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"Not an Ugly Highway in California"

By FRANK A. TETLEY, Member, California Highway Commission.

CALIFORNIA is a beautiful State. There is a glory in its mountains and valleys; an attraction of coasts and beaches; a lure to its rivers, its lakes, its forests and its deserts that has made California a name to conjure with among the people and the nations of the world.

Probably because of long years of association with the trees and shrubs, the vines and the flowers of California, the beautification of our State highway system carries a peculiar appeal to me. I regard the preservation and the protection of the beauty of our State almost as a religious duty, imposed by a Divine Providence upon us. The enhancement of its beauty is a responsibility equally as great.

Each in his particular field is responsible for the manner in which this duty is performed in the field of State highway affairs. A particular heavy responsibility rests upon those of us who are immediately charged with the control of and supervision over these roads.

BASIC BEAUTIFICATION PRINCIPLES

In making our State highways beautiful, and at the same time practical as to maintenance expense, there are certain definite principles and policies that appeal to me as fundamental. These are:

First, our planting should be characteristic of California's plant life. We should use as far as is possible, trees, shrubs, vines and flowers that are native to and symbolic of the State.

I believe that all highways on which trees are to be planted and maintained by the State of California should be at least sixty feet wide, and all main arteries should be one hundred feet wide; this because traffic is becoming greater and greater, and it is certainly a great loss that on account of the narrow highways, to have all trees on at least one side of the highway destroyed at some future time so that the highway can be widened.

Second, great care and study should be made of the varieties of trees to be planted in the different locations. It would be foolhardy to plant trees that would make a success in a desert country in a district that has moisture or elevation. We have a great many wonderful trees for highway planting to select



FRANK A. TETLEY

from, and if planted in the right locations, where they are native, wonderful and beautiful results can be obtained. This also will make diversification of trees.

Care should also be exercised in the cost of maintenance of trees. The eucalyptus tree, although a native of Australia, is just as indigenous to California as it is to its home land. There are many varieties of this tree, and after once started, from my experience, they can be maintained for less money than any real tree on the highway. In most places in the State, after these trees are planted and

watered for a few years, they will take care of themselves as far as irrigation is concerned. The flowering eucalyptus is really not strong enough to be planted as a highway tree. It is a beautiful thing, and can be planted in coast districts between eucalyptus, and of the type that will be giant highway trees.

Another tree that is very beautiful, and is a native of California, is the live oak. This can be planted with success in localities where it grows naturally, and after started for a few years, can also be maintained at low cost.

We also have in the southern part of the State, many different varieties of palms, including the *Canerensis*, *Washingtonia* *Robusta*, *Guadalupe*, *Cocos Plumosa*, that can be planted with success. In the northern part of the State I find a great deal of black walnut and London plane trees.

For our real desert countries, I think the most practical tree to plant, which can be maintained at low cost, is the Palo Verde. After these are started for a year or two, they require no water and care.

We also have many trees of different varieties that would make a beautiful setting in the districts they are adapted to: The pepper, elm, *Cedrus Deodara*, cork oak, Lombardy poplar, Jerusalem pine, magnolia, madrone, locust, acacia, and last, the St. John's bread tree, which I am afraid that unless watched, does not develop deep roots commensurate with the growth of the top.

Third, the method or mode of the planting should fit the individual need of the particular section of highway where the planting is to be made. In one case this outstanding need may be shade; in another case the problem may be to effectively hide a construction scar or some ugly roadside building; in still another case, trees may be planted to frame some commanding view of ocean or mountain peak, forest or waterfall.

Third, the planting along a highway should be so varied that the danger of monotony is avoided. The task is one that demands the combined cooperation of the landscape architect and the highway official. It is a task for both artist and engineer. The artist must see to it that the beauty of the highway is enhanced and emphasized by the character of the planting that is made, and that the purpose of the planting is accomplished. The highway engineer must make certain that the planting will not jeopardize the safety of the traveling public, nor interfere with the necessary expansion and development of the highway roadbed.

The task is further one in which both the State and its communities must cooperate. The whole burden cannot be thrown upon the

State. The fact must not be forgotten that the first duty of State officials charged with highway responsibility, is to move traffic with safety and dispatch, and that this in itself is a big job.

Experience has shown that the community organization lends itself in a splendid fashion to promoting planting, but generally speaking, does not function in caring for these plantings when made. Therein the State must step in.

Much must be done in California in the work of highway beautification, but there remains much yet to be done. Nor does this statement in any manner reflect critically upon those who have been in charge of State highway affairs. The pioneer builders, like all other pioneers, had little time and less money to give to the matter of highway beautification. Roads had to be built before they could be beautified.

PAST THE PIONEER PERIOD

While we are still in a highway building era (and the greatest in the history of California) we are well past the pioneer period. We can no longer justify an unattractive highway on the ground that we are too busy building roads to give thought to their adornment.

Nor should the first be forgotten, that a foundation has been laid for any enlarged program of highway beautification upon which we may now build.

State, County and communities have for years been working together in highway planting projects. This work has been limited in scope, but it has established a basis for further cooperative efforts.

The State through years of experience has established standards for roadbed widening that assure the fact that plantings can be made without danger that the trees planted will have to be cut down to make way for a widened roadbed before they have grown to maturity.

The State highway organization is thoroughly committed to the policy of preserving as far as it possibly can, the native trees and shrubs that grow along the highway right of way.

Here is a basis upon which State and County can proceed to build a more beautiful highway system.

The problem of highway beautifications, however, is not one of planting alone.

THE BILLBOARD QUESTION

The billboard question presents a difficult phase of this problem.

(Continued on page 19.)

Governor Rolph Signs Bills Providing Orderly Additions to State Highways

GOVERNOR JAMES ROLPH, JR., affixed his signature on Wednesday March 20th, to bills providing for the orderly addition of new highways to the State system. These measures have passed both houses of the Legislature by overwhelming vote.

One of the measures to which Governor Rolph affixed his signature was introduced into the Senate by Senators Edwards, Breed, Allen, Baker, Cassidy, Duval, Harper, McCormack, McKinley, Riley, Swing and Wagy.

A companion bill, also signed by Governor Rolph, was introduced into the Assembly by Assemblyman Kline of San Jacinto. The Governor attached his signature with a gold pen presented to him by a delegation of Plumas County residents headed by Superior Judge J. O. Monceur. This pen was spun from Feather River gold, and was quill shaped to symbolize the area of its origin.

The bills provide for total additions of 804 miles of secondary highways to the State system. The roads included are designated on the map accompanying this article.

The bills were based upon a report on the orderly addition to new secondary highways made by the California Highway Commission and the Division of Highways, Department of Public Works. This report in its turn was made in response to a resolution of the 1929 Legislature, instructing that much study and resulting recommendations be made.

The resolution above referred to directed the observance of the following principles relative to the inclusion of new roads in the State highway system:

1. Additions to the secondary highway system are to be made during the next two years totaling between 10 per cent and 12 per cent of the existing State highway mileage, and in the ratio of not less than three or four miles in the south to one mile in the north.
2. Additional mileage is to be included for budgetary purposes when necessary surveys are completed.
3. No change is to be made in the present statutory division of secondary funds.

The joint resolution provides qualifications for roads which might be properly included and added to the State highway system. Roads having such qualifications are:



Governor Rolph signs Edwards-Kline bills for the addition of secondary roads to State system. The bills were signed with a pen made from Plumas County gold and presented by the residents of that county. In the picture above J. O. Monceur (left) superior judge of Plumas County, and Senator A. H. Breed (right), president pro tem of the Senate, witness Governor Rolph's signature to the bills.

1. Highways now carrying a large volume of State traffic.
2. Highways affording relief to heavy traffic on present State roads.
3. Highways serving as important interstate links.

The prescribed requirements limit the additional mileage to from 10 per cent to 12 per cent of the present State highway mileage and divide same in the ratio of not less than three or four miles in the south to one mile in the north in order that a start might be made in equalizing existing discrepancy between the mileage of secondary State highways in the north and the south.

ROADS INCLUDED IN SYSTEM

The following statement shows the highways included under the bills signed by Governor Rolph and the reason for their inclusion.

A.—A highway from New Pine Creek on the California-Oregon State line to a connection with State Highway Route 28 near Alturas; 34 miles: Modoc County.

This road establishes a connection between the Oregon State Highway System and the Redding-Alturas lateral (Route 28) of the California State Highway System.

This project is a necessary link on an east of the Sierra routing. It is a designated Federal aid route. It was recommended for inclusion in the State highway system by the Highway Advisory Board in 1925. Oregon is improving its roads from Klamath Falls, from Bend and from Burns territory (the Yellowstone cut-off) to the state line at New Pine Creek. Oregon, with State and Federal funds, has practically completed a surfaced road from the Columbia River and also from Klamath Falls to New Pine Creek. They are or will be fast speedways through interesting country. The unimproved condition of the California extension is withholding from the public the potential value of these routes.

Within California the project will coordinate with the Redding-Alturas highway, and through the Alturas-Susanville route, with the Red-Bluff-Susanville-Reno lateral. In the future a connection from Lake Almanor to the Feather River road would extend recreational traffic further south.

The route qualifies as an interstate connection. Without it our present highway system lacks a direct connection to eastern Oregon.

B.—A highway from Quincy to a connection with State Highway Route 29, near Chats; 58 miles: Plumas and Lassen counties.

This project would form an addition to the Feather River road, State Highway Route 21, joining it to State Highway Route 29 near the latter's interstate connection with State of Nevada highways. Its inclusion in the State system will extend State jurisdiction over a section which must eventually be considered of State and interstate importance beyond present State highway termination. Within a few years Route 21 will provide the much advertised water grade arterial through the scenic Feather River to the county seat, Quincy. East of Quincy lies equally attractive country and favorable routing to interstate direct routes through Nevada.

National forest highway activities in cooperation with Plumas County aid, is completing on good standards a surfaced road east of Quincy as their funds permit. Limitations in county funds and in federal road designation will not enable local and federal agencies to complete the connection through Plumas and Lassen counties.

This project forms an integral part of the Feather River highway.

C.—A highway from State Highway Route 8, near Cordelia, via American Canyon to State Highway Route 14; 14 miles: Solano, Napa and Contra Costa counties.

Traffic between the Sacramento Valley and the bay cities does not find the direct and most advantageous passage from State Highway Route 8 to State Highway Route 14 over connected state highways. State Highway Route 7 is available via Martinez Ferry but a better road and the bridge facility induce almost exclusive use of the county highway from Napa wye to the Carquinez Straits. A state route should be established to serve adequately that important through traffic which changed conditions on crossing the straits have forced over county roads.

Proposed for inclusion as state highway is a favorable route from Cordelia south to State Highway Route 14 by way of American Canyon. This route is 5 miles shorter than via Napa wye and 9 miles shorter than via Martinez. It combines directness, uninterrupted travel, and safety. Through an ideal underpass site near Cordelia the one railroad crossing on the route will be separated, and grade crossings on the county route and in Vallejo avoided. The new location avoids the present disadvantageous passage over steep intersecting streets in Vallejo. Alignment and grades are excellent. The construction costs will be moderate.

The route qualifies for state inclusion because it will meet the necessity for a state highway that will serve a very large volume of state traffic now carried over a county highway. It is in the only practicable location that will provide this function with safety, directness and reasonable cost.

D.—A highway from a proposed Oakland tunnel to Walnut Creek; 9.6 miles: Contra Costa County.

Joint Highway District Number 13, composed of Alameda and Contra Costa counties, has organized for construction of a public highway and tunnel to supersede the present narrow, crooked and inadequate Tunnel road in Alameda County and improve the Contra Costa County road from the tunnel to the town of Walnut Creek.

Proposed for inclusion as a state highway is that portion of the route which lies in Contra Costa County between the tunnel and Walnut Creek, distance of 9.6 miles.

Basing calculations on the volume and class of traffic found on the present tunnel road and on the two State highways leading into Oak-

land, one from Livermore via Hayward and the other from Martinez through Crockett, and estimating the effect of better facilities easterly to Walnut Creek, the conservative twelve-hour traffic anticipated in 1940 on this project is equivalent to a twenty-four-hour traffic of 17,000 vehicles on Sundays and 10,000 on week days.

This route qualifies for state inclusion on volume, importance and character of present and of future probable traffic. It is logical to relieve Contra Costa County of this state traffic burden.

E.—A highway from State Highway Route 3 near Weed to the California-Oregon state line near Calor; 55 miles: Siskiyou County.

Geographic controls establish routing for the Pacific Highway through the north central portion of California. To reach the Klamath Lake Basin from this artery on improved roads requires a salient easterly through Oregon. The logical course for cutting this salient is a northeasterly diagonal departing from the Pacific Highway after the latter passes north of the summit near Mount Shasta. This diagonal has been recognized as a natural course on both railway and highway location. The highway routing proposed is 44 miles shorter than via the Shasta Canyon Highway over the Siskiyou Mountains.

It would depart from State Highway Route 3 near Weed and finds light construction conditions on a direct course to the Oregon Highway near Calor. The several intermediate summits are negotiated on moderate grades without losing direction and avoid adverse snow conditions better than on alternative routes.

The highway qualifies as an important interstate connection, as a route which will carry a large volume of state traffic and as one which is an economic alternative to another state route.

F.—A highway leading from Bishop, Inyo County, to a point on the California-Nevada state line near Montgomery Pass; 38 miles: Inyo and Mono counties.

This project is a routing from the Owens Valley to an interstate connection with Nevada state highway and is an alternative to State Highway Route 63. It is at present a county road. For a number of years the matter of decision on which of the two routes is preferable for ultimate interstate connection has been the subject of considerable investigation and discussion by California and Nevada road authorities. Neither California nor Nevada State Highway departments feel

that large outlay on the Westgard Pass Route other than by maintenance and minor improvement is warranted for the traffic served and are in accord in recognizing the superiority of the Montgomery Pass route. Nevada's procedure awaits some California state action in assuring permanent adoption of the route that must ultimately be chosen for practicable reconstruction.

The principal value of the route for state inclusion is for interstate connection, essential during winter months when it is the only practicable winter route between southern California and Nevada or the northern California and Oregon localities that are east of the Sierra. Future traffic will materially increase when the California and Nevada sections are improved. It qualifies as an interstate connection which will relieve the states of California and Nevada of expenditure of greater amounts on routes inferior in grades, directions and adaptability to serve traffic.

G.—A highway from Mojave to Bakersfield via Tehachapi Pass; 60 miles: Kern County.

Lying wholly within Kern County the road from Mojave to Bakersfield over Tehachapi Pass has been maintained as a county highway long since its serviceable condition has promoted thereon a class of traffic which readily qualifies it for state jurisdiction. It has outgrown its original function of supplying access to the county seat from the sparsely settled Mojave desert region and of giving means of egress to the several small settlements en route.

It is now considered an essential through route between the San Joaquin Valley and a wide area south and east of the Tehachapi Mountains. It joins State Highway Route 4 to State Highway Route 23 that runs north and south between San Fernando Valley and Owens Valley. At Mojave it connects with State Highway Route 58 which leads east for interstate connections via the Arrowhead Trail and the National Old Trail routes. It was recognized by the Highway Advisory Committee, in their report in 1925, as an important addition to the state system. Revision will make a marked improvement of the sharp curvature and steep grades on the present road. The distance is reduced from 66 miles to 60 miles.

The route is recommended as one important on state traffic classification. It is a passage over the Tehachapi range supplementing the Ridge route with relief thereto, is necessary for widely separated intercounty service, and is direct routing on interstate travel.

(Continued on page 20.)

April Bulletin of Snow Survey and Precipitation Data; Seasonal Forecast

THIS issue of the Division of Water Resources' monthly bulletin presents the results of the main snow survey for the season, covering some 160 snow courses throughout the Sierra; furnishes all available data to April 1st from the precipitation stations of the U. S. Weather Bureau, State, Districts, and Public Utilities in the mountainous portions of the various stream basins; and gives, based upon these data, the seasonal forecast for 1931 water supply.

Forecasts of stream flow are made at this time as the end of March is normally the period when the major storms have occurred and melting of the snow has barely commenced. Snow survey data at this time may therefore be taken as indicative of the April-July stream flow with later modification of estimates in accordance with subsequent storms, temperature and conditions.

A general summarization of all data shows:

1. The water content of the snow on April 1st of this year in per cent of the water content on April 1, 1930, varying from about 30 per cent for certain Owens Valley courses to about 70 per cent at courses in Merced basin with a general average throughout the Sierra of about 55 per cent.

2. For those few areas where snow surveys have been made for a sufficient number of years to permit the development of "normals," a water content of the snow in per cent of normal to April 1st almost as low as 10 per cent for one or two Owens Valley courses, nearly up to 50 per cent for Yuba basin courses and a general average of about 40 per cent.

3. The average precipitation to April 1st in per cent of normal to April 1st varying throughout the Sierra from 42 per cent for one station in Owens Valley to about 75 per cent for stations in Stanislaus basin with a general average of about 60 per cent, and an average for Los Angeles, San Gabriel and Santa Ana basins of 60 to 65 per cent.

4. The estimated 1931 seasonal stream flow in per cent of the 40-year mean (1889-1929) varying from 25 per cent for the Kings basin to 40 per cent for the Tuolumne basin with a combined figure of 33 per cent for the entire Sacramento and San Joaquin basins.

The data and estimates indicate for the Great Central Valley a water supply only better than the record low of 1924 by a small margin. It is to be anticipated, therefore, barring storms of most unusual magnitude and duration within the next few weeks, that

conditions of minimum stream flow with resulting salinity encroachment in the case of the Sacramento-San Joaquin Delta, may approach those of 1924.

FORECAST OF STREAM FLOW (APRIL 1, 1931)

FROM SNOW SURVEYS

These forecasts are made for those few basins or partial basins where the snow surveys have been conducted, according to the standard methods adopted, for a sufficient number of years to make it possible. (State of California Surveys began in 1930.)

YUBA BASIN

Area tributary to South Fork at Langs Crossing (Lake Spaulding).

Water content of snow in weighted per cent of normal for area (using Lake Spaulding, Cisco, Furnace Flat, Lake Fordyce, Soda Springs, Meadow Lake, Red Mountain, Sawmill Flat, Lake Sterling, Summit and Webber Peak snow courses) 38%

Normal April-July run-off of South Fork at Langs Crossing----- 240,000 acre-feet
Estimated 1931 April-July run-off-- 95,000 acre-feet
Area tributary to Bowman Lake.

