

US EPA ARCHIVE DOCUMENT

## Ecoregion 64 (Northern Piedmont) Observations

On July 12 and 13, 1999 we visited 9 of 10 sample blocks that were randomly selected for the Northern Piedmont ecoregion (64). This ecoregion, stretching from southern Virginia through central Maryland, southeast Pennsylvania, and central New Jersey, is dominated by three land cover types: urban and built-up, agriculture, and forest cover. The characteristics of each of these three vary throughout the region but the overall mosaic of these three land cover types remains generally consistent. There was considerable evidence of rural to urban land cover conversion throughout the ecoregion. Urban and built-up land cover is increasing throughout the region though the rate of change appears to vary across the ecoregions. The following is a summary of our observations of the land use and land cover patterns and influences for the Northern Piedmont ecoregions.

### Urban Lands

The overall land cover mosaic is dominated by forest cover and agricultural land. Dispersed throughout the vegetated mosaic is a hierarchy of populated places of varying sizes. Generally, the largest metropolitan are on the eastern edge of the Northern Piedmont where access to air, land, and sea transportation networks are best developed. The largest of these are New York/Newark, Philadelphia, Baltimore, and Washington, DC. Four of the 10 sample blocks fell in fringes of these four megacities. In all cases, these sample blocks included core urban land use and cover (i.e., high intensity residential, parks and recreational lands, and commercial, industrial, and transportation facilities), as well as the expanding fringe which typically included subdivisions, shopping centers, small industrial parks, and related land cover and land uses. In this region, there was considerable evidence of both old and new, with examples of efforts to preserve or restore historical urban elements. While the fringe of the mega cities included considerable tree cover and small agricultural remnants, land use is clearly driven by urban influences.

To the west of the mega cities are numerous smaller cities with populations from 50,000 to 150,000. Examples include Charlottesville, VA, Leesburg, VA, Frederick, MD, Hagerstown, MD, York, PA, Lancaster, PA, and Trenton, NJ. All exhibit an expanding urban-rural fringe that breaks into a patchwork of urban and built-up, agriculture, and forest land cover. The urban to rural transition is more abrupt than we observed for the larger cities. However, there was considerable evidence of both older and recent rural residential acreage developments.

The smallest town varied in their state of growth and change. As the distance from the small towns to the large or small cities increase, the rates of apparent change and urban growth decreased. While there were frequent examples of small housing subdivisions being established on the outskirts of the small towns, the total land area was typically very small.

A general impression from the field reconnaissance is that urban and built-up land cover is increasing throughout the Northern Piedmont, but the rates of change varies considerably. Most likely, the overall rate of urbanization is highest in the east and decreases in the west. Much of the conversion appears to be at the expense of agricultural land, though this is only an impression that will be tested during the change analysis.

### Agriculture

The characteristics of agriculture varied from place to place throughout the ecoregion. While the relative proportion of the landscape covered with agriculture was consistent across the ecoregion, the land use practices was somewhat variable. The most common crops were corn, wheat, pasture, hay crops, and soybeans. In the southern portion of the ecoregion (Virginia), pastureland was most common with little crop production. The areas with cropping often included alternating strips of wheat and corn. There was ample evidence that the horse ranching was a significant use of the pastureland. However, dairying and the production of beef cattle (especially Angus) were notable.

In the central part of the ecoregion (northern Virginia and Maryland), there was a mixture of crop production (especially corn with soybeans) and grazing and haying. Again, there was much evidence of horse ranching. In the northern region (Pennsylvania), corn and wheat were common with lesser area devoted to hay crops and pasture. As in the southern region, corn and wheat were often planted in alternating strips which typically followed the contours of the slopes. Some alfalfa and soybean production was also observed.

Evidence of agribusiness was common in most of the ecoregion, but especially in Virginia, Maryland, and Pennsylvania. Large grain elevators, farm supply stores, and implement dealers were found in most small and moderate sized towns. It was interesting to note that the implement dealerships often displayed a larger assortment of lawn tractors than crop production implements. We assume this is because of the frequency of small acreages.

Change in agricultural area was usually associated with urban encroachment and the rates of change were therefore greatest nearest to the major metropolitan areas. The proportion of agricultural cover was lowest in the New Jersey extent of the ecoregion. Most of the New Jersey lands were covered with urban and built-up and forest land cover. The little cropland observed was used as pasture or for corn or wheat production.

A note on the condition of agricultural land is warranted. It appears that there is a significant drought through the ecoregion. While crops planted in the early season (most wheat, some corn) appear healthy, those planted later showed significant stunting.

## Forest Land

Forest cover appears to be the most common land cover in the ecoregion. However, the extent and characteristics of the forest land varied somewhat from place to place. Forest cover was most common in the eastern reaches of the ecoregion and percent of land with forest cover appears to be higher closer to the metropolitan. For example, the areas around Baltimore and Newark/New York appeared have a high percent of forest land. The forest cover masked the many patches of low density residential developments.

In the other parts of the ecoregion, forest cover occupied hilltops. Low slopes and valley bottoms were often cleared. It appeared that in Pennsylvania, forest cover was limited to either hilltops or in narrow, steep drainage. Clearing for farming seems to occupy higher reaches and steeper slopes of the Pennsylvania hills.

We did not study species composition. We did note that oak and hickory was pervasive throughout the ecoregion. It was interesting to note considerable areas with invading sumac along roadsides.

We say little evidence of a forest product industry. We encountered a small sawmill in central Pennsylvania, but nothing elsewhere.