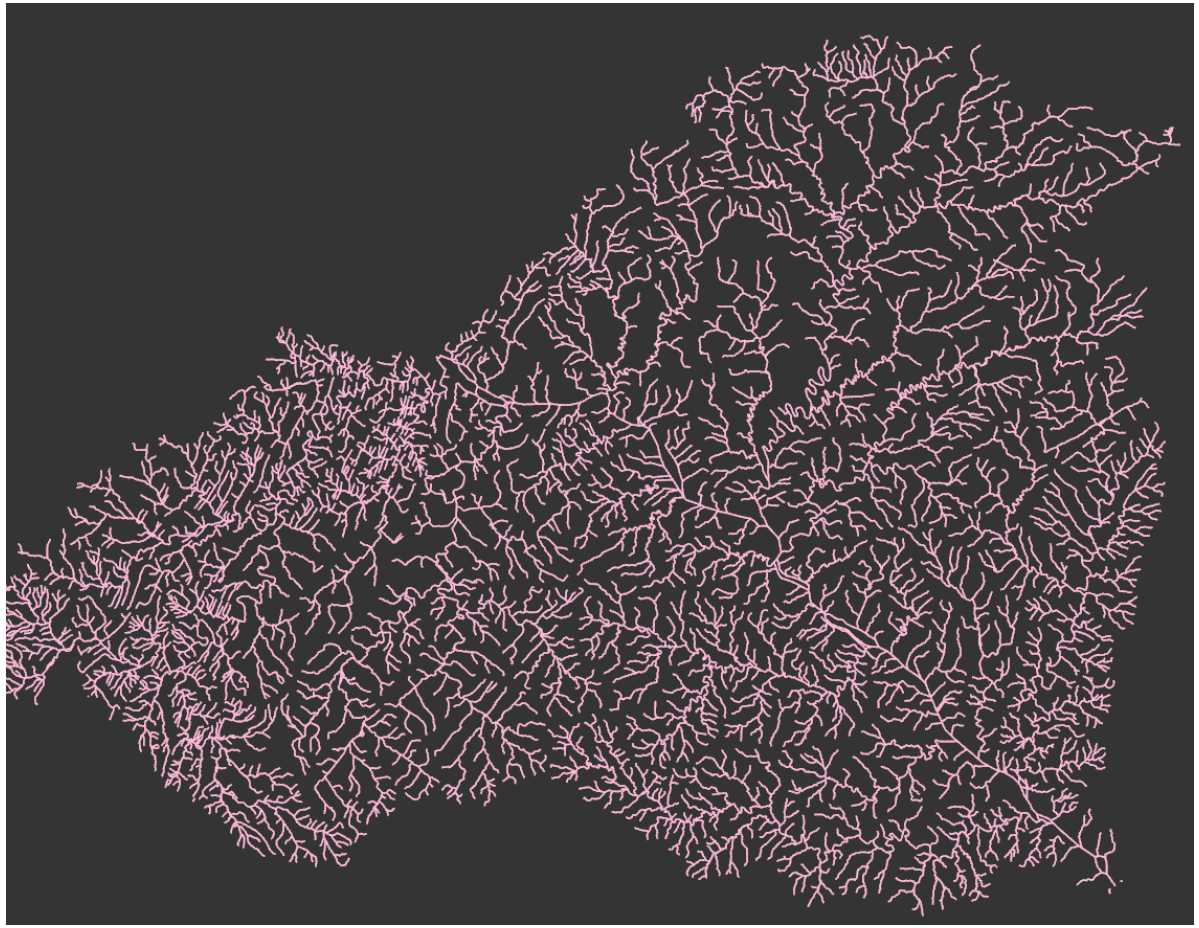
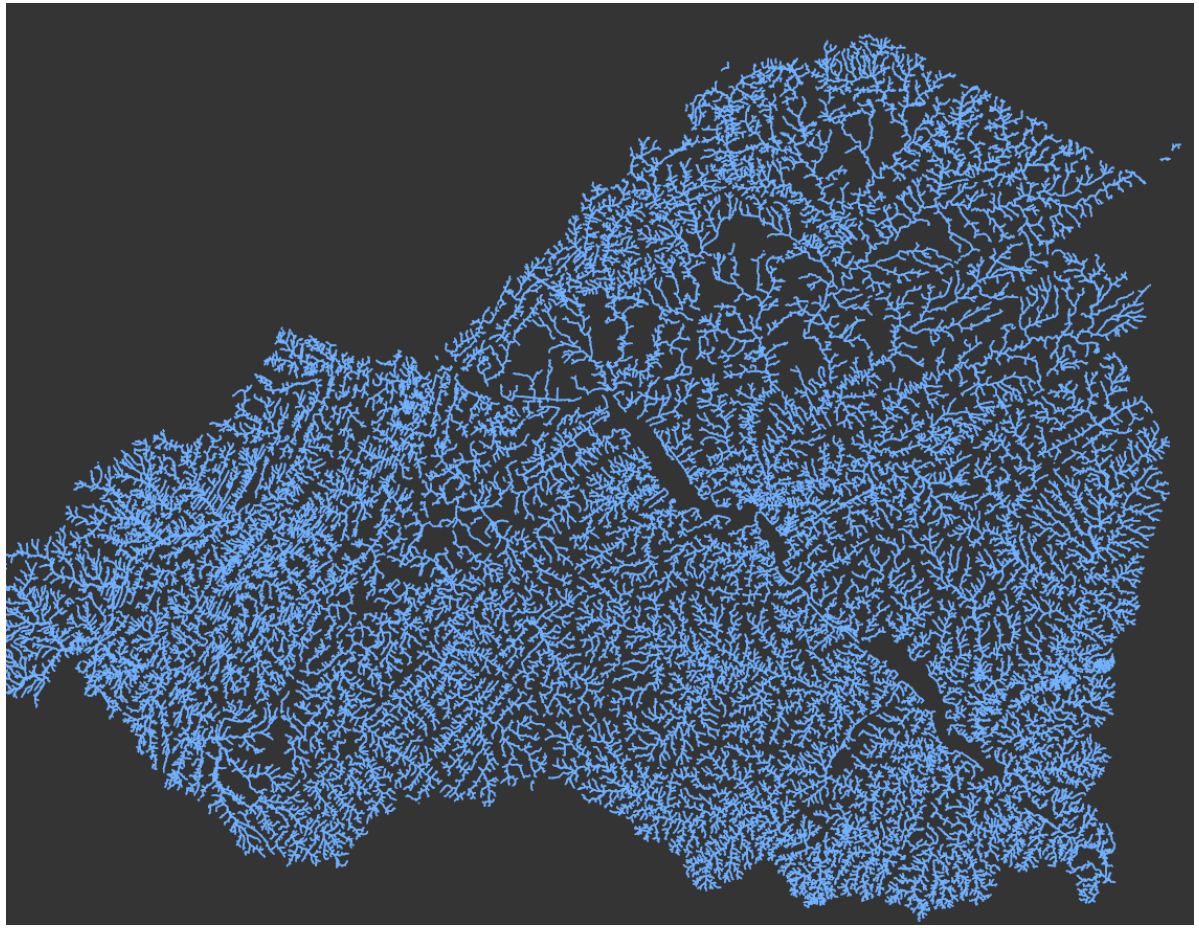
Impact of Stream Resolution on Riparian Buffer Inventories

