

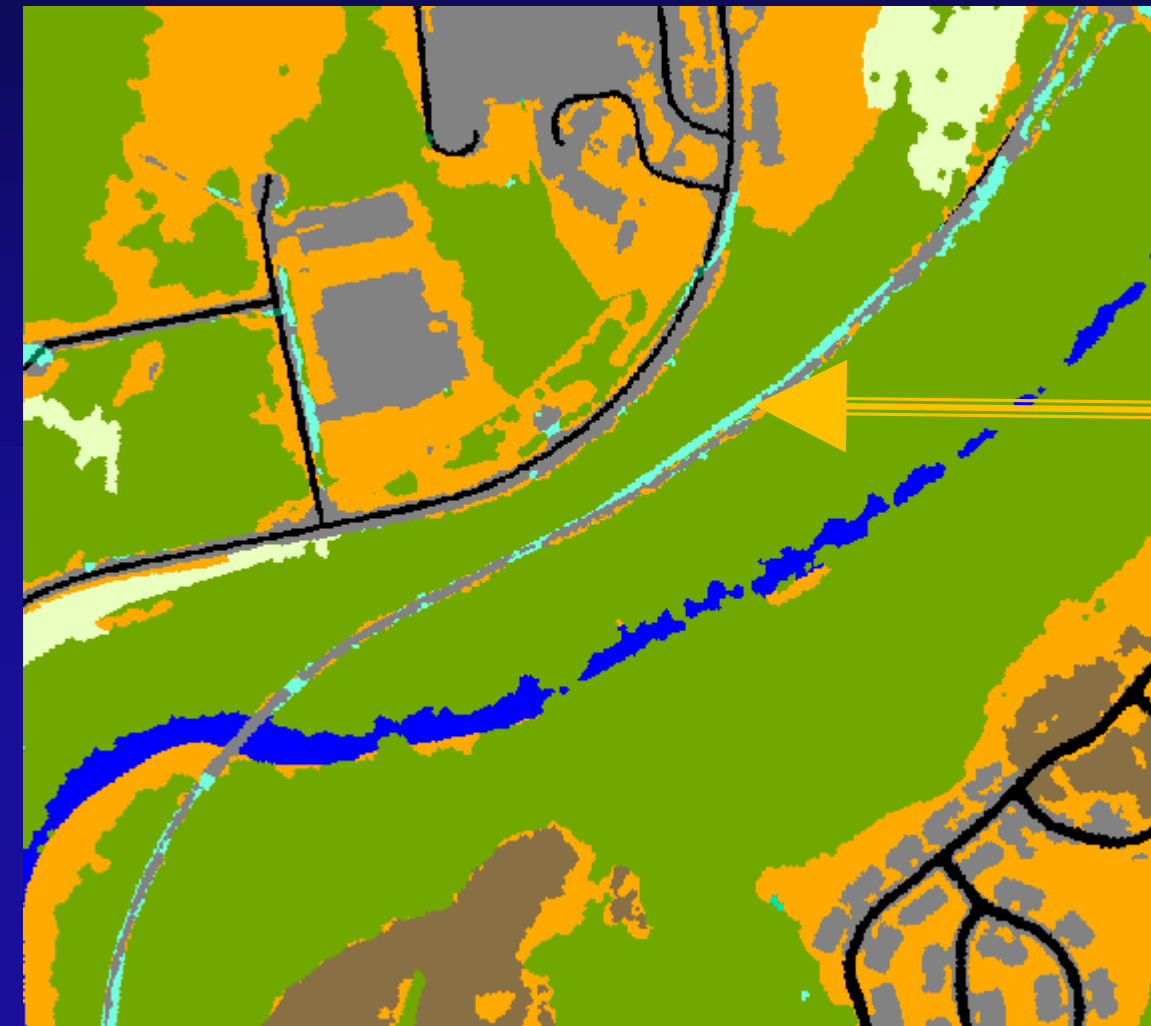
# **Final Phase 6 Land Use Database Nav Tec Rail**