Water content of snow in weighted per cent of normal for area above Middle Yuba at Milton and mouth of Jackson and Canyon Creeks (using Bowman Lake, Findley Peak, English Mountain, Meadow Lake and Webber Peak snow courses) ----- 37%

Normal April-July run-off for combined Jackson and Canyon Creeks and Middle Yuba at Milton (above Milton-Bowman tunnel diversion) 104,000 acre-feet
Estimated 1931 April-July run-off-- 38,000 acre-feet

TRUCKEE, TAHOE, CARSON AND WALKER BASINS

The forecasts for these eastern slope basins are compiled by the Forecast Committee of the Nevada Cooperative Surveys and have not been completed with this issuance of the bulletin.

FROM PRECIPITATION AND SNOW DATA

All available precipitation and snow data for the various basins have been analyzed to derive an estimate of the seasonal (October to September) stream flow in per cent of the 40-year average, 1889-1929, and these estimates are compared to the similar percentages

(Continued on page 24.)

Contractors Told Rolph Labor Program

THE employment of United States citizens on public works, who have been residents of California for at least a year; preference to married men in such employment; the maintenance of prevailing wage scales—these are cardinal points in the labor program of the Rolph administration, as outlined by Colonel Walter E. Garrison, director of the Department of Public Works.

Every contract signed by Colonel Garrison is accompanied by a letter to the successful contractor, requesting cooperation in making this program effective. Contractors as a whole have responded in a whole-hearted manner to Colonel Garrison's request.

The letters sent to contractors, in which this policy is definitely set forth, read as follows:

The enclosed contract, like most of the other contracts we are awarding at this time, is ahead of schedule. The object is to aid the unemployment situation in every possible way and to help to alleviate the present business depression.

Governor Rolph is very much concerned with this matter and has requested me to urge you to favor married men in the employment of your labor, as the burden of hard times falls heaviest on them. In this connection, we favor the policy of employing citizens of the United States who have been residents of the State of California for at least one year, and your efforts in this regard will be appreciated. It is also urged that you expedite this work as much as possible in order to lend your efforts in the recovery of business prosperity.

Another matter of much concern to the State at the present time and to the future prosperity of the nation is the matter of wage scale. It is our belief that the wages paid on this and other State contracts should be the prevailing wage in the locality, and we ask your serious consideration in dealing with this problem.

Your support in these respects will be very much appreciated.



COLONEL WALTER E. GARRISON

1930 FOREST FIRE RECORD

The fire-fighting organization of the forest service established a new record in 1930 in California by holding down the total area burned in the eighteen national forests in California to 35,000 acres. This was less than 20 per cent of the average annual loss from forest fires.

The average acreage burned annually in the California national forests is 188,000 acres, based on records for each year since 1909. The most disastrous year was 1924, when 551,000 acres were swept by fires. The only season that can be compared with 1930 for a low fire record is 1915, when only 41,000 acres burned.

"Do you know how to make a peach cordial?"
"Sure. Send her a box of candy."

HANDLING A WOMAN BY ELECTRICITY

A reader in New Jersey submits the following:

- If she talks too long—Interrupter.
- If she wants to be an angel—Transformer.
- If she is picking your pocket—Detector.
- If she will meet you half way—Receiver.
- If she gets too excited—Controller.
- If she goes up in the air—Condenser.
- If she wants chocolates—Feeder.
- If she sings inharmoniously—Tuner.
- If she is out of town—Telegrapher.
- If she is a poor cook—Discharger.
- If she is too fat—Reducer.
- If she is wrong—Rectifier.
- If she gossips too much—Regulator.
- If she becomes upset—Reverser.

—Hardware Dealer.

Lake Almanor Fish Hatchery

By CARL E. BERG, Engineer of Estimates and Costs, Division of Architecture

A FEW miles north of Lake Almanor, near Chester, Plumas County, stands the most recent of the Division of Fish and Game's fish hatcheries. This very appropriately has been named the "Lake Almanor Hatchery." From now on it will add its yearly quota of approximately four million



CARL E. BERG

trout fry to the many, many millions planted every year in California's streams and lakes by the Division of Fish and Game.

Designed by the Division of Architecture to be built of California lumber to harmonize with its setting in California's highland, it provides not alone the best facilities for successful fish culture, but also comfortable quarters for

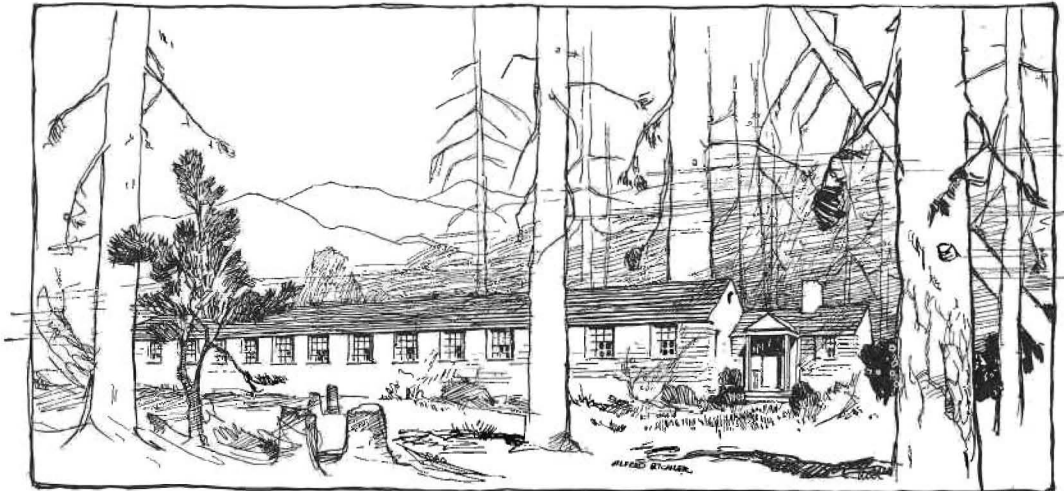
the man in charge and his family. The Red River Lumber Company of Westwood, California, who were the contractors, are to be complimented not alone for turning out a splendid job, but also for the speed with which it was done. Their construction force

under Mr. George Peltier, though carrying on the work in the winter months, completed their task in thirty working days, making it possible to have the hatchery finished in time for this year's hatching.

The hatchery itself is a frame building 40 feet wide and 150 feet long, well lighted, and affording ample room for 96 hatching troughs in which from early February, eggs from Rainbow, Lock Leven, Eastern Brook and Black Spotted trout will be hatched and the fry reared until ready for transplanting either into large rearing troughs or into streams and lakes of the surrounding country.

The all important cool, fresh water, without an abundance of which no fish hatchery can operate, is supplied by a never failing stream and, from behind a small concrete intake dam. A thousand feet of 10-inch riveted steel pipe carries by gravity 1000 gallons of water per minute into a screened and covered settling tank from which, after being freed from sand, leaves, etc., it flows into the hatchery head trough from where it is distributed through adjustable orifices into the hatching troughs.

Close to the hatchery is a comfortable cottage containing four rooms and bath, with running hot and cold water and wired for electricity, for the foreman in charge, and another cottage to house additional helpers will be erected later. A three-car garage pro-



Lake Almanor Fish Hatchery

vides ample storage for the hatchery's trucks and automobiles, it also has a large storage room in one end for wood, etc.

The Lake Almanor Hatchery is the ninth large hatchery designed and built by the Division of Architecture for the Division of Fish and Game. The other eight are located throughout the State as follows:

Mount Whitney Hatchery, near Lone Pine, Inyo County,

Kaweah Hatchery, Kaweah, Tulare County, Yosemite Hatchery, Yosemite National Park,

Lake Tahoe Hatchery, Tahoe City, Placer County,

Feather River Hatchery, Clio, Plumas County,

Big Creek Hatchery, near Swanton, Santa Cruz County,

Cold Creek Hatchery, near Ukiah, Mendocino County,

Mount Shasta Hatchery, Mount Shasta, Siskiyou County.

All these hatcheries are open to the public. The Division of Fish and Game invites everyone to visit them and see how the work of keeping up the supply of game fish in California's streams and lakes is carried on.

Already hundreds of thousands of people avail themselves of this invitation every year and the Lake Almanor Hatchery will undoubtedly attract a large number of visitors. It is located but a few miles from Chester on the Red Bluff-Susanville highway, and easily reached over a good road.

One night, just before closing up time, Ole Olsen came running into the general store, hatless, coatless and breathless, and dropping on his knees yelled: "Yon, Yon, hide me, hide me! Ye sheriff's after me!"

"I've no place to hide ye here, Ole," Yon Yonson, the proprietor, said.

"You moost, you moost," screamed Ole.

"Crawl into that gunny-sack, then," said Yon.

He had no sooner gotten hid than in ran the sheriff. "Seen Ole?" he asked.

"Don't see 'im here," said Yon, without lying.

Then the sheriff went nosing around and pretty soon he spotted the gunny-sack over in the corner. "Whats in here?" he asked.

"Oh, joost some old harness and sleighbells," said Yon.

With that the sheriff gave the sack an awful boot.

"Yingle, yingle, yingle!" moaned Ole.—*Pathfinder Magazine.*

A woman arriving in this country after a short visit to the continent was asked the usual question by the customs official at the landing port: "Anything to declare, madam?"

"No," she replied, sweetly, "nothing."

"Then, madam," said the official, "am I to take it that the fur tail I see hanging down under your coat is your own?"

POEM IS MADE PART

OF BID OF CONTRACTOR

ON DESERT ROAD JOB

When bids were opened by the Division of Highways recently, the following poem was found attached to a bid upon a Mojave Desert highway project:

THE MOHAVE SINK

The Devil in Hell one time was chained,
And there a thousand years remained,
He never complained, nor did he groan;
Just decided to have a Hell of his own
Where he could torture to like degree
All living things, and watch with glee.

So he asked the Lord, "Have you land to spare
That you would sell at a price that's fair?"
The Lord said, "Yes, I have plenty, I think;
I left it all down around the Mohave sink.
In fact, Old Boy, the stuff is so poor
I doubt it could be used as a Hell any more."

The Devil examined it closely and well,
But reported the country too dry for Hell.
So the Lord, to get it off his hands,
Told the Devil He'd water the lands,
As He had some water no longer of use—
Stagnant old bog holes that stunk like the deuce.

The Devil, tickled, danced round and round
In the place that's called "The Devil's Playground."
The trade was made, the deed duly given,
The Lord went back to His home in Heaven.
"Now," the Devil said, "this is all I have needed
To make a Hell," and at once he proceeded.

He piled the sands in queer ridges and drifts,
Shattered the rocks into ragged sharp rifts;
Scattered in places, a sparse growth of brush,
Caused hot winds to dance with a staggering rush;
He put ugly bugs in the stale water holes,
Made the sun shine down like a bed of hot coals.

With foot-evil he troubled the long-horn steer,
And with ticks infested the poor creature's ear;
He crazed the bronco with the loco weed
And poisoned the feet of the centipede;
He hid chuckwallas in crevice and cracks—
Ugly old lizards with scales on their backs.

To the jackrabbit he gave unbelievable speed,
Told kit fox to starve or on jackrabbit feed.
Through miles of country where one can't make a road
He put thorns on the foliage and horns on the toad;
He filled the sands with scorpions and ants,
You can't sit down 'thout half-soles on your pants.

With colonies of tarantulas he peopled the hills,
Made turtles eat cactus in spite of its quills;
Over rough, rocky crags caused big horns to roam,
Made the canyon cave the lynx cat's home.
The howl of the coyote through the dead of night
Makes the wanderer long for the morrow's daylight.

With mirages he fools the thirsty one's eyes,
Till he's lost in the wastes and in agony dies.
One can't describe the fear that prevails,
Shakes walk on their bellies and talk with their tails.
Round through the hills he scattered some ore,
Put false signs here and there to indicate more.

"THE DESERT RAT."

Copyright (1927) by Elmer Proctor, Yermo.

Officer is Cited for Unusual Services

STATE Traffic Officer L. T. Torres of the Santa Clara County squad has been formally cited for unusual service rendered as an officer in a special order issued by E. Raymond Cato, Superintendent of the California Highway Patrol.

The service performed by the officer included the arrest of two notorious "stick-up" men on February 25th and a man wanted for murder on March 7th.

On the first occasion, the citation order said: Torres, unassisted, arrested Homer Cooper and C. W. Carson on a stolen auto charge. Questioning developed that both had engaged in 29 holdups in Los Angeles in one of which three hotel guests were wounded. They are also alleged to have confessed membership in a gang of five criminals in Kansas City, Mo., which held up two banks and killed a traffic officer who attempted to prevent their escape. Torres found three loaded pistols on the men when arrested.

On the second occasion Torres arrested George Weyrauck and William Slinger on a similar charge. Questioning by Captain John Pacheco developed that Weyrauck was wanted for the murder of a Tacoma, Wash., service station attendant and the wounding of his wife. Both were identified as the men who participated in a series of burglaries in Oregon.

Torres joined the patrol in November, 1930.

Highway Patrol Courtesy Column

Testimony from Flower Festival.

Mr. Thomas F. McLoughlin, Manager National Mid-winter Flower Show, Encinitas, San Diego County: The above named association held its annual six-day show recently at Encinitas and was visited by Governor James Rolph and Lieutenant Governor Merriam.

During the six days enormous crowds visited the show and traffic on the Coast Highway in the vicinity of the show tent was heavy and congested.

I wish now to state, on behalf of the directors of this show, that no management could have had better assistance than was rendered by Capt. Otto Langer and his group of splendid officers. Not one single accident occurred and comments were heard on



TRAFFIC OFFICER T. L. TORRES

all sides about the way these officers helped the motor traveling public.

Trial Crowds

Well Handled.

From A. T. Dresser, Sheriff, Santa Cruz County: I want to take this means of thanking your department for the wonderful cooperation of your Santa Cruz County squad for assistance in handling crowds during the Thornewill trial when it was necessary to have uniformed men in the court room to handle the crowds, which were handled to my satisfaction and that of Judge Pullen of Sacramento, who sat in the case during the trial.

Through Captain Payton and his men we have had cooperation in other ways as well and I want to assure you that our office stands ready to assist your department at any time you need us.

Hold-up Men

Arrested.

From M. B. Driver, Sheriff of Alameda County, to Raymond E. Cato, Superintendent of the California Highway Patrol: Your letter of March 7th, making inquiries as to the arrest and disposition of three men by the name of J. L. Montgomery, J. R. Murray and Henry Melvin, who were held to answer before Judge Chas. A. Gale of Pleasanton, this county, is received.

We beg to advise that on the night of February 6, 1931, it was reported to our deputies, Mr. L. E. Van Patten and Mr. Hugo Radbruch, who live in the east end of the county, that some hold-up men were at work in Dublin Canyon at Boomer Hill, near Dublin. In their investigation of this stick-up our deputies met two of your men, Mr. C. K. Gill and Mr. C. Avellar, and gave them a description, as best they could, of the car and occupants in which the hold-ups were operating. Later on Mr. Gill and Mr. Avellar stopped the car as described and found three occupants whose names we have already mentioned. They immediately got in touch with our deputies, who took charge of the prisoners and took them to the Livermore jail. The next day the prisoners were arraigned before Judge Gale of Pleasanton and bound over to the superior court for trial. These men are now awaiting trial in the Alameda County jail.

It is my desire to thank you, and through you, your officers, who rendered such valuable service in this matter.

Your letter stating that you have instructed your officers to cooperate with all peace officers is highly appreciated. Through cooperation we can accomplish very much that it is impossible to accomplish by each group of officers working entirely independently of all other groups.

Thanking you again for your cooperative spirit, and, if you will please convey my personal compliments to the two officers mentioned, I will thank you.

Exhibit Is

Praised.

From D. E. Watkins, Secretary and General Manager, California State Highway Association: Permit me to comment favorably on the exhibit of the California Highway Patrol at the recent Pacific Automobile Show in Exposition Auditorium, San Francisco. I personally noted this exhibit and the excellent manner in which your staff took the opportunity of presenting to the motoring public the message of traffic regulation and highway safety. I hear many complimentary comments on this exhibit from my colleagues and from members of the California State Automobile Association.

Another noticeable feature was the courtesy of the members of your staff, Inspectors Charles D. Reade and Robert Coffey, Captain Albert O'Connor, and Patrolmen Otto Schramm, V. E. Dwelly, Avellar and Gill, who handled this work for you.

Squad Appearance

Complimented.

From Seth E. Howard, Brigadier General, C. N. G., The Adjutant General: Permit me to express my sincere appreciation for the courtesies rendered to me upon the occasion of the visit of Governor James Rolph, Jr., to Riverside and San Bernardino for the opening of the National Orange Show. May I also take this occasion to compliment the excellent appearance of your detachment of State motorcycle police together with the fine manner of performance in riding in formation.

Officer Was

Right on Job.

From D. P. Eicke, Stockton: I recovered the Ford car that was stolen from Stockton last Thursday and registered in the name of Mrs. D. P. Eicke, 673 Lexington avenue, in Modesto. I started for home and didn't get five miles when I was accosted by Officer C. A. Brink, whose star is No. 347. This was about five o'clock in the evening and the traffic was thick and speedy, yet as I pulled past he gave me the once over and the windshield mirror showed him whip out a book from his pocket and in less than a minute he had me off to the side of the road.

It was splendid work picking me out of all that traffic in such a short time. I wondered if you would drop him a card so that he might know that the public is appreciating such good officers.

Motorist in

Trouble Aided.

From R. M. Colelough, Sacramento: Two weeks ago, while driving on the Auburn-Grass Valley highway, I had brake trouble and was rendered prompt, courteous and efficient service by Officer Foyeur. Please be assured that the service is greatly appreciated.

Assistance

Appreciated.

From R. L. Dunn, Jr., San Francisco: I wish to call your attention to a very courteous act which was performed by one of your motorcycle officers operating out of San Luis Obispo by the name of Donnelly. On last Sunday my wife and I were returning from Los Angeles, and were stuck, due to motor trouble, on the grade about six miles out of San Luis Obispo. This officer came along, and stayed with us three hours past his regular time of duty to aid us and the party who was working on the job in a very ticklish spot on the road. I was so thoroughly impressed with this man's attitude and conduct that I want to call it to your attention.

Gave

First Aid.

From J. F. Stephenson, Hollister: I am writing to congratulate you on having such an efficient officer as Mr. L. Hamilton in this territory. I was changing a tire recently when the lug wrench slipped and cut my hand quite badly. Officer Hamilton, who was passing, stopped and gave me first aid in a very efficient manner, enabling me to proceed on my way.

(Continued on page 24.)

