THE CONCRETE HERALD

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In any hill-county location the earth slide is a common hazard. In most cases the only thing done is clear it away and forget about it. In the case of the sliding hill above the Puget Power Baker River power station here, it can not be that simple. Their problem is to get the material that must eventually slide to do so gradually, and then work out a plan of attack to prevent any future sliding.

Continued wet weather has kept the slide area moving for the past month. In addition to trying to clear away what comes down, the company is now engaged in long range planning of work that will be continued far into the summer to make the hillside safe for future winters.

12 WELLS PUMPING

So far 17 4-inch well casings have been driven in the hillside at the point where the sliding originates. Of the seventeen, twelve are now fitted with pumps that keep water out of the strata down below. Bedrock is down some 180 ft. but water was struck at levels between 40 and 50 feet. In drilling the wells, casing were sunk about 60 feet or less, then withdrawn to fill about 10 feet with sand to provide seepage for pumping.



PART OF NETWORK OF PUMPS AND DRAIN PIPES

A network of plastic pipe takes water from the twelve pumps, plus several sump pumps and streams away from the slide area. So much water is present that one well is practically an artesian, water coming up the casing even when the pump is not working.

The actual area sliding is about five acres in extent. A flat bench of bedrock prevents the moving earth from coming directly down on the powerhouse. What happens is that each movement on the upper slope pushes more over the bedrock cliff. At the top a clamshell shovel works picking the big logs, stumps and rocks out of the sliding mass. Mud and small material is permitted to go over the bank and is moved from behind the power house by sluicing with hoses and occasional dragline work with heavy stuff.

TREES CUT, BURNED

Tress and stumps are being cut up and burned rather than permit them to go into the river. Except for the watery mud which cannot be handled, all slide material is being hauled away to keep the river from taking the brunt of the dirt removal.

Sluicing pressure is provided by use of the old 8" line from the lake which formerly was used to provide water for the fish latter. Lines connected to this give high pressure for two nozzles on top of the powerhouse and others down below.

A crew is on duty 24-hours a day

throughout the area. Watchmen are stationed at strategic points to give warning by air whistle when earth begins moving. As they are at the head of the slide, sufficient warning is given for those working below to get in the clear. So far no more large slides have occurred but two places are being watched that are expected to come down before the slides stop.

As a precautionary measure the line crews are building a by-pass of the power lines from the Upper Baker through the solid portion of hillside. Also the local lines are to be re-aligned out of the path of any possible future disturbance.

SUMMER JOB PLANNED

According to Supt. Andy Miller the slide is following a pattern predicted by soil experts called in the first signs of trouble. Their theory is that the slide will eventually bench itself into inactivity but will continue to ooze mud and water. Pumps will be kept in operation on a permanent basis until conditions prove they are not needed.



TREES, MUD SLIP TOWARD EDGE OF ROCK CLIFF

When dry weather permits work on the slide area, bulldozers will ditch and terrace the hillside and plantings will be made to hold the surfaces with a mat of root growth.

It is expected that within a few years slide danger will be eliminated completely.

In the meantime, a continual cleanup operation is in progress. A striking example is noted within the usually spotless powerhouse, where floors, stairways, hand rails and much used doors and nearby walls are mudspattered by the mud-harassed workmen using the building in trips from top floor to yard in their work.