

## 4.7 Environmental Justice

Train noise and highway/rail at-grade crossing safety and delay impacts were evaluated for the potential to be disproportionately experienced by environmental justice populations (minority and low-income populations). SEA determined that train noise and safety and delay may have high and adverse impacts<sup>1</sup> on the communities located along the rail segments.

- Recognizing that train noise and highway/rail at-grade crossing safety and delay could have high and adverse impacts on the communities located along the EJ&E rail line, SEA analyzed the extent to which these impacts might disproportionately affect minority or low-income communities along the EJ&E rail line.
- Although SEA concluded that noise impacts would be high and adverse, those impacts would not be disproportionately borne by minority or low-income communities. SEA also concluded that highway/rail at-grade crossing safety and delay impacts did not meet the criteria of a high and adverse impact. [Section 4.7.3]
- As a result of the Proposed Action, three CN subdivisions that traverse or are adjacent to minority or low-income communities would experience decreases in train traffic of more than 8 trains per day. This decline in train traffic along these rail segments corresponds to a potential decrease in train noise and highway/rail at-grade crossing delays

### 4.7.1 Methodology

Environmental justice impacts occur where there are disproportionately high and adverse impacts to minority and low-income populations as a result of the Proposed Action.

SEA used a methodology to determine environmental justice impacts based on relevant orders and guidelines from other Federal agencies, as well as methodologies used for previous rail projects. The methodology includes: identifying affected communities along the rail segments, determining any high and adverse impacts, and assessing any disproportionate impacts to environmental justice populations.

#### 4.7.1.1 *Step 1: Identify Potentially Affected Communities*

SEA identified potentially affected communities as census block groups within 400 feet of rail segments which would experience a decrease of at least eight trains per day, or within 1,500 feet of rail segments that would experience an increase of at least eight trains per day. Demographic information for potentially affected census block groups from the 2000 Census was evaluated (U.S. Census Bureau 2000). The potentially affected census block groups were assessed for meeting the environmental justice criteria for low-income status and minority status. A detailed discussion of the specific criteria used to determine the low-income or minority status for potentially affected census block groups is included in Section 3.7, Environmental Justice.

#### 4.7.1.2 *Step 2: Assess High and Adverse Impacts*

SEA considered whether any environmental impacts could be high and adverse. SEA identified criteria for what is considered a high and adverse environmental impact.

The threshold of a high impact on highway/rail at-grade crossing safety and delay is based on the number of crossings with safety or delay impacts. SEA considers one or less crossings with safety or

<sup>1</sup> The governing regulation for environmental justice analysis, Executive Order 12898, uses the term “disproportionately high and adverse impacts” to refer to potential effects on environmental justice populations (FR 1994). Therefore, this section refers to impacts rather than effects.

delay impacts within a census block group to be low impact; two crossings to be moderate impact; and three or more crossings to be high impact.

Noise impact thresholds are defined based on the Proposed Action noise level (including horn noise) for each census block group within the environmental justice study area. SEA used the following criteria to determine the severity of noise impacts:

- Noise levels below 65 decibels on the A-weighted scale (dBA L<sub>dn</sub>) received a score of 0 (no impact)
- Noise levels between 65 dBA L<sub>dn</sub> and 69 dBA L<sub>dn</sub> received a score of 3 (low impact)
- Noise levels above 70 dBA L<sub>dn</sub> received a score of 5 (high impact)

Based on these criteria and discussed in Section 4.7.3.1, SEA identified only noise as having high and adverse impacts on any census block groups.

#### **4.7.1.3      *Step 3: Identify Disproportionate Impacts to Environmental Justice Populations***

Because it was determined that there are high and adverse impacts to communities along the rail segments, SEA assessed whether any high and adverse impacts would occur disproportionately on environmental justice populations. The potentially affected census block groups were mapped on top of the rail segments to identify those census block groups that could potentially experience high and adverse impacts from noise as a result of the Proposed Action.

For noise, SEA completed a statistical analysis as discussed in Appendix I to evaluate the potential for environmental justice populations to be disproportionately impacted by the Proposed Action. The analysis determined whether the fact that a census block group meets the criteria for minority or low-income status is independent of whether there is a high and adverse impact on a census block group. According to SEA, a certainty of greater than 50 percent that these two variables are not independent means that the impacts to environmental justice populations are disproportionate.

