

# Railroad and Regional Characteristics

transportation benefits for shippers, receivers, and the general public.

## Baseline Environmental and Social Characteristics

The environmental and social characteristics of the Washington, DC region are reflective of an area with a rich history, a nearby major estuary, a strong economy, and a prominent defense industry. To analyze this mix, a geographic information system database was developed that included the major features of the natural and built environment as well as the transportation network. A broad scan was done to identify the major constraints and opportunities for a new freight railroad alignment through the region.

For the purposes of this study, the region comprises the study-area jurisdictions shown in Figure 2-18, which spans from Frederick and Carroll Counties in Maryland to the north, Anne Arundel County in Maryland to the east, Hanover County in Virginia to the south, and Warren County in Virginia to the west. This is larger than the Metropolitan Washington Council of Governments (MWCOC) planning area. The study area evolved over the life of the project as potential freight railroad corridors were identified and screened.

### ENVIRONMENTAL FEATURES

The consideration of major environmental features at the early stages of a project can help ensure a context-sensitive and efficient solution. If the federal government were to be involved in a freight railroad realignment project, future steps would include a formal environmental review process in compliance with the National Environmental Policy Act (NEPA), which would document potential environmental impacts and identify mitigation measures. In the current study, information on major and available environmental features such as wetlands, parks, recreational areas, fish and wildlife refuges, historic sites was collected and reviewed. These are shown in Figure 2-19.

### Natural and Recreational Features

Many parks, recreational facilities, and fish and wildlife refuges are located in the Washington, DC region. The federal government owns many of these facilities, but smaller state and regional parks are also present. Notable parkland, recreational sites, and refuges designated by the U.S. Fish and Wildlife Service are:

- The area around Fort Belvoir includes Mason Neck State Park, Mason Neck National Wildlife Refuge, Pohick Bay Regional Park, Piscataway Park, Occoquan Bay National Wildlife Refuge, and Featherstone National Wildlife Refuge. Not only are these parks and refuges large, they front the Potomac River and nearby bays and are surrounded by wetlands.
- Prince William Forest Park, owned by the National Park Service, is a large park bounded by I-95 and Marine Corps Base, Quantico.
- Aquia-Po Beach Park is a locally owned riverfront park with marina facilities.
- Leesylvania State Park, south of Woodbridge and east of Prince William Forest Park, is along the Potomac River. The existing CSX Mainline runs through the park.
- The CSX Mainline runs through East Potomac Park and Anacostia Park in the District, both owned by the National Park Service.

A realigned freight railroad should avoid major parks, recreation sites, and refuges. Section 4(f) of the Department of Transportation Act of 1966 applies to U.S. DOT actions that may affect publicly owned public parks and recreation sites and wildlife and waterfowl refuges. The U.S. DOT will approve an action that requires the use of Section 4(f) resources only if there is no other prudent and feasible alternative.

This study also inventoried available wetlands and floodplain data; however, major impacts to these features were considered avoidable with any railroad realignment alternative.

