

WARNING AND RESPONSE TO THE MOUNT ST. HELENS ERUPTION

Thomas F. Saarinen

The amount of foreknowledge and warning for Mount St. Helens was probably greater than for any previous geologic hazard in United States history. The public, and/or responsible officials had a series of warnings, as information on this volcano passed through successive stages from a routine research publication to the issuing of a potential hazard notification, and still later, the initiation of a hazard watch. These warnings, and the regulations developed as a result of them, did probably cut down on the death toll of the eruption. However, many people remained unwarned, or unconvinced of the danger in spite of the great amount of information disseminated to the public through government channels as well as intensive media coverage.

The abstract in the slim informative "blue book" of Dwight Crandell and Donal Mullineaux [1978] opens with the statement: "Mount St. Helens has been more active and more explosive during the last 4,500 years than any other volcano in the conterminous United States." In the publication the past behavior and future probabilities of volcanic eruptions are succinctly outlined and the areas likely to be affected clearly marked on maps. In addition, the bulletin includes step-by-step instructions for identifying the warning signs of an eruption, monitoring the premonitory events, and actions which should be taken to inform both governmental agencies and private companies. This publication was a product of an ongoing United States Geological Survey (henceforth U.S.G.S.) research program which has focused on hazards appraisals for the volcanos in the United States portion of the Cascade Range. A report discussing the Mount St. Helens hazard appraisal appeared in Science as early as 1975 [Crandall, Mullineaux, and Meyer, 1975], and geologists and some U.S. Forest Service personnel were aware of the work one or two years earlier.

In recent years as reports on various volcanos reached publication stage they were forwarded to the Hazards Information Coordinator, and after evaluation, warnings of potential hazards were issued. This is in keeping with U.S.G.S. responsibility to provide timely and effective warnings with respect to geological hazards. It has been doing so since 1977.