

undeveloped lands will be predicted to assist local agencies with assessing future land use compatibility with the project alternatives.

3.6.4 Construction Noise

Trucks and machinery used for construction produce noise which may impact some land uses and activities during the construction period. At some time, residents along the alignment would experience perceptible construction noise from implementation of the proposed project. To minimize or eliminate the impact of construction noise on these receptors, mitigation measures have been incorporated into the IDOT's *Standard Specifications for Road and Bridge Construction* as Article 107.35(2012). For construction noise, the INDOT Noise Policy states, "INDOT will be sensitive to local needs and may make adjustments to work practices in order to reduce inconvenience to the public."

3.6.5 Traffic Noise Abatement Measures

A comprehensive traffic noise impact analysis will be conducted as part of the Tier Two NEPA studies. This analysis will identify traffic noise impacts and evaluate the feasibility and reasonableness of abatement measures using the FHWA Traffic Noise Model. At a minimum, noise abatement in the form of noise barriers shall be considered. Barriers tall enough to break the line of sight from the noise source to the receptor usually are capable of achieving a 5 dB(A) reduction in traffic noise levels. Alternative abatement measures could include earth berms, traffic management measures (traffic control, time use restrictions for certain vehicle types, modified speed limits, etc.), alteration of horizontal and vertical alignments, and acquisition of real property to serve as a buffer zone.

Traffic noise abatement measures must be feasible and reasonable, and will be evaluated under the IDOT and INDOT policies accordingly.

The Tier Two NEPA studies will also address construction noise and vibration. Because construction noise and vibration varies greatly depending on the equipment being used, the need for a construction noise and vibration analysis, and potential monitoring, will be evaluated on a case-by-case basis.

3.6.6 Coordination

In the Tier Two NEPA studies, in accordance with respective state policies, if barriers are found to be feasible and reasonable the views of the benefited receptors will be sought. Preliminary design details of the likely abatement measures will be discussed at public meetings and hearings, and local officials will be furnished the appropriate information pertaining to undeveloped lands within the project limits.

3.7 Energy

Direct and indirect energy is expended for transportation facilities. Direct energy is consumed in the operation of vehicles and maintenance of transportation facilities. Indirect energy use includes energy consumed during construction of a project and changes in vehicle travel patterns near a construction area. Energy consumption by

vehicles in the Study Area may increase during construction due to possible traffic delays associated with road closures and detours. The number of improvements and the time required to complete construction would have a corresponding impact on the fossil fuels consumed.

Construction of the Illiana Corridor would result in transportation system efficiencies; thereby reducing vehicle stopping and slowing conditions. This would result in less direct and indirect vehicular operational energy consumption for the preferred corridor(s) than the No-Action Alternative. Thus, it is expected that long term, post-construction operational energy requirements would offset construction requirements and result in a net savings in energy usage.

During the Tier Two NEPA studies, direct and indirect energy impacts will be evaluated, as required. Additional design details regarding the nature of the planned improvements will be available at this later project stage, allowing for an assessment of direct and indirect energy consumption.

Based on the results of these analyses, an evaluation of potential measures that could be implemented in the design, construction, operation, and maintenance of the project in order to reduce wasteful, inefficient, and unnecessary consumption of energy will be conducted. The findings will include recommendations of those measures that should be incorporated into the proposed project and which measures should be eliminated from further consideration.

3.8 Natural Resources

This section describes the existing natural resources found within the corridors, including upland habitats, wildlife resources, and threatened and endangered species, and presents potential impacts of the working alignments. The section concludes with a discussion of potential mitigation strategies.

3.8.1 Upland Communities

3.8.1.1 *Existing Conditions*

Existing upland community types within the corridors consist of agricultural land, urbanized land, forested areas, and riparian areas adjacent to stream corridors. In Illinois, the Illinois Natural Areas Inventory (INAI) identifies sites that are high quality natural areas, contain habitat for endangered species, and possess other significant natural features. Within the Study Area, there are 23 INAI sites totaling 11,524 acres. Manhattan Creek is the only INAI site within Corridor A3S2. The Kankakee River is the only INAI site within Corridors B3 and B4. There are no protected upland community types in Indiana within the corridors.

The western termini of the corridors are within the Midewin-Des Plaines-Goose Lake Prairie Conservation Opportunity Area (COA) and the Kankakee Sands COA. These areas were identified in the Illinois Comprehensive Wildlife Action Plan (WAP) as critical