

### 3.9 Environmental Justice

#### 3.9.1 What is environmental justice and how is it important to this project?

Environmental justice promotes the fair treatment and meaningful involvement of all people in the decision making process for transportation projects. Environmental justice seeks to avoid disproportionately high and adverse impacts on low-income and minority populations. The I-70 Mountain Corridor extends 144 miles through diverse communities and socioeconomic conditions. The lead agencies analyzed environmental justice to determine if the impacts and benefits of the Action Alternatives disproportionately affect minority or low-income populations.

#### 3.9.2 What study area and process were used to analyze environmental justice?

The study area for environmental justice includes the five counties adjacent to the Corridor: Garfield, Eagle, Summit, Clear Creek, and Jefferson counties. Municipal planners and local housing authority representatives helped to identify the study area for the identification of minority and low-income populations within these areas, which were depicted through analysis of U.S. Census data and other sources as described below.

The lead agencies coordinated with the Environmental Protection Agency, the Northwest Colorado Council of Governments (NWCCOG), and representatives from the five Corridor counties during the scoping period to develop an approach for evaluating environmental justice. The lead agencies collected year 2000 U.S.

Census information to identify minority and low-income populations at the community (U.S. Census blocks and block groups) and county levels. The 2000 U.S. Census contains the most current data available for variables important to environmental justice analysis. The lead agencies reviewed more current population and economic data available at the community level and engaged municipal planners and others to identify minority and low-income populations that might not be represented in the U.S. Census data.

Minority refers to persons who are Black, Hispanic, Asian American, or Native American Indian or Alaskan. Issues of importance to Native American tribes are discussed in **Section 3.13.4, Historic Properties and Native American Consultation**. Low-income is defined using income limits set annually by the U.S. Department of Housing and Urban Development (HUD), which considers individuals and households earning less than 30 percent of the area median income of a community to be low-income. Income limits are adjusted for household size to establish county-specific low-income thresholds. This approach is consistent with the Colorado Department of Transportation’s (CDOT) Title VI and Environmental Justice Guidelines for National Environmental Policy Act (NEPA) Projects, Rev. 3 (December 2004). The *I-70 Mountain Corridor PEIS Environmental Justice Technical Report* (CDOT, March 2011) contains additional details on the methodology for identifying minority and low-income populations.

#### Assessing Environmental Justice in Transportation Projects

Environmental justice requirements stem from the Civil Rights Act of 1964; Executive Order (EO) 12898—Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations—issued in 1994; and the Federal Highway Administration (FHWA) Technical Advisory 6640.23—FHWA Actions to Address Environmental Justice in Minority Populations And Low-Income Populations—issued in 1998, outlining FHWA procedures for compliance with EO 12898.

### 3.9. Environmental Justice

The Colorado Department of Transportation accomplished the following activities to capture potential “pockets” of low-income and minority individuals that may be overlooked by aggregated U.S. Census data:

- Contacted local planners, housing authorities, health and human services, and school superintendents throughout the Corridor
- Conducted community outreach activities with potentially affected populations

The community outreach efforts included a variety of formats, time frames, and approaches providing opportunities for low-income and minority populations to participate in the planning process. The following outreach methods were included:

- Scoping meetings
- Community interviews
- Community profile research
- Geographic characterization of the Corridor
- Environmental justice interviews
- Community outreach meetings
- Newsletters and event participation

Additional identification of and outreach to low-income and minority populations was conducted during the public review and comment period for the Revised Draft Programmatic Environmental Impact Statement. Community planners and housing authorities were contacted in Garfield, Eagle, Summit, and Clear Creek counties. These individuals identified 19 specific low-income or non-English speaking communities along the Corridor. Outreach was targeted based on the needs and interests of those communities and included a small group meeting, distribution of informational packets, and phone briefings with building managers where identified populations reside. The Colorado Department of Transportation also worked with local churches and conducted informational briefings after church services.

Additional details about these efforts are contained in **Chapter 6, Public and Agency Involvement** of this document and the *I-70 Mountain Corridor PEIS Environmental Justice Technical Report* (CDOT, March 2011).