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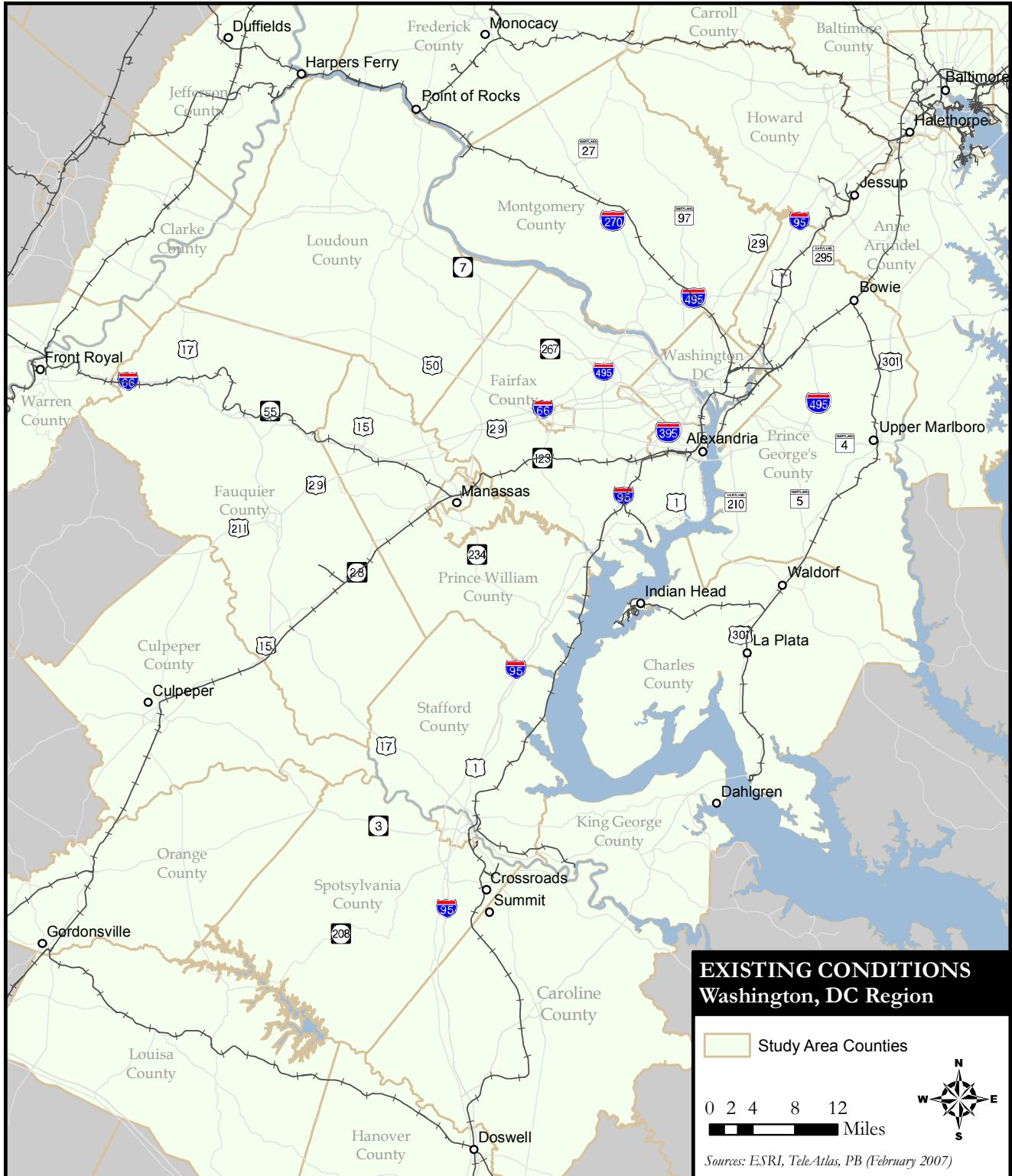