**September 7, 2016**

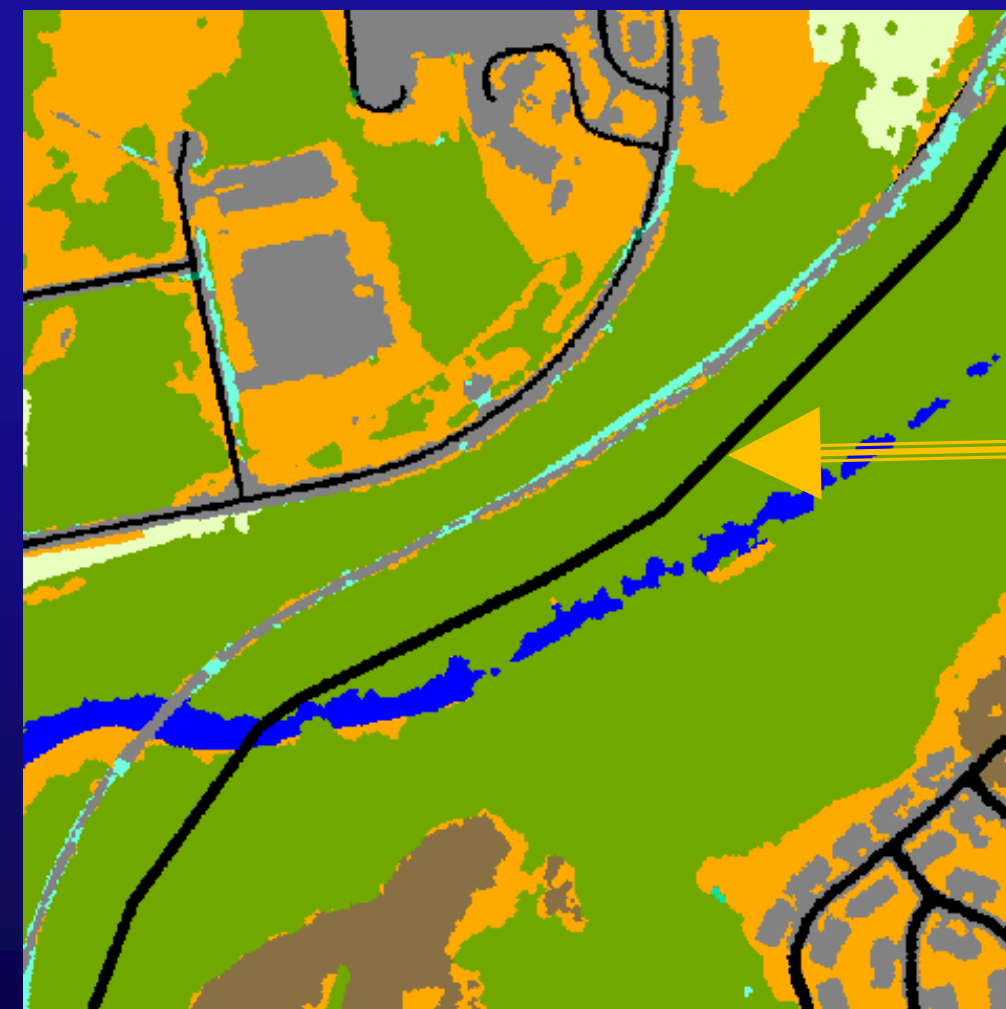
**Fred Irani  
US Geological Survey  
Eastern Geographic Science Center**

# Overview

- A spot check of the NavTec Rail Right of Way (RoW) data against CC, UVM and VA Land Cover indicates significant double counting of impervious surfaces using our current method of finding Impervious Rail