#### 3.9.3 What agencies have CDOT and FHWA coordinated with and what are their relevant issues?

During the study process, the lead agencies coordinated with county and municipal staff and the Environmental Protection Agency to collect information and concerns regarding minority and low-income populations in the Corridor. These agencies expressed the following concerns:

- Displacement of low-income and minority residents
- Separation of neighborhoods
- Affordable housing
- Access to public transportation
- Commute times for Corridor residents
- Adverse effects for residents living close to new transportation facilities and construction

The *I-70 Mountain Corridor PEIS Environmental Justice Technical Report* (CDOT, March 2011) contains additional information about the coordination with and concerns expressed by agencies.

### 3.9.4 What are the areas of interest for environmental justice in the Corridor?

Existing minority and low-income populations are scattered throughout the Corridor communities (**Figure 3.9-1**). In rural and mountainous areas, Census blocks and block groups are often large and may not reflect localized population distribution patterns. For example, affordable housing might be located close to highway facilities, as these locations are less desirable (and thus more affordable) than areas located farther from the highway. Interviews with Corridor community planners and housing authorities identified 19 specific housing areas known to house primarily low-income or non-English speaking residents distributed throughout the Corridor, as shown on **Figure 3.9-1**. Tier 2 processes will use updated U.S. Census information and targeted outreach to further identify neighborhoods or other subgroups of minority or low-income populations along the Corridor to determine the potential for effects of specific improvements on these groups.

#### What minority populations are present in the Corridor?

Minority populations, like the general population, have expanded in recent years in the Corridor. The growth in minority populations correlates to job growth in tourism-related industries, including service and construction. The U.S. Census data indicate that a low percentage of minorities live in the Corridor, ranging from 6 percent to 26 percent, and averaging 8 percent across the Corridor. The U.S. Census data indicate that minorities are dispersed throughout the communities. Of the 647 Census blocks immediately adjacent to the I-70 highway, 50 have a higher percentage of minorities than their respective county (8 percent). These blocks are shown in **Figure 3.9-1**.

#### What low-income populations are present in the Corridor?

Low-income households exist within the Corridor. Percentages of low-income households in the five counties range from 11 percent in Jefferson County to 15 percent in Summit County. Low-income households for towns within the counties range from 3 percent (Eagle-Vail) to 32 percent (Silver Plume). Data from 2004 from the Colorado Department of Local Affairs suggest that Silver Plume may have a higher percentage of low-income households than is represented by the 2000 U.S. Census. Those updated data do not change the relative comparison of low-income populations in the Corridor, as Silver Plume has the highest number of low-income households in the Corridor under both measures.