Figure 2-18. Study Area

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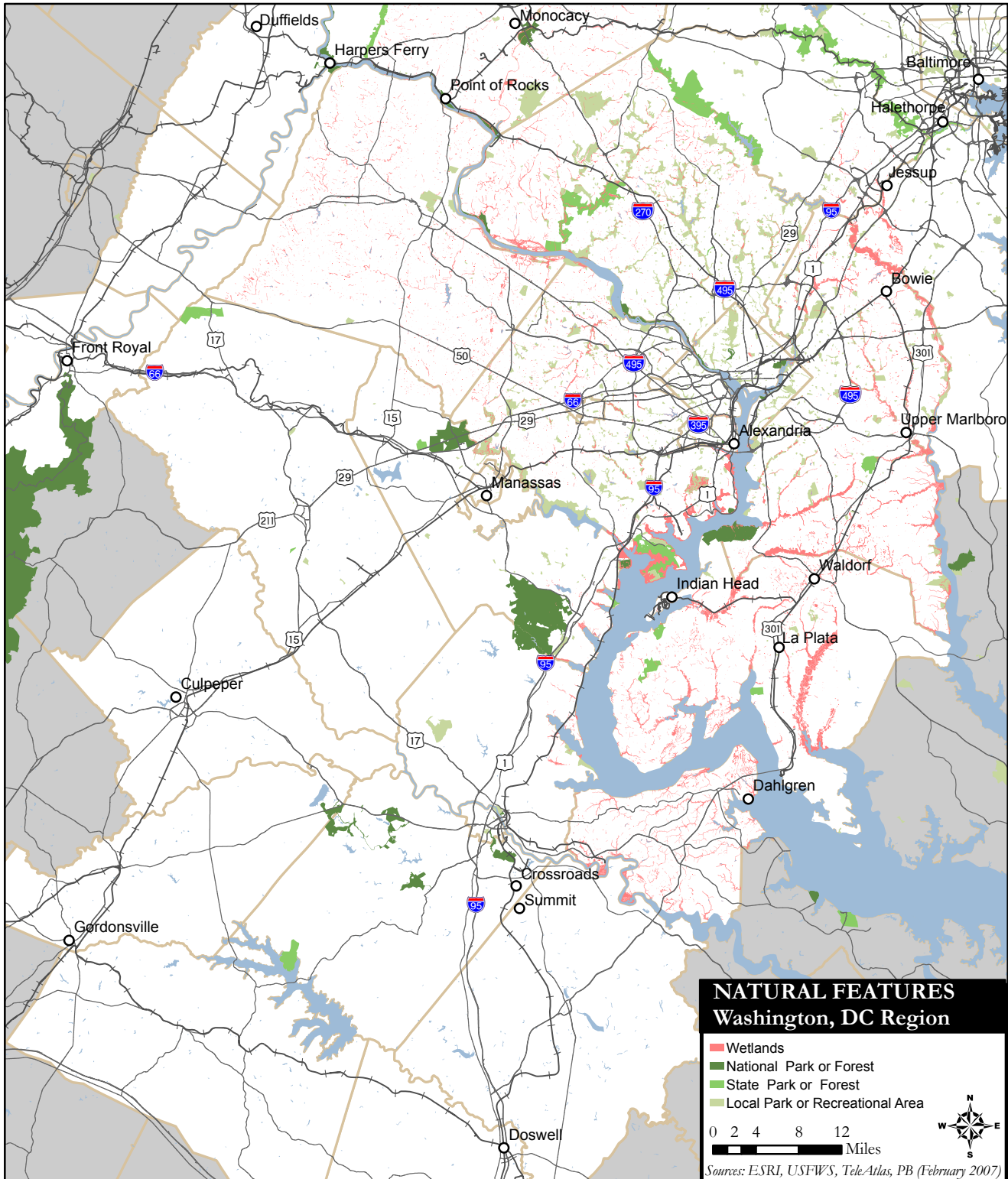


Figure 2-19. Study Area - Natural Features

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## Historic Sites

The Washington, DC area is filled with historic sites and districts related to the evolution of the city and federal government. Mount Vernon is located south of Alexandria on the west shore of the Potomac River. Piscataway Park, owned by the National Park Service and located across the river from Mount Vernon, ensures that the view from Mount Vernon remains similar to what it was when George Washington lived there. Any significant new infrastructure, including a freight railroad, should avoid the Mount Vernon area or viewshed.

The existing CSX railroad runs through the Fredericksburg Downtown Historic District, just west of the Old & Historic Alexandria District, and along historic areas in the District. There are many individual historic properties located throughout the region, and impacts to these could be avoided or mitigated during future project development stages.

Section 106 of the National Historic Preservation Act regulates federal actions that may have an adverse effect upon historic properties. Viable railroad alignment alternatives should avoid historic properties or districts.

## Environmental Justice

Another important consideration is environmental justice, which helps to ensure social equity in major proposed actions. Any project financed with federal funds must comply with a 1994 Presidential Order stating that:

Each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.

*-Executive Order 12898*

Data from the U.S. Census Bureau was reviewed to understand the regional distribution of minority and

low-income populations. The study used this data to analyze the alignment alternatives in later project steps; this is discussed in Section 3 of this report.

## SOCIAL CONDITIONS

A realigned freight railroad should ideally avoid intensely settled areas due to community disruption, the cost of construction in such areas, and the security risk associated with proximity to a large population.

## Development Patterns

In general, residential population in the region radiates out from the District with gaps for rivers and strips of agricultural land. The densest residential development is concentrated inside the Capital Beltway (I-495), in the western and southern parts of Fairfax County, to the west of I-95 in Prince William County, and along I-270 in Montgomery County. Other moderately dense residential areas include Manassas in Virginia and Frederick, Waldorf, and Columbia in Maryland.

