CHAPTER II

DATA COLLECTION AND BACKGROUND INFORMATION

1. Size of Study Area

The overall study area is comprised of ± 1320 acres or 1.06 square miles. The area within the former Urban Area Boundary comprises 547.91 acres and the new Urban Area consists of 1,304.75 acres.

2. Environmental Characteristics

Climate

The southern San Joaquin Valley climate is influenced to a great extent by the Coast Ranges to the west which prevent the cool, moisture-laden maritime air from reaching the valley. It is generally characterized as a Mediterranean climate (one of three similar zones in the world). The area in general has a climate that tends to be clear, sunny, warm and dry. The mean temperatures range from a low of 34° F. (1.1°C) in January to a high of 100° F. (37.7°C) in July. Because of the Coast Ranges, the average rainfall for the area is very low, ranging from three to nine inches per year, with 90% of the yearly precipitation between November and April. There are periods in winter when the valley floor is covered with dense wet ground fogs. Winds are typically light and from the north.

Vegetation and Wildlife

The vegetation, where undisturbed, is valley grassland, which is characterized primarily by deep-rooted perennial bunchgrass. Cultivated fields produce principally cotton, other field crops or grass for range land.

The historic range of certain endangered animals including the Blunt-Nosed Leopard Lizard, San Joaquin Kit Fox, and Giant Garter Snake includes the Goshen area. However, few if any of these species are found in Goshen today due to the extensively built up character of the area and the fact that most surrounding lands are under cultivation.

Topography

The topography is generally level with a slight slope from the northeast to the southwest. The elevation drops about seven feet across the community, a diagonal distance of not quite two miles. Average elevation for Goshen is approximately 282 feet above sea level.

Water Table

In the Spring of 1970 and 1975, the ground water table was approximately 70 feet below the ground's surface.

Soil Characteristics

The Goshen area soils are typical of those found in semi-arid regions and are referred to as transported soils, indicating that they have been deposited some distance from their parent rock. The soils which characterize the Goshen area originated from granitic rocks of the Sierra Nevada and contain quantities of mica, quartz, feldspars and granitic sand. (Source: U.S.D.A., Soils Survey Map, Visalia). The predominant soil types in the Goshen area are generally described as follows:

Cajon Sandy Loam - a deep permeable soil on gently sloping alluvial fans and flood plains with a Class II agricultural capability (good agricultural land). There are slight limitations for septic systems. The soil is extremely easy to till and is not sticky when wet. The major portion of the soil is free of salts but with a comparatively low organic-matter content. The soil is of good quality and suitable for most crops.

Traver Fine Sandy Loam - a soil with dense or moderately dense subsoil on alluvial fans and valley plains. It is moderately affected by salt and alkali, with a Class IV agricultural capability (fairly good agricultural land). It has moderate to severe limitations for septic systems. Black alkali is present in most areas. Small mounds and depressions are common over the surface. Because of its puddled condition and compact subsoil, water is absorbed very slowly. Without water, the soil is hard and dry. This grade of soil is suitable for few crops except grasses and shallow rooted crops.

Chino Silty Clay Loam - a deep permeable soil on gently sloping alluvial fans and flood plains - free of salts and alkali - Class I agricultural capability (very good cultivable land) - moderate limitations for septic systems - has a moderately high water holding capacity for both surface and subsurface areas - slight tendency to retard absorption due to compaction characteristics.

Flooding

Goshen is subject to Standard Project Floods and Intermediate Regional Floods from Mill Creek Ditch and the St. John's River. According to current records there were no flooding problems in 1966, 1969, 1973, and 1978. It is uncertain whether there was flooding in 1953 or 1955 before construction of the Kaweah Dam due to inadequate records.