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## CHAPTER 3 AFFECTED ENVIRONMENT

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### 3.1 INTRODUCTION

According to the National Environmental Policy Act (NEPA) (40 Code of Federal Regulations [CFR] § 1502.15) “the Environmental Impact Statement shall succinctly describe the environment of the area(s) to be affected or created by the alternatives under consideration.” Potential impacts cannot be determined without first understanding the existing conditions in the affected environment. For this reason, the impact analysis process involves two steps—identifying the affected environment and detailing the potential environmental consequences resulting from the alternatives. The geographic extent of the affected environment is determined by the potential for impacts to affect components of the human, natural, and cultural environment. From this point forward, these human, natural, and cultural components are referred to collectively as resource categories. Depending on the resource category, the extent of the affected environment/region of influence may differ. For instance, the proposed action may have impacts on soils within specific areas of the Military Lease Area; however, air pollutants generated by the proposed action would include areas downwind of the proposed action and could possibly influence the regional air quality. Following the affected environment discussion, Chapter 4 details the magnitude of potential impacts or “environmental consequences” of the proposed action on the resource categories.

### 3.2 GEOLOGY AND SOILS

Section 3.2 describes the geology and soils in the region of influence for the proposed action. The geology and soils of the islands of Tinian and Pagan including the adjacent marine geology and sediments (out to a distance of 1,000 feet [300 meters]) comprise the region of influence for this resource. This distance from shore for marine geology and sediments is based on the footprint of amphibious training under the proposed action. Geology and soils include the natural physical characteristics of the land forms (topography), the underlying soils and rocks (structural geology), and any associated geologic hazards.

#### 3.2.1 Definition

The discussion of this resource includes an overall description of the regional geological setting as well as a description of the topography, geology (geologic units and hazards), and soils associated with the region of influence (i.e., Tinian and Pagan). These terms are defined below.

- **Topography** - the natural and man-made features of a place or region that show relative positions and elevations at the earth’s surface.
- **Geology** - the bedrock materials, mineral deposits, and fossil remains of an area.
- **Geologic Unit** - a volume of rock of identifiable origin or age that is defined by the distinctive, dominant, easily mapped, and recognizable physical characteristics and features that characterize it.