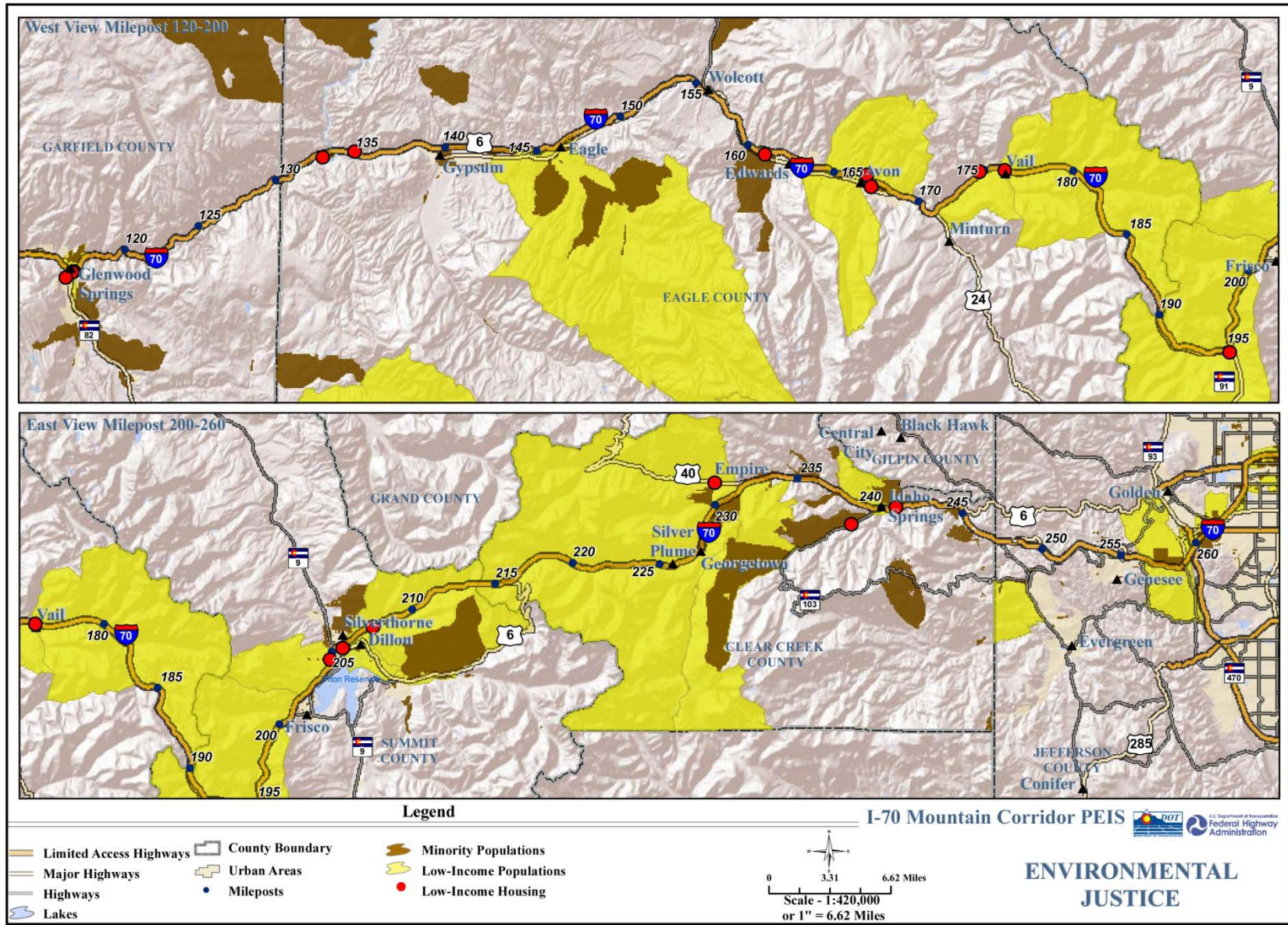
Of the 476 Census block groups immediately adjacent to the I-70 highway, 67 have a higher percentage of low-income households than their respective county (14 percent). These block groups are shown in **Figure 3.9-1**. U.S. Census block group data indicate that locations of low-income households are highly variable in terms of residential density, geographic location within the communities, and proximity to the I-70 highway. The U.S. Census data verify information obtained from county planners and local officials that low-income residents are distributed throughout the Corridor. Small groups of low-income populations might be found in areas not recognized by the HUD data, but the small number does not substantially change the percentage identified that are relevant at this first tier of analysis. It is also possible that smaller “pockets” of low-income populations could be present and not reflected in the U.S. Census data because the block groups account for larger geographic and population areas.

Little formal public housing is available in the Corridor for low-income residents. However, more affordable housing is likely located close to highway facilities, as these locations are less desirable than areas located farther from the highway. Local agencies and the NWCCOG identified known locations of housing for low-income and minority residents. As shown in **Figure 3.9-1**, this housing is distributed throughout the Corridor and is primarily adjacent to the I-70 highway. Housing types include apartments, condominiums, mobile homes, and senior housing. In the interest of privacy, only the general locations are shown in **Figure 3.9-1**, and exact addresses are not provided.



### 3.9. Environmental Justice

Figure 3.9-1. Minority and Low-Income Populations across the Corridor



### What public transportation is available in the Corridor, and what are the commuting patterns?

Local transit services are available in several communities along the Corridor including Glenwood Springs, Snowmass, Avon, Beaver Creek, Vail, and Breckenridge. These local transit systems serve a diverse customer base, providing local service within communities for residents commuting from home to work, shopping, medical facilities, and other destinations. Transit systems such as Eagle County Regional Transportation Authority and Summit Stage in Summit County provide services between communities, and the Roaring Fork Transportation Authority serves both Garfield and Pitkin counties. In the eastern part of the Corridor, the Regional Transportation District provides transit service to the Denver metropolitan area from as far west as Bergen Park, and private companies provide transit service between the airport, Denver, and the mountain resort areas. The proportion of low-income and non-low-income residents that use transit is about the same in the western and eastern parts of the Corridor.

