FEDERAL COORDINATING OFFICE

federal emergency management agency

MOUNT ST. HELENS TECHNICAL INFORMATION NETWORK

Wednesday, June 25, 1980

BULLETIN #25 - "Flood Hazard Reduction in the Vicinity of Mount St. Helens"

This bulletin describes the problems associated with reducing flood hazards caused by the eruption of Mount St. Helens. Also it outlines the steps in process now or to be taken by various federal agencies to lessen the impacts of any flooding.

Drainage basins develop a system of streams that will efficiently transport sediment and water from upland slopes. Individual stream channels in turn adjust themselves to transport a certain volume of water. This volume is commonly expressed as cubic feet per second (cfs)--a volume passing a point on the river in one second. If the flow is greater than the channel capacity, the river spills out of the channel and floods adjacent parts of the valley.

River channel capacity is normally exceeded only once every ~~two~~ or three years. The May 18 eruption, however, completely filled the upper 14 miles of the North Fork of the Toutle River channel with mudflow material. Several million cubic yards of that material washed down into the Cowlitz and Columbia Rivers, leaving up to 15 feet of sediment in the lower Cowlitz River. The lower Cowlitz channel no longer has its normal channel capacity and will not be able to readjust itself quickly to safely carry its normal winter flow. For example, where the Cowlitz River had a 76,000 cfs channel capacity prior to May 18, it now has only a 10,000 cfs channel capacity. Flows greater than 10,000 cfs generally happen at least once every year. Therefore, flooding

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