



Introduction

CHAPTER 1

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The Phase 1 Report outlines, summarizes, and explains the progress achieved to date within the Pajaro River Watershed Study. Phase 1 consisted of modeling both the hydrologic and sediment regimes of the watershed. These models provide a better understanding of the characteristics of the watershed and changes over time that affect flooding frequency and potential in the downstream reaches of the Pajaro River. This chapter gives background information on the project including the formation of the Pajaro River Watershed Flood Prevention Authority (Authority), the need for the Pajaro River Watershed Study (PRWS), and the physical setting and history of the watershed.

Purpose/Legal Authority

The Pajaro River Watershed Flood Prevention Authority was established in October 1999 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

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 have been made in the past to prevent flooding, it has become apparent over the past decades that the magnitude of the problem was not properly established. 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. In addition, projects completed in the past may have caused environmental damage by removing riparian habitat and straightening the river’s path.

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

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

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.

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 can be seen in Figure 1-1.

Soap Lake is an intermittent feature of the watershed but has been found to be an extremely important flood control feature. Upper Soap Lake is also known as San Felipe Lake and is a permanent body of water. Lower Soap Lake, or just Soap Lake, which is located between San Felipe Lake and the Highway 101 crossing, is created when flood events create a backup on the Pajaro River upstream of the San Benito River. This reach of the Pajaro River acts as a natural control for increased flows from the upper Pajaro River watershed. The lake effects disappear as the floodwaters recede.

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.

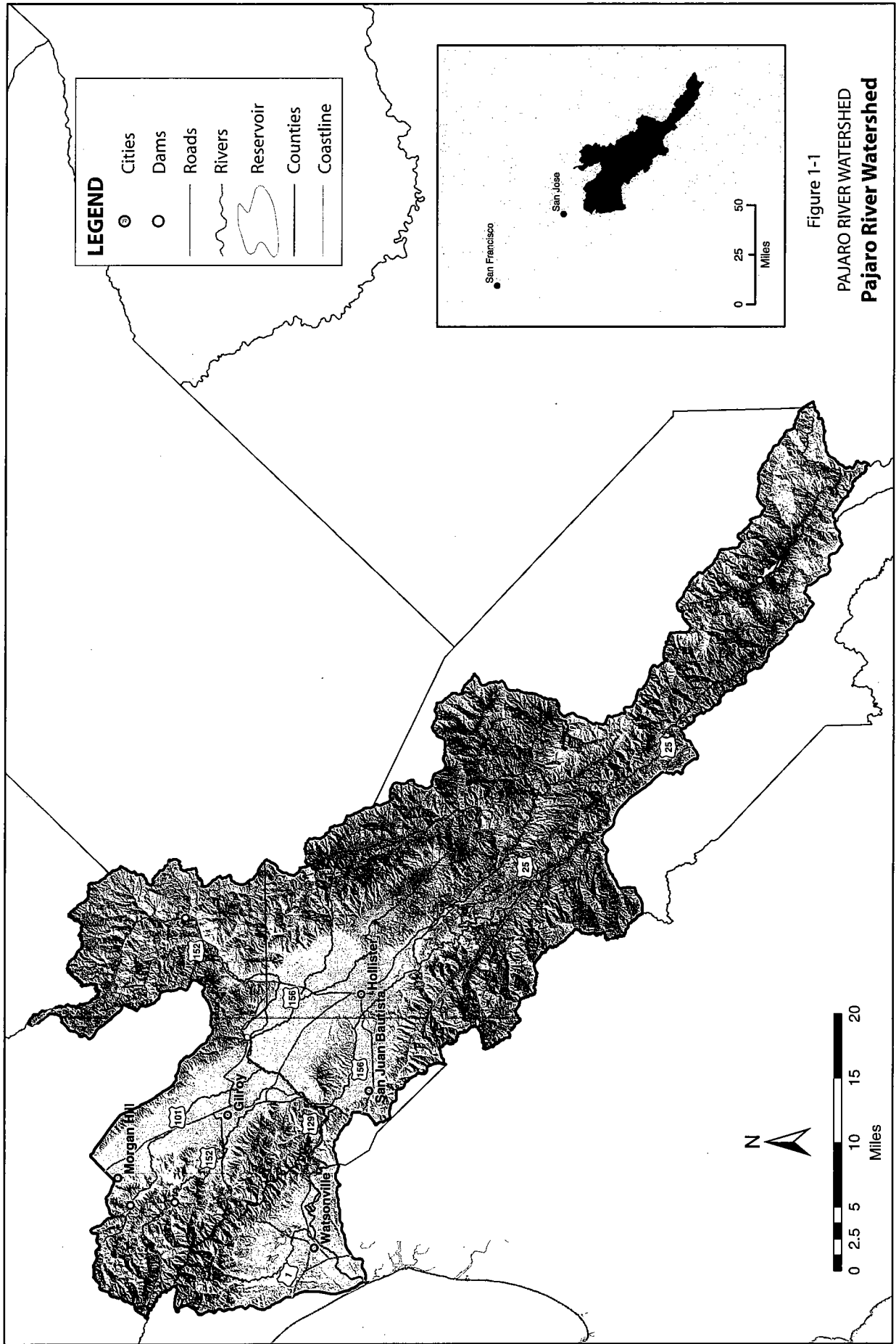
Brief History of the Watershed

To prepare for the future, it is necessary to understand current and past watershed conditions. The present is important because it is the reference point for future courses of action. The past is relevant because the ability to see how the watershed has changed over the years makes it possible to understand how different factors, taken individually or as a whole, affect flooding potential. The late 1940s are especially significant because of major flood protection work done at that time. The work radically changed the shape and function of the river and flood plain. It is important to see how the watershed has changed since that time.