Lower Susquehanna Example

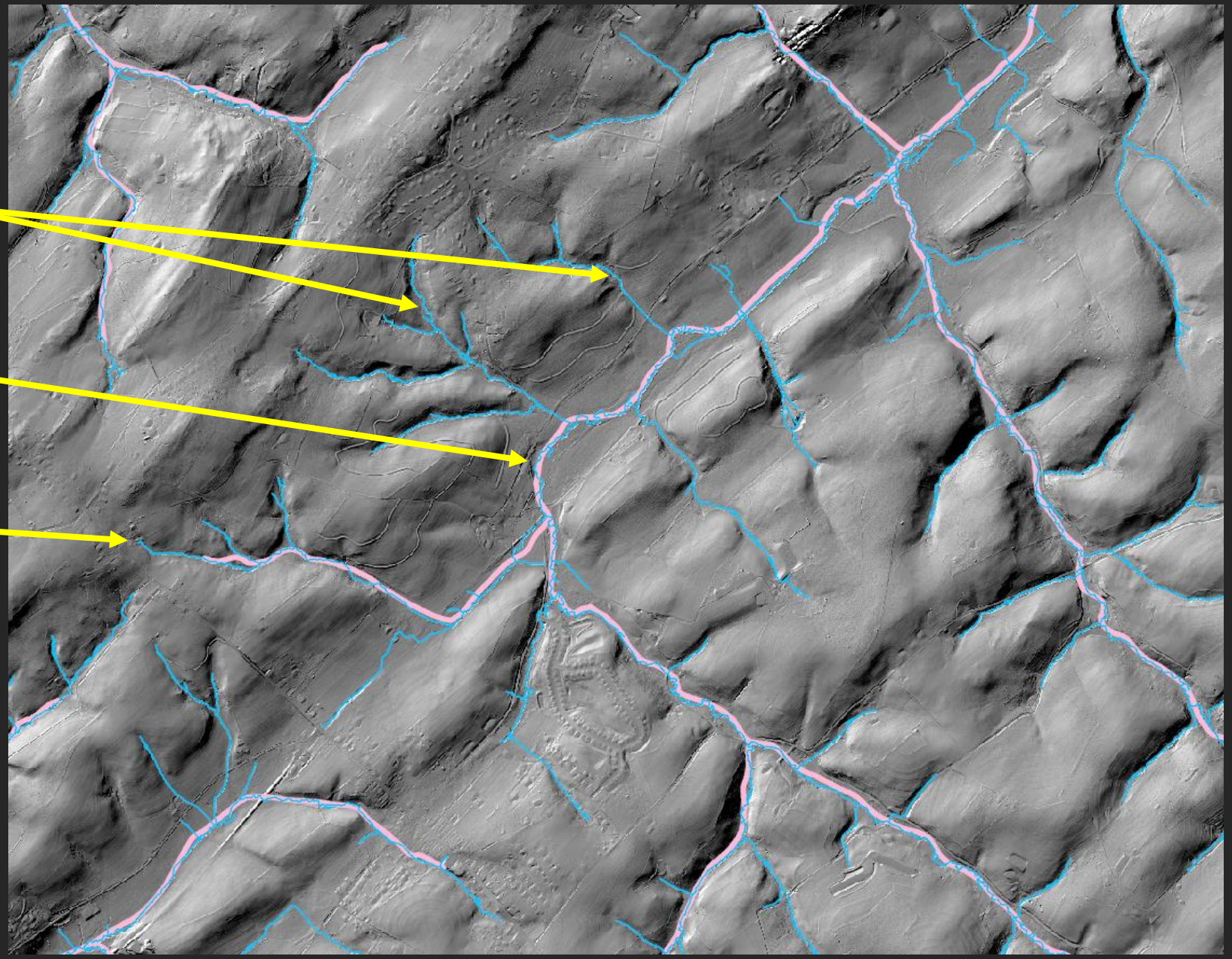
National Hydrography Dataset, 1:24,000
6,923.6 km