A large number of workers commute across county lines for employment, and many do so because of a lack of available affordable housing within the counties where jobs are located. Garfield County, for instance, estimates that 80 percent to 90 percent of the county's low-income workers commute between 20 minutes and 90 minutes daily because they cannot afford to live where they work.

### What are the issues with affordable housing in the Corridor?

The following describes the issues with affordable housing in the Corridor:

- The projected increase in population and the demand for second homes in some of the Corridor counties escalates land and home prices and decreases availability of affordable housing. Although the slumping housing market in recent years helped narrow the housing affordability gap for some local workers, longer term pressures on the housing prices remain and housing is still relatively expensive compared to incomes of local residents.
- The high cost of land is a major impediment to developing affordable housing. The lowest income residents are most affected by high housing costs because they must compete for affordable rental units with residents with higher incomes who can afford higher rents but cannot afford to purchase a home. In some communities, employers are considering employer-assisted housing options and developing employee housing units to retain workers and handle labor shortages.
- Several Corridor communities are considering implementing requirements for new developments to provide affordable units. A federally operated rental subsidy program is available for very low-income residents in Eagle County, and programs are available to provide housing assistance to qualifying homebuyers. Summit County initiated some housing assistance programs for low-income residents, and Clear Creek County initiated a study of affordable housing options. However, neither county has a formal program at this time. Very little public (Section 8) housing exists within the Corridor. Section 8 is a federal housing program that provides rental subsidies for low-income renters and homeowners.

### 3.9.5 How do the alternatives potentially affect minority and low-income populations?

All of the alternatives have the potential to directly and/or indirectly affect minority and low-income populations living in the Corridor at some level.



### 3.9. Environmental Justice

#### How do the alternatives directly affect minority and low-income populations in the Corridor?

Based on the percentage and distribution of minorities and low-income households, none of the alternatives have direct effects on minority or low-income populations that are different (disproportionate) in comparison to the population on a Corridorwide basis.

The first tier impact analysis for all environmental resources was reviewed to identify the potential for adverse effects and project benefits on all segments of the population, including minority and low-income population groups. Benefits primarily relate to transportation benefits throughout the Corridor, and they vary depending on the transportation components of each alternative. Adverse impacts to minority and/or low-income populations are not likely to exceed those of the general population. Adverse impacts related to induced growth affect populations throughout the Corridor and vary by alternative. Assessing the distribution of localized adverse impacts requires more detailed project information (design and construction details) than can be determined at this first tier. The lead agencies recognize this limitation at Tier 1 and commit to conducting more in-depth impact analysis during Tier 2 processes when more detailed design and construction information has been developed and impacts are evaluated at the local level.

The No Action Alternative neither provides additional travel options nor addresses congestion or travel delays in the Corridor. In this respect, it is the least beneficial to the employees that rely on the highway to commute to their jobs. The No Action Alternative would not change environmental or community conditions and would, therefore, not affect minority or low-income populations.

Action Alternatives that reduce commute times or provide additional commuting options, such as public transportation, are a benefit to low-income populations and lessen the impact of the housing and employment disparity. Generally, the Combination alternatives and the Preferred Alternative, if fully implemented, provide the greatest commuting benefits to low-income residents by offering a range of transportation choices, but also have the greatest negative effect on affordable housing because improved access could disperse demand for housing and increase the cost of housing in outlying areas that are now more convenient to affluent second home residents. The Minimal Action Alternative has little effect on congestion or commuting travel time but improves options by including a Corridorwide bus service in mixed traffic with connections to existing transit operators.

Under all but the Highway alternatives, the efficiency of local, municipal transit service is improved, including the bus in mixed traffic option that is included as part of the Minimal Action Alternative. Alternatives that maintain additional transportation options benefit low-income residents who do not own a car or who depend on public transportation for commuting to work, shopping, and medical facilities.

