

Chapter 8

Irreversible and Irretrievable Commitments of Resources

This chapter evaluates the irreversible and irretrievable commitment of resources necessary to implement the Proposed Action and Alternatives. The irreversible and irretrievable use of non-renewable resources affects current and future generations and is defined as follows:

- Irreversible commitments involve the use or destruction of a specific resource (such as energy or minerals) that cannot be replaced within a reasonable time frame.
- Irretrievable commitments involve the loss of a resource that cannot be restored (for example, extinction of a species or destruction of a cultural site).

Natural and man-made resources would be expended in the construction and operation of the Proposed Action and alternatives.

8.1 Natural Resources

8.1.1 Land

Land required for construction of connections and double track would not represent an irreversible or irretrievable commitment of resources, because if and when the rail lines are no longer needed, or if a greater need arises, the land could be converted to another use. Up to 26 acres would be acquired for right-of-way for connections depending on the connection alternatives selected for implementation and for construction of double track (see Table 4.5-6, Land Use Conversion Summary, in Section 4.5 of Chapter 4, above).

8.1.2 Water resources

Small areas of wetlands would be irreversibly affected during construction. Although the loss of these wetlands would be mitigated under SEA's proposed mitigation (see Chapter 6, Mitigation), up to 9.2 acres of wetlands could be affected by construction of proposed connections (see Table 4.12-9, Wetland Effects from Proposed Connections, in Section 4.10 of Chapter 4, above), and up to 8.6 acres of wetlands could be affected by construction of double track (see Table 4.12-10, Wetland Effects from Proposed Double Track, in Section 4.10 of Chapter 4, above).

8.1.3 Protected species

SEA has identified four primary categories of risk to natural areas associated with an increase in the number of trains on the EJ&E rail line under the Proposed Action. The categories of risk relate to wildlife management and use of the natural areas, and include noise and vibration effects, train/species collisions, hazardous material spills, and wildfires. Wildlife in the area, however, already live with existing train traffic and its noise and vibration, potential for animal/train collisions, potential for hazardous materials spills, and potential for wildfires. SEA has determined that because the affected wildlife living within the construction limits along the EJ&E rail line is mobile, the Proposed Action would not irreversibly or irretrievably affect any particular animal populations.

Construction of the connections and double track would disturb areas within and adjacent to existing right-of-way. Much of the land is already within existing railroad right-of-way and much of the native vegetation has been removed or altered. Disturbed areas do not encroach on habitat for protected species. SEA determined that the potentially affected protected plant communities and wildlife populations would not be irreversibly or irretrievably affected.

Potential impacts would be mitigated through best management practices and project-specific mitigation measures (see Chapter 6, Mitigation, above)

8.2 Man-made Resources

8.2.1 Construction Materials

Although the Proposed Action would irreversibly convert natural resources to construction materials such as fill material, concrete, ballast, treated wood ties, steel rail, steel tie plates, spikes, and anchors, the amounts of these materials would not be large, and would be typical of annual maintenance programs. Further, these materials could be recovered and recycled for other uses at a future date.

8.2.2 Time, Labor, and Machinery

Human effort would be irretrievably committed during the planning, construction, operation, and maintenance phases of the Proposed Action. The commitment of time, available labor, and machinery in the construction of the connections and double tracks would also represent an irreversible and irretrievable commitment of resources.

8.2.3 Fuel

Construction activities related to the Proposed Action would irreversibly consume fuel, mostly diesel.

Operation of trains under the Proposed Action would consume greater amounts of fuel, and therefore constitute an irreversible commitment of fuel resources. SEA estimated that the longer EJ&E route would use more fuel; this would be partially offset by savings from reduced idle time and savings from other carriers. SEA estimates that the total net increase would be 1,905,136 gallons per year (year 2015). Fuel efficiency of trains would increase substantially, as measured in gross ton-miles per gallon, but the trains would travel longer distances, thus increasing net fuel use.

In addition, the Proposed Action would use 84,239 gallons of gasoline and 8,189 gallons of diesel per year over the No-Action Alternative for increased idling times at highway/rail at-grade crossings. At the same time, however, residents of the Chicago region and the United States, in general, would benefit from the improvement of rail operations in Chicago. The net increase in energy use, an irreversible impact, is estimated to be less than 10 percent of the total energy used under the No-Action Alternative.