

CHAPTER 1

INTRODUCTION

1.1 Purpose of Report

This report summarizes and explains the work done as part of Phase 2 of the Pajaro River Watershed Study. This phase included preliminary identification of all project alternatives that provided 100-year flood protection, and the selection of the most feasible alternatives for more detailed study in future phases.

Flood protection measures that include both upstream and downstream alternatives were identified and defined. In this report, the alternative projects were conceptually defined by identifying a possible project location and size, the advantages and disadvantages, a planning level cost estimate, and the approximate level of flood protection.

Once the alternatives and their flood protection capabilities were outlined, the alternatives were packaged into groups of projects that provided 100-year flood protection. Package elimination and comparison criteria were established to differentiate between the packages. Further evaluation of the alternative packages led to the conclusion that some of the alternatives were not feasible due to various factors such as lack of public support, high costs, environmental regulations, or prohibitive construction constraints. The overall list of alternative packages was trimmed by applying the elimination criteria for these factors. The comparison criteria were used to identify nine packages from the remaining alternative packages for detailed study.

This introduction provides background information on the project including the formation of the Pajaro River Watershed Flood Prevention Authority (Authority), the physical setting and history of the watershed, a brief summary of Phase 1 of the Pajaro River Watershed Study (PRWS), and a discussion of the purpose of this report.

1.2 Background

Legal Authority

The Pajaro River Watershed Flood Prevention Authority was established in July 2000 in order to “identify, evaluate, fund, and implement flood prevention and control strategies in the Pajaro River Watershed, on an intergovernmental basis.”¹ Since the watershed covers areas of four counties and four water districts, the board is comprised of one representative from each of the following agencies:

- County of Monterey
- County of San Benito
- County of Santa Clara
- County of Santa Cruz
- Monterey County Water Resources Agency
- San Benito County Water District
- Santa Clara Valley Water District
- Zone 7 Flood Control District

¹ Keeley, “Assembly Bill 807: Pajaro River Watershed Flood Prevention Authority Act.” October 10, 1999.

The Authority acts as a governing body through which each member organization can participate and contribute to finding a method to provide flood protection in the watershed and promote general watershed interests. In addition to flood protection, some identified benefits include:

- Municipal, agricultural, and industrial water supply
- Groundwater recharge
- Support of rare, threatened, or endangered species
- Migration and spawning of aquatic organisms
- Preservation of wildlife habitat²

Although efforts by individual agencies have been made in the past to prevent flooding, the ultimate solution may require coordination of structural and non-structural projects throughout the four counties that make up the watershed. Flooding throughout the lower Pajaro River reaches is a hazard to public and private property including residences, agriculture, highways, watercourses, and environmental resources. Recent floods have caused millions of dollars in damage.

As described in the enabling legislation State Assembly Bill 807, the goal of the Authority is to implement flood prevention and control strategies within the watershed. It is a further goal of the study to identify strategies and projects that will provide multiple benefits, such as drinking water, ground water recharge, or environmental restoration and protection.

Watershed Setting

The Pajaro River is the largest coastal stream between the San Francisco Bay and the Salinas Watershed in the County of Monterey.³ The watershed is approximately 1,300 square miles.

The watershed covers portions of Santa Cruz, Santa Clara, San Benito, and Monterey Counties. The large size contributes to the number of diverse environments, physical features, and land uses within the watershed boundary. Tributaries to the Pajaro River, the largest of which is the San Benito River, originate throughout the watershed. A relief map of the watershed showing major highways, cities, dams, and rivers is shown on Figure 1-1.

Soap Lake is an intermittent feature of the watershed but has been found to be an extremely important flood protection feature. Upper Soap Lake is also known as San Felipe Lake and is a permanent body of water. Lower Soap Lake, referred to in this report as Soap Lake, will be formed in the floodplain between San Felipe Lake and the Highway 101 crossing. Soap Lake is created when flood events cause the flooding of low-lying areas and flow backup on the Pajaro River upstream of the San Benito River. The backwater effect is caused by a narrow passage known as Chittenden Pass that is located at the southern edge of the Santa Cruz Mountains. This upper reach of the Pajaro River acts as a natural control to reduce peak flows from the upper Pajaro River watershed. The lake effects disappear as the floodwaters recede and low-lying areas are drained.

Development within the watershed, both urban and rural, is clustered around the major cities. The major urban centers are Watsonville, Gilroy, Morgan Hill, Hollister, and San Juan Bautista. Agriculture and grazing are the dominant land uses in these areas but represent a small portion of the total watershed land use. Other industries outside of the urban setting include mining and timber harvesting. The majority of the land cover is grassland, shrubland, and forest. Figure 1-2 shows the spatial distribution of the land uses.

² "Draft Water Quality Management Plan for the Pajaro River Watershed." Prepared for Association of Monterey Bay Area of Governments. March 1999.

³ Ibid.