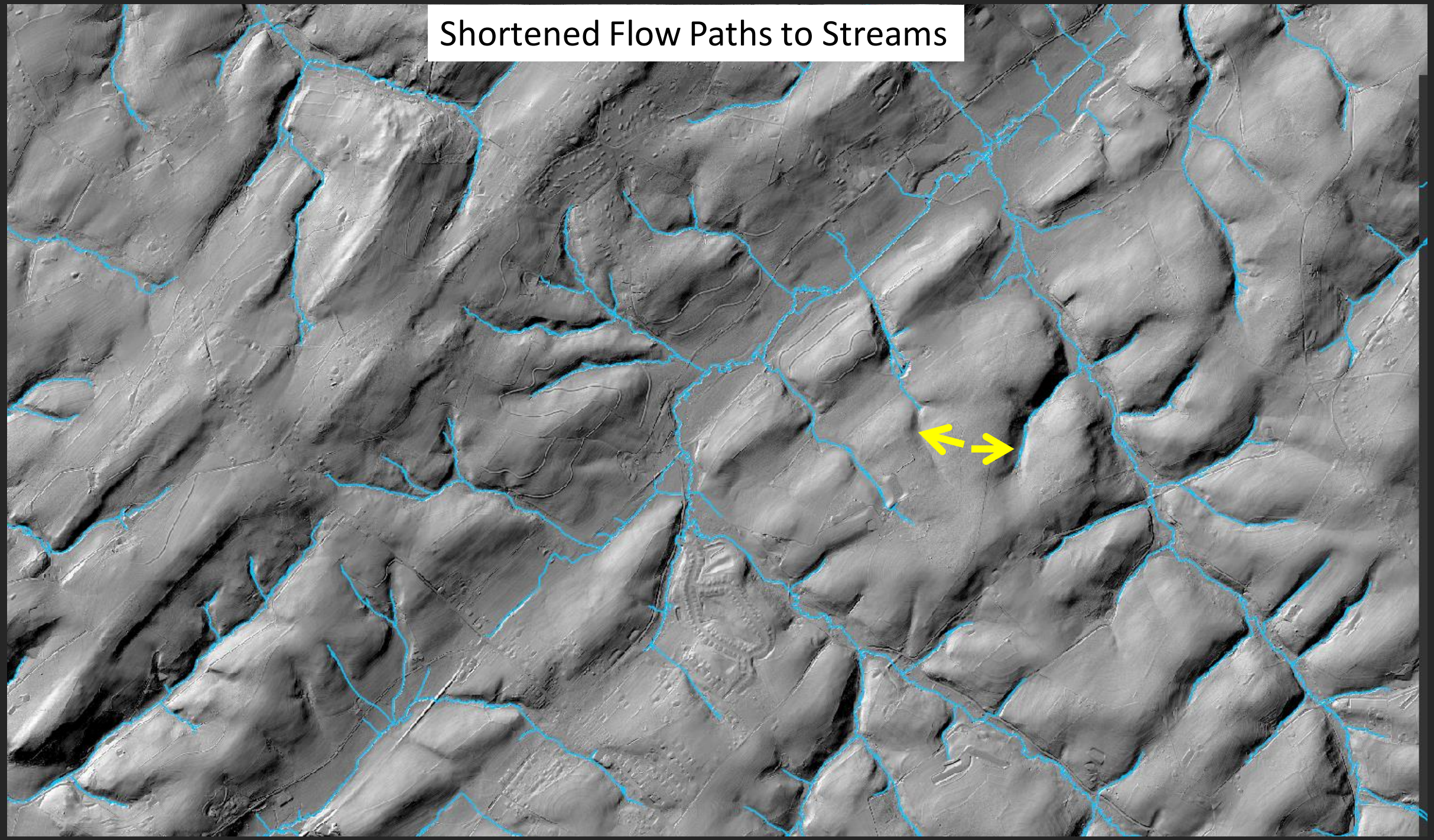
CBP Hyper-Resolution Streams, 1:2000
16,784.6 km



Why the 2x difference in stream length?

