

ENVIRONMENTAL JUSTICE

In February of 1994 President Clinton signed Executive Order 12898. Its major goal is to ensure that no minority or low-income population suffers a “disproportionately high and adverse human health or environmental effects” due to any “programs, policies, and activities” undertaken by a federal agency or any agency receiving federal funds. As the Michigan Department of Transportation (MDOT) does receive federal funding, the above-mentioned order applies to its programs, policies and activities. Environmental Justice (EJ), however, is not a new requirement. In fact, since no additional legislation accompanied the President’s order, its authority rests in Title VI of the Civil Rights Act of 1964, and MDOT has long considered these principles in its planning processes.

These requirements can be met in a variety of ways and on a variety of levels. MDOT’s first responsibility, when planning specific projects, is to identify populations that will be affected by a given project. If a disproportionate effect is anticipated, mitigation procedures must be followed. If mitigation options do not sufficiently eliminate the disproportionate effect, reasonable alternatives should be discussed and, if necessary, implemented. Disproportionate effects are those effects which are appreciably more severe for any EJ group or predominantly borne by a single EJ group.

In addition to a project-by-project analysis of Environmental Justice, MDOT is responsible for ensuring that its overall program does not disproportionately distribute benefits or negative effects to any target EJ population. Analysis at the statewide level examines the total negative and positive outcomes of transportation projects to see whether there is a disproportionate effect. This process involves establishing a baseline (a geographic representation of the location of those populations mentioned in the executive order) and then examining MDOT’s program as a whole as it relates to these areas.

For purposes of this document, all EJ analysis was done at the statewide-level but presentation is limited to the non-MPO areas of the state only. Each MPO TIP contains an EJ analysis of all projects within its Metropolitan Area Boundary. Generally the negative effects of projects are examined at the individual project level, however, the analysis in this report focuses on the benefits of transportation improvements to an area. For this analysis the following definitions were used:

Low-Income: a person whose median household income is at or below the U.S. Department of Health and Human Services poverty guidelines.

Minority:

1. Black or African American” refers to people having origins in any of the Black racial groups of Africa. It includes people who indicated their race or races as “Black, African American, Negro,” or wrote in entries such as African American, Aglo American, Nigerian, or Haitian.
2. Hispanic refers to “Some other race” and was included in Census 2000 for respondents who were unable to identify with the five Office of Management and Budget race categories. Respondents who provided write-in entries such as Moroccan, South African, Belizean, or Hispanic origin (for example, Mexican, Puerto Rican, or Cuban) are included in the “Some other race” category.”

3. Asian refers to people having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent. It includes people who indicated their race or races as "Asian Indian," "Chinese," "Filipino," "Korean," "Japanese," "Vietnamese," or "Other Asian," or wrote in entries such as Burmese, Hmong, Pakistani, or Thai.
4. American Indian or Alaskan Native" refers to people having origins in any of the original peoples of North and South America (including Central America), and who maintain tribal affiliation or community attachment. It includes people who indicated their race or races by marking this category or writing in their principal or enrolled tribe, such as Rosebud, Sioux, Chippewa, or Navajo.
5. Native Hawaiian and Other Pacific Islander refers to people having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands. It includes people who indicated their race or races as "Native Hawaiian," "Guamanian or Chamorro," "Samoan," or "Other Pacific Islander," or wrote in entries such as Tahitian, Mariana Islander, or Chuukese (U.S Census Bureau 2000, March 2001).

Low income and minority thresholds were developed using U.S Census 2000 data for low-income groups and for minority groups as derived by the U.S Department of Health and Human Services. MPO populations were included in the development of the thresholds to get a true statewide average. The Location Quotient (LQ) statistical method was used to arrive at the final thresholds. The LQ is a "statistical method that strives to show if a local economy has a greater share than expected of a given economy. The LQ helps to determine whether or not a particular block group has a greater share of its racial groupings than expected in the state. Hence, that local economy having a greater than one (>1) contribution will be recognized as an EJ zone in the state." Those EJ zone areas were mapped and overlaid on the projects contained in the FY 2011-2014 STIP.

