



West

West VISITS SHASTA DAM

PUBLISHED BY

Southern Pacific



IT'S GOING TO BE A MIGHTY BIG DAM!

EVERY Spring, melting snows from California's rugged northern mountains swell the Sacramento River into a raging torrent. Often it overflows its banks. Billions of gallons of precious water needed for summer irrigation flow useless into the sea.

To control the Sacramento River and to divert some of its water into the San Joaquin Valley for irrigation, the Central Valley Project was conceived. Its key unit is Shasta Dam, now under construction twelve miles north of Redding on Southern Pacific's Shasta Route.

The striking photograph above shows how you go about damming a river. The river is the Sacramento (1). First you drill a mammoth tunnel in the

river bank (2) and temporarily route Southern Pacific's tracks through the tunnel so they won't be in the way of the dam. Later you'll use this tunnel to divert the river while the dam is being completed. Next you build a "head tower" 460 feet high (3) and rig cables across the canyon to carry materials to the dam site.

Next problem is where to get the concrete for building the dam (you'll need 6,000,000 cubic yards). So you ship in 1,200,000 tons of cement and unload it at the silos (4). Then you find you have to go ten miles to get the right kind of sand and gravel for your aggregates, so you build the longest conveyor belt in the world (5) and bring your aggregates to the cement. Cement and aggregates are carried up the hill by pipes and conveyors (6) to the mixing plant at the base of the head tower. The mixed concrete is then hoisted up the tower and lowered in mammoth buckets to the dam site (7).

New Southern Pacific Line

Meanwhile hundreds of workmen are busy relocating 37 miles of Southern Pacific line that will be submerged when the lake behind the dam fills up. This little item includes twelve tunnels and eight bridges, one of them the highest double-deck bridge in the world (500 feet). The new line will be seven miles shorter than the old one.

The dotted line in the picture shows how high Shasta Dam will be when completed some time in 1944. It will be the second highest dam in the world (560 feet) second longest (3,500 feet at crest), second largest in volume of concrete (6,000,000 cubic yards).

Construction work on Shasta Dam provides a real thrill for passengers on Southern Pacific's Shasta Route trains between San Francisco and Portland. Trains pass right by the dam site, using the tracks shown in this picture (2). Figure 8 on the photograph is the site of Shasta Dam powerhouse, which will have an ultimate capacity of 375,000 kilowatts. Figure 9 is the Vista House from which visitors watch the construction work.

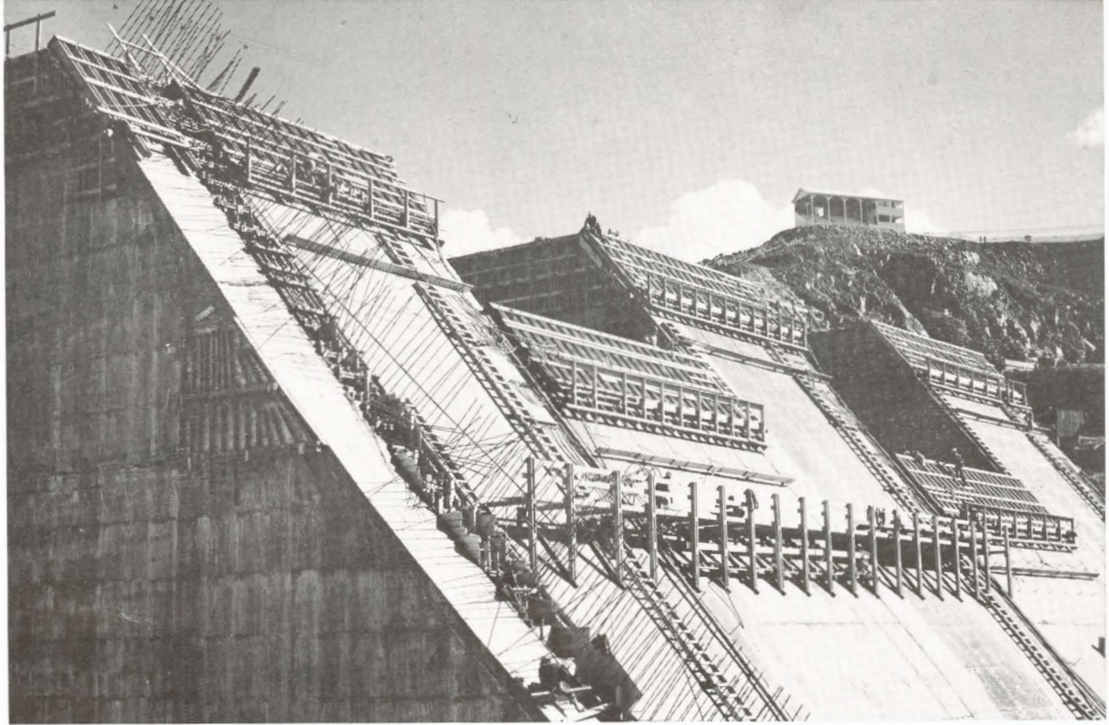
Artist's drawing at right shows how the whole thing will look when completed. Note that Shasta Dam is built below the confluence of three rivers—the Sacramento, McCloud and Pit. It will back up the water of these rivers for 35 miles, creating a lake with an area of 29,500 acres.