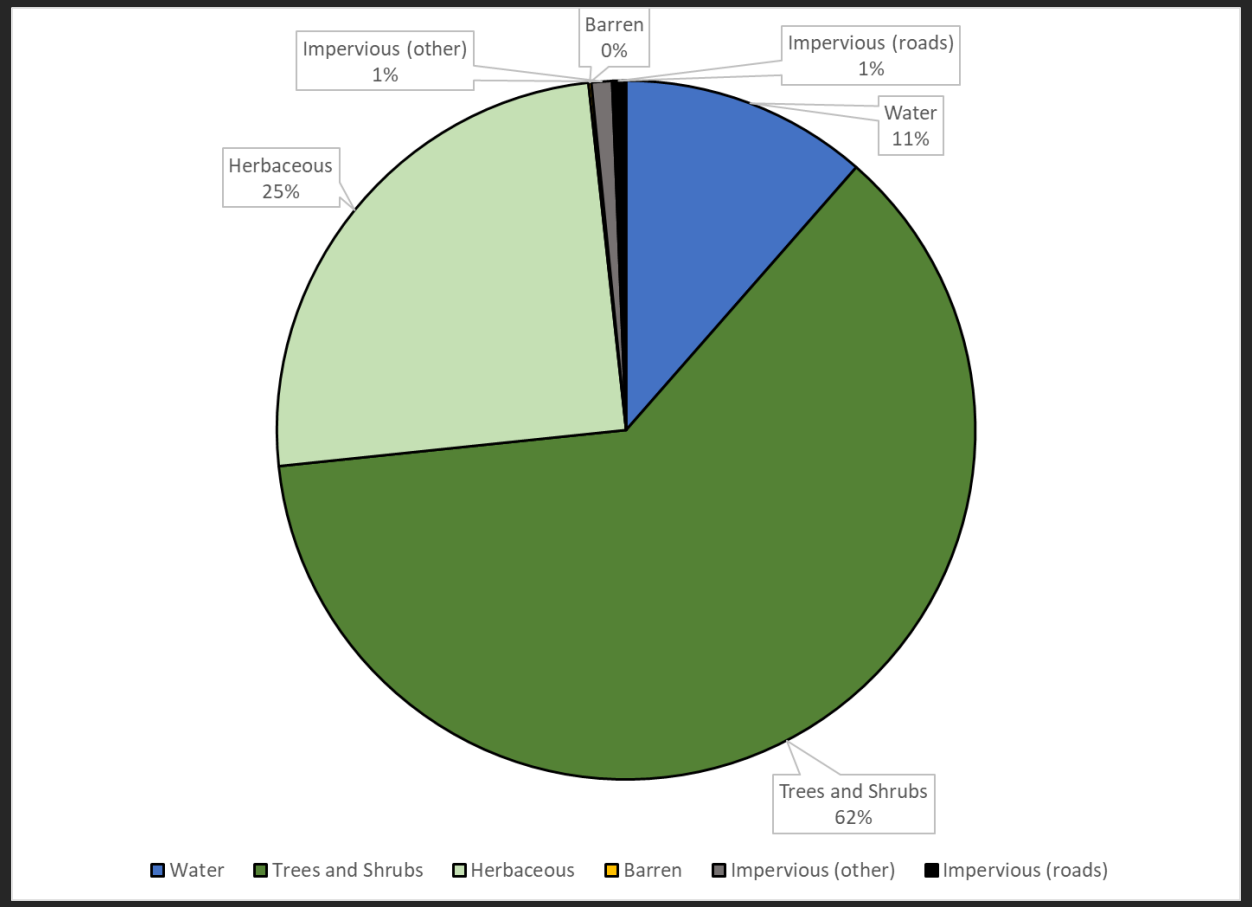


Shortened Flow Paths to Streams

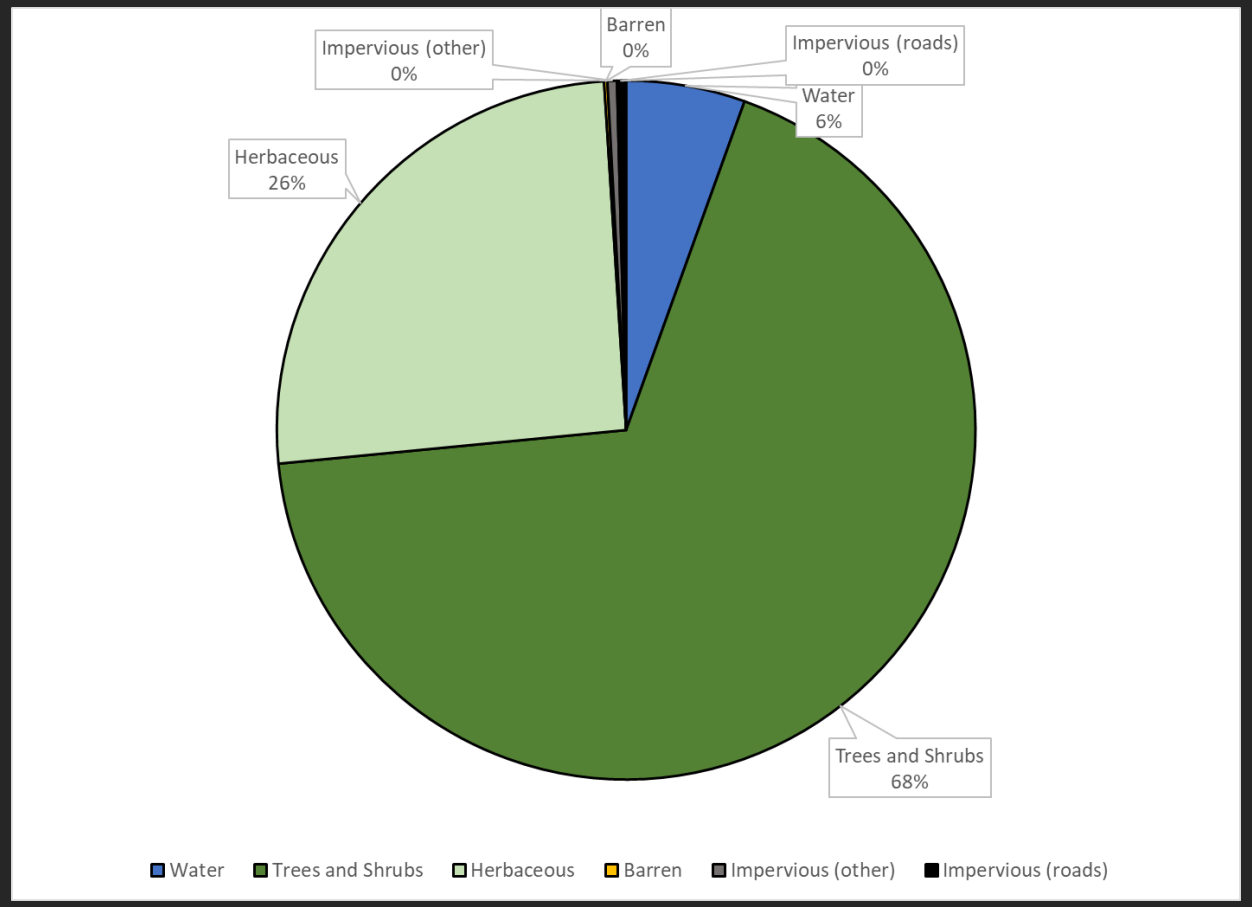


Differences in Land Cover Along Streams

NHD 24K (62% Trees/Shrubs)



Hyper-Res 2K (68% Trees/Shrubs)



Considerations for using High-res Data for Buffer Inventories

High-resolution hydrography and land use data will:

- Increase the number of stream miles, particularly for ephemeral & intermittent streams;
- Increase the drainage density and decrease the travel time to small streams;
- Alter the land cover proportions in the stream corridor in predictable ways based on the dominant land use on hillslopes;
- Enable the assessment of narrow, 35-feet wide, stream buffer conditions.

How important is knowing stream flow permanence (ephemeral, intermittent, perennial)?