



Storms are no stranger to Portola and the Feather River Route, the cover shows WP rotary 34 removing 8 to 9 feet of snow from the Portola Yard in January 1952.

Again in 1955 major storms hit the WP and now 1986 will be a big storm year.....

## WESTERN PACIFIC *Mileposts*

FEBRUARY 1956

# STORM REPORT

**N**or in recent history has the Western Pacific suffered damage to its property to the extent that occurred during the "100-year flood" and storms which struck Northern California with a devastating blow during the Christmas holidays.

According to measurements taken at Bucks Creek power house about midway between Oroville and Portola, 29.43 inches of rainfall was recorded between December 16 and 26. This brought the flow of water through the Feather River to a new high record of 250,000 cubic feet per second.

Damage from the 1955 storms to the railroad was widespread. Most serious was a major slide in the canyon at Milepost 250.35, where between 80,000 and 100,000 cubic yards of decomposed granite and rock slid away from a point beginning about 800 feet above the roadbed and the highway below to a width of about 400 feet. Actually, there were two slides at this location, the first of which occurred shortly before noon on December 22. Heavy earthmoving equipment was brought to the scene immediately and Western Pacific crews from many points on the railroad, aided by Utah Construction Company crews and equipment, had by working around the clock nearly cleared the slide for the re-laying of track on December 28. About seven o'clock that evening, when the men had left the job for dinner and to service equipment which had been pulled back from the immediate slide area, a second slide

broke loose which completely dwarfed the first. Aided by an enormous portable power plant which provided a battery of high-powered floodlights to light up the face of the slide so that work could continue 24 hours a day, the weary crews once again began the fight against the elements. The face of the slide had to be re-scaled, huge imbedded rocks had to be released and brought down, and bulldozers and power shovels began removing tons of earth and rock like a horde of ants working on a picnic lunch. It was hoped that the slide could be cleared once more for the re-laying of rail by January 6, but rain, and even snow, continued to fall and despite all possible human and mechanical efforts the storms made continuous work impossible, delaying the opening of the line at this point until 11:30 p. m. on January 8.

The big storm did show conclusively that had it not been for Western Pacific's program of preventive maintenance which has been aggressively pursued in the past eight years in the Feather River Canyon, the damage and period of traffic interruption would have been much worse than it was. Even so, there were other serious interruptions.

Another major item of damage was the loss of embankment east of the Bear River Bridge (Milepost 166.25 to 168) where the levee broke at several locations about 12½ miles west of Marysville. Three of these were of major importance which required the

driving of piles and considerable fill. This, too, called for around-the-clock work by roadway, bridge and building crews, and bulldozers. It was just prior to this time that a fine example of cooperation between railroads occurred. Southern Pacific was having troubles of its own on the Donner Summit route. Having no pile driver of their own readily available, they borrowed the new Western Pacific diesel pile driver which was on routine maintenance work at Milepost 116.37.

J. W. Corbett, Southern Pacific's vice-president-system operations, wrote H. C. Munson on December 28 that "our people who were on the ground cannot speak too highly of the tremendous job which your people, who were with the driver, did. They uncomplainingly worked long hours under very adverse conditions and their performance was nothing short of perfection itself. I wish you would extend to them also my sincere appreciation." (EDITOR'S NOTE: See Vice-President Munson's letter to WP railroaders on Page 18.)

When the embankment near Bear River bridge broke and washed out WP track it was impossible to return the pile driver without a time consuming round-about haul, so SP had another of their pile drivers brought from the San Joaquin area for use by WP. Some 525 feet of bridge was driven and embankments restored, mostly during continuous heavy rainfall and high water between December 26 and January 1. This portion of the railroad was

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reopened to traffic on Sunday, January 1.

There was also a large washout 70 feet long at the west end of Berry Creek (Milepost 224.2) where water ran 20 feet deep. Other serious washouts occurred at the east end of Tunnel 11 (Milepost 237.33), at Milepost 225.9, and at Pulga (Milepost 239.3), where high water ran over both siding switches. These washouts were mostly due to slides which came down gullies and plugged culverts. Between Mileposts 267 and 270 water passed over the railroad and washed out track at three locations. Another condition occurred at Milepost 299.5, where high water eroded the bank and washed away 14 rail lengths.

Other relatively minor trouble spots occurred along the railroad principally due to high water. There was also a washout on the San Jose Branch and on the Reno Branch which temporarily closed those lines to traffic, but repairs were quickly made.