Legislative Committee Reports On California Water Problems

THE report of the Joint Committee of the Senate and Assembly dealing with the water problems of California was submitted to the Legislature on March 23d. This committee authorized by the 1929 Legislature was made up of the following legislators:

B. S. Crittenden, chairman, R. P. Easley, Edwin A. Mueller, Will R. Sharkey, Van Bernard, Frank W. Mixter, H. C. Nelson, Ralph E. Swing.

After dealing with the history of the water problem in California, and a detailed analysis of the problems and features that it presents, the committee recapitulates its findings as follows:

The following table sets forth the units proposed, with estimates of cost:

Kennett Reservoir, Afterbay and Power Plant	\$84,000,000
Contra Costa Conduit	2,500,000
Delta Cross Channel	4,000,000
San Joaquin Pumping System	15,000,000
Friant Reservoir and Power Plant	15,000,000
Aqueducts from Friant Reservoir	29,900,000
Rights of Way, Water Rights and General Expense	8,000,000
Total Great Central Valley	\$158,900,000
Santa Ana River Flood Control and Conservation Project	30,000,000
Grand total initial plan	\$188,900,000

In the report of the legislative committee of 1929, rather a complete statement of policies were suggested in State activities along these lines. We wish to reaffirm the policies set forth in that report.

We desire to reassert with reference to Mountain Problems of Northern and Central California that the foothill sections of Northern and Central California have furnished much of the basic wealth of our State and should not be overlooked in the development of water resources of those parts of the State. It is important that the State retain such authority over the water coming within its control as will insure a sufficient supply for use within the watershed where such water originates when and as the same may be needed and reasonable provision should be made for maintaining the mountain streams of such territories in the interest of and for the protection of fish and game and for supplying the reasonable demands of outdoor recreation and sports and the demands for all other beneficial uses. Economically speaking, lands farthest from market and from centers of population and land difficult of development are among the last to be brought under cultivation and unless provision is now made for caring for the demands of these lands as well as for the other beneficial uses when and as needed, the right for use for such purposes may be lost. Of the waters brought under control of the State the right of use of such part thereof as may be reasonably antici-

pated as necessary for supplying and caring for all the aforesaid uses should at this time be reserved, and allotted for such uses as required. In supplying areas of deficiency of water from areas of surplus only such water as is not needed to serve vested or other property rights, or necessary for supplying the uses and purposes hereinbefore mentioned should be considered and no water should be diverted from the area of origin which is now or which may ever be required for any beneficial use within such area of origin.

FINANCING

Your legislative committee in 1929, on the subject of financing, reported in part as follows:

"We feel that the Federal Government is interested in the development of Kennett, upon the grounds of its well established policies regarding navigation and flood control. Therefore, every effort should be put forth toward the adoption of the program of construction hereinbefore mentioned to obtain Federal aid. Whenever such Federal aid is obtained it should inure to the benefit of the State in repayment of the amount of money which the State may have advanced or reducing the amount of bonds to be sold in the construction of Kennett and the San Joaquin Valley project.

"We recommend that the Legislature memorialize Congress to at once investigate the need for this development and to approve the same and appropriate such sum or sums as it deems just in the premises."

In considering the question of financing this development the amount of money involved at first seems overwhelming; however, when we compare that investment with that which we make for our State highway system and compare the direct economic benefit to the State as a whole as well as to great numbers of private individuals, there is little doubt that the investments for water conservation would directly return to the people generally a greater economic benefit.

The money involved should be considered on the basis of an investment, not on the basis of the expenditure of money for social, political or educational purposes. It will not impair the credit of the State; it will increase it, because it directly increases the volume of property in the State.

Considering the amount of money involved from the standpoint of investment the question to be considered is:

What is it worth in dollars and cents to the property values of the property included in the State of California to have this investment made?

The difference between a copious supply of cheap water for agriculture, industry and domestic necessity and a scarcity of water for such purposes is directly illustrated in the difference between desert or semi-desert and highly developed properties containing orchards, dairies, cities and towns. The removal of the salt water menace around the great metropolitan centers and in the delta will be reflected in millions of dollars of increased value in property. To illustrate, the difference in being able to obtain liberal bank loans on land and not to be able to obtain

them scarcely at all, to be able to have ample supply of water in the fertile lands of the counties of the southern San Joaquin or to have shrinkage of population, withdrawal of loans, decrease in all business activities. Ample supply of water will be reflected in increased transportation, increased consumption of products, increased growth in the cities, bank deposits, increased activities in everything that goes to create a healthy economic condition.

To our minds the investment of the money herein mentioned would be reflected before the construction could be completed in increased State, Federal and county taxes sufficient to justify the investment even though the entire sum were paid by the State and Federal governments.

This is not a fanciful theory or a new idea in government. Many of the oldest countries in the world have owned, operated and furnished to the public their public water developments, because of the State's interest in the same.

In the early history of California when its population was sparse it was possible for individuals to develop their own water supply or for improvement districts comparatively small in size to do the same. This condition has changed. The local supply has been depleted and now it becomes necessary in all development to take into consideration the entire picture.

Speaking more definitely in regard to northern California project we believe the State and Federal governments should each contribute heavily toward these developments, that the Federal Government is justified from the standpoint of navigation, flood control and reclamation in contributing at least \$20,000,000 toward the entire amount; that the State as it becomes necessary should match this amount; that the original money should be advanced by the Federal Government and that the State should guarantee the repayment to the Federal Government in all sums in excess of the amount of \$20,000,000.

We recommend the advancement of money by the Federal Government and the guarantee of the return of the same by the State, and the guarantee should be made when the State has succeeded in entering into contracts with responsible parties for the repayment of all of said moneys and interest within a period of fifty years or thereabouts. That the State should be given power to enter into contract with persons, corporations, cities, counties and districts, for the purchase and sale of power and water and that in general the State should take over the direction, control, management in a general way of the construction and operation of all of the units in the central basin of California. That it should be given quite liberal power in the negotiation of such contracts on such terms as the Legislature may from time to time prescribe.

We believe that the Federal Government should be called upon to furnish the money at a very low rate of interest of approximately $3\frac{1}{2}$ per cent and that some money should be furnished the San Joaquin unit free.

The Santa Ana project should be worked out on the same basis as flood control and reclamation problems of the Sacramento Valley were solved. That is one-third be paid by the State, one-third by the Federal Government and one-third locally.

We recommend that suitable constitutional amendments be introduced and adopted at this session of the Legislature authorizing the carrying out of the recommendations hereinbefore made. We further recommend that a special tribunal be created for the determination and appraisal of water rights and other properties that might be involved in such development.

We recommend that great care be given to the

Governor Signs Gasoline Tax Collection Laws

LEGISLATION designed to tighten up the gasoline tax collection laws and prevent oil companies from defrauding the State out of tax has been approved by Governor Rolph.

The gasoline tax bills were introduced by Senator Arthur H. Breed, Piedmont, after the state board of equalization disclosed that approximately \$1,250,000 was due the State in delinquent taxes.

Four amendments were written into the State gasoline tax act, as follows:

1. Collections to be made by the State monthly, instead of quarterly as at present.
2. Oil firms must post bonds guaranteeing payment of the levy.
3. Tax laws strengthened to prevent the sale of gasoline in California, which previously was reported as exported.

4. Preventing unauthorized blending of motor vehicle fuel, by demanding licensing of all producers and brokers dealing in products which may be made into gasoline.

The tax evasions were caused by dealers who reported the gasoline as being sold for export, and then sold it in California, and the fact that some small firms were forced to the wall by periodic gasoline wars leaving these taxes unpaid.

Sambo, a southern darkey, married Liza. In about two weeks he came to the reverend gentleman who had tied the knot, looking as if he had lost his last friend in the world.

"What's the matter, Sambo; aren't you happy?" the preacher inquired.

"No, suh, pahson. Ah wants a divorce."

"I'm sorry to hear that, Sambo, but you must remember that you took Liza for better or worse."

"Ah knows dat, pahson, but she's wuss den ah took her fo'."

The weatherman dreamed that himself was dead;
That he stood by his monument, tall, and read
The message thereon—and he hung his head,
For "Probably Warmer" was all it said.

protection of the present and future needs of all portions of the State where water may be stored and from or through which it may be diverted from its natural course or courses, that it be understood to be fundamental that it is not only wrong but economically unsound to injure materially one section in order to benefit another.

We urge that prompt action be taken, that in so doing great care and consideration be given to the needs of all who may be affected. We believe it to be a short-sighted policy, however, for districts not immediately benefited to fail to take interest in this State-wide plan.

State-County Road Mileage Study

The California Highway Patrol today announced the results of a survey of road mileage in California Taken to provide the basis of studies for a more adequate and equal distribution of traffic officers.

The survey was announced as covering both paved and unpaved county and state roads in each county. The information thus secured is to be used for an index system combining factors relative to accident hazard such as population and traffic density, motor vehicle registration, etc.

The patrol's survey, based on statistics gathered by traffic officers in the various counties, showed a total of 74,492 miles of public highway in the state.

This figure, which does not include city streets or private roads is divided as follows: Paved county roads, 8970; unpaved county roads, 59,184; paved state roads, 4118; unpaved state roads, 2219.

Under paved roads are listed all concrete-asphaltum, concrete, and macadam roads. Under unpaved roads are listed all dirt, gravelled, graded and oiled roads.

Tulare County with a total mileage of 4650 leads the list of counties. Fresno County is second with 4569. Other counties are shown by the following table:

County	County roads			State highways			Grand total
	Paved	Unpaved	Total	Paved	Unpaved	Total	
Alameda	177.79	354.70	512.49	57.10		57.10	569.59
Alpine		32	32	.086	67.014	67.10	99.10
Amador	8	368	376	44.236	58.364	102.60	478.60
Butte	302.52	1,078.79	1,441.31	65.09	42.21	107.30	1,548.61
Calaveras		295	295	33.894	66.306	100.20	395.20
Contra Costa	173	417	590	21		21	611
Colusa	55	660	715	57.608		78	793
Del Norte		164	164	81.426	12.674	94.10	258.10
El Dorado	157	1,063	1,250	52.829	68.471	146.30	1,396.30
Fresno	285	4,260	4,486	59.379	24.221	83.60	4,569.60
Glenn	40	1,160	1,200	51.69	8.31	60	1,260
Humboldt	67	1,151	1,258	128.618	81.782	210.40	1,468.40
Imperial	73.5	2,426.5	2,500	152.50		152.50	2,652.50
Inyo		608	608	99.19	70.81	170	778
Kern	199	2,761	2,960	227.145	129.755	356.90	3,316.90
Kings	112	1,510	1,622	30.80		30.80	1,652.80
Lake	28.5	571.5	600	50.769	36.831	87.60	687.60
Lassen		1,650	1,650	47	60.90	107.90	1,757.90
Los Angeles	1,307.56	2,419.69	3,727.25	203.544	49.856	253.40	3,980.65
Madera	61	1,459	1,520	44		44	1,564
Marin	74.9	228.1	303	38.5	4.60	43.10	346.10
Mariposa		1,000	1,000	40.189	16.511	56.70	1,056.70
Mendocino		357	357	139.53	50.17	189.70	546.70
Merced	135.50	1,774.50	1,916	91.80		91.80	2,001.80
MODOC		739	739	10.315	72.885	83.20	822.20
Mono		280	280	12.585	131.015	143.60	423.60
Monterey	262	799	1,061	117.074	63.026	180.10	1,241.10
Napa	80.3	384.7	465	26.30		26.30	491.30
Nevada		525	525	65.27	51.03	116.30	641.30
Orange	244	680	924	71.20		71.20	995.20
Placer	100	605	705	124.60	1.71	126.40	831.40
Plumas		246	246	9.20	39.90	49.20	295.20
Riverside	281.05	1,870.32	2,151.37	120.741	59.459	180.20	2,331.57
Sacramento	283	1,717	2,000	89.609	5.391	95	2,095
San Benito	40	407.25	447.25	27.90		27.90	475.15
San Bernardino	438.7	2,319.3	2,758	234.204	255.296	489.50	3,247.50
San Diego	183.53	2,394.37	2,577.90	93.902	24.898	118.80	2,696.70
San Francisco	630	240	870	2.20		2.20	872.20
San Joaquin	670	1,500	2,170	103.163	1.137	104.30	2,274.30
San Luis Obispo	78	1,125	1,203	117.854	38.746	156.60	1,357.60
San Mateo	95	45	140	75		75	215
Santa Barbara	555	175	730	96.527	35.073	131.60	861.60
Santa Clara	266	884	1,150	99.350	8.25	107.60	1,257.60
Santa Cruz	125	375	500	26.280	28.42	54.70	554.70
Shasta	8	1,856	1,864	109.42	74.68	184.10	2,048.10
Sierra		200	200	1.65	28.85	30.50	230.50
Siskiyou	33.5	1,256	1,289.5	66.309	115.591	181.90	1,471.40
Solano	43	690	733	69.10		69.10	802.10
Sonoma	265	1,235	1,500	93.50		93.50	1,593.50
Stanislaus	160.75	1,001.25	1,162	49.50		49.50	1,211.50
Sutter	163	542	705	28.50		28.50	763.50
Tehama		916.75	916.75	100.74	29.76	130.50	1,047.25
Trinity		340	340	.794	112.806	113.60	453.60
Tulare	208	4,347	4,555	95.488	.112	95.60	4,650.60
Tuolumne	30	245	275	34.358	122.242	156.60	431.60
Ventura	239.55	346.1	585.65	61.20		61.20	646.85
Yolo	80	720	800	48.30		48.30	848.30
Yuba	60	420	480	18.06	26.04	44.70	524.70
Total miles	8,970.65	59,184.82	68,155.47	4,118.506	2,219.094	6,337.40	74,492.87



State of California

GOVERNOR'S OFFICE

SACRAMENTO

March 6, 1931

JAMES ROLPH, JR.
GOVERNOR

Mr. Thos. E. Stanton, Jr., President,
California State Employees' Association,
Room 404 B, State Capitol,
Sacramento, California

My dear Mr. Stanton:

I was very glad to receive your letter of February 25th, setting forth the purpose of the California State Employees' Association, and desire to commend the employees of the State for their initiative in taking this step.

Throughout my entire period of public life, I have been most interested in the welfare of the public employees. I actively sponsored the retirement and civil service measures in the City of San Francisco.

Organizations such as yours can be a source of much good when conducted along proper lines, free from political motives and entanglements. Let me urge your Association to always maintain the high ideals set forth in your Constitution.

I sincerely appreciate your kind assurance of cooperation and support in making my administration a successful one, and in return desire to assure you of my confidence in the sincerity of your purpose. You may convey to the employees of the State my cordial good wishes for the success of the California State Employees' Association.

Very sincerely yours,

A large, stylized handwritten signature in black ink, appearing to read "James Rolph, Jr.", written over the typed name.

Governor

Press Comment on State Highway Affairs

Highway Commissioner Commended.

That a good public servant is not without honor even in his own country is evidenced by the following article appearing in the *Riverside Enterprise*:

Frank A. Tetley, State Highway Commissioner, was honored Monday by the Board of Supervisors with a resolution in return for the manner in which he is supporting an adequate southern California highway program, particularly in Riverside County.

Mr. Tetley is giving a great deal of his time to legislative matters affecting all of this part of the State, particularly those in Riverside County. His many years of business operations in all parts of the southern counties qualify him to understand the problems to be met better than most public officials.

The recognition by the county supervisors of just what he is doing is merited.

* * * * *

Illegal Signs Removed.

The article below is from the *Santa Barbara Press*:

Santa Barbara County's scenic roadsides are being partly cleaned of signboards by the district state highway maintenance crew, it was announced yesterday from the office of the County Planning Commission. Similar work is being done in other counties.

During the past few weeks thousands of signs in this county and in San Luis Obispo and Ventura counties have been taken down by the county and State road crews. Only those signs placed on ranch properties without the permission of the owners are removed. Work is concentrated on scenic sections of highway. Signs are encouraged in commercial districts.

Santa Barbara County, while relatively clean of billboards and signs, is occasionally flooded with signs, County Planning Director L. Deming Tilton said. The county crews are watching the roadsides carefully to keep the signs at a minimum in scenic sections.

* * * * *

Toll Bridge Purchase Praised.

The following editorial is from the *Riverside Press*:

It is good news that the states of California and Arizona have reached an agreement with the owners of the Blythe-Ehrenberg bridge for the purchase of that structure. * * *

Governor Rolph is entitled to great credit for working out this arrangement with Arizona. The achievement is one that does credit to his tact and ability to handle such a difficult problem which has been created by the antagonism toward California that has in the past existed on the part of Governor Hunt of Arizona.

Highway Commissioner Tetley of Riverside has also rendered valuable service in the matter.

* * * * *

Rolph Administration Vindicated.

Apropos of the above, the following editorial is from the *Redlands Facts*:

California and Arizona appear to be working toward a common purpose at last. The important incident is common purchase of the Blythe bridge that the highways connecting the two states may be taken into the Federal aid system. Governor Rolph, if he makes friendly relationship with Arizona, will have vindicated his administration at the start. The nonsense of ill feeling between the states has existed long enough, and has had a great deal to do with the persistent bitterness concerning the proposed Boulder Canyon development.

* * * * *

Right to the Point.

Very pertinent comment by the *Tulare Times*:

California is spending millions to do away with grade crossings. A nearby example of the huge expenditures made for this purpose will soon take place here, when the Highway Commission builds eight miles of new road to obviate two railroad crossings. With safety first as a motto, the State is expending vast sums for the protection of the careless driver. The State seems to think more about the lives of the heedless drivers than they do themselves, which of course is the right policy.

* * * * *

Benefit of Roadside Burning.

The following testimony of the benefit of roadside burning is given by the *Colton Courier*:

Although many of us have doubtless at various times questioned the advisability of expending money in removing the weeds from along the highways, there are figures to prove that the expenditure of money for that form of public improvement has been more than repaid in the saving of property through elimination of roadside fires.

An example of this saving is shown right here in our own county where there was formerly one fire to every ten miles of highway through grass land and brush each year. After roadside clearing had been established the fires were lessened and last year there was not a single roadside fire in the entire county where the highway had been properly cleared, irrespective of the amount of travel over many sections of the popular roadways into the mountains.

Good Road for Hot Dog Stands.

Says the *Chico Enterprise*:

The reaction of R. A. Sherwood of Chico to the aspersion of Jo Boucher and N. D. Bruce of Paradise to the effect that the Deer Creek road, as depicted in a map of northern California highways and proposed highways in Wednesday's *Enterprise* is a bologna road, is that nothing links up like a sausage.