WEST thanks the U. S. Bureau of Reclamation for use of photographs in this issue.



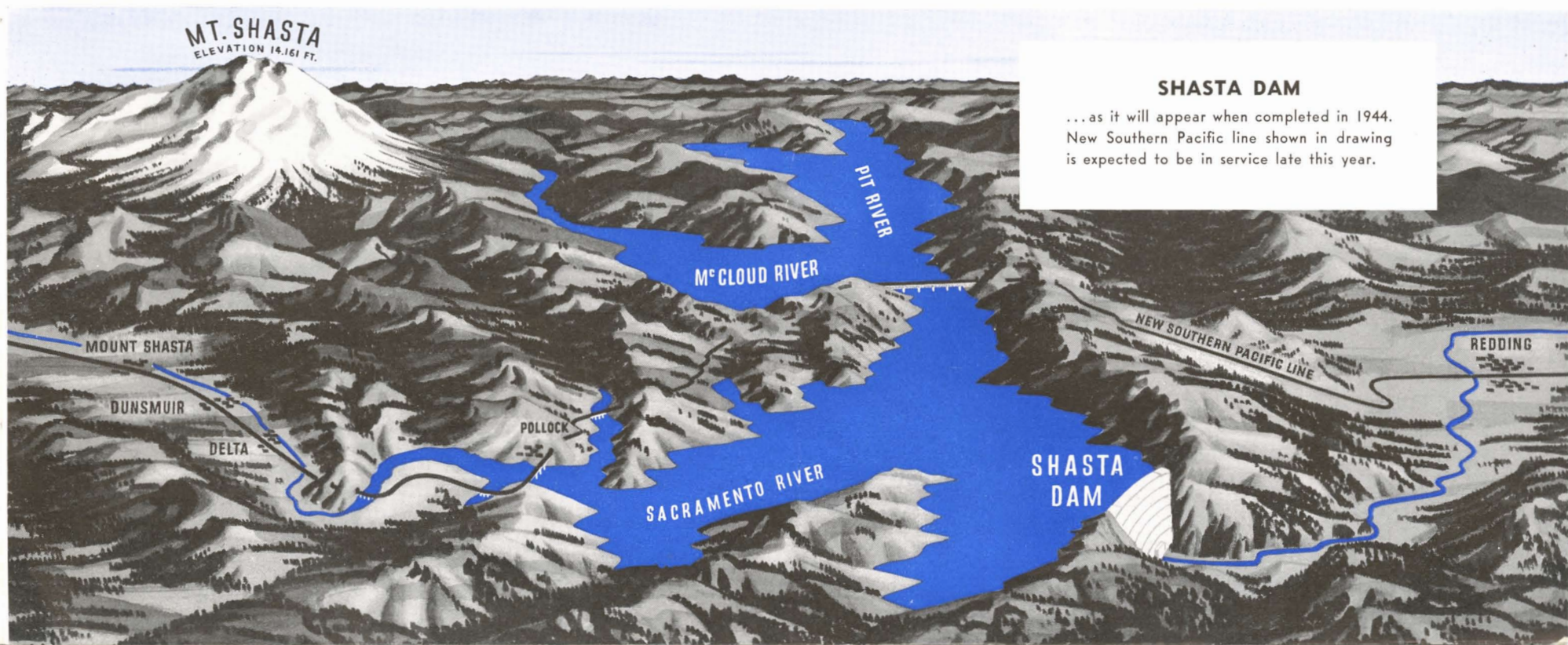
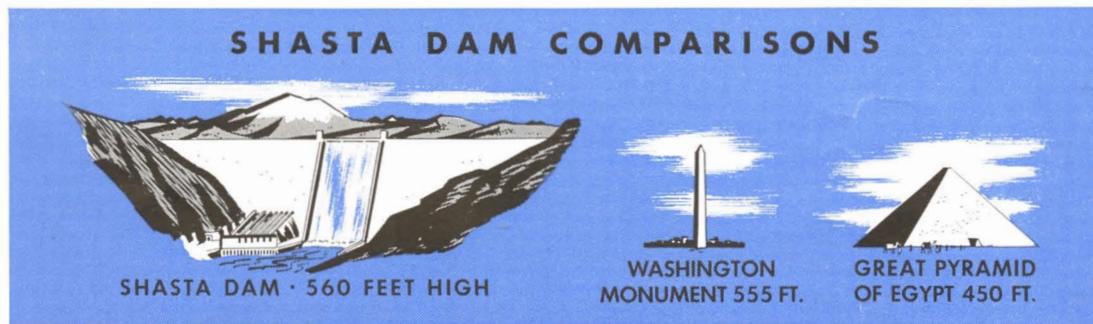
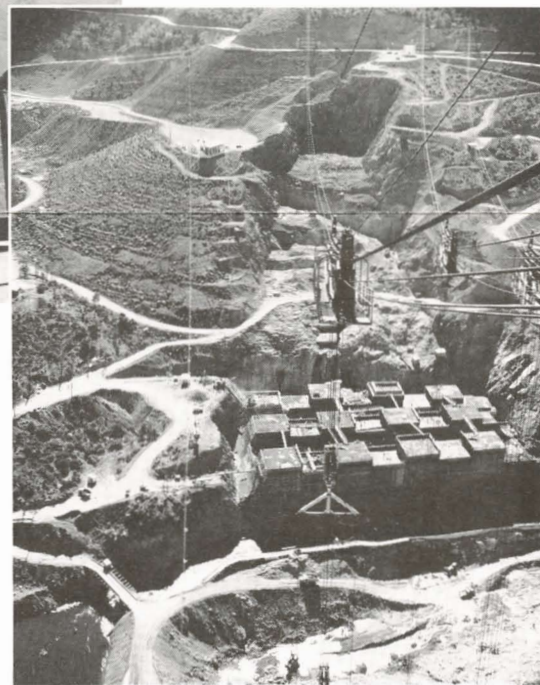
A river of rock flows from Redding to Shasta Dam on this conveyor, the longest in the world. (Conveyor is 10 miles long, belt 20 miles.) More than ten million tons of rock and sand will be used to manufacture the six million cubic yards of concrete for Shasta Dam. This conveyor has a capacity of 1,100 cubic yards of sand and gravel per hour. Diagrams below give a graphic idea of how big Shasta Dam will be when finished. Its overflow will fall 480 feet—nearly three times farther than Niagara! Note powerhouse at left of dam.