If SEA determined that these variables are not independent, then the environmental justice variable was assessed for the frequency with which it corresponds to high impacts. A frequency value greater than 1.0 indicates that the variables are dependent; therefore, the high and adverse impacts on environmental justice populations are disproportionate.

### **4.7.2      No Action Alternative**

#### **4.7.2.1      *Impacts on Minority Populations***

Under the No-Action alternative, the Applicants would continue to operate trains along the EJ&E rail line the same as it is currently handled through their trackage rights. Impacts on minority populations along the EJ&E rail line would be the same as those experienced under existing conditions.

#### **4.7.2.2      *Impacts on Low-Income Populations***

Under the No-Action alternative, the Applicants would continue to operate trains along the EJ&E rail line the same as it is currently handled through their trackage rights. Impacts to low-income populations along the EJ&E rail line would be the same as those experienced under existing conditions.

### 4.7.3 Proposed Action

#### 4.7.3.1 Proposed Changes in Rail Line Operations

##### *Impacts on Minority Populations*

Highway/rail at-grade crossing safety or delay impacts did not meet the criteria of a high and adverse impact. There would be safety or delay impacts at five highway/rail at-grade crossings, resulting in a low impact to 17 census block groups (10 environmental justice and 7 non-environmental justice). None of the census block groups (neither environmental justice nor non-environmental justice) would experience a high or adverse impact resulting from highway/rail at-grade crossing safety or delay. Since no census block group had three or more impacted crossings, there would not be high and adverse impacts associated with highway/rail at-grade crossing safety or delay. Therefore, SEA did not analyze it for disproportionate impacts on environmental justice populations.

High and adverse train noise impacts are identified where the noise levels are equal to 70 dBA L<sub>dn</sub> or greater. Approximately one-third (25 census block groups) of the environmental justice census block groups along the EJ&E rail line would experience a high and adverse train noise impact and approximately one-half (50 census block groups) of the non-environmental justice census block groups would experience high and adverse train noise impacts. Based on SEA's analysis of train noise impacts on environmental justice communities, it was determined that environmental justice communities would experience high and adverse impacts from train noise. However, SEA concluded that high and adverse train noise impacts would not be disproportionately borne by environmental justice communities.

SEA has determined that minority populations along the EJ&E rail line would not experience disproportionate impacts from train noise or safety and delay at highway/rail at-grade crossings. The data to support these conclusions are presented in Appendix I.

##### *Impacts on Low-Income Populations*

Highway/rail at-grade crossing safety or delay impacts did not meet the criteria of a high and adverse impact. There would be safety or delay impacts at five at-grade crossings which results in a low impact on 17 census block groups (7 environmental justice and 10 non-environmental justice). None of the census block groups (neither environmental justice nor non-environmental justice) would experience a high and adverse impact resulting from highway/rail at-grade crossing safety or delay. Because there are no high and adverse impacts associated with highway/rail at-grade crossing safety or delay, SEA did not analyze it for disproportionate impacts on environmental justice populations.

High and adverse train noise impacts are identified where the noise levels are equal to 70 dBA L<sub>dn</sub> or greater. Based on this criterion, low-income census block groups would experience high and adverse train noise impacts. Seven census block groups that meet the environmental justice criteria for low-income status would experience high and adverse train noise impacts and 69 non-environmental justice block groups would experience high and adverse train noise impacts. SEA concluded that the high train noise impacts occurring as a result of the Proposed Action would not be disproportionately borne by low-income environmental justice populations.

SEA has determined that low-income populations along the EJ&E rail line would not experience disproportionate impacts from train noise or safety and delay at highway/rail at-grade crossings. The data to support these conclusions are presented in Appendix I.

### *Benefits Along CN Rail Lines*

#### **No-Action Alternative**

Under the No-Action alternative, the Applicants would continue to operate trains through the Chicago Terminal District in the current manner. The number of trains would not decrease along the CN rail lines as described in the Application. Low-income and minority populations along the CN rail lines in and out of Chicago would not benefit from train traffic decreasing on the CN rail lines.

#### **Proposed Action**

Currently, the CN operates rail lines in and out of Chicago. The Proposed Action would divert train traffic from the CN rail lines onto the EJ&E rail line. As a result of the Proposed Action, some rail segments on the Wisconsin Central (Waukesha Subdivision), Illinois Central (Chicago Subdivision), and the Grand Trunk Western (Elsdon Subdivision) would experience decreases in train traffic of more than 8 trains per day. These rail segments traverse or are adjacent to minority and low-income populations. A decline in train traffic along these rail segments corresponds to a potential decrease in impacts to communities adjacent to or near the rail lines.