Due to declining state gas tax and vehicle registration revenues, MDOT is faced with a shortfall of at least \$84 million to match available federal funding beginning in 2011. MDOT is submitting two programs in order to keep potential projects moving through the federal approval process in time for the 2011 construction season in case matching funds become available. One would be a program reduced by approximately \$600 million per year, while the other would be a \$1.25 billion program that would include the ability to match federal aid. Because of the ongoing challenging financial times facing Michigan transportation funding investment, the FY 2011-2014 STIP EJ analysis presents three project scenarios as follows:

All Projects: All FY 2011-2014 non-MPO trunkline and local Rural Task Force (RTF) projects but only FY 2011 Small Urban (local) projects. Small Urban projects for FY 2012-2014 have not been selected.

Full Program: All FY 2011-2014 non-MPO trunkline projects assuming that additional state funds will be available to match all federal aid for the four year period.

Reduced Program: All non-MPO trunkline projects for FY 2011-2014 where MDOT could not match the federal funding

Each of the above project scenarios were mapped and compared individually to each of the low-income and minority EJ zones. The three maps at the end of this section show each project scenario compared to the low-income population in Michigan (light blue color). Additional

maps are provided in Appendix I that show the spatial locations of the individual low-income and minority groups, as well as all of them combined. The Asian minority group (#3) was combined with the Native Hawaiian and Other Pacific Islander group (#5) for the EJ analysis.

The analysis addresses two fundamental Environmental Justice principles:

1. To avoid, minimize, or mitigate disproportionate high and adverse human health or environmental effects on low-income and minority populations.
2. To prevent the denial of, reduction in, or significant delay in the receipt of benefits by low-income and minority populations.

Figure 1 summarizes the results of the analysis of all non-MPO projects and costs in relation to all non-MPO EJ zones. For the sake of consistency and comparison with the FY 2008-2011 STIP EJ analysis, Rural Task Force projects and Small Urban projects are listed separately.

Disproportionate adverse effects

Adverse effects, as defined in the final US DOT Order on Environmental Justice (DOT Order 5610.2) contained in the Federal Register in 1997, include but are not limited to: bodily impairment, illness or death; air, noise, or water pollution and soil contamination; destruction or disruption of natural resources or aesthetic values; disruption of community cohesion; disruption of the availability of public and private facilities and services; displacement of persons, farms, non-profit organizations; increased traffic congestion.

Figure 1

FY 2011 - 2014 STIP Environmental Justice Analysis

PROJECTS						
Type of Project	Total Projects		Total Projects in EJ Zones		Percent of Projects in EJ Zones	
	Full	Reduced**	Full	Reduced**	Full	Reduced**
Trunkline (MDOT)	208	95	148	82	71.2%	86.3%
Rural Task Force (Local)	369	369	283	283	76.7%	76.7%
Small Urban (Local)*	36	36	31	31	86.1%	86.1%
Total	613	500	462	396	75.4%	79.2%
COST						
Type of Project	Total Project Costs		Total Project Costs in EJ Zones		Percent of Project Costs in EJ Zones	
	Full	Reduced**	Full	Reduced**	Full	Reduced**
Trunkline (MDOT)	\$564,542,444	\$296,368,642	\$466,952,356	\$141,679,402	82.7%	47.8%
Rural Task Force (Local)	\$121,766,593	\$121,766,593	\$111,308,659	\$111,308,659	91.4%	91.4%
Small Urban (Local)*	\$9,915,072	\$9,915,072	\$9,771,322	\$9,771,322	98.6%	98.6%
Total	\$696,224,109	\$428,050,307	\$588,032,337	\$262,759,383	84.5%	61.4%

* Only FY 2011 Small Urban (SU) projects are included in this analysis; FY 2012-2014 SU projects have not been selected.

** Only the number of Trunkline projects are changed in the Reduced column of the table.

Review of the total 613 trunkline and local non-MPO projects that comprise the proposed FY 2011-2014 STIP reveals that the majority fall within the preservation category. The remainder of the projects consists of bridge, intelligent transportation system (ITS), traffic and safety signing, carpool parking lot, roadsides, economic development projects, miscellaneous projects as well as some capacity increase projects.

