

# **CHAPTER FIVE**

## **ENVIRONMENTAL CONSEQUENCES**

### **5.0 INTRODUCTION**

This chapter presents an assessment of the environmental impacts of the Sponsor's Proposed Project and its alternatives, including the No Action Alternative. It also presents a discussion of preliminary mitigation measures that the Federal Aviation Administration (FAA) and Marin County would consider to avoid and minimize potential adverse environmental effects.

As stated in FAA Order 1050.1F, *Environmental Impacts: Policy and Procedures* the environmental consequences chapter forms the scientific and analytical basis for comparing the Sponsor's Proposed Project and reasonable alternatives. It includes considerations of direct and indirect effects and their significance and possible conflicts between the Sponsor's Proposed Project and the objectives of Federal, regional, state, tribal, and local land use plans, policies, and controls for the area concerned.

FAA Order 1050.1F, Exhibit 4-1 states the thresholds of significant environmental impacts that the FAA has established for the resource categories discussed in this Supplement to the Final Environmental Impact Statement (SEIS). In some cases, the FAA has not established thresholds of significance, but has identified factors to consider when evaluating whether a Proposed Project or Alternatives would result in a significant impact on the environment. These significance thresholds and factors are briefly discussed at the beginning of each environmental resource section for the convenience of the reader while the full text of these thresholds of significant environmental impacts and factors to consider can be found in FAA Order 1050.1F, Exhibit 4-1.

The following analysis discloses the impacts for the projected future conditions in 2024. The FAA uses 2024 as a basis for analysis because 2024 is the projected implementation year of the proposed runway extension. In addition, specific Airport activity levels and their associated air quality and noise impacts are evaluated for a condition five years beyond the opening year (2029).

The proposed relocation of navigational aids will occur in areas that are graded and filled for the extension of the runway and parallel taxiway, so the environmental impacts of these relocations are not addressed separately. Similarly, the potential environmental effects of changes in flight procedures – predetermined aircraft maneuvers to approach or depart from an airport – are addressed as part of the

overall project's effects on environmental resources such as noise rather than being considered separately. The environmental resource categories addressed in this chapter include:

- Section 5.1: Noise
- Section 5.2: Compatible Land Use
- Section 5.3: Socioeconomic Impacts, Environmental Justice, and Children's Environmental Health and Safety Risks
- Section 5.4: Secondary (Induced) Impacts
- Section 5.5: Air Quality
- Section 5.6: Water Quality
- Section 5.7: Department of Transportation, Section 4(f) Resources and Land and Water Conservation Act, Section 6(f) Resources
- Section 5.8: Historical, Architectural, Archaeological, and Cultural Resources
- Section 5.9: Biological Resources
- Section 5.10: Wetlands and Streams
- Section 5.11: Floodplains
- Section 5.12: Coastal Resources
- Section 5.13: Wild and Scenic Rivers
- Section 5.14: Farmlands
- Section 5.15: Energy Supply, Natural Resources, and Sustainable Design
- Section 5.16: Visual Resources (including Light Emissions and Visual Impacts)
- Section 5.17: Hazardous Materials, Pollution Prevention, and Solid Waste
- Section 5.18: Construction Impacts
- Section 5.19: Irreversible and Irrecoverable Commitment of Resources

A further environmental impact evaluation of Alternative B and Alternative D with the inclusion of larger Runway Safety Areas to accommodate Aircraft Reference Code B-II aircraft under those alternatives is included in Appendix Q-1, *FAA Response to Comments Received on the Draft Supplement to the Final Environmental Impact Statement*.