



CHAPTER 5: AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES, AND MITIGATION

This chapter discusses the affected environment and environmental impacts from the construction and operation of the project alternatives and how these impacts will be mitigated.

Since the Supplemental Draft EIS was published in August 2014, additional analyses and content review have been performed for many of the resources discussed in this document. These updates, along with changes resulting from the comments received on the Supplemental Draft EIS, have been incorporated into this Final EIS. In this section, no content-related updates were made.

5.1 Introduction to Chapter 5

Chapter 5 is divided into sections (listed in the text box to the right) discussing various environmental and social resources and how the project alternatives benefit or impact these resources. In addition to the resources listed, the following topics also are discussed in this chapter:

- 5.21 Irreversible and Irretrievable Commitment of Resources
- 5.22 Short-Term Uses and Long-Term Productivity
- 5.23 Summary of Impacts and Mitigations

Each section includes subsections that identify the study area for that resource, discuss how the project alternatives will affect the resource, and provide mitigation measures to offset the adverse impacts. The discussion of impacts begins with those that are common for all alternatives and then moves into the impacts that are specific to each alternative for each resource.

Corresponding technical reports documenting detailed analysis for the following resources covered in Chapter 5 have been included with this document as attachments. The attachments provide technical data and detailed analysis supporting the results provided in this document. Some of these technical reports include an addendum, which updates the analysis that was previously performed in preparing the 2014 Supplemental Draft EIS.

- Environmental justice (Attachment F)
Environmental Justice Technical Report
(included in Supplemental Draft EIS)
- Relocations and displacements (Attachment G)
Conceptual Stage Relocation Technical Report
Addendum
- Hazardous materials (Attachment H)
Hazardous Materials Technical Report Addendum
- Historic preservation (Attachment I, Section 106)
Section 106 Determinations of Eligibility and Effects
Documentation for Finding of Adverse Effect
- Air quality (Attachment J)
Air Quality Technical Report
- Noise (Attachment K)
Noise Technical Report

Resources evaluated in Chapter 5

- 5.2 Social and Economic Conditions
- 5.3 Environmental Justice
- 5.4 Land Use and Zoning
- 5.5 Relocations and Displacements
- 5.6 Historic Preservation
- 5.7 Paleontological Resources
- 5.8 Visual Resources and Aesthetic Qualities
- 5.9 Parks and Recreational Resources
- 5.10 Air Quality
- 5.11 Energy
- 5.12 Noise
- 5.13 Biological Resources
- 5.14 Floodplains and Drainage/
Hydrology
- 5.15 Wetlands and Other Waters of
the U.S.
- 5.16 Water Quality
- 5.17 Geology and Soils
- 5.18 Hazardous Materials
- 5.19 Utilities
- 5.20 Human Health Conditions

- Biological resources (Attachment L)
Biological Assessment Addendum
- Floodplains and drainage/hydrology (Attachment M)
Hydrology and Hydraulics Addendum
- Wetlands and other waters of the U.S. (Attachment N)
Wetland Finding
Wetlands and Other Waters of the U.S. Technical Report Addendum

Project area

An approximate one-mile buffer zone around I-70 within the project limits.

Study area

A geographic boundary created to define the extent of the analysis associated with a resource.

Construction limits

The area to which the proposed construction activities for all alternatives is expected to be limited.

Project limits

The east and west boundaries of the project along I-70: I-25 to Tower Road.

5.1.1 What is the study area?

In this document, each resource has a specific study area. Those study areas may be the same as the project area or construction limits of the evaluated alternatives depending on the resource. The project area was primarily identified to initiate this study and identify possible project alternatives.

Exhibit 5.1-1 shows the project area, the project limits along I-70, and the construction limits of the proposed alternatives.

Some resources—such as social and economic resources—have a broader study area that includes all the neighborhoods impacted along the corridor, while others—such as utilities—are analyzed within the project’s construction limits.

Exhibit 5.1-1 Project Area, Project Limits, and Construction Limits



5.1.2 What are the alternatives analyzed in Chapter 5?

The I-70 East Final EIS examines potential effects to environmental resources resulting from proposed improvements to I-70 between I-25 and Tower Road. Consistent with federal regulations, this document fully evaluates potential effects that might result from the No-Action Alternative and the Build Alternatives (Revised Viaduct Alternative and Partial Cover Lowered Alternative). The alternatives and options are presented in **Exhibit 5.1-2**.

For more details on the alternatives and their options, see Chapter 3, Summary of Project Alternatives.

Exhibit 5.1-2 Summary of Project Alternatives and Options

Alternative		Expansion Options	Operational Options
No-Action		<ul style="list-style-type: none"> • North • South 	N/A
Build Alternatives	Revised Viaduct	<ul style="list-style-type: none"> • North • South 	<ul style="list-style-type: none"> • General-Purpose Lanes • Managed Lanes
	Partial Cover Lowered	N/A	<ul style="list-style-type: none"> • General-Purpose Lanes • Managed Lanes

5.1.3 What resources are not affected by the project alternatives?

Data collection for the I-70 East EIS determined that the following resources are not present in the project area, so the alternatives will have no effect on them:

- Prime and unique farmlands
- Wild and scenic rivers

Because these resources are not present in the project area, they are not analyzed or discussed in this document.