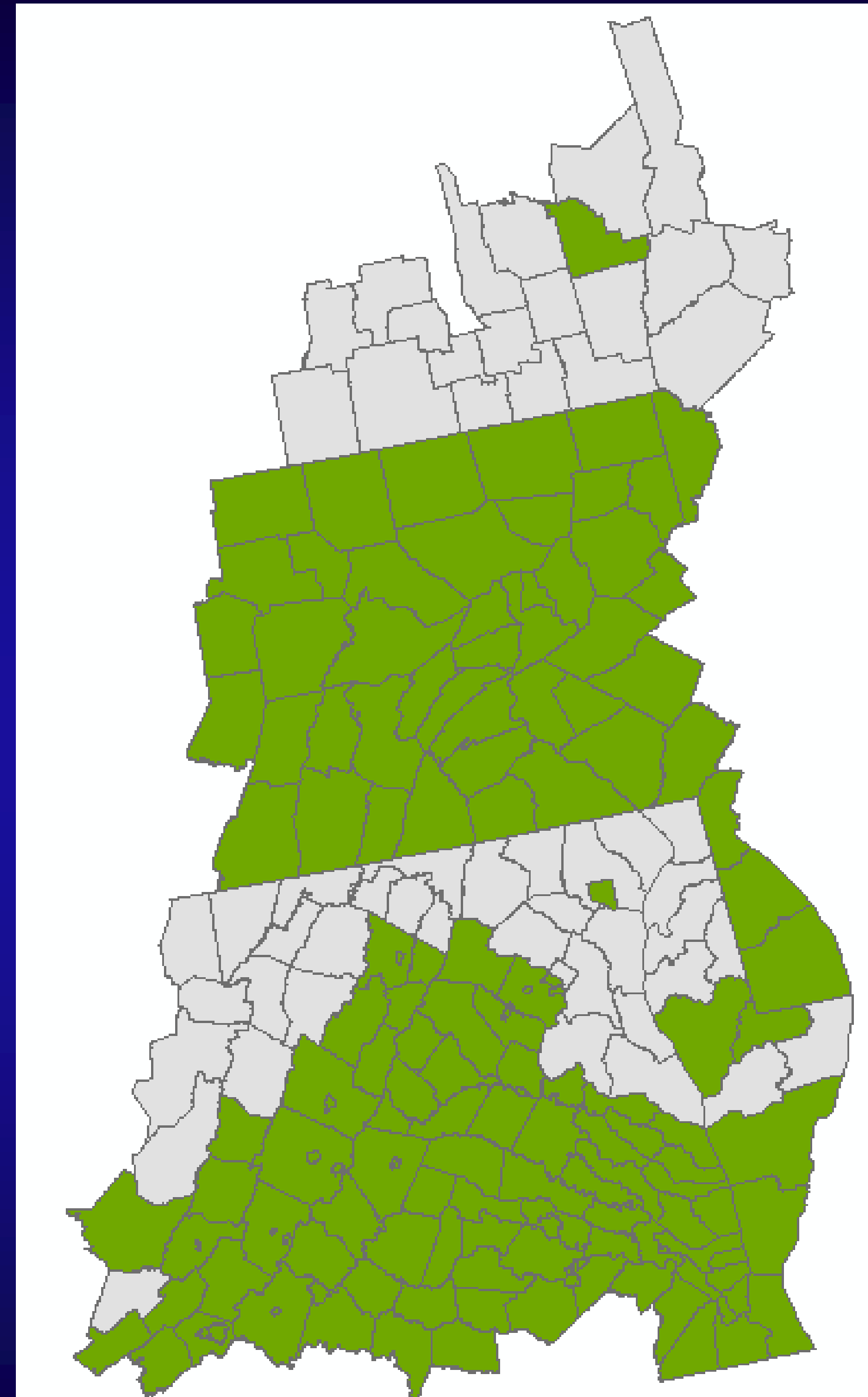
Impervious  
Land Cover  
over Rail Bed



NavTec Rail Row

# Spot Check

- Areas Spot Checked included
  - VDEQ: VA Bay North and South
  - UVM: Delaware, North PA;
  - CC: Baltimore City, Dorchester, Green, Madison, Prince George, Queen Anne Wicomico, others.

