

29. SOILS

29.1 Introduction

The Pebble Project study area within the Cook Inlet region is comprised of a transportation corridor study area (EBD Figure 29-1). The soils study for this area had one main component: to gain an understanding of the general types of soils that occur within the area.

The objectives of the Cook Inlet Region soils study included reviewing historical soils data from the region to determine the typical and common soil types occurring in the study area.

Summarize the soil map unit descriptions provided by the *Exploratory Soil Survey of Alaska* (ESS) (Rieger et al., 1979) for the study area.

29.2 Results and Discussion

The study area was glaciated during the Pleistocene and is in relatively close proximity to several active volcanoes in the Alaska Range. The soil parent materials are influenced by volcanic ash and the nearest source is Augustine Volcano, about 15 miles southeast of the study area.

A comprehensive literature review provided information on existing soil survey coverage for the study area. It also provided information relative to properties of volcanic-ash derived soils in Alaska.

The study area is covered by the broad-scale *Exploratory Soil Survey of Alaska* (ESS) (Rieger et al., 1979). A soil investigation is also available for Chisik Island (Clark and Ping, 1995), located within the Cook Inlet region about 20 miles northeast of the study area.

The two existing publications describe the prevalent soil types in or near the study area and indicate that many of the soils in the study area are influenced to some degree by volcanic ash within the parent materials. The ESS classifies the dominant soils of the area as typic cryandepts and describes their ash-influenced, or andic, properties. The Chisik Island soil investigation describes similar soils. Both publications provide soil classification terminology based on the version of *Soil Taxonomy* (USDA, 1999) current at the time of each publication. The soil descriptions and data presented were used to determine how the earlier soil classifications would translate to the 2006 classification system (Soil Survey Staff, 2006).

29.3 References

Clark, M. H., and C. L. Ping. 1995. Soil Survey Investigation. Chisik Island Tuxedni Wilderness Area Alaska.

Rieger, S., D.B. Schoephorster, and C. E. Furbush. 1979. Exploratory Soil Survey of Alaska. USDA-SCS. Washington, D.C.: U.S. Government Printing Office.

Soil Survey Staff. 2006. Keys to Soil Taxonomy, 10th Edition. USDA NRCS. Washington, D.C.: U.S. Government Printing Office.

USDA-Natural Resources Conservation Service. 1999. Soil Taxonomy. A Basic System of Soil Classification for Making and Interpreting Soil Surveys. 2nd ed. AH 436, Washington, D.C.