More concentrated than residential settlement patterns, regional employment is densest in the District and its suburbs to the north and west. Figure 2-21 shows that the largest areas of dense employment in the region are Downtown Washington, DC and Tysons Corner and Reston in Fairfax County. Other employment centers include Bethesda, Silver Spring, and Rockville in Montgomery County, Crystal City, Rosslyn, Ballston, and the Pentagon in Arlington County, and Old Town Alexandria.

The most-rural counties—with the fewest residents and employees per acre—include King George, Jefferson, Clarke, Warren, Fauquier, Culpeper, Orange, Louisa, Hanover, and Caroline Counties in Virginia, and Charles and Carroll Counties in Maryland.

## Land Use

The generalized land use information in Figure 2-22, compiled by the United States Geological Survey, shows that, like population and employment distribution, commercial, urban, and residential land uses are concentrated in and around the Capital Beltway. Data was not available for the outer portions

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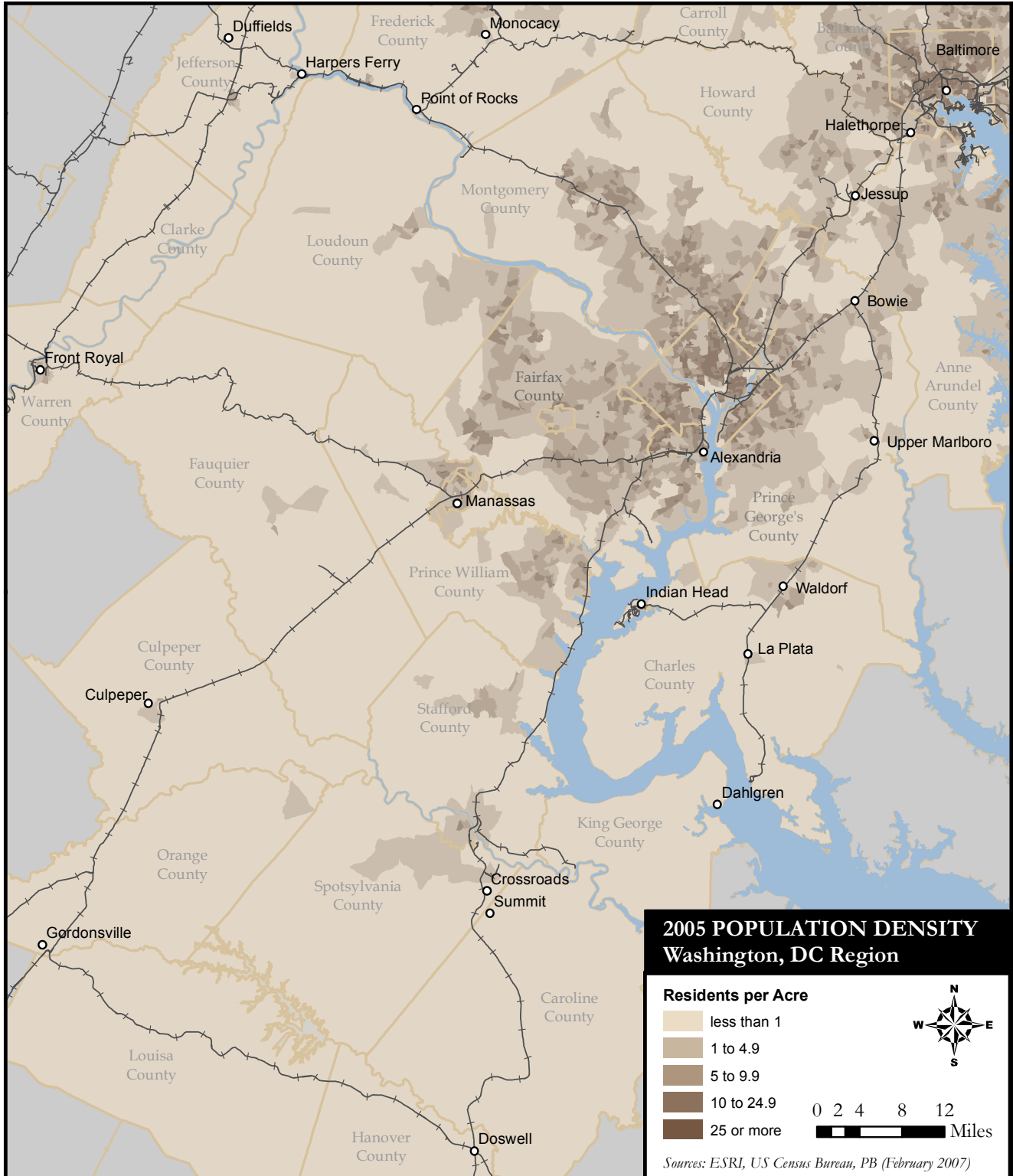