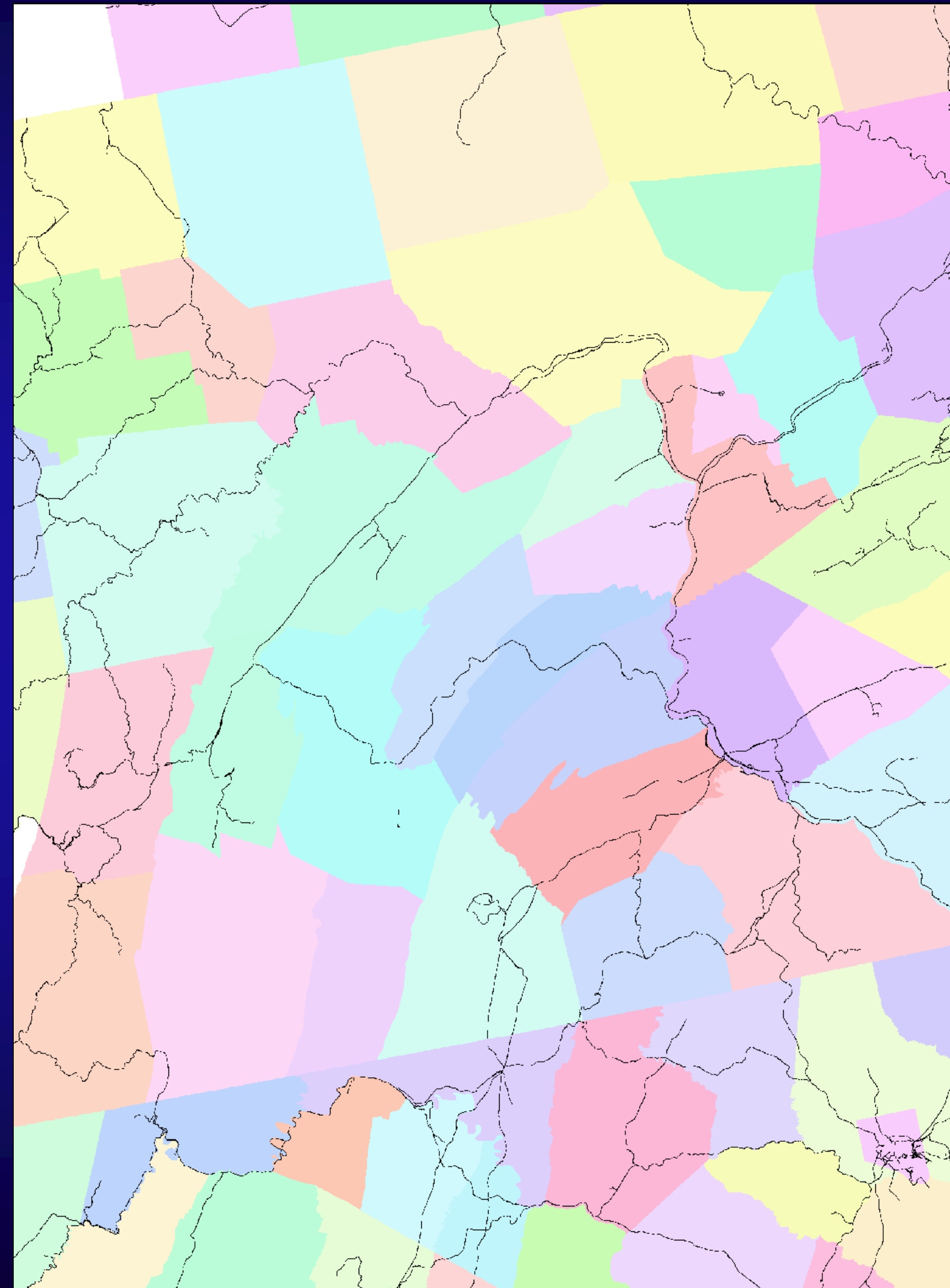




- The land cover data (LC) picks up impervious rail very well on its own where it is not obscured by forest or trees.



- **LC Rail in Central PA largely follows streams of rivers and is rarely obscured by trees.**





- Washington, Garrett Counties, MD, LC does very well at delineating tree canopy over impervious where Rail penetrates forested areas.





- **NavTec Rail follows the LC impervious areas very well in urbanized areas. It can wander off-track in rural areas and often wanders into forested patches where LC shows rail is actually running alongside a forest patch.**





# Rural Areas

- NavTec Rail ROW and Impervious LC Agree in Rural Areas Except where Rail enters Fragmented Forest Patches





# Impacts

- Where NavTec Rail agrees LC impervious, LC is sufficient.
- The effort to reclass Low Veg and Barren within the Rail RoW to impervious results in significant double counting the impervious class across the watershed.
- Not certain what the trade off is between double counting of IS and loss of IS beneath Rural Forest Patches.
- Impervious acres gained as LV within Rail RoW does not appear to be significant.
- The CC and UVM have captured Trees over Rail as Trees over Impervious (TCol) fairly well

# Options:

## 1. Eliminate the Use of RR to convert Low Vegetation within RR and Rely Solely on the Land Cover Classifications

Any Low Vegetation & Barren LC within the RR will not be captured as Impervious Surface.

## 2. Convert Only NavTec Rail RoW that Penetrates Forest Patches to Tree Canopy over Impervious

Commission Errors where NavTec Wanders Off the Land Cover Track Will Still be Significant



# Recommend Option One

## **1. Eliminate the Use of RR to convert Low Vegetation within RR and Rely Solely on the Land Cover Classifications**

**Any Low Vegetation & Barren LC within the RR will not be captured as Impervious Surface.**

# Contact Information:

Fred Irani, USGS- EGSC  
Chesapeake Bay Program Office  
410 Severn Ave, Suite 109  
Annapolis, MD 21403

410-267-9845

[firani@usgs.gov](mailto:firani@usgs.gov)

[firani@Chesapeakebay.net](mailto:firani@Chesapeakebay.net)

<http://www.chesapeakebay.net>

<http://chesapeake.usgs.gov/>

<http://egsc.usgs.gov/>