Highway Policy Commended.

The *Modesto News-Herald* makes the following editorial comment:

The State Senate Committee on Roads and Highways has voted to stick to the policy of providing money only for those roads that are included in the budget prepared by the State Highway Commission.

That is the wise and sensible thing to do.

For this budget is prepared after a thorough and impartial study of the whole situation by the engineers of the Department of Public Works. It seeks to be fair to all sections; and at the same time include only such improvements as there is money in sight to pay for.

If exceptions are made to its recommendations, the bars will be down and the highway system again will become a legislative football and pork barrel.

Getting To Be a Habit.

The *Pacific Palisades* tells the following story:

Last Friday afternoon a rock truck belonging to the State Highway Maintenance Department, operated by Arthur C. Humphrey, went over the bank near Castellammare, severely bruising the driver about the face and shoulder, and injuring his ribs.

Humphrey was unloading rock along the beach. The tongs held on to a heavy rock and before it could be released pulled the truck over the bank, Humphrey going down with it. He was taken to a doctor in Santa Monica by Frank Fay, the actor, who happened to be passing at the time, and later was moved to his home.

This is the sixth time Humphrey has had an experience of this kind, and each time it has happened on a Friday.

Commissioner Hopkins Wins Warm Praise.

This is from the *Tehachapi News* of March 20th:

The Tehachapi Highway—and we can now say that, with much pride—has an able champion in State Highway Commissioner Harry A. Hopkins of Taft. One of the first things Mr. Hopkins did on taking his seat on the Commission was to make himself vigorously heard in favor of this main artery and which has been fought through two administrations. The Commission unanimously endorsed the Edwards bill, Chairman Earl Lee Kelly declaring: "The roads in the rural sections of the State must be developed both to take

Dam Supervision by State is Commended

THE leading article in the January number of *Pacific Service Magazine* is a resume on State supervision of dams by A. H. Markwart, vice president of the Pacific Gas and Electric Company. We quote in part from this article as follows:

The failure of the St. Francis dam focused the attention of the State legislative body on the necessity for concentrating the supervision of dams under one central control. As a result, the 1929 Legislature, under the police powers of the State and for the purpose of safeguarding life and property, invested the duty of the supervision of the construction and maintenance of all dams, with the exception of those owned by the United States, in the Department of Public Works, under the administration of the State Engineer. This law repealed all other State acts governing the supervision of dams.

The new California law states that all dams in the State, whether heretofore or hereafter built or then under construction, shall be under the jurisdiction of the Department of Public Works, as administered by the State Engineer, and that it shall be unlawful to construct, enlarge, repair, alter, remove, maintain or operate any dam except with the approval of that department. All dams fifteen or more feet in height from the stream bed to the crest of the spillway, or impounding ten acre-feet or more, are subject to this control.

In the administration of the duties conferred upon the State Engineer by the new legislation, a fine spirit of cooperation has been evidenced at all times. Dam construction has been termed "a splendid adventure," and true it is, for unforeseen and difficult conditions arise and alteration in the original plans and decisions must be made with the least possible hindrance of the work. Such situations, as they arise, require the fullest cooperation among all parties involved. In this the State representatives have been most helpful, and have shown their understanding of their duty which, under the police power of the State, is primarily to see that public safety is assured.

care of their own and traffic needs, and also to provide transportation facilities in and out of the metropolitan centers. Governor Rolph expressed this thought in his very able inaugural address."

An Improved "Unimproved" Highway.

Under the heading Technically Unimproved, the *Marysville Democrat* comments as follows:

Although the Tahoe-Ukiah Highway between Marysville and Grass Valley is labeled on the latest map of the State Department of Public Works as "unimproved," the motorists who have been using it for years are of the opinion that it is vastly improved since the State took charge of it.

The designation on the map is meant only to differentiate between that type of improvement and other types in use by the State. The entire section between Marysville and Grass Valley has been improved by regrading, widening, change of alignment, removal of

(Continued on next page.)

CALIFORNIA HIGHWAYS AND PUBLIC WORKS

Official journal of the Division of Highways of the Department of Public Works, State of California; published for the information of the members of the department and the citizens of California.

Editors of newspapers and others are privileged to use matter contained herein. Cuts will be gladly loaned upon request.

COLONEL WALTER E. GARRISON.....Director
GEORGE C. MANSFIELD.....Editor

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Vol. 9 APRIL, 1931 No. 4

Law Is Cited of Responsibility for Children Motorists

THE California Highway Patrol calls the attention of the motoring public to provisions of the law setting up the method whereby parents and others who have signed the application of a minor for an operator's license may be released from the liability they have assumed.

The Division of Motor Vehicles, it was stated, can not under the law accept an application for release from liability unless the application has been verified and properly notarized as required by law.

Persons seeking to file such release applications were advised to secure from the nearest branch office of the patrol a correct form which has been devised. These forms are now available at all branch offices of the Division and the patrol.

Under the present law no minor may obtain an operator's license unless the application is signed by both parents, if both are living, or by his guardian, employer or other person having custody of the minor. The person or persons signing the application then become liable for damages caused by the minor as a result of negligence. The only exception is when the minor is driving a vehicle as the agent of someone other than the person signing the application.

In cases in which the person signing the application of a minor makes formal request for release from liability the law requires the Division of Motor Vehicles to cancel the license.

AN IMPROVED "UNIMPROVED" HIGHWAY

(Continued from page 18.)

stones and resurfacing, yet this is not sufficient to constitute improvement as rated by the State. Formerly rough, narrow and unsurfaced, the highway easterly from Marysville is now smooth, wide and oil surfaced, with the exception of four miles that will be rebuilt this year. It is now a highly popular route into the hills and mountains, and is part of an excellent scenic loop out of Sacramento.

"Boy, wahh did you say you got wounded? In whut battle?"

"In de Doggone Forest," promptly replied Rastus.

"You mean the Argonne?" someone asked.

"Well," said he, "maybe they are gone now, but they wuz there then."

"NOT AN UGLY HIGHWAY IN CALIFORNIA"

(Continued from page 2.)

Whatever the individual opinion of the reader may be, relative to billboard advertising, certainly there can be no great difference of opinion as to the need for eliminating any ill-placed signs from areas fronting on highways. This statement is made not alone with regard to the billboards erected by the larger out of door advertising concerns, but is also directed against the motley and discordant array of signs with which many local merchants litter up the landscape along the highways leading into their cities. These signs have no advertising value to the merchant, but serve only to create the impression upon travel that the particular town in which these merchants may live holds beauty in little regard.

ROADSIDE BUILDINGS

Again a highway lined with ugly, untidily planned and unattractive buildings can never be a beautiful highway. Nor is there any excuse for any such structures here, for in California the flowers, the shrubs and the trees of the whole world are available for planting. Beauty here need not cost money. It can be literally had without money and without price. It need only be desired.

AN ADMINISTRATION AMBITION

My ambition for the present highway administration is a longer program of highway beautification. Our slogan should be, "Not an Ugly Highway in California." I know of no greater contribution than this that the administration of Governor Rolph can make to the State highway system of California. It fits into the spirit of his administration. It fits into the spirit of California.

While Mark Twain was editor of a Missouri paper, a subscriber wrote to him saying he had found a spider in his paper and asked Mark whether this was a sign of good or bad luck. The following was the reply of the humorist:

"Old Subscriber: Finding a spider in your paper was neither good nor bad luck for you. The spider was merely looking over our paper to see which merchant is not advertising, so that he can go to that store, spin his web across the door and lead a life of undisturbed peace ever afterward."

The little son of a minister had been very naughty and as punishment he was not allowed to eat with the rest of the family, and a small table was set aside for him. On being given his food at this table for the first time, the little chap said very solemnly: "Lord, I thank Thee. Thou hast spread a table before me in the presence of mine enemies."

GOVERNOR ROLPH SIGNS BILLS PROVIDING ORDERLY ADDI- TIONS TO STATE HIGHWAYS

(Continued from page 6.)

H.—An extension of State Highway Route 61 from Red Box to a connection with State Highway Route 62 near Big Pine Flat; 37 miles: Los Angeles County.

This is strictly a recreational project proposed at this time because the demand for such highways within a short distance of the enormous population centered in Los Angeles County and vicinity is insistent. In this section of the south, the desire of tourists and of valley residents to make the most of every opportunity to spend leisure on recreational drives has resulted in phenomenal use of road facilities that provide such pleasure. Large local expenditures are annually made to extend the ways into the mountains. The timbered areas are few and water supply is limited. Where these are both available the incentive to reach them is strong. Their development approaches, in the south, a necessity rather than a luxury, even in face of the extreme costs of road building in these southern mountains.

Pressure for access to the cool and scenic mountain heights at the heads of the Arroyo Seco and the San Gabriel rivers accomplished inclusion in the state highway system of route 61 and route 62. The same urge initiates the present proposal to extend along the mountains a connection between these routes. It qualifies as a road which will carry such state classified traffic, as a relief for congested state roads of like nature, and as a necessary addition to justify expenditures on State Route 61.

I.—A highway from Los Angeles to a connection with State Highway Route 26, east of Colton; 42.5 miles: Los Angeles and San Bernardino counties.

In the confined territory east and southeast of Los Angeles, that widens as it approaches San Bernardino and Riverside, the nature of local arteries has broadened in function and of necessity has resolved into several principal routings to Los Angeles from individual centers east thereof: the routes near the coast, the Foothill boulevard at the base of the mountain range, and, between these, more direct passages. This route is one of the intermediate routes following in large part county roads that are ideally located. It leaves Los Angeles midway between two congested

arteries—Whittier boulevard and the Foothill boulevard—utilizes Garvey and Holt avenues through developed territory where radical changes in location would incur prohibitive right of way costs and connects with State Highway Route 26 near Colton.

The route qualifies on large present volume of state traffic carried, on relief to other state roads and as a link in interstate routing.

J.—A highway from the southern terminus of State Highway Route 43 to Newport Beach via the Santa Ana Canyon; 63 miles: San Bernardino, Riverside and Orange counties.

A line from San Bernardino to the coast through the cities lying northeast and southwest of the Santa Ana Mountains practically makes a right angle with the coast line at Newport Beach, and is, therefore, the most direct line to the coast through an area that includes Colton, Riverside, Corona, Santa Ana and Orange. This line closely follows the course of the Santa Ana River, which breaks a pass through the Santa Ana Mountains and the Puente Hills and provides the only practicable highway location along the direct line mentioned. All other main routes cross it at right angles.

This artery is well fed by local, intercommunity and intercounty traffic. Additional traffic in large quantity is of a recreational nature, those from the coast towns seeking the mountains through San Bernardino, Redlands and Riverside, and those from the interior valley making their way to the coast. By this attractive route traffic between termini or subtermini will avoid the inconvenience and congestion of longer and busier thoroughfares to the west. With the astonishingly rapid development in this area both to date and expected in the future, the routing is essential if the state is to render adequate service, protect a large initial outlay, and economize by taking advantage of the present opportunity to establish permanent routing.

The route qualifies for inclusion in the state system because it now carries a large volume of state traffic. It will form a logical unit of the state system covering this section without being supplanted by parallel service of equal value.

K.—A highway from Riverside to Beaumont; 19.5 miles: Riverside County.

The county highway between Riverside and Beaumont, commonly referred to as the Jack-rabbit Trail, is used by many as a by-pass of State Highway Route 26 in breaking across country between points east of the former city and west or south of the latter. From Beaumont but a small rise is required to the

pass in the San Jacinto Range from which the road descends to the San Jacinto Valley and through the Alessandro Valley to a junction with the Inland route. Realignment of portions will bring this route to a high standard. It would then be equal to State Route 26 in distance between Beaumont and Los Angeles points, be shorter for traffic between Beaumont and Riverside or points southwest thereof, have no interference through contact with cities en route, and be of decided advantage to commercial vehicles trucking westerly from points east of Beaumont (including the Imperial Valley) since the appreciable grades descend in a westerly direction.

It will make advantageous connections westerly through Riverside with State Highway Route 19 and the route through Pomona to Los Angeles; southwesterly with the proposed state highway through Santa Ana Canyon and to the beaches; southerly with the Inland route, Riverside to San Diego; and easterly through State Highway Route 26 to the Imperial Valley and transcontinental highways. From Beaumont easterly to the Imperial Valley is a source of supply for truck and farm produce which the Los Angeles area will absorb as fast as it can be supplied. Colorado River prospective water supply projects will create on this route a volume of new traffic of a State and intercounty character.

This route, now so well patronized as an alternative of State Route 26 even though its standards are relatively low, will continue to induce traffic. Since the majority of that traffic is intrastate in character, the volume is considerable and a relief to route 26 would be economically furnished, the route qualifies for State inclusion. By-passing the Redlands and San Bernardino highway by deflecting the trucking element over this more advantageous routing is an economic policy.

L.—A highway from Riverside to San Diego; 95 miles: Riverside and San Diego counties.

The Inland route from Riverside to San Diego is an old established county routing which passes through many settlements and towns in plains and in narrow valleys lying in a semimountainous district between the aforesaid termini. Riverside and San Diego counties have paved this route in the past, making a serviceable road for light traffic. For increased volume and speed much of the alignment is too sharp. The length of ultimate State routing from Riverside to San Diego termini would be 20 miles shorter than the existing highway.

The Inland route offers the most direct passage for traffic to and from San Diego which would lead through Riverside and any of the territory north of that city or northwest as far as Ontario, all of which is or will be coordinated by direct State highways. Resorts and attractive country en route induce a recreational traffic. It can, therefore, be classified as important for a link in the State system. Without its inclusion a county highway must assume service of a State nature, service not supplied by direct routing on the State system.

It qualifies for State inclusion by volume of intercounty and intrastate traffic it now carries, by reason of relief it will afford to present heavily traveled State roads and as an advantageous component of a comprehensive State system.

M.—A highway from Pomona to Temecula; 56 miles: Los Angeles and Riverside counties.

A valuable adjunct in state road systemization would be a short cut to the Elsinore Lake district and to the Inland route from the territory between Corona and Pomona and the territory north and west of Pomona. It would prove a convenient approach to the Inland route for the Los Angeles and Pasadena vicinity. From extreme points in Los Angeles it offers an alternative passage to San Diego which, though longer than the coast route, will avoid restrictions to speed on the coast route, caused by congestion and delays within more numerous cities.

The general course of the proposed route is very direct from the western terminus near Pomona to the Santa Ana Canyon near Prado and through Temescal Canyon to Lake Elsinore and to Temecula on the Inland route. Correct location for an economical direct highway will be possible if defined before it becomes prohibitively encumbered by improvements en route. The most favorable of existing road facilities could be utilized.

On the basis of expected increase on improved routing, on the normal increase of local development, on the value this route would give as an inland passage from eastern Los Angeles vicinity to San Diego, and on its recreational value, it is estimated the route will, by 1940, carry 6450 vehicles on Sundays and 3100 vehicles on week days, these being average twenty-four-hour daily estimates.

It qualifies for State inclusion on road systemization, on relief to the Coast route and on present and probable future volume of State traffic thereon.

N.—A highway (a) from Blythe to the California-Arizona State line at the Colorado River and (b) from State Highway Route 26 near Indio to a connection with State Highway Route 64; (a) 4 miles: (b) 19.5 miles: Riverside County.

State Highway Route 64, made a State highway by constitutional amendment, 1919, does not connect with a State highway, at Mecca on the west and terminates on the east at Blythe, 4 miles from the State line. As a link in transcontinental routing, the State route should extend from the State line to a junction with some other State route. Proposed for inclusion in the State system are the two sections which will rectify deficiency in present designation of routing and will complete the route for proper termini connections.

Approval of the requests of Arizona and California to place this route on the federal aid system has been granted by the Secretary of Agriculture. Designation of a unit with connections to the State line and to another established route in California is essential. The proposal qualifies for State inclusion as a necessity on interstate connection.

O.—A highway from National City to the United States-Mexico international boundary near Tia Juana; 10 miles: San Diego County.

There is no State highway south of San Diego to the International Boundary. San Diego and the contiguous municipality, National City, extend city limits to within 10 miles of Mexico, said 10 miles being traversed by county highways.

The recommended location would utilize portion of county road with an ultimate connection to the Mexican line that depends upon the final site for the U. S. Customs House, as yet undecided.

The routing will carry a large volume of local traffic but when the proportion of such which can be analyzed as of a transient nature is added to the number which originate at distant points we find that this routing services principally a class of traffic of State rather than local nature.

Present traffic is sufficient to justify a first class highway and State control of same. The international connection on the Pacific coast should be a State highway. The road down the Mexican coast extends far and will undoubtedly be continued farther. The road is classified for inclusion on volume of State traffic and as an international road connection of importance.

P.—A highway from Calexico to State Highway Route 27 near El Centro; 8.5 miles: Imperial County.

The proposed road for State inclusion is

between State Highway Route 27 near El Centro and Calexico on the Mexican border. Its northern terminus is near the junction of the three State highways, routes 12, 26 and 27, in the center of the intensely cultivated irrigation district of the Imperial Valley that contains the large towns of the southeast portion of the State. The southern terminus is the only important entrance from California to Mexico east of the Pacific coast. The proposed route accordingly provides direct contact for all the highways that converge in this vicinity and for all the community, development and international interests centered at this point.

This project qualifies upon its classification of international highway connection. It coordinates the present State highway system with such a connection and with highway development proposed by the county through the heart of Imperial County.

Q.—A connection from State Highway Route 63 to the California-Nevada State Line; 24 miles: Mono County.

Oasis is the eastern terminus of State Highway Route 63. A 2½-mile gap over Fish Lake Valley intervenes between Oasis and the California-Nevada state line, where Nevada state highway proceeds northeasterly. Inclusion of this short section as a State highway will close the gap between the California and Nevada highway systems, will afford a complete interstate connection and correct an obvious error in State highway designation.

R.—A highway from Castaic Junction to a connection with State Highway Route 2 near Ventura; 39.5 miles: Los Angeles and Ventura counties.