Under the Proposed Action fewer trains correspond to less opportunity for vehicle/train interactions. Accident frequency would decrease more than 0.05 (one accident per 20 years) at 14 highway/rail at-grade crossings along these rail segments, which is a beneficial impact. All of the highway/rail at-grade crossings along these rail segments would experience less delay with the Proposed Action and would operate at the same or better level of service (LOS). In addition, communities near the rail segments would experience less train noise due to decreased train volume. The environmental justice communities traversed by or adjacent to these rail segments would experience beneficial impacts related to safety and delay at highway/rail at-grade crossings and train noise from the decreased train traffic on the CN lines as a result of the Proposed Action.

#### **4.7.3.2 Proposed New Construction**

Potential effects from construction of the connections and double track include temporary effects such as delays or changes in access within the construction zone and permanent impacts such as land use or socioeconomic impacts. SEA does not consider temporary effects to be high and adverse; therefore, they are not addressed with respect to their impact on environmental justice populations. Displacements have the potential to be high and adverse; displacements are addressed in the subsections that follow.

The No-Build alternative would not result in any displacements because no construction or acquisition of additional ROW would occur. Therefore, no high and adverse impacts would result.

#### *Connections*

The majority of the connections would not require displacements and, therefore, are not addressed with respect to their impact on environmental justice populations. None of the connections would require residential displacements. Three of the connection alternatives could result in commercial displacements:

- Joliet Alternative – Original Proposal could result in acquisition of one commercial property
- Proposed Matteson Connection and Matteson Alternative – Northeast and Southwest Quadrants could result in the acquisition of one commercial property.

The Joliet Alternative-Original Proposal, the Proposed Matteson Connection, and the Matteson Alternative – Northeast and Southwest Quadrants would be located in areas with environmental justice populations. SEA did not perform a detailed analysis of these potential displacements because:

- The displacements would involve commercial facilities that can be relocated.
- The large employment base in the Chicago metropolitan area would not be affected by the loss of these commercial properties.

#### *Double Track*

Construction of the double track would not displace any residences or businesses; therefore, no high and adverse impacts would result.

#### **4.7.4 Other Environmental Justice Issues**

Environmental justice populations may experience impacts in the form of lost job opportunities where rail yard operations are diverted from existing CN yards to the East Joliet and Kirk yards. Some of the CN yards in Illinois that would lose rail car classification activity are located in environmental justice communities. A detailed analysis of the impacts to environmental justice populations from potential lost job opportunities was not conducted because the Applicants have not finalized specific plans regarding job relocations.

Many environmental justice populations exist near segments of the EJ&E rail line that will experience additional carloads of hazardous material as a result of the Proposed Action. Many environmental justice populations exist near segments of the CN rail line that will experience decreased carloads of hazardous material as a result of the Proposed Action. SEA's analysis of rail safety issues (see Section 4.2, Rail Safety and Hazardous Materials Transport) indicates the potential for rail accidents would have a minor increase along the EJ&E rail line, and the potential for a release of hazardous materials along the rail line would be very small. Therefore, SEA determined that the potential for environmental justice communities to experience exposure due to a hazardous materials release would be slightly elevated, but not high and adverse.

#### **4.7.5 Public Outreach**

SEA conducted a series of meetings with representatives of communities with environmental justice populations. SEA scheduled the meetings to identify issues of concern and to discover how to reach groups who might otherwise not participate in the public comment process. SEA held eleven meetings with state elected officials (ten from Illinois and one from Indiana), four meetings with Illinois local government officials, four meetings with Illinois Hispanic civic organizations, and five meetings with church leaders (four in Illinois and one in Indiana). A detailed summary of these meetings is provided in Chapter 9 and in Appendix A.

#### **4.7.6 Conclusion**

As a result of the Proposed Action, SEA concluded that there would not be high and adverse impacts due to delays or safety at the EJ&E highway/rail at-grade crossings. SEA also concluded that there would be high and adverse impacts as a result of the Proposed Action due to train noise along the EJ&E rail line, but that these impacts would not be disproportionate on minority or low income populations. As a result of the Proposed Action, SEA concluded that minority and low income populations along the CN Waukesha Subdivision, the CN Chicago Subdivision and the CN Elsdon Subdivision would experience reduced effects on vehicle safety, delays, and train noise. Finally, SEA concluded that there would be no high and adverse effects from construction of connections or double track.

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