Financially, the storms delivered a serious blow. Repairs to roadway and bridges amount to approximately \$400,000, which does not include additional maintenance expenses which will be heavy during several months in 1956. The expense of detouring freight and passenger trains and re-routing freight so that our passengers and shippers would get the best possible service, plus traffic revenues lost because of the interruptions to service, are estimated to amount to \$1,160,000.

No sooner had the storm which struck the Marysville area been reported than the purchasing department immediately "alerted" suppliers of various items of bridge material. With the assistance of the store department, a preliminary estimate was ascertained of the material that might be required, and the Sacramento store was placed on a 24-hour basis to commence shipping material. A. S. Kasper, material supervisor, coordinated the detailed material requirements of the engineering department at the site of the washout, which included piling, stringers, ties, hardware, sacks, lights, lanterns, etc. In a period of 48 hours approximately \$32,000 worth of material was either at the site or moving. Small items of material were brought in on a continuous flow to the trestle by means of a shuttle truck operation between Sacramento store and Marysville. Approximately \$7,500 worth of culvert, drainage pipe, rail and fasten-

ings, lumber, etc., was also furnished and rushed to the slide at Milepost 250.35.

Detailed studies by competent consulting geologists who made a survey of the slide area at Milepost 250.35 by helicopter and on foot tell us that rock formations at this point are unstable and that the only way to avoid the possibility of again being blocked there by future slides is to bore a tunnel about 3,000 feet long behind the rock face. Estimated cost of this tunnel, on which work has already begun, is \$1,800,000. It should be completed before the next fall season and will be identified as Tunnel 15. (A tunnel located between Camp Rogers and Belden, about eight miles east of the slide, was formerly No. 15, but this was daylighted following a fire in 1944.)

All of these expenses must be paid for entirely by the railroad because, contrary to some opinions, none of the widely published government "flood-relief funds" are available for such purposes. Neither does the railroad receive help from any other outside agency at any time, such as is furnished to other forms of transportation with which the railroad must compete.

WHEN it became apparent that the railroad was in for a prolonged interruption, it was immediately decided to protect shippers' and passengers' interests by effecting delivery of all trains as quickly as possible regardless of detours and/or reroutes necessary and resultant costs and loss of revenues.

The *California Zephyr* trains were first rerouted between Stockton and Salt Lake City via the Santa Fe and Union Pacific through Barstow, California, as the Southern Pacific's line over Donner Summit was also closed because of slides. When that railroad again opened its line a few days after Christmas the *California Zephyr* trains were detoured between Sacramento and Weso, Nevada, where they again used Western Pacific tracks to and from Salt Lake City.

Freight service was also detoured between Weso, Nevada, and Stockton, and between Klamath Falls and Stockton. On December 29 the Southern Pacific advised that because of their own conditions and a shortage of power and crews they would be unable to assist us with further detours after midnight, December 31. However, they advised that they would be glad to assist us by taking all cars which we wished to reroute after that time.

Beginning January 1, therefore, freight was rerouted via SP or Santa Fe-Union Pacific, whichever appeared to offer the best delivery prospects at the time.

Under detour arrangements the affected railroad, using its own crews and power, moves its trains over another railroad, employing pilots from the assisting railroad at a standard rate. Under rerouting the affected railroad delivers cars of freight and accompanying waybills to the assisting railroad which absorbs them with other traffic, delivering back to the first carrier or connection as instructed—and revenue is adjusted on the basis of negotiated agreement. In general, rerouting is not as efficient as detouring because it does not allow the affected railroad to run its trains through intact. Neither does it allow the affected railroad to keep its own train and engine crews at work.

Western Pacific's subsidiary, the Sacramento Northern, also suffered extensive damage, particularly between Pleasant Grove and Pearson. Major losses were the 960-foot trestle over the South Yuba River and the 865-foot trestle approach across the Feather River between Marysville and Yuba City. Considerable trackage at one time lay under water, yard and station buildings were inundated, and much motive power and equipment was damaged. Track on the Marysville approach to the River and 5th Streets storage tracks was removed to allow the Marysville Levee Commission to construct a new levee.

It is estimated that damage to tracks and structures, equipment and communications on the Sacramento Northern will be in the neighborhood of \$800,000. Not included in this figure is the cost of replacing the South Yuba trestle, as it is the intention to apply to the Interstate Commerce Commission for permission to make a connection between Alicia on the SN and Cleveland on the WP, for operation over Western Pacific tracks into Marysville. The estimated cost of this connection is \$136,000.

Plans are under way for early replacement of the Feather River bridge. Until this bridge is replaced, however, SN traffic must be handled between Yuba City, Colusa, Thermalito and Chico via the Southern Pacific connection at Chico.

Loss of SN traffic during the flood period is estimated at \$50,000.

## Work Went On 'Round the Clock