A well traveled county highway follows the Santa Clara River drainage from State Highway Route 4 near Castaic Junction to State Highway Route 2 near Ventura. It furnishes service for the following traffic: (a) Local traffic originating along its route, comprising considerable intercourse between Ventura, Santa Paula, Fillmore and Piru and including the trucking and domestic movement from many ranches and orchards in this river valley. (b) Intercounty traffic from points along the coast between Santa Barbara and Ventura vicinities to points in the northwest part of Los Angeles County. (c) State-wide traffic whereby the best facility is offered by this route for those from or to the Coast route near Ventura to or from the State Highway over the Tejon Pass into the south San Joaquin Valley and to or from the State Route 23 northeast of Castaic. Because of the absence of appreciable grades thereon and because it

avoids congestion on routes closer to Los Angeles, the route is taken by many who leave the coast near Ventura for San Fernando Valley and points easterly via State Highway Route 9, the Foothill boulevard through Pasadena, San Bernardino, etc. Improvement of this route to eliminate sharp unnecessary turns and hazardous rail crossings, and to provide satisfactory width and type of pavement would greatly increase through travel thereon. By 1940, traffic of 7000 and 5000 vehicles for 24 hours on Sundays and week days, respectively, would be a conservative estimate.

It qualifies for State inclusion on importance and volume of State traffic now using it and is relief for alternative State routes.

S.—A highway from State Highway Route 31 near old Cajon Station to a connection with State Highway Route 23 near Lancaster; 49 miles: Los Angeles and San Bernardino counties.

The above route is a proposal effecting a short cut from San Bernardino to the San Joaquin Valley or to the east Sierra route through Owens Valley to Tahoe and Nevada. The proposed location continues the northwesterly direction of the San Bernardino-Cajon portion of State Highway Route 31, passing over the Cajon Range through Phelan Pass and proceeding to Lancaster over level country, the whole coordinated route making a straight course which will justify it as an essential through route. Traffic on existing indirect and unimproved desert mountain roads is not representative of volume that the proposed route will carry.

Through its northern terminus it will derive traffic from State Highway Route 59, State Highway Route 23 and the Tehachapi Pass road, as well as from the fertile vicinity of Lancaster. Through San Bernardino a large adjacent area will contribute traffic, with the Inland route forming a direct passage from territory to the south and State Highway Route 26 supplying the approach from the Imperial Valley and Arizona.

This route qualifies as a favorable alternative in relief of present state routing and as an important coordinating link in the state highway system to serve the potential traffic demand at or through San Bernardino.

T.—A highway from Pomona to State Highway Route 2 near Fullerton via Brea Canyon; 15.5 miles: Los Angeles and Orange counties.

The county highway running from Pomona to Fullerton by way of Brea Canyon, a cross-connection between the inland territory surrounding Pomona and the coast territory south of Los Angeles, bears the same relation to

this vicinity as the Santa Ana Canyon route bears to the San Bernardino-Newport Beach travel. It and the Santa Ana Canyon road utilize the two available locations through the ridges separating the coast and the interior and satisfy traffic desire common to Los Angeles, Orange, Riverside and San Bernardino counties.

The Brea Canyon road joins State Highway Route 19 and State Highway Route 2 by a lateral at right angles to the course of those routes. It is geographically located about equidistant between the Santa Ana Canyon lateral and the thoroughfares to the coast on the southeastern outskirts of Los Angeles. Its course is in the proper direction for direct routing from origin to destination of traffic not as conveniently served by alternative highway facilities.

Brea Canyon will attract more traffic as the local streets and boulevards nearer Los Angeles become more crowded. It and the Santa Ana Canyon road are the two laterals southeast of Los Angeles that must carry cross traffic inland from coast, a state function not now supplied by the present state system. It qualifies as a highway now by carrying a large volume of state traffic.

U.—A highway from San Luis Obispo to a connection with State Highway Route 56 near Cambria; 36 miles: San Luis Obispo County.

At present State Route 56, from Carmel south along the coast, terminates state jurisdiction near Cambria. San Luis Obispo County highway connects it to State Highway Route 2 at San Luis Obispo. The classification of traffic on this section will change from strictly local traffic to a cosmopolitan nature when the completion of the state coast highway provides the through drive.

The Cambria-San Luis Obispo proposal qualifies for state inclusion as a unit extending to a connection with the existing system a state highway that will carry a large proportion of state traffic. It is one step toward effecting this general policy by a secondary road inclusion in the south where mileage is not in balance with the remainder of the state.

V.—A highway from Santa Barbara to a point on State Highway Route 2 near Zaca, via San Marcos Pass; 38 miles: Santa Barbara County.

State Highway Route 2 follows the coast for 30 miles west of Santa Barbara, then turns north for 18 miles to Zaca, passing through Gaviota Canyon. This proposed additional route is a diagonal of these two courses, is 10 miles shorter and lies on the direct line from Santa Barbara to Santa Maria.

The proposed route qualifies as a measure for relief to State Highway Route 2, supplying a shorter alternative that is also a scenic and recreational routing. It will indefinitely postpone radical widening of the present state highway through Gaviota Canyon and along the coast which would destroy valuable landscape and property. It coordinates with future road development north and south of its termini.

W.—State Highway Route 14, near Crockett, to American Canyon Route, near Vallejo.

This route will provide a connection from the proposed American Canyon Route to State Highway Route 14, near Crockett. It will provide a complete through road for traffic from the inland valleys to the bay area.

HIGHWAY PATROL COURTESY COLUMN

(Continued from page 12.)

Parking Made Easy For Convention.

Mrs. E. H. Brown, Durham: On February 28th, the Durham Women's Home Department entertained the Home Department from all over Butte County, 500 women attending. Mr. T. C. Bissett, Chico traffic officer, had charge of the parking. The school in which we entertained was on the highway. It was dangerous for women drivers to turn off and park. He took care of 130 cars. There was no confusion or jamming of cars coming or going. The women of the various Home Departments thought they were very fortunate in having such a capable and efficient traffic officer.

The Pruitts had the reputation of being the world's ideally married couple, so on their silver anniversary friends gathered and in the course of the evening asked Mrs. Pruitt how it happened that she and her husband never quarreled.

"It's because we understand each other so perfectly," she beamed. "If we have a difference of opinion and I am right, Chauncey gives in at once."

"And if it is he who is in the right?"

The lady drew herself up. "In our twenty-five years of married life," she declared, "that's never happened."

A curious little boy was watching a car being loaded at the station, and later inquired: "Why do they call it a shipment when it goes in a car and a cargo when it goes in a ship?"

Old Lady (to street-car motorman): "Please, Mr. Motorman, will I get a shock if I step on the track?"
Motorman: "No, lady. Not unless you put your other foot on the trolley wire."

Mrs. Blabber: "You're looking very happy this morning. Had you had good news?"

Mrs. Gabber: "Just wonderful! My husband has just had a nervous breakdown and we're going to California."

APRIL BULLETIN OF SNOW SURVEY AND PRECIPITATION DATA; SEASONAL FORECAST

(Continued from page 7.)

for the actual seasonal stream flow of 1924 (a record dry year) as follows:

Stream	Seasonal stream flow in per cent of 40-year mean (1889-1929)	
	Estimated 1931	Actual 1924
Sacramento River at Red Bluff	35	36
Feather River at Oroville	27	25
Yuba River at Smartsville	35	23
American River at Fair Oaks	30	18
Sacramento River at Sacramento (Including tributaries)	33	30
Mokelumne River at Clements	32	22
Stanislaus River at Knights Ferry	35	19
Tuolumne River at Jacksonville	40	28
Merced River at Exchequer	38	23
San Joaquin River at Friant	30	22
San Joaquin River near Vernalis (Including tributaries)	36	24
Combined Sacramento and San Joaquin Rivers (Including tributaries)	33	28
Kings River at Piedra	25	21
Kaweah River at Three Rivers	28	23
Kern River near Bakersfield	32	28
Combined Kings, Kaweah, and Kern Rivers	28	23

Based upon past experience these estimated seasonal stream flow percentages are used to predict the minimum stream flow to be expected at certain points and these estimated minimum flows are compared with the actual minimum flows of 1924, as follows (The estimates assume a 1931 rice area approximately 10 per cent greater than that of 1930—preliminary data):

Stream	Minimum flow in second-feet		
	Estimated 1931	Actual 1924	Flow Date
Sacramento River at Red Bluff	2800	2810	July 6
Sacramento River at Colusa	1100	1470	July 21
Sacramento River at Sacramento	1000	705	July 17
Feather River at Nicolaus	50	0	Aug. 2
American River at Sacramento	40	0	Aug. 1
San Joaquin River near Vernalis	500	391	July 22
Combined Sacramento and San Joaquin River flow to Delta, minimum 10 day flow	1600	1280	July 10 to 19, Incl.

Based upon the relation established by past records, the estimated seasonal stream flow percentages and minimum flows are applied to predict the maximum salinity to be expected in the late summer at points in the Sacramento-San Joaquin Delta and comparison is made with the 1924 salinity records, as follows:

Delta Stations	Maximum salinity (high tide) in parts of chlorine per 100,000 parts of water		Date
	Estimated 1931	Actual 1924	
O and A Ferry	1250	1345	August 28
Collinsville	1050	1150	August 16
Antloch	930	1030	August 20
Emmation	670	802	August 6
Jersey	580	708	August 30
Three Mile Slough	530	692	August 30
Rio Vista	400	608	August 12

Winter Traffic Count on State Highways

By T. H. DENNIS, Maintenance Engineer

THE REGULAR winter traffic count on State highways was taken on Sunday and Monday, January 11 and 12. This is the seventh winter count taken over the highway system. In previous years the count was made from 6 a.m. to 10 p.m. The 1931 count, however, was reduced to four hours each day, and traffic for 16 hours estimated for comparative purposes with the year 1929 as a basis. The 1929 count was selected as a basis for expanding the 4-hour counts to 16 hours because traffic during the 1930 count was generally disrupted by inclement weather and was far below normal. In making a comparison of the detailed figures which follow for 1930 and 1931 this fact must be borne in mind.

The 1931 Sunday count covered the hours from 10 a.m. to 2 p.m. The Monday count included the peak hours of travel from 8 a.m. to 10 a.m. and from 4 p.m. to 6 p.m.

The large volume of purely recreational Sunday travel, which is most pronounced in densely populated areas, precludes the use of a state-wide average for making a 16-hour estimate of traffic from 4-hour counts. On the other hand, the flow of traffic on Monday is more regular and a single average would be fairly representative. The averages obtained from the 1929 count and used in estimating the 16-hour counts for 1931 are as shown below:

Percentage Which 4-Hour Count Bears to 16-Hour Count

DISTRICT	I	II	III	IV	V	VI	VII	VIII	IX	X
Sunday—										
10 a.m. to 2 p.m.	31	31	27	28	28	30	27	28	31	27
Monday—										
8 a.m. to 10 a.m.	31	31	32	31	30	31	30	30	30	31
4 p.m. to 6 p.m.										

The hourly variation of traffic is erratic at stations registering less than 200 vehicles in 16 hours, and the 1931 estimate appears to be exaggerated at some of these stations. Excluding such cases the estimate for a majority of the stations is believed to be within a range of 10 per cent, while practically all stations fall within a range of 20 per cent. For ordinary applications this variation is not a serious matter especially for the winter count which covers, usually, the minimum traffic period of the year.

In comparing the detailed counts at the 859 stations which follow it should be noted that traffic for 1930 was below normal and the figures for 1931 therefore appear to be excep-

tionally high. If allowance is made for the fact that the 1930 Sunday traffic showed a decrease of 36.2 per cent from the 1929 figure, and the Monday traffic a decrease of 14.5 per cent, such variations will be less pronounced. Any general statement showing annual increase as a whole or by State routes and based on the 1930 count would be misleading, and has therefore been omitted from the summary.

The station by station record is as follows:

Route 1. Sausalito to Green Line				
District IV				
Station location	January, 1930		January, 1931	
	Sun. 12	Mon. 13	Sun. 11	Mon. 12
Sausalito to Ferry Building			57	50
Sausalito-Hyde Street Ferry			5,119	2,165
Hyde Street-Berkely			4,342	2,735
Belvedere Jr. R. 52 to Belvedere,				
S. on 1	4,562	2,850	5,800	3,190
E. on 1	704	442	5,800	3,390
N. to Corte Madera	4,293	2,602	2,300	1,390
Alto Jr. at Jr. Marin I-C & Rt. 52				
S. on 1			5,800	3,200
E. on 52			900	470
N. on 1			5,500	3,190
Calif. Park Y. Jr. Rt. 1 & 60,				
S. on 1			6,400	2,690
N. on 1			8,600	3,790
E. on 60			3,200	1,190
San Rafael N. of Cy. at Hill Top	5,504	2,242	5,000	2,190
Petaluma S. of Cy. Limits at Maint. Yard	2,200	1,965	4,600	2,900
Petaluma N. of Cy.	3,938	4,463	5,700	4,300
Cotati at Jr. C.R. to Sebastopol,				
S. on 1	2,359	2,935	1,300	1,000
W. on C.R.	692	512	1,100	730
N. on 1	1,807	1,575	2,200	1,100
Santa Rosa S. of Cy. at Triangle Service Sta.	2,390	2,078	3,400	2,300
Santa Rosa N. of Cy. at S. P. R. H. Xing	2,894	2,389	3,700	3,500
Healdsburg S. of Cy. at N. W. P. R. Xing	1,915	1,400	2,100	1,500
McCray's Jr. C.R. to Preston,				
S. on 1	815	615	1,100	570
E. on C.R.	160	154	820	180
N. on 1	656	495	820	400
McDonald at Jr. Rt. 48 to Booneville,				
S. on 1	541	422	840	380
W. on 48	168	122	220	90
N. on 1	379	304	620	300
Hopland at Jr. Rt. 18 to Lakeport,				
S. on 1	449	631	980	690
E. on 18	405	362	610	390
N. on 1	834	981	1,560	1,000
Ukiah S. of Cy. Lts. Jr. with Rt. 70,				
S. on 1	804	712	1,360	830
E. on 70	529	651	670	680
N. on 1	1,176	1,283	1,860	1,400
Ukiah N. of Cy. Lts. Jr. Rt. 15 to Colusa,				
S. on 1	1,042	753	1,560	1,100
E. on 15	377	311	570	490
N. on 1	752	490	1,460	770
District I				
Willits N. of Cy. at Jr. C.R. to Sherwood,				
S. on 1	453	367	650	650
W. on C.R.	64	23	60	50
N. on 1	394	342	590	704
Mendocino-Hum. Co. Line	196	115	240	180
Garberville Jr. C.R. to Briceiland,				
S. on 1	288	259	640	390
W. on C.R.	73	77	190	140
N. on 1	330	320	700	480

(Continued on page 36.)

Newcastle Tunnel Project Is About One-third Complete



West portal of tunnel under Newcastle

THE Newcastle cut-off construction, consisting of a tunnel under the Southern Pacific Railroad and the north part of Newcastle and new grading and surfacing of the cut-offs from the present highway to the tunnel, which is under contract to T. M. Morgan Paving Company, is one-third completed. Driving of the tunnel is under way, construction of drainage units and reconstruction of public utilities are in progress, and grading of the new roadbed is being done as rapidly as the preliminary work connected therewith is completed.

HIGHWAY CREW AID IN FIGHTING FIRE PRAISED

COMMENDATION of representatives of the Division of Highways is voiced in the two letters printed below for cooperation in subduing a fire in the Arroyo Seco, Los Angeles County, extended by Maintenance Foreman Fred Phillips and Gray H. Cuttriss, and aid given by a highway crew dispatched by Resident Engineer A. N. George. The letters follow:

UNITED STATES DEPARTMENT OF AGRICULTURE, FOREST SERVICE, ANGELES NATIONAL FOREST

Los Angeles, California,
March 20, 1931

Mr. S. V. Cortelyou,
Division of Highways,
Los Angeles, California.

Dear Sir:

On March 11th a fire occurred in the Arroyo Seco in one of the cabins there and the fire truck in the Arroyo Seco was dispatched to the scene and, incidentally, Fred Phillips and Doc Cuttriss, who were working

close to the warehouse at the time joined our truck crew and went to the fire, working from 11.00 a.m. to 1.00 p.m. Mr. A. N. George also dispatched a crew of 10 men who worked for one hour.

This sort of cooperation, Mr. Cortelyou, is just the kind that makes it possible for the Forest Service to maintain somewhere near an adequate fire protection record, and I wish to take this opportunity to thank you for the attitude your men have in connection with this important work, and would like to have you convey my sentiments to the men who reported for work and assisted in this particular job. This type of cooperation is appreciated by every member of the Forest Service organization and goes beyond the kind of cooperation we hear so much about that is more or less inactive when an actual fire occurs.

Very truly yours,

WM. V. MENDENHALL,
Forest Supervisor.

THE GIRLS' CORNER CLUB
Frances L. Neth, Director
Los Angeles, Calif.

March 16, 1931.

Mr. S. V. Cortelyou,
Division of Highways,
Dept. of Public Works,
Los Angeles, California.

My dear Mr. Cortelyou:

The Girls' Corner Club Cottage located in the Arroyo Seco, known as Camp No. 290, was practically destroyed by fire March 11, 1931. I am taking this occasion to thank you for the valiant and faithful work that was done at that time by your men, Mr. F. V. Phillips and Mr. Gray H. Cuttriss. They worked unceasingly to attempt to save our building and contents, and we appreciate in the deepest way their unselfish efforts for us. They have been such kind, neighborly friends to us, courteous and thoughtful in every way that hence I am writing this note to you.

We regret that the main building was almost entirely destroyed, but we are planning to rebuild immediately. A gain, with many thanks, I am,

Most sincerely yours,

FRANCES L. NETH.

LETTER OF APPRECIATION

The following letter of appreciation was written by District Engineer Cortelyou to the men mentioned in the above letters:

Los Angeles, Calif.
March 23, 1931.

Mr. A. N. George
Mr. F. V. Phillips
Mr. Gray H. Cuttriss
Pasadena, Calif.

Gentlemen:

I am sending to you herewith copies of letters dated March 20th from Wm. V. Mendenhall, Forest Supervisor, and dated March 16th from Frances L. Neth, Director of the Girls' Corner Club, expressing appreciation of your help in fighting a fire in the Arroyo Seco on March 11th.

In your action on that day you have exemplified the spirit of cooperation which we wish to have permeate our organization, and I desire to commend you for your efforts along this line.

Yours very truly,

S. V. CORTELYOU,
District Engineer.

Progress Report of Activities

in the

Division of Water Resources

AS OF MARCH 1, 1931

EDWARD HYATT, Chief of Division

Irrigation District
Activities



Applications for
Approval of
Dams

Flood Control and
Reclamation



Adjudications
of Stream
Flow

IRRIGATION, WATER STORAGE DISTRICTS

The spring meeting of the California Irrigation Districts Association was held in Sacramento on February 27 and 28, 1931. The meeting was devoted to the discussion of proposed legislation affecting irrigation districts and the irrigation interests of the State. Mr. William Durbrow was reelected president and Mr. W. D. Wagner, secretary of the association.

