

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 1050.1E, Change 1, *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.

The following analysis discloses the impacts for the projected future conditions in 2018. The FAA uses 2018 as a basis for analysis because 2018 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 (2023).

Based on the guidance provided by FAA Order 1050.1E, Change 1, the environmental impacts of the Sponsor's Proposed Project and alternatives have been evaluated under the categories listed below. 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: Fish, Wildlife, and Plants
- 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: Light Emissions and Visual Impacts
- Section 5.17: Hazardous Materials, Pollution Prevention, and Solid Waste
- Section 5.18: Construction Impacts