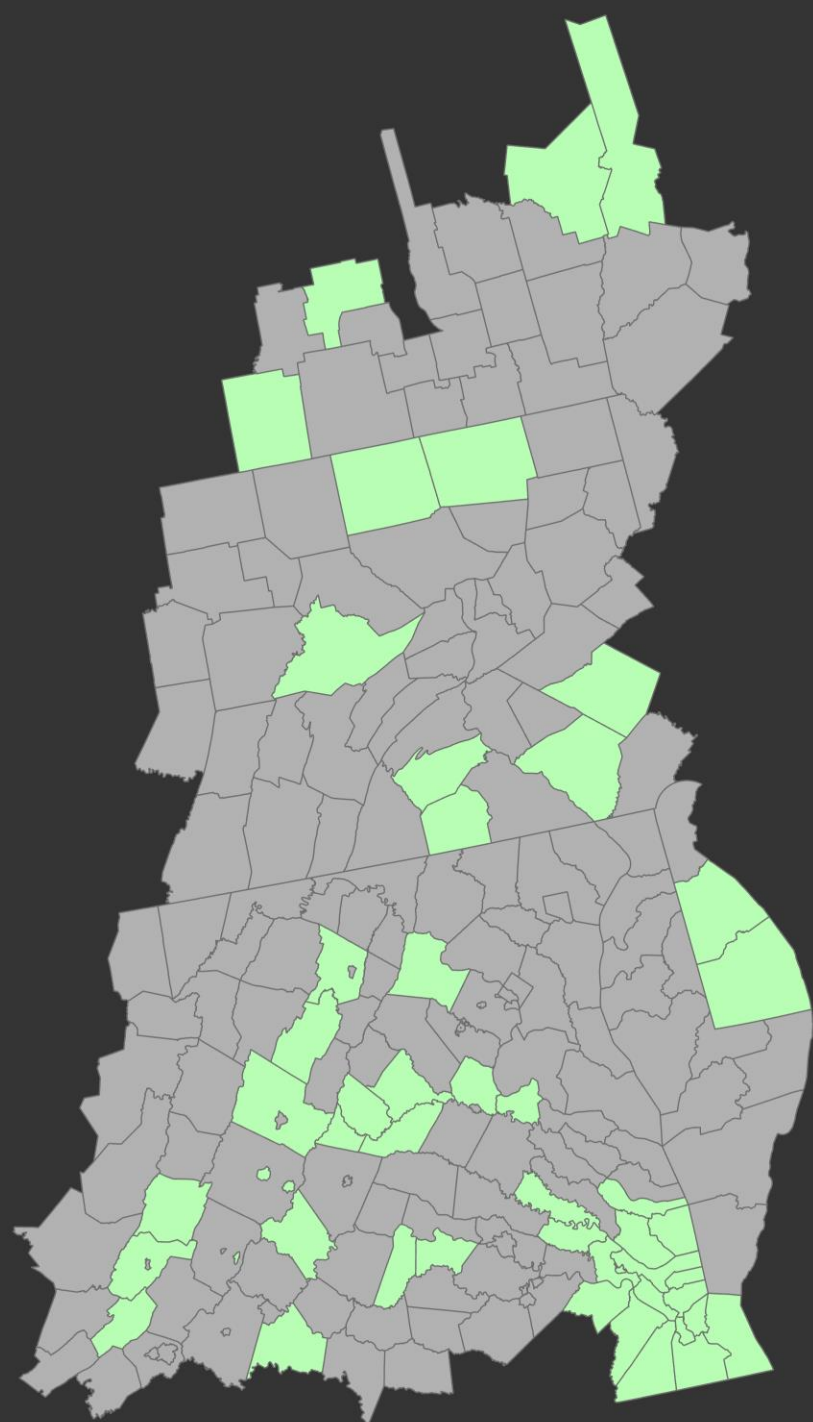


## **Sewer Data:**

**Used updated sewer service areas for  
51 local jurisdictions.**

## **Result:**

**Updated population on sewer and  
septic systems for 2013, 2017 and  
2025.**



# Created a 2017 land use dataset

## 1. Update high-resolution land cover within Landsat-satellite derived “Hot Spots”:

- Excludes Virginia due to issues with 2014 land cover and 2018 NAIP
- 2013/14 land cover data updated with 2017 aerial imagery
- Developed decision rules to relate land cover change to Phase 6 land uses. These rules will be reviewed by the LUWG in September.

## 2. Update high-resolution land cover everywhere using 2016 National Land Cover Dataset:

- For Virginia only
- Update based on change in impervious cover from 2011-2016 and for all other classes from 2013-2016.
- Developed decision rules to relate land cover change to Phase 6 land uses. These rules will be reviewed by the LUWG in September.

## 3. How does NLCD change (2013-2016) compare to High-res change (2013-2017)?

- High-res change:

IR_chng	INR_chng	TCI_chng	TG_chng	TCT_chng	FORE_chng	WLO_chng	WLF_chng	WAT_chng	MO_chng	CRP_chng	PAS_chng
2,208	6,264	1,240	15,448	5,347	(48,070)	(2,680)	(2,279)	1,197	6,187	4,608	10,532

- NLCD change:

IR_chng	INR_chng	TCI_chng	TG_chng	TCT_chng	FORE_chng	WLO_chng	WLF_chng	WAT_chng	MO_chng	CRP_chng	PAS_chng
5,715	14,573	2,621	10,097	8,945	(40,959)	(196)	(738)	173	(2,607)	(7,342)	9,713

# Updating 2025 Current Zoning Scenario

## Updated Population Projections:

- Virginia (from 2017 ed. to 2019 ed.)
- New York (from 2011 ed. to 2018 ed.)
- Delaware (from 2016 ed. to 2018 ed.)
- Metropolitan Washington Council of Governments (from 2016 ed. To 2018)

## Updated Protected Lands (from 2016 ed. to 2018 ed.)

## Updated Sewer Service Areas

## No update to local zoning data:

- Data received from ~90 of 206 localities. Generalizing these data requires a minimum of 1-2 hours per datasets. LUWG will discuss the potential for updating these data for priority counties and for those with already generalized zoning classes.

## Land Use Change (2013 – 2025):

	Development	Natural	Agriculture
cz2019	274,571	(230,834)	(43,737)
cz2017	303,246	(185,537)	(117,710)