Office work in the analysis and compilation of data for the 1930 report on the activities of California irrigation districts has been continued throughout the month.

Field visits were made and conferences held with officials of South San Joaquin, Tracy-Clover, Naglee-Burk and West Stanislaus irrigation districts in San Joaquin and Stanislaus counties; the El Dorado Irrigation District, El Dorado County; the Princeton-Codora-Gleann, Glenn-Colusa and Provident irrigation districts in Glenn and Colusa counties; the Camp Far West and Cordua irrigation districts in Placer and Yuba counties; and the Richvale Irrigation District in Butte County, for the purposes of discussing matters connected with the economic operation of these districts.

An inspection of the Salt Springs Valley reservoir, Calaveras County, was made in connection with the tentative proposal of the Linden irrigation district to purchase the same.

Notice has been received by the State Engineer from the proponents of their intention to file with the supervisors of Kings County a petition proposing the organization of an irrigation district to be known as the Empire West Side Irrigation District, covering an area of 7100 acres located along the west side of the lower Kings River.

The following matters were referred to the California Bond Certification Commission by the State Engineer for the consideration and action of the Commission:

- (1) Request for approval to proceed with a bond issue in the amount of \$137,000 by the Linden Irrigation District.
- (2) Request for approval of expenditures by the El Nido Irrigation District in the amount of \$87,000 for developments within the district.
- (3) Request for approval of expenditures jointly by the Carpenter and Serrano irrigation districts in the amount of \$298,500 for construction of Santiago Creek dam.
- (4) Consideration of the proposal of a refunding issue by the Oakdale Irrigation District affecting the bonds of the first and third issues of this district amounting to a total of \$2,000,000.

DAMS

The department has, during the above period, continued its activities, directed toward final action on existing dams which have been found to be in a satisfactory condition, with a view to their approval. Frequent supervision has been maintained on the construction and repair of dams.

To date 748 applications for approval of existing dams are on file; 59 applications have been filed for approval of plans and specifications for construction or enlargement and 131 applications for approval of plans for repair or alteration.

APPLICATIONS RECEIVED FOR APPROVAL OF PLANS FOR REPAIR OR ALTERATION

Dam	Owner	County
Lake Grace	Pacific Gas and Electric Company	Shasta
North Battle Creek	Pacific Gas and Electric Company	Shasta
Fairmont	City of Los Angeles	Los Angeles

PLANS APPROVED FOR CONSTRUCTION OR ENLARGEMENT

Dam	Owner	County
*Garner No. 1	Childs and Waller	Shasta
**Hawkins	C. N. Hawkins	San Benito
*Chatsworth	City of Los Angeles	Los Angeles
* New construction		
** Enlargement		

The Chatsworth project contemplates raising the two earthen structures at that reservoir so as to impound 10,5000 acre-feet for the water supply of the city of Los Angeles.

In passing upon this project, the State Engineer has availed himself of the engineering experience of Mr. J. B. Lippincott, Consulting Engineer of Los Angeles, and of Prof. Chas. D. Marx, Consulting Engineer of Stanford University. Dr. John P. Buwalda, of the California Institute of Technology, an outstanding consulting geologist, completes the personnel of the State's consultants. After an exhaustive study by the department, and a favorable report by the consultants, the application for approval of plans for this enlargement was approved on March 24.

PLANS APPROVED FOR REPAIR OR ALTERATION

Dam	Owner	County
Lower Franklin	City of Los Angeles	Los Angeles
Orr Creek	Pacific Gas and Electric Company	Placer
Silva Flat	Homer C. Jack	Lassen
Lake Grace	Pacific Gas and Electric Company	Shasta
McMahon Gulch	Dianda and Patroni	San Mateo

An order authorizing use of Salt Springs dam up to elevation 3915 was issued pending completion of the dam.

Almost 100 dams have been carefully examined as to design and actual construction conditions and have

been found to meet the requirements of safety. Certificates of approval on these dams will soon be issued.

FLOOD CONTROL AND RECLAMATION

MAINTENANCE OF SACRAMENTO AND SAN JOAQUIN DRAINAGE DISTRICT

The maintenance force in Sutter County of eight men, exclusive of pump operators, has been engaged during the period in miscellaneous routine maintenance in connection with the by-pass structures, levees, drainage canals and pumping plants. Repairs to the Franklin road bridge, estimated to cost \$1,000, have been commenced with our own equipment. The work will consist of driving five new pile bents in the borrow pit and repairing the bridge deck. Plans are being made for the repair of the Hoke bridge, which has been closed for a year on account of its unsafe condition. There has been no high water, and therefore no occasion for the customary winter repair work.

FLOOD CONTROL PROJECT MAINTENANCE—BANK PROTECTION

All cooperative bank protection work for the current season has been completed. The river floating equipment is being repaired and painted by the caretakers.

EMERGENCY FLOOD CONTROL AND RECTIFICATION OF RIVERS

Construction is now under way by the Hammond and Little River Redwood Company, in cooperation with the State and Humboldt County, of channel rectification work at the mouth of Little river in Humboldt County. This will consist of a timber dam and the excavation and cleaning of the old river channel.

Channel rectification work on the San Jacinto river in cooperation with landowners and the county of Riverside is now under way, estimated cost \$3,150. A small levee 2100 feet long protected with a wire fence barrier is being constructed.

Russian River Jetty: The funds provided by the Division of Fish and Game for the maintenance of the jetty structure have been expended in the placing of rock, repairs to the structure and improvement of the railroad. The appropriation of \$22,500 by Chapter 60, Statutes of 1931, is now being used in placing rock in the structure. A crew of eleven men is employed in the quarry and on the railroad. On account of the severe storm conditions no attempt will be made to continue the construction seaward until May 15 or later.

Navarro River Jetty: There is now available \$500 for additional work on the Navarro River jetty, with which additional rock will be set where it was displaced by the fall and winter storms.

Flood Measurements and Gages: All gages maintained by this Division are now in operation, but all streams have been at unusually low stage throughout the winter. There have been no floods or freshets to warrant flood meter measurements, for which preparations are complete. In the office all records are being brought to date for the purpose of incorporating in a report all that have not hitherto been published for the flood seasons of recent years.

MINNESOTA—The state highway department has just rounded out its first quarter century of service, having been organized in January, 1906.

WATER RIGHTS

APPLICATIONS TO APPROPRIATE

During the month of February there were nineteen applications to appropriate water received by the Division, eleven applications were canceled, nine permits were issued, five permits were revoked and eight licenses were issued.

During the 1930 field season 182 projects were inspected and compilation of reports covering these inspections was completed during the current month. These reports will form the basis of recommendations for license or revocation in 83 per cent of the cases, which is a better percentage of actions than in any preceding year.

Field work in connection with permit inspections during the current season has been outlined and will begin on March 29th. There are 223 projects listed for inspection scattered throughout the full length and breadth of the State.

A study has also been undertaken of the desirability and practicability of revising the practice of the Division in the matter of appropriation allowances for irrigation use. The practice has been to express direct diversion allowance (i.e., those which are made for immediate use as distinguished from storage) in terms of cubic feet per second, the rate being determined by the estimated requirement in the month of maximum demand, and expressed as the continuous flow equivalent thereof. There is some objection to this practice because in some instances the manner of use is determined rather by the availability of water (i.e., water is not always available in the source and the irrigator must divert when the supply is available rather than when the immediate needs of the crop would demand) and in other instances peculiarities of the crop demand that the whole, or practically the whole of the annual supply of irrigation water must be applied at one time or at least in a very short period and the rate of diversion is properly governed solely by the capacity of the diversion works. It is desired to ascertain to what extent the present practice of the office in the matter is inconsistent with best irrigation practice, and whether or not any modification of current practice of the office is practicable and desirable.

ADJUDICATIONS

Shasta River (Siskiyou County). Case pending in the Superior Court of Siskiyou County.

Whitewater River (San Bernardino and Riverside Counties). Case pending in the Superior Court of Riverside County awaiting developments in regard to the proposed All American Canal from Colorado River.

North Cow Creek (Shasta County). Case pending in the Superior Court of Shasta County, awaiting the Court's pleasure in placing it on the calendar.

Oak Run Creek (Shasta County). Case pending in the Superior Court of Shasta County awaiting the entry of a decree in the North Cow Creek case.

Clover Creek (Shasta County). Case pending in Superior Court of Shasta County awaiting the court's pleasure in placing it on the calendar.

Butte Creek (Siskiyou County). Case pending in the Superior Court of Siskiyou County awaiting action by the parties involved.

Los Alamos Creek (Santa Barbara County). Action by referee is being deferred awaiting receipt of a stipulation for consent judgment signed by all of the parties involved.

Davis Creek (Modoc County). The two exceptions to the report of referee which had been filed in this case were heard before the Superior Court of Modoc

County on March 9. The issues raised by these exceptions were settled by stipulation between the parties involved, and the case is now pending in the court awaiting issuance of a decree.

Mill Creek (Modoc County). A stipulation for consent judgment defining the water rights on the stream system was presented to the water users at a conference held at Lake City on March 17, 1931. Fifty per cent of the water users signed the stipulation at that time, and many of the others present expressed the desire to meet with representatives of the Division for further discussion of the stipulation before signing the same. The stipulation is now being circulated among these latter parties.

Deep Creek (Modoc County). At a conference held at Cedarville on March 16, 1931, the Deep Creek water users entered into an agreement providing for administration by the Division of Water Resources of a schedule of allotments for trial distribution during the 1931 irrigation season.

Franklin Creek (Modoc County). The Franklin Creek water users, at a conference held at Alturas on March 16, 1931, entered into an agreement providing for administration by the Division of Water Resources of a schedule of allotments for trial distribution during the 1931 irrigation season.

New Pine Creek (Modoc County). Field work on the investigation was commenced during the latter part of March, and is being conducted in conjunction with water master service on the various streams in Modoc County.

WATER DISTRIBUTION

Cedar, Davis, Deep, Emerson, Franklin, Mill, New Pine, Owl and Soldier Creeks (Modoc County). Water Master service was commenced on these streams for the 1931 season during the latter part of March, and involves the distribution of water for approximately 16,000 acres of land.

Pit River (Modoc and Lassen Counties). The water users of Hot Springs Valley Irrigation District have entered into an agreement for the 1931 irrigation season to permit supervision of their diversions from Pit River by the Resident Engineer in Charge of the Pit River Investigation. This work will be carried on in conjunction with the supervision of diversions from Pit River in Big Valley which was commenced on March 1. Administration of the two areas will involve supervision over diversions supplying water for the irrigation of approximately 16,000 acres of land.

CALIFORNIA COOPERATIVE SNOW SURVEYS

The regular snow surveys at the key courses were made through arrangements with all cooperating agencies in the last few days of February. The results of these surveys, together with all precipitation data to March 1 from the stations of the U. S. Weather Bureau, State, districts and public utilities, were published in the monthly snow survey bulletin issued early in March.

It was shown that the water content of the snow as determined at the various snow courses on March 1st of this year in per cent of the water content on March 1, 1930, varied throughout the Sierra from 50 to 95 per cent and by stream basins was as follows: Upper Sacramento and McCloud (one course) 55 per cent; Feather (2 courses) 50 per cent; Yuba (4 courses) 75 per cent; American (3 courses) 70 per cent; Mokelumne (2 courses) 70 per cent; Stanislaus (3 courses) 85 per cent; Tuolumne (6 courses) 70 per cent; Merced (6 courses) 95 per cent; Mono (2

courses) 60 per cent; Upper San Joaquin (1 course) 95 per cent; Kings (1 course) 70 per cent.

In those few areas where snow surveys have been made a sufficient number of years to permit the development of "normals" the water content of the snow in per cent of the normal water content for the entire season (as of April 1) was found to be: Yuba Basin (3 courses) 50 per cent; American and Mokelumne Basins (1 course each) 45 per cent; Mono Basin (2 courses) 30 per cent; Upper San Joaquin Basin (1 course) 40 per cent.

The data from the precipitation stations showed the average precipitation to March 1st in per cent of the normal to the same date varying throughout the State from 50 to 85 per cent and by stream basins as follows: Upper Sacramento, McCloud and Pit, 50-60 per cent; Feather and Yuba, 55 per cent; American, 60 per cent; Mokelumne, 65 per cent; Stanislaus, 80 per cent; Tuolumne and Merced, 65 per cent; Mono, 60 per cent; Upper San Joaquin, 55 per cent; Owens, 50 per cent; Kings, 55 per cent; Kaweah, 65 per cent; Kern, 70 per cent; Santa Ana and Los Angeles, 75 per cent; and San Gabriel, 85 per cent.

Since the publication of the March bulletin, a further estimate of water supply conditions for the coming summer, based upon general knowledge of the March precipitation to date and the definite data to March 1st, indicates in general a water situation closely approaching that of 1924. It is to be noted, however, that the main survey of all snow courses as a basis for stream flow forecasts, has been in progress during the last few days of March and will be completed very shortly. This will furnish the data for the April bulletin and a more detailed forecast of water supply therein.

In the office, aside from the computations necessary in the preparation of the bulletins, computations have been made of the natural run-off for the 1929-30 season at the main gaging stations of all the major stream basins and other work of this character has been done in continuation of the study of the relation between snow and run-off.

SACRAMENTO-SAN JOAQUIN WATER SUPERVISOR

The work of the past month under this project has been confined chiefly to the computations necessary in the preparation of the report for the 1930 season covering all diversions, stream flow, return flow, etc., throughout the Sacramento-San Joaquin territory. These computations are nearing completion and preparations will soon be under way for the commencement of the field season. It is indicated that the coming season may be one of very low water supply and it is probable that this will entail considerable extra field work. If the situation is such as to require diversion regulation or the operation of a diversion schedule, an increase in the field forces may be required.

The small amount of field work during the past month has included regular observations, tide gage maintenance, and maintenance of tanks being used in a determination of the consumptive use of water of aquatic plants.

The salinity sampling has continued at thirty stations and tide gages have been maintained at eight points between Collinsville and Sacramento. A new salinity station was established on Dutch Slough for observations in connection with the proposed Industrial Diversion. The following are com-

parative salinity and stream flow data for 1930 and 1931.

Station	Salinity in parts of Chlorine per 100,000	
	March 14, 1931	March 14, 1930
Bullhead Point -----	450	195
O. and A. Ferry -----	48	5
Collinsville -----	8	2
Antioch -----	9	5
Jersey -----	5	5
Emmaton -----	2	4
Webb Pump -----	6	5

Station	Discharged in second-feet	
	March 20, 1931	March 30, 1930
Sacramento River at Sacramento -----	24,000	39,300

WATER RESOURCES

Ventura County Investigation.—During the past month the major flood of the year occurred, the peak being larger than any discharge since 1927. While the discharge was not large yet at its peak the flow into the ocean was 5500 second-feet from Santa Clara River.

South Coastal Basin Investigation.—This investigation has continued in a routine way during the month and a few additional engineers were placed on the work.

Mojave River Investigation.—This investigation has continued in a routine way during the month.

Santa Clara Valley Investigation.—This investigation has continued in a routine way during the month.

Pit River Investigation (Modoc and Lassen Counties).—Routine field work was continued throughout the month. The survey of the irrigated areas located on several small streams tributary to Pit River has been resumed. A meeting of the Permanent Committee with representatives of the Division of Water Resources and some 60 water users was held at Lookout on February 25. The Progress Report on the Pit River Investigation for the year ending September 30, 1930 was presented, and the work accomplished and the results obtained to date were reviewed. The meeting was then given over to open discussion of an outline of the field work to be accomplished prior to September 30, 1931.

Napa Valley Investigation.—Regular stream flow measurements on Napa River and Conn Creek were continued during the month and because of the peculiar State interest in the water crop of Rector Creek, which is looked upon as a possible future source of water supply for local State institutions, the investigation has been broadened to include stream flow measurements on that creek. Additional surveys have been made to determine more accurately the location of wells which are under observation and the elevation thereof.

A survey was also made to determine the location and capacity of pumps which are operated on Napa River and Conn Creek at points intervening between the upper and lower gaging stations.

A reconnaissance was made of Sulphur Spring and Pope Creeks for reservoir sites but nothing of present practicable value was found.

Water Resources Reports.—Effective progress has been made in completing the reports on the water resources investigation covering the State Water Plan for coordination, development, conservation and utilization of the water resources of the State under the provisions of Chapter 832 of the Statutes of 1929.

On March 4, advance copy of Bulletin 25, entitled "Report to the Legislature of 1931 on State Water Plan" was transmitted to the Governor and members of the Legislature. The report on the State Water

Plan presents a practical engineering recommendation providing for a system of physical works which would make available a water supply for the benefit of 75% of the agricultural area of the State. Recommendations in the report cover units to meet the most pressing immediate requirements and plans for the ultimate development of all water resources of California.

In addition to Bulletin 25, there were transmitted printed copies of the following:

Bulletin 28A, "Industrial Survey of Upper San Francisco Bay Area."

Bulletin 31, "Santa Ana River Basin."

Bulletin 32, "South Coastal Basin."

Bulletin 34, "Permissible Annual Charges for Irrigation Water in Upper San Joaquin Valley."

Also, advance mimeographed copies of the following reports:

Bulletin 33, "Rainfall Penetration and Consumptive Use of Water in Santa Ana River Valley and Coastal Plain."

Bulletin 36, "Cost of Irrigation Water in California."

It is anticipated a further number of bulletins will be received from the State Printer during the next three to four weeks.

MISCELLANEOUS ACTIVITIES

In completion of the field trips which have been made from time to time during the past year by representatives of the State, the U. S. Army Engineers and the U. S. Geological Survey for the location of gaging stations, a trip was made during the past month to locate stations in the Southern San Joaquin Valley. Locations were made on Caliente Creek near Caliente and on Los Gatos Creek near Coalinga. A location was inspected on Poso Creek but found unsuitable. Except for a location on the American River at Coloma, this completes the program for the location of fourteen new stations and the installation of recorders at eighteen old stations throughout the San Joaquin drainage basins in accordance with the Federal-State Cooperative Agreement.

STATE HIGHWAY PROGRESS REPORT

as of April 1, 1931.

C. H. PURCELL, Chief.

Construction Program Under Full Speed.

During the months of April, May and June, the work now in preparation indicates that we will have about 365 miles of road projects estimated to cost approximately \$10,180,000, advertised or with construction already started. The closest estimate we can make indicates that about 4500 men will be required for this construction for the normal construction crews without counting in the many hundreds of other men who are employed by commercial plants. From our experience with unemployment camps, we feel that each one of the persons employed will probably take care of two to three others so that in effect the program will care for a great many thousands. The value of this work is enhanced by its very general distribution over the whole State.