The Transit and Combination alternatives provide transit options for minority and low-income residents along the Corridor commuting to regional destinations and connecting to existing transit services in Eagle and Summit counties where the majority of jobs occur. These alternatives also allow second home residents and some permanent residents to commute greater distances, which could continue to exacerbate the problem of affordable housing by increasing housing prices in outlying areas.

Alternatives that include transit potentially benefit low-income and minority residents who spend a high percentage of their income on automobile-related commuting expenses. Public transit could meet their needs if the provided service met their schedules and improved direct access to destinations in the Corridor where they travel.

The benefits of the Preferred Alternative are within the range of the Transit and Combination alternatives. However, the Preferred Alternative is the most flexible and potentially beneficial of the Action Alternatives because its adaptive management approach allows implementation to fit community needs, growth trends, and transportation needs.

As noted previously, assessment of localized impacts is limited at this first tier of analysis. The types of localized impacts that could occur from implementation of the Action Alternatives in Tier 2 processes include property acquisition for right-of-way; displacements of businesses and residences; changes in access; localized air, noise, or water pollution; localized disturbance of hazardous wastes, including soil or water contamination; effects to historic properties or community facilities; and changes in public services or facilities relied on by minority or low-income populations. Other localized impacts could occur depending on the setting and context of specific Tier 2 processes. **Table 3.9-1** summarizes the types of localized impacts that could occur from implementation of Action Alternatives in Tier 2 processes. Only the Combination alternatives meet the 2050 purpose and need. Of the Combination alternatives, the Preferred Alternative results in the least adverse impacts due to the smaller footprint of the Advanced Guideway System transit component and the incremental approach to implementing highway improvements based on needs and triggers described in **Section 2.7.2**.

**Table 3.9-1. Environmental Justice Impact Analysis**

Resource*	Impact Analysis
Air Quality	Air quality is expected to improve between now and 2035 due to control programs established by the Environmental Protection Agency. This would benefit the general population, including minority and low-income residents. Increases in mobile source air toxic (MSAT) concentrations are anticipated along the highway sections in Clear Creek County between Silver Plume and Idaho Springs, and in the Vail valley where the highway is closer to communities. However, localized increases in MSAT emissions for the Action Alternatives could be offset due to increases in travel speed and reductions in congestion (which are associated with lower MSAT emissions). Construction would generate localized air quality impacts. These impacts would be experienced by both minority/low-income populations and the general population at various times and locations throughout the duration of the project. While impacts to minority and/or low-income populations are not likely to exceed those of the general population, conclusions cannot be drawn without localized air quality modeling, which will be conducted during Tier 2 processes.
Water Resources	Impacts are expected to include impervious surface/roadbed expansion, stream channelization, further impedance or blockage of cross-slope streams, impacts from disturbance of historic mine waste materials, and impacts from transportation system operations and maintenance of the new facilities. Impacts would be distributed throughout the Corridor, and impacts to minority and/or low-income populations are not likely to exceed those of the general population.
Geologic Hazards	Geologic hazards are distributed throughout the Corridor. Impacts to minority and/or low-income populations are not likely to exceed those of the general population. Mitigation included in the project would improve safety and reduce the risks posed by geologic hazards, benefiting local populations, including minority and low-income residents.
Regulated Materials	Construction would disturb hazardous or potentially hazardous waste sites. These sites are distributed throughout the corridor. Impacts to minority and/or low-income populations are not likely to exceed those of the general population. Minority and low-income populations would benefit from the remediation of hazardous waste sites.
Land Use	The Preferred Alternative is expected to induce growth and concentrate this growth in urban areas, primarily in Eagle County. Impacts to minority and/or low-income populations are not likely to exceed those of the general population. Minority and low-income residents benefit from improved access to transit. Induced growth occurs under all but the Minimal Action Alternative and No Action Alternative. Induced growth increases development pressures and corresponding land values, placing increased pressure on communities to provide housing for lower income residents.
Right-of-Way	The Preferred Alternative affects properties in areas where transportation improvements encroach on adjacent properties. The majority of affected properties are located in Clear Creek County, where the existing highway right-of-way is most limited, and result largely from interchange improvements. The Colorado Department of Transportation would relocate and compensate property owners and/or renters for displacement under the requirements of the Uniform Act. Conclusions regarding impacts to minority and/or low-income populations, and whether those impacts would be considered adverse or not, cannot be drawn without the more detailed design that will be available during Tier 2 processes.