Shasta Dam is being constructed in blocks 50 feet square and five feet thick. Blocks are keyed together by grooves and ridges. An intricate system of pipes in the dam cools concrete and controls shrinkage during setting process. Vista House is in the background.

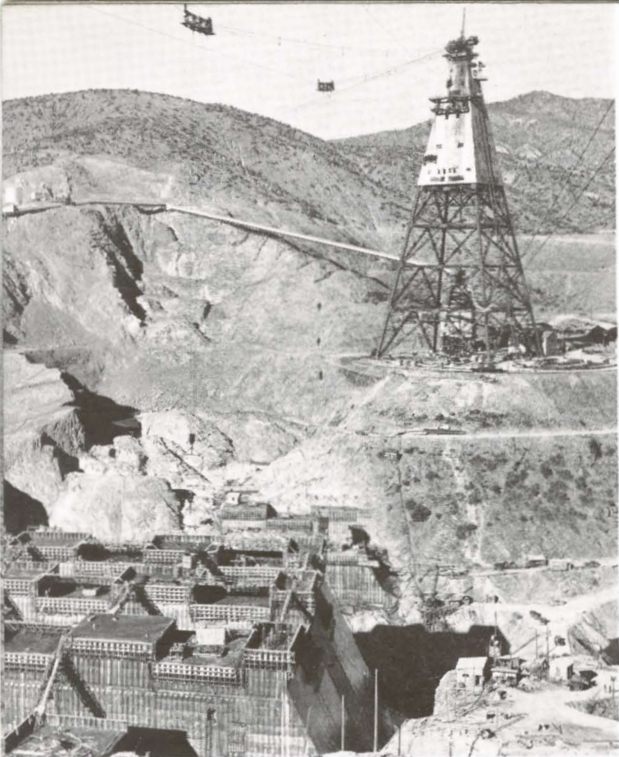


In the photograph at left, you are on top of the head tower, looking straight down at the ground 460 feet below. Tracks carry the hoist which took you to the top. Below is another view from head tower, showing mammoth excavation for bed of dam.



SHASTA DAM

...as it will appear when completed in 1944. New Southern Pacific line shown in drawing is expected to be in service late this year.



Another view of the head tower at Shasta Dam, showing the cable rigs from which giant buckets of concrete are lowered. Some sections of Shasta Dam now rise more than 100 feet above the river.



This photograph shows how Southern Pacific's Shasta Route tracks have been diverted through a tunnel to bypass the site of Shasta Dam. (Sacramento River at right.) Many Southern Pacific passengers now stop over at Redding to visit the dam site and watch the construction work.



These "tight rope walkers" are building the highest double-deck bridge in the world. Five hundred feet above present level of the Pit River, it will carry S. P. trains across northeast arm of lake.

HOW TO SEE SHASTA DAM

SHASTA DAM is being constructed on Southern Pacific's Shasta Route, twelve miles north of Redding, California. While Southern Pacific trains go right by the dam site, you really ought to stop over at Redding for a day and enjoy a leisurely visit to this \$100,000,000 project. See the giant head tower (460 feet high), the world's longest conveyor, great shovels excavating in the hillsides, and the mammoth concrete blocks rising foot by foot from the river bed.

See it by day and again by night, when electric lights change the scene into a fairyland.



Humboldt Motor Stages Inc. operate four tours daily to the dam site, leaving Redding at 9:30 A.M., 1:00 P.M., 4:00 P.M. and 7:30 P.M. Tour costs only \$1.50 for the round trip.

Redding offers comfortable hotel accommodations for reasonable rates.

