

**Cairo Bridge Project  
Environmental Justice Analysis  
Ritchie County, West Virginia**

**U.S. Department of Transportation  
Federal Highway Administration**



**West Virginia Department of Transportation  
Division of Highways**



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## **Cairo Bridge Project (WV 31)**

The Cairo Bridge Project is being proposed by the West Virginia Division of Highways (WVDOH) to replace the existing bridge carrying WV 31 over North Fork Hughes River in Ritchie County, West Virginia.

### Environmental Justice

Executive Order 12898 of February 11, 1994, *Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations*, requires that the proposed project be assessed to determine whether or not it will have a disproportionately high impact on minority or low-income populations within the area (OPUSA 1994). An analysis of potential environmental justice impacts was conducted to assess if there were environmental justice populations in the project area, and if so, to determine if there would be such a disproportionate effect on them from the proposed project. There are three fundamental principles at the core of environmental justice:

- To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations;
- To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process; and
- To prevent the denial of, reduction in, or significant delay in, the receipt of benefits by minority and low-income populations.

Environmental justice addresses potentially disproportionate high effects of proposed decisions on low-income populations and minority populations. The Federal Highway Administration defines “disproportionate impacts as adverse effects that are predominately borne by a minority population and/or a low-income population. Disproportionate effects are appreciably more severe or greater in magnitude on environmental justice populations than on nonminority or non-low-income populations (FHWA 2015).

### Demographic Overview

Information from the *American Community Survey* was accessed from the U.S. Census Bureau (USCB 2016) and the U.S. Environmental Protection Agency environmental justice web sites (USEPA 2016) to determine the presence of any minority or low-income populations within the project area. Population estimates from 2015 were also reviewed.

The population of West Virginia during the 2000 U.S. Census was 1,808,344 (USCB 2000). By 2010, the statewide population had grown to 1,852,994 (USCB 2010). Population in Ritchie County peaked in 1900 when it reached 18,901. It has been steadily declining between 1900 and 1980 when an increase in population was recorded. The following decennial census (1990) once again recorded a population decline. The population has been relatively stable over the past 20 recorded years, with the most recent population estimate of 9,982 in 2015 (USCB 2016). Population projections for the area indicate the county’s population will decline approximately 18 percent over the next 14 years (WVU 2014). As a comparison, the population of West Virginia is expected to grow by 1.4 percent by the year 2035. Table 1 provides a

demographic overview of Ritchie County and Census Tract (CT) 9624 as they relates to the entire state.

**Table 1  
Demographic Overview**

Area	Population Characteristics					Individuals Below Poverty Level		Housing	
	Total Population	White	African Amer.	Other Minority	Age 65 & Over	Total	Percent	Units	Households
Ritchie County	10,449	10,387	35	27	1,797	1,975	18.9	5,843	4,367
Census Tract 9624	3,258	3,251	2	5	570	447	16.4	2,200	1,364
West Virginia	1,844,128	1,727,948	66,389	49,791	328,255	337,475	18.3	884,605	742,359

Methodology

The analytical methodology employs a comparative screening analysis that measures potentially impacted populations to determine if an environmental justice population would see a disproportionate impact when compared to the non-environmental justice populations. This methodology identifies a threshold for the study area and compares block group data to that threshold. If block group data exceed the threshold, the potential for disproportionate effects to occur on that block group is judged to be present. It does not address potential impacts to individual members of environmental justice populations, instead evaluating impacts to neighborhoods as a whole.

The analysis utilized currently available information from the following U.S. Census units: Ritchie County, and CT 9624 [block group 1]. Population, race, household, and poverty data were retrieved directly from the U.S. Census American Fact Finder. The factors used for the environmental justice screening are found in Table 2.

**Table 2  
Environmental Justice Screening Factors**

Area	Total Population	White Population	Minority Population	Percent Minority	Persons with Incomes Below Poverty Level	Percent Below Poverty Level
Ritchie County	10,449	10,387	62	0.6	1,975	18.9
CT 9624	3,258	3,251	7	0.2	447	16.4
CT 9624 BG 1	1,080	1,080	0	0.0	130	12.0

Findings

Without a minority population within the project's study area (CT 9624 BG 1) the screening threshold of Ritchie County (0.6 percent) is not exceeded. With a low-income (poverty) population of 12.0 percent, the project's study area does not exceed the screening threshold of Ritchie County (18.9 percent). Not only does the entire study area fall below the county thresholds for each environmental justice category, the entire census tract 9624 does as well.

Consequently, the project is unlikely to have a disproportionate effect on environmental justice populations.

References

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