### 3.9. Environmental Justice

**Table 3.9-1. Environmental Justice Impact Analysis**

Resource*	Impact Analysis
Social and Economic Values	Improvements in emergency response time would benefit the general population, including minority and low-income residents. During construction, economic growth is expected to be suppressed by congestion and the associated reduction in visitation. Dispersing construction activities throughout the Corridor over time would minimize this economic hardship. Once construction is complete, economic conditions would improve throughout the Corridor. Because of the interdependency of the Corridor counties, the economic analysis was conducted for the nine-county region as a whole, with some conclusions drawn about the distribution of economic benefits among Corridor counties. Impacts specific to low-income and minority populations within those counties cannot be made until Tier 2, when there will be enough data to conduct a location specific analysis.
Noise	In the seven communities measured for the Tier 1 study, impacts primarily occur in Vail, Lawson/Downieville/Dumont, and Idaho Springs because those areas already experience elevated noise levels. Conclusions regarding the distribution of noise impacts cannot be made until noise measurements are refined during Tier 2 processes when the configuration of proposed highway improvements, associated traffic projections, and field noise measurements at potentially affected receptor locations are available.
Visual Resources	Visual impacts result from the additional pavement associated with the six-lane highway and the above-grade Advanced Guideway System. These impacts would be dispersed throughout the Corridor. While impacts to minority and/or low-income populations are not likely to exceed those of the general population, conclusions cannot be definitively drawn until a more refined analysis is conducted during Tier 2 processes.
Recreation Resources	The Preferred Alternative would directly and indirectly impact recreation resources adjacent to the I-70 highway. Recreation-related trips would most likely increase as a result of the proposed improvements. Impacts to recreational sites of particular importance to minority or low-income populations would be assessed in Tier 2 processes when more site-specific data are available.
Historic Properties	Historic properties could be directly or indirectly affected by the Preferred Alternative. These resources are distributed throughout the Corridor and are not uniquely important to minority and/or low-income populations. While impacts to minority and/or low-income populations are not likely to exceed those of the general population, conclusions cannot be drawn until intensive surveys have been conducted and the identification of historic properties is complete.
Paleontology	Curve safety modifications, interchange modifications, and auxiliary lane construction potentially affect sensitive geologic units. These resources are not uniquely important to minority and/or low-income populations.
Energy	Energy would be used during the construction and operation of the project. High fuel costs may affect low-income populations more than the general population, and alternatives that provide transit provide an additional mode of travel that may be more cost effective if fuel prices continue to rise.

\* Impacts to natural resources (i.e., biological resources and wetlands) have been assumed not to have any direct impacts or indirect effects on human populations and are not included in the environmental justice analysis.

#### How do the alternatives indirectly affect minority and low-income populations in the Corridor?

According to the REMI<sup>®</sup> (Regional Economic Models, Inc.) model (discussed in **Section 3.8, Social and Economic Values**), the No Action and Minimal Action Alternatives likely suppress economic conditions in the five-county Corridor region due to increased highway congestion and reduced access to recreational and tourist amenities. Under all of the alternatives, including the No Action Alternative, lack of affordable housing near places of employment continues to be a problem in the Corridor. The availability of affordable housing and public transportation are indirect impacts that could accrue differently between low-income or minority populations and non-low-income or non-minority populations. Increased transportation access and capacity could induce growth and may create more demand for second home



ownership and general population growth. As land values increase, low-income residents could be faced with insufficient affordable housing options within a reasonable distance of destinations where they need to travel. **Section 3.7, Land Use and Right-of-Way and Section 3.8, Social and Economic Values**, further discuss indirect impacts. As noted in **Section 3.9.4**, affordable housing may be located closer to the highway, and residents living closer to the I-70 highway could be disproportionately affected by noise, dust, and access restrictions during construction. Some or many of these residents may be lower income. These impacts are temporary and may be outweighed by the transportation benefits such as shorter commute times, improved access, and transit options.