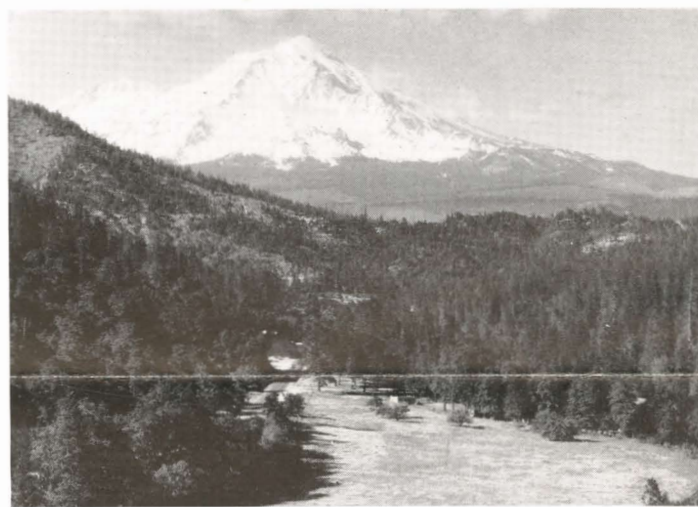
If you can spare the time, by all means make the side trip to Lassen Volcanic National Park (an hour and forty minutes from Redding). Lassen Peak is America's only active volcano, so there are many interesting phenomena in the Park—mud pots, boiling hot springs, geysers, lava fields—as well as beautiful lakes and forests.

The Lassen National Park Co. operates a stage tri-weekly (Monday, Thursday, Saturday) from Redding to the Park during the summer season (June 15 to Sept. 15). Round trip fare from Redding to Manzanita Lake in Lassen Volcanic National Park is \$6.

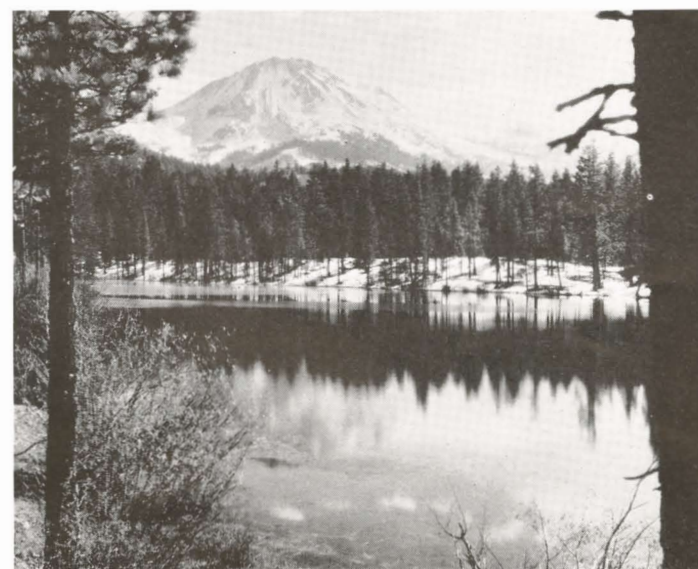
Fine Trains

Train service on Southern Pacific's Shasta Route is fine and fast. Finest and fastest is the *Cascade* (San Francisco-Portland), de luxe, all-Pullman limited with luxurious diner and lounge car.

Then there's the *Beaver* (San Francisco-Portland), friendly economy train with streamlined chair cars, modern tourist Pullmans, lounge car for tourist passengers, and low-cost meals. Several other trains daily, including the *West Coast* (Los Angeles-Portland).



Shasta Dam and Southern Pacific's Shasta Route are both named after Mt. Shasta (above). "Shasta" is derived from the Russian word *tchastal*, meaning "white" or "pure". Shasta Route trains skirt the base of this majestic northern California peak (elevation 14,161 feet).



Lassen Peak (elevation 10,453 ft.) in Lassen Volcanic National Park, interesting side trip from Redding on S.P.'s Shasta Route.

S.P.

The Friendly Southern Pacific



With this issue, *WEST* celebrates its first birthday. We hope you have enjoyed it as much as we have enjoyed sending it to you. Your comments will be appreciated by F. S. McGinnis, Vice-president, Southern Pacific, 65 Market St., San Francisco, Calif.