



4 November 2003

INFORMATION PAPER

SUBJECT: Alenaio Stream Special Study, Hilo, Hawaii

1. Purpose: To provide information on the subject project.
2. Points of Major Interest and Facts.

a. The Alenaio Stream watershed is in the South Hilo District on the island of Hawaii. Hilo is the principal urban center in the South Hilo District. Alenaio Stream drains an area of approximately 8.5 square miles.

b. The combination of record rainfall intensity and volume during November 1-2, 2000 caused severe flooding and landslides throughout the eastern and southeastern portion of the island of Hawaii and along the eastern portions of the island of Maui. According to the National Weather Service, at the Hilo Airport on the island of Hawaii, 27.83 inches of rain fell in a 24-hour period ending at 11:00 am on November 2, exceeding the previous record of 22.3 inches. The highest 24-hour rainfall total was recorded at Kapapala Ranch in Kau on the southeastern portion of the island of Hawaii, where 37.02 inches fell. The State of Hawaii record rainfall amount for a 24-hour period is 38 inches, which fell on January 25, 1956 in Kilauea, Kauai.

c. During the November 2000 flood event, the Alenaio Stream Flood Control project in the town of Hilo, island of Hawaii, prevented approximately \$12 million dollars of flood damages. The lower flood control project consists primarily of a concrete open channel, an open grass field storage area and a protective earthen levee. However during this flood event, several flooded businesses on the protected side of the levee have asserted that floodwaters from Alenaio Stream flanked the end of the levee and contributed to the flooding conditions in the lower business district. The County of Hawaii, Department of Public Works has requested that the U.S. Army Corps of Engineers analyze the flood flow paths to determine if the levee is being flanked during high flow events. FLO2D, a 2-dimensional unsteady-state hydraulic model will be used to analyze the flow paths.

d. Under the Flood Plain Management Services Program, POH received \$15k in August 2003 to conduct the study. A MIPR was forwarded to the U.S. Army Corps of Engineers Seattle District to assist in conducting the 2-dimensional hydraulic analysis. The County of Hawaii surveyors provided topographic data of the study site. This study is scheduled to be completed on December 2003.

3. Congressional Interest. There is minimal Congressional interest in this study, at this time.