Figure 2-20. Existing Population Density

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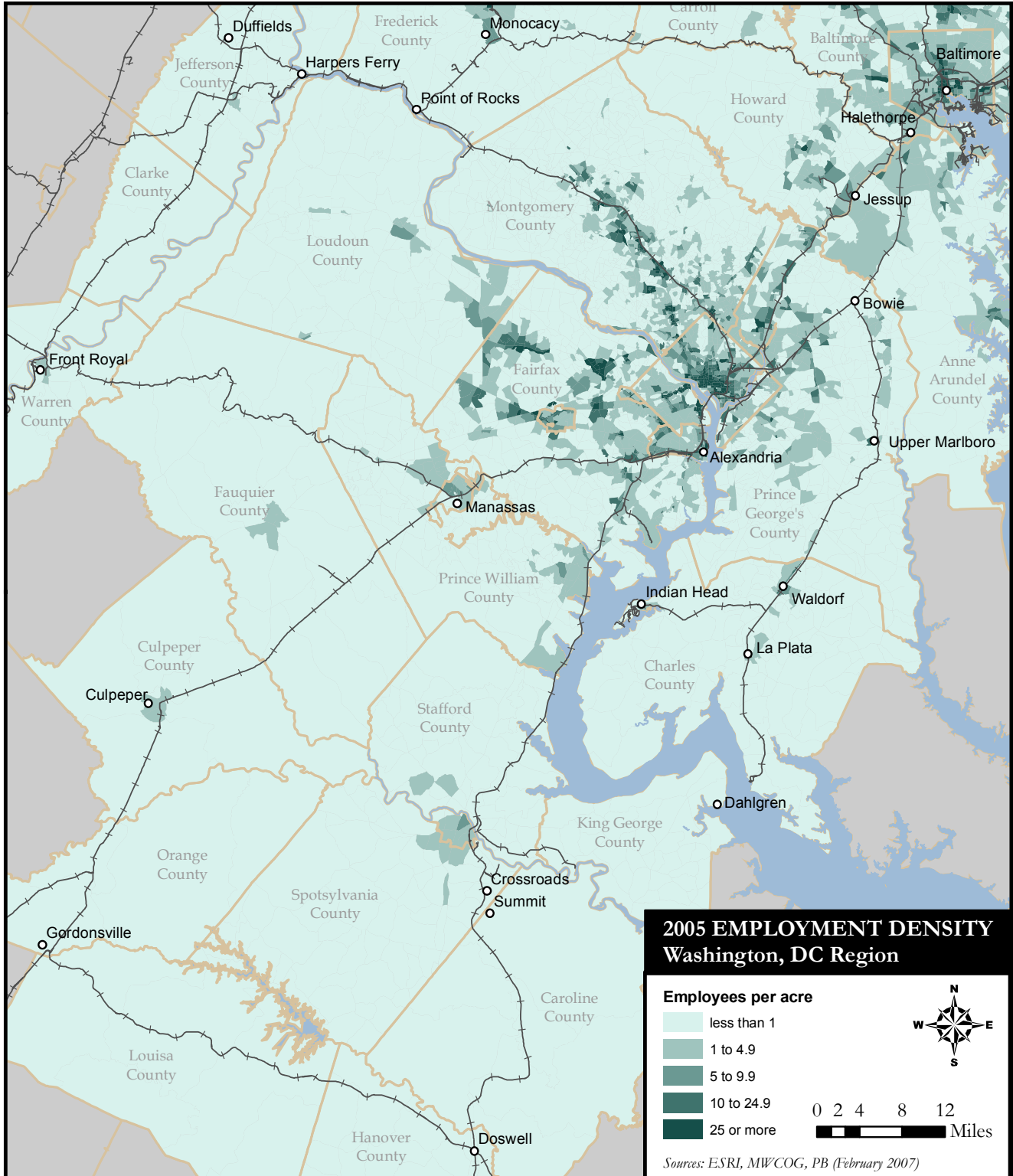


Figure 2-21. Existing Employment Density