

Shobe Canyon

An effective land treatment program

Shobe Canyon, a major flood threat located to the south of Heppner, has undergone extensive land treatment, the purpose of which is to control erosion and reduce peak flows from convection storms. The land treatment project was completed in 1972.

Can Heppner still be flooded? Will the land treatment work control Shobe Canyon floodwater? This is a question that even professional conservationists and engineers cannot answer.

Very little is known about the ability of a land treatment project such as this to reduce flood hazards. This project in Shobe Canyon is the most extensively treated small watershed in Oregon.

The Morrow Soil & Water Conservation District and the Soil Conservation Service have made some progress in evaluating this project. A telemetered rain gauge will be placed at the tip of Shobe Canyon this summer. The National Weather Service will install and maintain this equipment. The rain gauge will tell how much water falls on the watershed. The Morrow Soil & Water Conservation District is now attempting to acquire a streamflow gauge to measure the amount of water that comes out of the watershed.

With this data it will be possible to determine how this watershed treatment reduces the peak flow discharge.

This watershed treatment will not stop water from flowing through Heppner after a waterspout. It has two primary purposes. The first is to reduce the peak flow or eliminate the huge wall of water rushing through Hepp-

ner. The flood water should now flow from the watershed over an extended period of time.

The second purpose of the watershed treatment is to reduce the amount of soil material that is contained in these floodwaters. SCS technicians estimate that in the 1971 flood that 30 per cent to 40 per cent of the volume was soil material. This accounted for the tremendous quantity of mud that was deposited in the town of Heppner after the storm.

Some observations and facts about the most recent storms this winter are interesting. The rainstorms that have occurred this winter have caused very little erosion in

Shobe Canyon. The amount of runoff from Shobe has been equal to or less than that from Donaldson Canyon. After the chinook of Jan. 12, however, runoff from Shobe exceeded that from Donaldson Canyon. Nearly all of the debris basins have filled with water. Soils information from the Soil Conservation Service reveals that the Morrow silt loam soil that occurs in Shobe Canyon can hold only 5 to 6 inches of water. Since the area has received approximately 12 inches of rainfall since September, most of the excess water is either being retained in the watershed or has slowly run off.

Erosion and runoff have been held to a minimum. The

only improvement that could be made would be to seed the entire watershed to adapted perennial grasses and construct additional debris basins. This pattern of land treatment should be used on southern Morrow County farms where soil erosion is present. The aim of the Morrow SWCD is to keep soil erosion to an acceptable level of 5 tons per acre. Shobe

Canyon has proven that it can be done.

Community effort was the one force that accomplished the job. The City of Heppner still can be flooded from four other drainages. The Heppner Water Control District and Morrow SWCD are now working on a similar project that would more adequately protect the city from further flooding.

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