Flood protection management entered the current era when the U.S. Army Corps of Engineers (Corps) initiated a study in 1936. However, it was not until 1949 that a complete levee was constructed from Murphy's Crossing to the river mouth, a distance of about 10.5 miles, (Figure 1-3) to improve flood protection for the lower Pajaro River flood plain.⁴ In some locations, existing levees, which had straightened the river course somewhat, were

³ Ibid.

⁴ "Draft Environmental Impact Report: Pajaro River and Salsipuedes and Corralitos Creeks Management and Restoration Plan, Santa Cruz County, California." Prepared for County of Santa Cruz. September 2001.



LEGEND

- ⊙ Cities
- Dams
- Roads
- ~ Rivers
- ⬭ Reservoir
- Counties
- Coastline

San Francisco

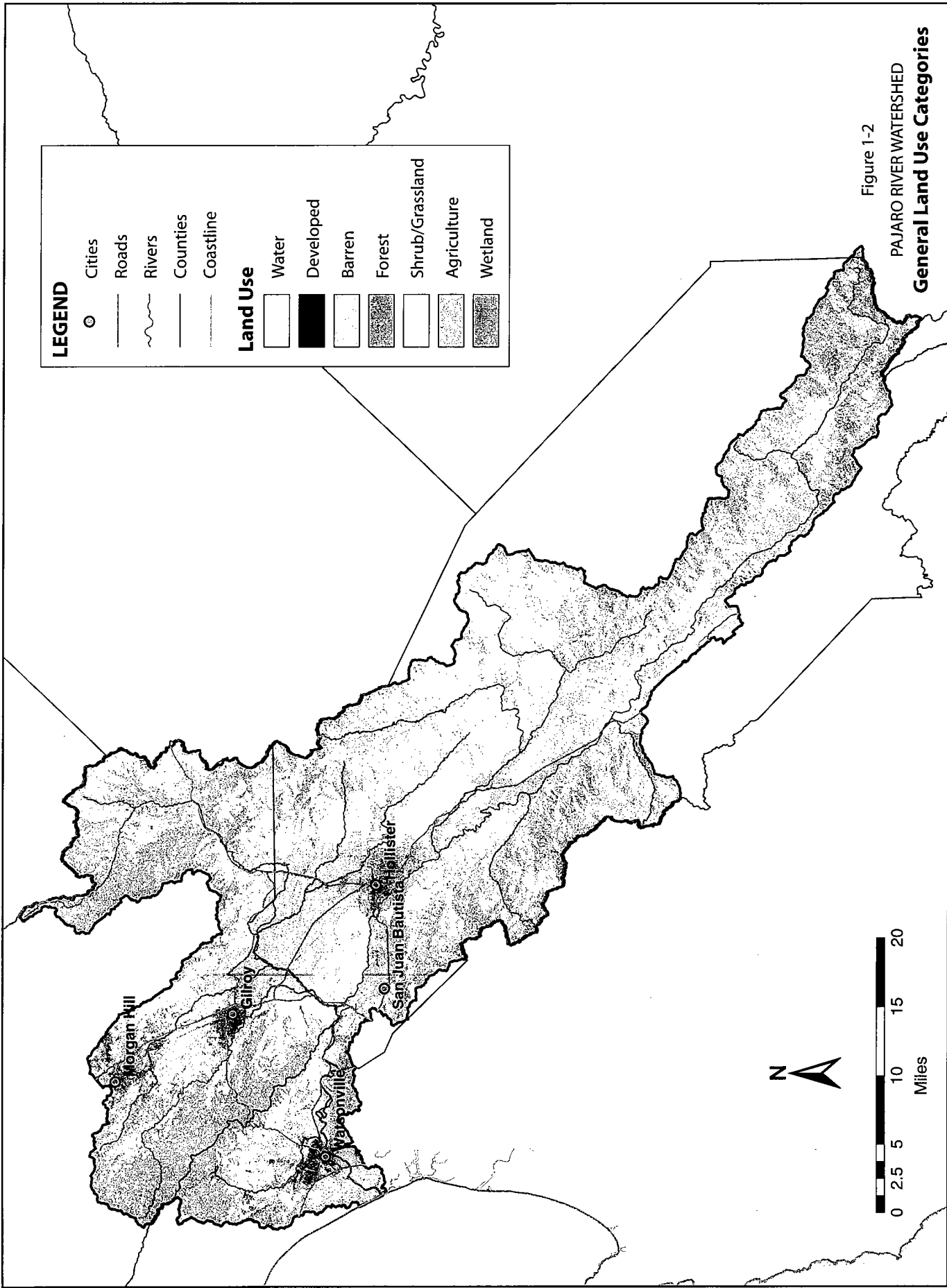
San Jose

0 25 50 Miles

Figure 1-1
 PAJARO RIVER WATERSHED
Pajaro River Watershed

N

0 2.5 5 10 15 20 Miles



LEGEND

- Cities
- Roads
- ~ Rivers
- Counties
- Coastline

Land Use

- Water
- Developed
- Barren
- Forest
- Shrub/Grassland
- Agriculture
- Wetland

Figure 1-2

PAJARO RIVER WATERSHED

General Land Use Categories



