

**GCLMPO MTP
APPENDIX D**

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■ **APPENDIX D:**
■ **ENVIRONMENTAL JUSTICE ANALYSIS**

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BACKGROUND

Transportation investments can have both positive and negative impacts on the communities in which the projects are located. To achieve environmental justice (EJ), GCLMPO programs will be administered so as to identify and avoid disproportionately high and adverse effects on vulnerable populations.

EJ analyses will be conducted to determine if our programs, policies, or activities will result in disproportionately high and adverse human health and environmental effects on minority populations and low-income populations.

ENVIRONMENTAL JUSTICE FACTOR ANALYSIS

Utilizing the Equity Analysis for the Greater Philadelphia Region¹ as a guide and demographic data from the US Census Bureau, the GCLMPO uses the following eight factors to generate an Indicators of Potential Disadvantage (IPD) Score for each Census Block Group within the MPO planning area.

1. Residents under age 18
2. Residents age 65 years or older
3. Residents identified as one minority
4. Residents identified with Hispanic Origin
5. Limited English Proficiency (LEP) Spanish
6. Residents with 1 or more disability
7. Residents below the poverty line
8. Zero Vehicle Households

The EJ Factor Analysis methodology generates an “EJ score”, which is used to meet the nondiscrimination requirements and recommendations of Title VI and EJ for GCLMPO’s plans, programs, and decision-making processes.

The score calculation is determined by standard deviations relative to an indicator’s regional average. This score classifies the concentration of the populations of interest under Title VI and EJ present in every block group in the GCLMPO region. These population groups are represented in the eight indicators as part of the EJ Score.

The data for each of the indicators in the EJ Factor Analysis are split into five bins: well below average (score of 0);

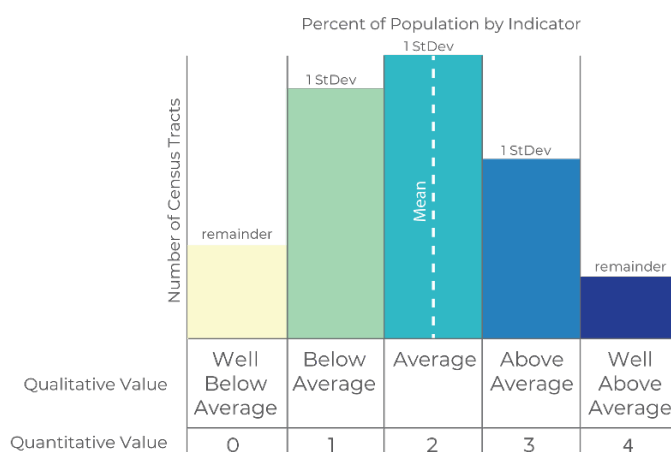


Figure D-1: Example Standard Deviations & Corresponding Scores

¹ Source: Source: Equity Analysis for the Greater Philadelphia Region. Delaware Valley Regional Planning Commission. <https://www.dvrpc.org/webmaps/ipd/>. (September 2021)

below average (score of 1); average (score of 2); above average (score of 3); and well above average (score of 4). See Figure 1. A summary score of all eight indicators for each Census block group (ranging from 0-32) is used to show regional concentrations of populations of interest under Title VI and EJ.

Census Block Groups with EJ populations summary scores are classified into six (6) concentration groups according to their EJ Factor Analysis summary score (ranging from 0-32):

- Census Block Groups with a 0-4 EJ summary score denote **No Concentration**
- Census Block Groups with a 5-10 EJ summary score denote **Slight Concentration**
- Census Block Groups with a 11-16 EJ summary score denote **Low Concentration**
- Census Block Groups with a 17-21 EJ summary score denote **Moderate Concentration**
- Census Block Groups with a 22-27 EJ summary score denote **High Concentration**
- Census Block Groups with a 28-32 EJ summary score denote **Extremely High Concentration**

Bin 2 for each indicator contains Census Block Groups at or near (within a half standard deviation from) the regional average (mean) for that indicator. Bins 4, 3, 1, and 0 are then built out from the regional average; Bins 1 and 3 go another full standard deviation out from bin 2, and bins 0 and 4 contain any remaining tracts further out from 1 or 3, respectively. In cases where the regional average is so low that bin 1 would contain Census block groups with 0% of an indicator's designated population, the block groups with estimates of zero are manually assigned to bin 0, instead of bin 1.

The GCLMPO's planning area is comprised of 318 Census Block Groups, with concentrations of EJ and Title VI Populations shown below in Table D-1.

	<i>Census Block Groups</i>	<i>Area (Square Miles)</i>
Extremely High Concentration	6	18.12
High Concentration	22	68.70
Moderate Concentration	60	211.82
Low Concentration	155	618.76
Slight Concentration	75	219.33
No Concentration		
TOTAL	318	1,136.72

Table D-1: Concentration of EJ and Title VI Population



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