It should be noted that 84 per cent of the \$10,780,000 total referred to above comes from funds of the eighty-third and eighty-fourth fiscal years extending from July 1, 1931, to June 30, 1933. Under ordinary circumstances, this money would not be available until the beginning of the fiscal year, in this instance July 1, 1931. These expenditures have been advanced in accordance with the employment policy of Governor Rolph that public work must be speeded up to the maximum.

Record Day for Bid Openings.

Wednesday, March 25th, was a record day in State highway circles.

On that day, bids were opened on State highway projects, the total material and labor cost of which will run to \$800,000. This establishes a new high point in State highway history for projects offered to contractors on any one day.

Wednesday's record opening is followed closely by those of today (April 1st) when bids were opened on contracts, the total cost of which exceeds \$700,000.

Relief Employment.

Relief employment funds work will be exhausted shortly after April 1st in some districts, and probably by April 15th in all districts. This work has employed over 1700 men since November on a three-day-a-week basis.

Program for Maintenance Activities.

The routine maintenance work will continue at the present rate during the next three months. In addition dust oil is to be applied to 1063 miles of our earth and rock surfaced roads, and on 330 miles of shoulders along side pavement. In the Eureka district and certain other sections where employment conditions are most acute, this work will be handled by day labor forces to give the benefit to local men. In the main, however, the work will be handled under contract arrangement during April and May. This work will cost approximately \$300,000 and will provide employment for possibly 150 to 200 men.

The work of reinforcing rock surfaces and constructing oil surfacing and constructing oil rock borders in an estimated amount of \$700,000 will be started in April and should be practically completed by August 1st. This work will provide employment for possibly 300 men. Like the dust oiling, the jobs are well scattered throughout the State. The estimated labor is actual labor on the job and, of course, is in addition to labor which goes into producing and shipping of oil rock, etc.

This work of the maintenance department is largely seasonal and the volume depends entirely on available funds as set up in the Governor's budget. No special action is required to insure that this work will be started, as preliminary arrangements are now well under way.

HIGHWAY BIDS AND AWARDS For Month of March

IMPERIAL COUNTY—Between Holtville and East High Line Canal, gravel and paved with Portland concrete cement. Dist. VIII, Rt. 27, Sec. D, Central California Roads Co. & Southern California Roads Co., Los Angeles, \$309,155; Wells & Bressler, Santa Ana, \$327,551; McCray Co., Los Angeles, \$284,075; Sander Pearson, Santa Monica, \$324,642; Basich Bros. Const. Co., Torrance, \$256,929; Griffith Co., Los Angeles, \$286,978. Contract awarded to Jain & Bressi Const. Co., Inc., Los Angeles, \$246,159.

KERN COUNTY—Between Grapevine and Bakersfield, grading and shoulders surfaced with bituminous treated crushed gravel, about 29.8 miles in length. Dist. VI, Rt. 4, Sec. B & C, Gibbons & Reed Co., Burbank, \$323,870; P. J. Akmadzich, Los Angeles, \$284,513; Fredrickson & Watson Const. Company and Fredrickson Bros., Oakland, \$272,686; G. W. Ellis, Los Angeles, \$279,514; Hartman Const. Co., Bakersfield, \$285,777; Southwest Paving Co., Los Angeles, \$319,772; Fred W. Nighbert, Bakersfield, \$275,225. Contract awarded to A. Teichert & Son, Inc., Sacramento, \$264,404.

LAKE COUNTY—Between Middletown and the Ukiah-Tahoe Highway, 25 miles. Dist. IV, Rt. 49, Sec. A B C, Peres & Gatto, Richmond, \$5,992; Chas. Kuppinger, Lakeport, \$5,292; Edward A. Peres, Richmond, \$6,888; C. F. Fredrickson & Sons, Lower Lake, \$5,544; Jack Casson, Hayward, \$5,460. Contract awarded to Basalt Rock Co., Napa, \$5,050.

MENDOCINO COUNTY—Between Pepperwood Sch. and Little Dan Cr., 13.5 miles to be paved with Bituminous treat crushed gravel of which 5.5 miles is to be graded 24 feet wide. Dist. 1, Rt. 1, Sec. H-I, Hemstreet & Bell, Marysville, \$531,051; J. F. Knapp, Oakland, \$500,571; T. E. Connolly, San Francisco, \$636,309; George Pollock Co., Sacramento, \$543,207; Robinson Roberts Co., Los Angeles, \$524,478; Fredrickson & Watson Construction Co. and Fredrickson Bros., Oakland, \$558,511; MacDonald & Kahn Co., Ltd., San Francisco, \$577,986; General Construction Co., Seattle, \$636,393; Healy-Tibbitts Construction Co., San Francisco, \$527,569; Granfield, Farrar & Carlin, San Francisco, \$625,247; R. L. Crooks & Co., Portland, \$634,563; W. S. Mead, Oakland, \$581,569; Morrison, Knudsen Co., Boise, \$556,525; Kern & Kibbe, Portland, \$704,513. Contract awarded to E. C. Coats, Sacramento, \$438,470.

MENDOCINO COUNTY—From Devoy Grove and the northerly boundary. Dist. I, Rt. 1, Sec. K, Hemstreet & Bell, Marysville, \$14,223; H. H. Boomer, San Francisco, \$12,734; J. F. Knapp, Oakland, \$17,979; Smith Bros. Co., Eureka, \$15,047. Contract awarded to Chigris & Sutsos, San Francisco, \$11,297.

MONTEREY COUNTY—Between 2 miles north of Salinas and the northerly boundary. Dist. V, Rt. 2, Sec. J, about 11 miles to be graded and paved with Portland concrete cement. Jahn Bressi Const. Co., Los Angeles, \$486,913; Macco Const. Co., Clearwater, \$536,407; Healy-Tibbitts Const. Co., San Francisco, \$509,871; Fredrickson Watson Const. Co., and Fredrickson Bros., Oakland, \$496,518; J. F. Knapp, Oakland, \$509,931; Will F. Peck Co., Los Angeles, \$481,147; N. M. Ball, Porterville, \$483,589; Union Paving Company, San Francisco, \$482,586; C. W. Wood, Stockton, \$477,036; Hanrahan Co., San Francisco, \$474,300; Davis H. Ryan, San Diego, \$509,215; Basich Bros. Const. Co., Torrance, \$464,830. Contract awarded to Peninsula Paving Co., San Francisco, \$459,358.

MONTEREY COUNTY—Bridge across Garrapata Creek, reinforced concrete 1-150 arch span and 5-25 girder spans, and about 0.28 miles to be graded. Dist. V, Rt. 56, Sec. G, A. W. Kitchen, San Francisco, \$53,980; M. E. McGowan, San Francisco, \$54,223; Paul M. White, Santa Monica, \$46,298; Oberg Bros., Los Angeles, \$39,810; Geo. J. Ulrich Const. Co., Modesto, \$46,017; Rocco & Caletti, San Rafael, \$48,605. Contract awarded to Hantahan Company, San Francisco, \$37,835.

ORANGE COUNTY—At Gollivan overhead crossing, graded and paved Portland cement concrete, 0.9 miles. Dist. VII, Rt. 2, Sec. B, P. J. Akmadzich, Los Angeles, \$42,790; Matich Bros., Elsinore, \$37,359; Wells & Bessler, Santa Ana, \$46,529; Korace-

vich & Price, South Gate, \$41,727. Contract awarded to Griffith Co., Los Angeles, \$35,807.

PLACER COUNTY—Undergrade crossing at New England Mills, 2 concrete abutments graveled and surfaced, 1000 lineal feet of roadway with bituminous treated crushed gravel. Dist. III, Rt. 37, Sec. B, C. W. Wood, Stockton, \$36,115; Fredrickson & Watson Const. Co., Oakland, \$38,768; Lindgren & Swinerton, Inc., Sacramento, \$37,104; J. W. Hoopes, Sacramento, \$45,601; C. Emil Force, Piedmont, \$40,644; Bodenhamer Const. Co., Oakland, \$39,086; P. F. Bender, North Sacramento, \$36,264. Contract awarded to W. H. Hauser, Oakland, \$32,521.

SAN BERNARDINO COUNTY—Bridge across Lytle Cr., 2 miles west of San Bernardino, 5-35' steel stringer spans concrete deck on pile bents. Dist. VIII, Rt. 9, Sec. C, Oberg Bros., Los Angeles, \$35,486; W. H. McCune, Jr., Monrovia, \$41,468; Byerts & Dunn, Los Angeles, \$33,605. Contract awarded to Robinson-Roberts Co., Los Angeles, \$33,313.

SAN BERNARDINO COUNTY—Between Cronise Valley and 6 miles west of Baker, grading and surfacing with oil treated crushed gravel, 13.6 miles. Dist. VIII, Rt. 31, Sec. J-K, Geo. Herz & Co., San Bernardino, \$255,450; O. A. Lindburg, Stockton, \$266,235; A. Teichert & Son, Inc., Sacramento, \$268,293; Robinson, Roberts Co., Los Angeles, \$279,727; Chas. U. Heuser, Glendale, \$268,510; Morrison-Knudsen Co., Boise, \$271,414; H. W. Rohl Co., Los Angeles, \$248,796; Fred W. Nighbert, Bakersfield, \$259,310. Contract awarded to McCray Co., Los Angeles, \$247,706.

SAN BERNARDINO COUNTY—Reinforced concrete Girder Bridge over A. T. & S. F. Ry., 2 miles east of Essex, 1-48', 4-34' spans on concrete bents. Dist. VIII, Rt. 58, Sec. 1, Byerts & Dunn, Los Angeles, \$24,593; Robt. E. McKee, Los Angeles, \$25,971; Johnson Const. Co., Los Angeles, \$28,892. Contract awarded to H. W. Rohl Co., Los Angeles, \$20,885.

SAN LUIS OBISPO COUNTY—Between 1.5 miles south of San Margarita and Atascadero, grading and paving with asphalt concrete 9.8 miles. Dist. V, Rt. 2, Sec. C-D, Central California Rds. & Southern Cal. Rds. Co., Los Angeles, \$250,341; Irving L. Rider, San Jose, \$229,330; A. Teichert & Son, Sacramento, \$233,620; Peninsula Paving Co., San Francisco, \$224,279; Clark & Henry Const. Co., San Francisco, \$236,749; P. J. Akmadzich, Los Angeles, \$341,389. Contract awarded to Hanrahan Company, San Francisco, \$209,700.

SAN LUIS OBISPO COUNTY—Repair bridge across Estrella River, about 12 miles east of Paso Robles, consisting of one 154 ft. through steel truss span. Dist. V, Rt. 33, Sec. B, Lord & Bishop, Sacramento, \$1,275. Contract awarded to Wm. Lane, Paso Robles, \$1,247.

SAN MATEO & SANTA CLARA COUNTIES—Bridge across San Francisco Creek at Palo Alto, 3-27' spans on concrete pile bents. Dist. IV, Rt. 68, Sec. D-A, A. T. Howe, Santa Rosa, \$24,954; Fredrickson & Watson Const. Co., Oakland, \$22,094; J. W. Hoopes, Sacramento, \$20,718; Geo. J. Ulrich Const. Co., Modesto, \$20,220; Peter McHugh, San Francisco, \$26,387; M. B. McGowan, San Francisco, \$20,675; MacDonald & Kahn Co., Ltd., San Francisco, \$19,999; Clinton Stephenson Const. Co., San Francisco, \$22,986; Ralph Hunter, Sacramento, \$21,899; Healy-Tibbetts Const. Co., San Francisco, \$24,395; A. W. Kitchen, San Francisco, \$21,506; A. J. Raisch, San Jose, \$22,440; Merritt, Chapman & Scott Corp., San Pedro, \$25,462; Paul M. White, Santa Monica, \$21,279. Contract awarded to Barrett & Hilt, San Francisco, \$17,218.

SANTA BARBARA COUNTY—Reinforced concrete arch bridge across Gaviota Creek, 1-100' span. Dist. V, Rt. 2, Sec. E, Byerts & Dunn, Los Angeles, \$53,062; Gist & Bell, Arcadia, \$47,637; Merritt & Chapman Corp., San Pedro, \$54,483; Oberg Bros., Los Angeles, \$43,336. Contract awarded to Paul M. White, Santa Monica, \$36,287.

ARCHITECTURAL AWARDS For Month of March

SONOMA STATE HOME—Continuous type bake oven, to Petersen Oven Company, San Francisco, \$3,450.

AGRICULTURAL PARK (State Fair Grounds), Sacramento—Additional Live Stock Building, contract for general work to F. L. Hansen, San Francisco, \$97,500; for electrical work, to C. E. Turner, Sacramento, \$2,278; for plumbing work to Carpenter & Mendenhall, Sacramento, \$8,370.

Contract for general work on Poultry Building to Yoho Dauger, Sacramento, \$43,743.

SAN DIEGO STATE TEACHERS COLLEGE—Grading athletic field, to R. A. Floyd Engineering Company, San Diego, \$2,030.

WHITTIER STATE SCHOOL—Building for Boys, contract for general work to Gene B. Foster, Los Angeles, \$25,082; for plumbing and heating, to Cooby Winterbottom, Los Angeles, \$5,060; for electrical work to R. R. Jones Electric Co., South Pasadena, \$1,355.

ATTORNEY GENERAL'S OFFICE, State Office Building, San Francisco—Alterations, to Braas Kuhn, San Francisco, \$1,740.

NORWALK STATE HOSPITAL—Installation refrigeration plant, to Baker Ice Machine Company, Los Angeles, \$5,351.

PACIFIC COLONY—Employees' Quarters and Garage No. 2, contract for general work to Louis A. Geisler, Huntington Park, \$30,986; plumbing and heating to Thos. Haverty Co., Los Angeles, \$5,999; electrical work to R. R. Jones Electric Co., South Pasadena, \$1,250.

DAM APPLICATIONS AND APPROVALS

Application for approval of dams built prior to August 14, 1929, filed with the State Department of Public Works, Division of Water Resources, during the month of March, 1931.

MODOC COUNTY—Lindauer Concrete Dam No. 152-4. G. Lindauer, San Francisco, California, owner; buttress and flashboards 11½ feet above streambed with a storage capacity of 550 acre-feet, situated on Pit River tributary to Sacramento River. For Diversion and storage purposes, for irrigation and stock use.

MODOC COUNTY—Lindauer Upper Dam No. 152-5. G. Lindauer, San Francisco, California, owner; crib and needle dam, 8 feet above streambed with a storage capacity of 850 acre-feet, situated on Pit River tributary to Sacramento River. For diversion and storage purposes for irrigation and stock use.

MODOC COUNTY—O'Brien Dam No. 152-6. O'Brien and O'Connell Estates, Alturas, owner; crib and flashboards, 10½ feet above streambed with a storage capacity of 1000 acre-feet, situated on Pit River tributary to Sacramento River. For diversion and storage purposes, for irrigation and stock use.

SOLANO COUNTY—Suisun Municipal Dam No. 21. Town of Suisun City, Suisun, California, owner; earth dam, 45 feet above streambed tributary to Suisun Creek in Sec. 12, T. 5 N., R. 3 W., M. D. B. and M., for storage purposes, for municipal use.

YOLO COUNTY—Moore Diversion Dam No. 391-3. Clear Lake Water Company, Woodland, California, owner; flashboards, 6 feet above streambed with a storage capacity of 40 acre-feet, situated on Cache Creek tributary to Sacramento River in T. 10 N., R. 1 E., M. D. B. and M., for diversion purposes, for irrigation use.

Applications for approval of plans and specifications for construction or enlargement of dams filed with the State Department of Public Works, Division of Water Resources, during the month of March, 1931.

LOS ANGELES COUNTY—Chatsworth Highline Dam No. 6-32. City of Los Angeles, Los Angeles, owner; earthfill, 49 feet above streambed with a storage capacity of 280 acre-feet, situated on a wash tributary to Los Angeles River in Sec. 9, T. 2 N., R. 16 W., S. B. and M., for regulation and storage purposes, for irrigation and domestic use. Estimated cost \$100,385.80, fees paid \$1,001.93.

LOS ANGELES COUNTY—Haypress Dam No. 778-3. Santa Catalina Island Company, Avalon, California, owner; earth dam, 16.9 feet above streambed with a storage capacity of 20.7 acre-feet, situated on Haypress Creek tributary to Grand Canyon in Sec. 32, T. 9 S., R. 14 W., S. B. and M., for storage purposes for domestic use. Estimated cost \$4223.77, fees paid \$42.24.

LASSEN COUNTY—Quaking Asp Gulch No. 1 Dam No. 253-2. Antone Avilla, Red Bluff, owner; earth dam, 10 feet above streambed with a storage capacity of 33 acre-feet, situated on Quaking Asp Gulch in Sec. 7, T. 36 N., R. 10 E., M. D. B. and M., for storage purposes for stock watering use. Estimated cost \$500, fees paid \$20.

LASSEN COUNTY—Quaking Asp Gulch No. 2 Dam No. 253-3. Antone Avilla, Red Bluff, owner; earth dam, 8 feet above streambed with a storage capacity of 30 acre-feet, situated on Quaking Asp Gulch in Sec. 13, T. 36 N., R. 9 E., M. D. B. and M., for storage purposes, for stock watering use. Estimated cost \$500, fees paid \$20.

Applications for approval of plans and specifications for repair or alteration of dams filed with the State Department of Public Works, Division of Water Resources, during the month of March, 1931.

SHASTA COUNTY—North Battle Creek Dam No. 97-96. Pacific Gas and Electric Company, San Francisco, owner; situated on North Battle Creek tributary to Battle Creek in Sec. 20, T. 32 N., R. 3 E., M. D. B. and M.

LOS ANGELES COUNTY—Fairmont Dam No. 6-8. City of Los Angeles, Los Angeles, California, owner; earthfill, located in Sec. 12, T. 7 N., R. 15 W., S. B. and M.

PLUMAS COUNTY—Eureka Lake Dam No. 283. Plumas-Eureka Corp., Johnsville, California, owner; situated on Eureka Creek tributary to Feather River in T. 22 N., R. 11 E., M. D. B. and M. Earth and rock dam.

TUOLUMNE COUNTY—Matelot Dam No. 97-75. Pacific Gas and Electric Company, San Francisco, owner; earth dam, located in Sec. 1, T. 2 N., R. 14 E., M. D. B. and M.