The proposed facility improvements located in minority or low-income populations are similar in design and comparative impacts to those located in non-minority or non-low-income populations. The projects are located in mostly rural, low-population areas thereby minimizing potential adverse effects such as noise, vibration, displacement of persons or businesses, or disruption of community cohesion. All displacements and acquisition of right-of-way will be at the project development level and will follow the appropriate state and federal procedures including the Uniform Relocation Assistance and Real Property Acquisition Policies Act to minimize the impacts on affected individuals and businesses. Therefore, it has been determined that any adverse impacts associated with the proposed system improvements do not reach the disproportionately high and adverse standard.

Receipt of beneficial effects

As Figure 1 shows, the FY 2011-2014 STIP includes 208 trunkline projects for the full program and 95 trunkline projects for the reduced program, 369 Rural Task Force projects, and 36 Small Urban area projects located outside the MPO areas. This results in a grand total of 613 projects in the full program and 500 in the reduced program. Of this grand total, 462 (75.4%) full program projects or 396 (79.2%) reduced program projects are located within, partially within or adjacent to an established EJ zone. Breaking it down further, of the 208 projects for the full trunkline program and 95 projects for the reduced trunkline program, 148 (full) or 82 (reduced) projects, 71.2 percent and 86.3 percent respectively, are within EJ zones. Of the 369 Rural Task Force (local) projects, 283 or 76.7 percent are within EJ zones; of the 36 Small Urban (local) projects, 31 or 86.1 percent serve EJ zones.

Total trunkline and local project costs in FY 2011-2014 are estimated to be \$696.2 million (full) or \$428.1 million (reduced), of which \$588.0 M (84.5 percent) will benefit EJ zones should MDOT implement the full program, while about \$262.8 M (61.4 percent) will benefit EJ zones should MDOT implement the reduced program.

Of the total trunkline and local project costs, MDOT Trunkline full program will account for 81 percent of the program and such projects will benefit approximately 82.7 percent of the EJ zones, while the cost of the reduced program will account for 69.2 percent and benefit 47.8 percent of the EJ zones. The Rural Task Force (local) projects account for 17.5 percent of the full program or 28.4 percent of the reduced program, and benefits 91.4 percent of the EJ zones. The Small Urban area FY 2011 program accounts for 1.4 percent (full) or approximately 2.3 percent (reduced) of the total cost and will benefit about 98.6 percent of EJ zones.

A significant number of projects and associated project costs are located within or adjacent to areas established as EJ zones. Although the benefit to the EJ zones drops from 84.5% to 61.4%, the benefit is still significant higher than the non-MPO population percentage which is 24% of

the total population. Therefore, it has been determined that low income or minority populations are not being denied receipt of projects but will positively benefit from the economic impact of these proposed transportation improvements.

Figure 2 shows the population that is served by transportation improvement projects in selected geographic areas within the State of Michigan. Since the 2000 Bureau of Census is the most current population data, this table remains the same as in the FY 2008-2011 STIP and will be updated as soon as the new census data is made available. The total population of non-MPO EJ zones was calculated as 1.7 million or 18 percent of Michigan's population. In other words, 18 percent of Michigan's citizens are considered low-income or a minority. Of the total non-MPO population, 74 percent reside in EJ zones.

Figure 2

2000 Census Data for FY 2011-2014 STIP EJ Analysis

Geographic Area	Total Population	Percent of Total Population	Total Number of Census Block Groups*
In the State of Michigan	9,938,444	100%	8410
In MPOs	7,599,927	75%	6370
In Non-MPO Areas	2,338,517	24%	2040
In Non-MPO EJ Zones	1,741,833	18%	1506

* A Census Block Group is the smallest geographic level for which EJ-related Census data is available.

Environmental Justice ensures that the potential impacts and benefits derived from transportation services are provided equitably to every population in Michigan. Through careful planning and proactive involvement, MDOT guarantees the highest quality transportation services to all of Michigan's citizens, regardless of race or income.

The maps on the next three pages display the location of all the state and local highway projects included in this document. Projects are displayed either a colored line segments. A line segment represents projects that are linear in nature, such as a highway between two intersecting roads. Each color represents the year of project implementation.