The Minimal Action Alternative provides Corridorwide bus service in mixed traffic with connections to municipal transit providers to improve access and mobility for commuters. The potential for induced growth would be greater for the Combination alternatives than for the Highway or Transit alternatives alone. Induced growth results in a greater demand for affordable housing as available land is converted to second homes and industries that support this growth. Induced growth potentially increases job opportunities in the construction- and service-related positions that are often filled by low-income and minority workers.

#### **How does construction of the alternatives affect minority and low-income populations in the Corridor?**

Construction of any of the Action Alternatives creates community disruption throughout the Corridor:

- Access and travel through the Corridor is more challenging for Corridor residents.
- Restricted access and construction-related traffic congestion affect revenues.
- Construction-related noise, dust, and equipment emissions increase.

Low-income residents living closer to the I-70 highway could be disproportionately affected by noise, dust, and access restrictions during construction, and mitigation or design alternatives will be considered to offset impacts. The distribution of localized construction impacts will be evaluated during project-specific Tier 2 processes, when more detailed design and construction information is available.

#### **What are the project effects on environmental justice in 2050?**

The No Action Alternative and Minimal Action Alternative suppress economic growth, and that suppression will likely continue to 2050. These circumstances may result in low-income and minority households relocating to other areas of the state in response to a sluggish jobs market.

As suggested in **Section 3.8, Social and Economic Values**, construction has a negative effect on economic growth. Delaying construction or spreading it over a longer period of time likely decreases the intensity of the economic impacts but causes Corridor communities to be affected by construction over a longer period.

Economic growth continues to place pressure on the real estate market, and without established regulatory mechanisms, affordable housing options remain limited in Summit and Eagle counties. By 2050, the effects on low-income and minority households from the alternatives likely have less influence than other growth-limiting factors, such as water availability and community controls on growth and land use planning. **Chapter 4, Cumulative Impacts Analysis**, provides additional analysis of the alternatives in relation to past and current trends and other reasonably foreseeable future actions and events.

## 3.9. Environmental Justice

### 3.9.6 What will be addressed in Tier 2 processes?

This document and the associated *I-70 Mountain Corridor PEIS Environmental Justice Technical Report* (CDOT, March 2011) provide an overview of the minority and low-income populations from a Corridor perspective. Local municipalities highlighted particular areas of concern that will be evaluated on a local level in Tier 2 processes. Most, if not all, of the Tier 2 processes can and will reference updated U.S. Census data as the 2000 U.S. Census is replaced with the 2010 U.S. Census.

Tier 2 processes will use the most current data and guidance, including updated data on affordable housing, to analyze impacts on minority and low-income populations. During Tier 2 processes, CDOT will:

- Develop specific and more detailed mitigation strategies and measures
- Develop best management practices specific to each project
- Adhere to any new laws and regulations that may be in place when Tier 2 processes are underway
- Continue to directly coordinate with local government entities and social services to identify low-income populations along the Corridor
- Coordinate with the Colorado Minority Business Office to obtain a listing of minority-owned business enterprises that register with the office in Colorado and are located along the study Corridor

Tier 2 processes will develop public involvement to ensure full and fair participation by all potentially affected communities in the transportation decision making process.

### 3.9.7 What are the approaches to programmatic mitigation planning for environmental justice?

Mitigation strategies for social and economic resources will apply to all communities in the Corridor and also will benefit minorities and low-income populations. If Tier 2 processes conclude that disproportionately high or adverse impacts will occur on low-income or minority populations, the Colorado Department of Transportation will work to avoid, minimize, or mitigate such impacts. Tier 2 processes that occur in populated areas will consider pockets of minority and/or low-income populations that may require additional attention and/or mitigation for such issues as listed below:

- Localized air quality impacts
- Noise impacts
- Shading from elevated structures or walls
- Residential and business relocations
- Changes in access or travel patterns
- Loss of community cohesion

The lead agencies will consider mitigation, enhancement measures, and offsetting benefits when determining whether there will be disproportionately high and adverse effects on minority and low income populations. If after considering these factors, a disproportionately high impact to minority or low-income populations is identified, the project “will only be carried out if further mitigation measures or alternatives that would avoid or reduce the disproportionately high and adverse effects are not practicable. In determining whether a mitigation measure or an alternative is ‘practicable,’ the social, economic (including costs) and environmental effects of avoiding or mitigating the adverse effects will be taken into account” (FHWA, 1998).