TUOLUMNE COUNTY—San Diego Dam No. 97-82. Pacific Gas and Electric Company, San Francisco, earth dam, located in Sec. 13, T. 2 N., R. 14 E., M. D. B. and M.

PLACER COUNTY—Kidd Lake Dam No. 97-25. Pacific Gas and Electric Company, San Francisco, owner; earth and rock dam, situated on a small creek tributary to South Yuba River in Sec. 29, T. 17 N., R. 14 E., M. D. B. and M.

Plans and specifications for the construction or enlargement of dams approved by the State Department of Public Works, Division of Water Resources, during the month of March, 1931.

SAN BENITO COUNTY—Hawkins Dam No. 651. C. N. Hawkins, Hollister, California, owner; hydraulic fill, 67 feet above streambed with a storage capacity of 1000 acre-feet, situated on Los Viboras Creek tributary to Pajaro River. For storage purposes, for irrigation use.

LOS ANGELES COUNTY—Chatsworth Dam No. 6-4. City of Los Angeles, Los Angeles, owner; earth dam, 40 feet above streambed with a storage capacity of 10,500 acre-feet, situated on Chatsworth Foot Hills tribu-

tary to Los Angeles River in Ex Mission de San Fernando, for storage purposes, for municipal, domestic and irrigation use.

Plans for the repair or alteration of dams approved by the State Department of Public Works, Division of Water Resources, during the month of March, 1931.

SHASTA COUNTY—Lake Grace Dam No. 97-92. Pacific Gas and Electric Company, San Francisco, owner; earth dam, located in Sec. 4, T. 30 N., R. 1 E., M. D. B. and M.

SHASTA COUNTY—North Battle Creek Dam No. 97-96. Pacific Gas and Electric Company, San Francisco, owner; masonry, situated on North Battle Creek tributary to Battle Creek in Sec. 20, T. 32 N., R. 3 E., M. D. B. and M.

LOS ANGELES COUNTY—Fairmont Dam No. 6-8. City of Los Angeles, Los Angeles, owner; earth dam, located in Sec. 12, T. 7 N., R. 15 W., S. B. B. and M.

SAN MATEO COUNTY—McMahon Gulch Dam No. 608. Dianda and Patroni, Half Moon Bay, owners; earth dam, situated on McMahon Creek in T. 5 S., R. 6 W., M. D. B. and M.

WATER APPLICATIONS AND PERMITS

Applications for Permits to Appropriate Water Filed With the Department of Public Works, Division of Water Resources, During the Month of March, 1931.

BUTTE COUNTY—Application 6902. R. M. and H. L. Stafford, Live Oak, Calif., for 2.0 c.f.s. from Morrison Slough (Main Drain Ditch of Dist. 2055) tributary to Sacramento River. To be diverted in Sec. 13, T. 17 N., R. 2 E., M. D. B. and M., for irrigation purposes (160 acres). Estimated cost \$2,000.

EL DORADO COUNTY—Application 6903. U. S. Eldorado National Forest, Placerville, Calif., for 3000 gallons per day from Granite Lake Creek tributary to Emerald Bay, Lake Tahoe. To be diverted in Sec. 28, T. 13 N., R. 17 E., M. D. B. and M., for domestic and fire protection purposes. Estimated cost \$450.

LAKE COUNTY—Application 6904. C. G. Haycock, 2674 27th St., Sacramento, Calif., for 0.5 c.f.s. from Middle Creek tributary to Clear Lake and Cache Creek. To be diverted in Sec. 31, T. 16 N., R. 9 W., M. D. B. and M., for irrigation purposes (40.26 acres).

BUTTE COUNTY—Application 6905. California Mutual Building and Loan Association, a corp., San Jose, Calif., for 14.78 c.f.s. from Lateral "A" Drainage Canal of Reclamation District tributary to Butte Creek, thence Sacramento River. To be diverted in Sec. 19, T. 18 N., R. 2 E., M. D. B. and M., for irrigation purposes (591.2 acres of rice).

SANTA BARBARA COUNTY—Application 6906. Union Realty Co., P. O. Box 820, Santa Barbara, Calif., 7 gallons per minute from San Marcos spring. To be diverted in Sec. 11, T. 5 N., R. 28 W., S. B. B. and M., for irrigation and domestic purposes (5 acres). Estimated cost \$1,200.

LOS ANGELES COUNTY—Application 6907. U. S. Angeles National Forest, 501 Brownstein-Louis Bldg., Los Angeles, Calif., for 0.002 c.f.s. or approximately 1390 g.p.d. from Camp Spring tributary to Shake Canyon. To be diverted in Sec. 13, T. 7 N., R. 16 W., S. B. B. and M., for domestic purposes. Estimated cost \$100.

LOS ANGELES COUNTY—Application 6908. U. S. Angeles National Forest, 501 Brownstein-Louis Bldg., Los Angeles, Calif., for 0.002 c.f.s. or approximately 1390 g.p.d. from Ranger Spring tributary to Pine Canyon. To be diverted in Sec. 18, T. 7 N., R. 15 W., S. B. B. and M., for domestic purposes. Estimated cost \$50.

VENTURA COUNTY—Application 6909. Hibbard S. Williams, P. O. Box 265, Santa Paula, Calif., for 0.025 c.f.s. from unnamed spring tributary to Timber Canyon, thence Santa Clara River. To be diverted in Sec. 18, T. 4 N., R. 20 W., S. B. B. and M., for mining and domestic purposes. Estimated cost \$1,000.

MENDOCINO COUNTY—Application 6910. Fred W. Gordon, Cummings, Mendocino County, Calif., for 0.05 c.f.s. from unnamed spring tributary to South Fork of Eel River. To be diverted in Sec. 3, T. 23 N., R. 17 W., M. D. B. and M., for domestic purposes. Estimated cost \$250.

HUMBOLDT COUNTY—Application 6911. Mrs. Sarah J. Carpenter, Salyer, Calif., for 2.0 c.f.s. from

Ammon Creek tributary to South Fork of Trinity River. To be diverted in Sec. 12, T. 5 N., R. 5 E., H. B. and M., for irrigation purposes (66 acres). Estimated cost \$800.

HUMBOLDT COUNTY—Application 6912. Redwood Empire Golf and Country Club, Scotia, Calif., for 0.267 c.f.s. from Wolverton Gulch tributary to Van Duzen and Eel Rivers. To be diverted in Sec. 8, T. 2 N., R. 1 E., H. B. and M., for irrigation and domestic purposes (30 acres). Estimated cost \$4,000.

MONO COUNTY—Application 6913. A. J. Warrington, Bridgeport, Calif., for 3.9 c.f.s. from Virginia Creek tributary to East Walker River. To be diverted in Sec. 2, T. 3 N., R. 25 E., M. D. B. and M., for mining purposes. Estimated cost \$50.

MONO COUNTY—Application 6914. A. J. Warrington, Bridgeport, Calif., for 3 c.f.s. from Dog Creek tributary to Virginia Creek and East Walker River. To be diverted in Sec. 16, T. 3 N., R. 25 E., M. D. B. and M., for mining purposes. Estimated cost \$1,500.

BUTTE COUNTY—Application 6915. J. E. Carrico, Biggs, Calif., for 0.81 c.f.s. from Feather River tributary to Sacramento River. To be diverted in Sec. 4, T. 13 N., R. 3 E., M. D. M., for irrigation purposes on 65 acres. Estimated cost \$400.

SAN BERNARDINO COUNTY—Application 6916. Aubrey Wardman, Whittier, Calif., for 2.5 c.f.s. from underground (shafts with lateral drifts). To be diverted in Sec. 16, T. 1 N., R. 6 W., S. B. M., for irrigation and domestic purposes on 225 acres. Estimated cost \$25,000.

TUOLUMNE COUNTY—Application 6917. W. C. Le Hane, Box 94, Modesto, Calif., for 600 c.f.s. from Stanislaus River tributary to San Joaquin River. To be diverted in Sec. 10, T. 1 S., R. 12 E., M. D. M., for irrigation purposes on 100,000 acres of land more or less, to be irrigated.

TRINITY COUNTY—Application 6918. Trinity Loop Mining Co., Marvin B. Sherwin, Secretary, Oakland, for 10 c.f.s. from Hawkins Creek tributary to Trinity River. To be diverted in Sec. 21, T. 6 N., R. 6 E., H. M. for mining and domestic purposes. Estimated cost \$6,000.

SUTTER COUNTY—Application 6919. W. S. and John W. Saunders, Tudor, Calif., for 15.5 c.f.s. from Feather River tributary to Sacramento River. To be diverted in Sec. 2, T. 13 N., R. 13 E., M. D. M., for irrigation purposes on 400 acres.

SUTTER COUNTY—Application 6920. Grever C. Shannon, Tudor, Calif., for 3.5 c.f.s. from Feather River tributary to Sacramento River. To be diverted in Sec. 2, T. 13 N., R. 3 E., M. D. M., for irrigation purposes on 85 acres.

TRINITY COUNTY—Application 6921. Colen F. Whittier, c/o Geo. Nordenholt, 6327 W. 5th St., Los Angeles, Calif., for 150 c.f.s. from Soldier Creek tributary to Trinity River. To be diverted in Sec. 25, T. 33 N., R. 11 W., M. D. M., for mining and domestic purposes.

SAN BERNARDINO COUNTY—Application 6922. Carter E. Putnam, Cucamonga, Calif., for 0.20 c.f.s. from run-off of irrigation water (water runs in ditch by side of road) tributary to Santa Ana River Watershed. To be diverted in Sec. 2, T. 1 S., R. 7 W., S. B. M. for irrigation purposes. Estimated cost \$3.

SIERRA COUNTY—Application 6923. Geo. F. Taylor, Downieville, Cal., for 50 c.f.s. from Cherokee Creek tributary to North Fork of Yuba River. To be diverted in Sec. 6, T. 19 N., R. 9 E., M. D. M., for mining purposes.

NEVADA COUNTY—Application 6924. Fletcher Hamilton, San Francisco, Calif., for 25 c.f.s. from each source, not to exceed a total of 50 c.f.s. from (1) Rob Roy (2) Deadman (3) Roscoe and (4) Logan Canyons tributary to (1) and (2) Poorman Creek (3) and (4) S. Fork Yuba River. To be diverted in Secs. (1) 25 (2) 26 (3) and (4) 34, T. 18 N., R. 10 E., M. D. M., for mining and domestic purposes.

SUTTER COUNTY—Application 6925. Boyd Farm Co., Yuba City, Calif., for 20 c.f.s. from Feather River tributary to Sacramento River. To be diverted in Sec. 14, T. 14 N., R. 2 E., M. D. M., for irrigation purposes on 1000± acres.

SONOMA COUNTY—Application 6926. Albert P. Kogler, San Francisco, California for 0.05 c.f.s. from Porter Creek tributary to Mark West Creek and Russian River. To be diverted in Sec. 11, T. 8 N., R. 7 W., M. D. M., for irrigation and domestic purposes on 2½ acres. Estimated cost \$750.

LAKE COUNTY—Application 6927. Peter V. Pedroncini, Ukiah, Calif., for 0.1 c.f.s. from 2 unnamed springs tributary to Spruce Canyon to be diverted in

Sec. 11, T. 15 N., R. 11 W., M. D. M., for irrigation and domestic purposes on ½ acre. Estimated cost \$3,000.

Permits to Appropriate Water Issued by the Department of Public Works, Division of Water Resources, During the Month of March, 1931.

SHASTA COUNTY—Permit 3662, Application 6703. Elmer Gastineau, Los Angeles, Calif., March 9 1931 for .02 c.f.s. from unnamed springs in Sec. 12, T. 32 N., R. 5 W., M. D. for irrigation and domestic use on 20 acres. Estimated cost \$250.

BUTTE COUNTY—Permit 3663, Application 6700. Harvey C. Adams, Chico, Calif., March 9, 1931 for 3 c.f.s. from drainage ditch from Drainage Dist. No. 2 in Sec. 28, T. 19 N., R. 1 E., M. D., for irrigation use on 120 acres. Estimated cost \$250.

MONO COUNTY—Permit 3664, Application 6744. Raymond S. MacMillan, Los Angeles, Calif., March 9, 1931 for 200 g.p.d. from unnamed spring in Sec. 14, T. 2 S., R. 26 E., M. D., for domestic purposes. Estimated cost \$150.

SIERRA COUNTY—Permit 3665, Application 6834. Langdon Smith, Downieville, Calif., March 10, 1931 for .003 c.f.s. from unnamed spring in Sec. 5, T. 19 N., R. 10 E., M. D., for domestic purposes. Estimated cost \$500.

MONTEREY COUNTY—Permit 3666, Application 6794. Stuart Haldorn, Monterey, Calif., March 16, 1931 for 2 c.f.s. from Higuera Creek in Sec. 24, T. 19 S., R. 1 E., M. D. M., for power purposes.

MONTEREY COUNTY—Permit 3667, Application 6795. Stuart Haldorn, Monterey, Calif., March 16, 1931 for 0.12 c.f.s. from Higuera Creek in Sec. 24, T. 19 S., R. 1 E., M. D., for irrigation and domestic uses.

SAN BERNARDINO COUNTY—Permit 3668, Application 6669. Geneva Catherine Baxter, Lucerne Valley, Calif., March 17, 1931 for 0.14 c.f.s. from (1) Deep Creek Canyon and (2) unnamed spring in Sec. (1) 16 (2) 10, T. 3 N., R. 1 W., S. B. and M., for irrigation and domestic use on 20 acres. Estimated cost \$150.

EL DORADO COUNTY—Permit 3666, Application 6416. Emil E. Larsen, Placerville, Calif., March 25, 1931 for 6.5 c.f.s. from South Fork Brush Canyon in Sec. 4, T. 10 N., R. 12 E., M. D., for irrigation and domestic use on 60 acres. Estimated cost \$300.

INYO COUNTY—Permit 3670, Application 6868. H. J. Halliday, Bishop, Calif., March 25, 1931 for .0035 c.f.s. from small unnamed stream in Sec. 2, T. 9 S., R. 31 E., M. D., for domestic and recreational uses. Estimated cost \$155.

HUMBOLDT COUNTY—Permit 3671, Application 6766. E. F. Barker and Beatrice Barker, Orleans, Calif., March 26, 1931 for 0.1 c.f.s. from unnamed Gulch in Sec. 15, T. 10 N., R. 5 E., H. M., for irrigation and domestic use on six acres.

TOO MUCH IRRIGATION

The following stanza is anent the danger of our irrigation:

Countless worn-out fields remind us
We should build our lands to stay
And departing leave behind us
Fields that have not washed away.
When our boys assume the mortgage
On the land that's had our toil
They'll not have to ask the question
"Here's the land but where's the soil?"

First came the "realtor," then the "mortician," later the "beautician," subsequently the "bootician," then the "pedicure." And the other day a large dump truck careened down the avenue in one of our large cities bearing the imposing legend: "Kelly & McGuire, truckologists."

Jim the Porter: "Boss, de ladies has finally giv' in, ain't they?"

Boss: "Give in? How?"

Jim: "Well, I just now seen a sign down the street that said, 'Ladies' Ready-to-Wear Clothes.'"

Statistics Teach "Safety First" Lesson

ILLUSTRATIVE of the imperative necessity of careful driving in thickly-populated districts and on open highway, the Bureau of Research, Statistics and Traffic Safety of the California Highway Patrol announces figures showing forty-two children killed and 511 injured in California during 1930 by vehicles striking them while they played on the roadway.

The figures show 25 per cent of all injured and 17 per cent of all killed in pedestrian accidents were children.

In this connection the bureau called attention to sections of the law requiring motorists to drive at a speed not exceeding 15 miles an hour in school zones and to stop when school buses are taking on or discharging passengers.

Of 31,019 motor vehicle accidents in California, involving injury or death during the year, 9198, or approximately 30 per cent involved collisions with pedestrians.

These collisions resulted in death or injury to 9627 persons. The actual deaths totaled 857. The injured totaled 8770.

Over one-third of the pedestrian accidents occurred at intersections and about one-fourth were due to "jay-walking." About 3 per cent involved persons walking along the highways and streets.

THE "HIT AND RUN" DRIVERS' TOLL

"Hit and run" drivers were involved in 114 accidents causing death and 1156 others causing injury in California during 1930.

As "hit and run" drivers are able to make their escape usually because witnesses fail to get their numbers, E. Raymond Cato, superintendent of the California Highway Patrol, said members of the patrol would be instructed to continue rigid enforcement of section 43 of the motor vehicle act requiring that license plates be displayed in a position clearly visible and be kept free from foreign matter such as dust and grease.

Among the convictions were 4500 for various speed violations. Four hundred thirty-four were convicted of reckless driving and 1000 were apprehended for faulty headlamps. There were but 65 drivers the month convicted of driving while intoxicated.

Famous last words: "Sure, stranger; climb in the back seat."

Rolph Signature to Secondary Highway Law Wins High Praise

(From the *San Bernardino Sun*)

THE adoption by the Legislature and the signature of Governor James Rolph, Jr. of the new secondary highway bill discharges an obligation long due California.

The bill adds 633 miles of highway to the secondary system on southern California. To the north went 171 miles of additional State highways.

The measure was designed to correct the injustice in the number of secondary highways provided for southern California.

Governor Rolph carried out his pledge to the people with his signature on this measure. It is his contribution to his determination that all sections of California shall be treated squarely. And it is easy for Governor Rolph to take the position that there is no north and no south in California, but one great State. He is a typical Californian.

There is no claim that Governor Rolph initiated the movement for justice in the allocation of State highways. But he did speedily make it a law. There was no disposition on his part to make it the subject of pork barrel politics.

Fire Wardens of Southern California Meet in Convention

THE Southern California Association of Foresters Firewardens held their second annual meeting at Avalon, Catalina Island, during the latter part of February.

The Southern California Association of Foresters and Firewardens came into being just two years ago. This was the natural result of a mutual urgency appeal among men in the fire service of the public to form an organization for their mutual benefit and education. Their motto "For Unity of Thought and Action" expresses the purpose of the Organization. Membership is open only to those in the employ of some rural or mountain Fire Prevention Agency of Southern California. Its membership totaling approximately 120 paid-up members, includes U. S. F. S. Officers, County Fire Wardens and State Fire Rangers.

In southern California there are four National Forests—three counties with their own fire organization and seven counties under the jurisdiction of State Fire Rangers. Already these groups have been drawn closer together in cooperative Fire Prevention and Control Agreement; also by holding quarterly Directors meetings, and their big annual meetings, the men in the work have a chance to get together, talk over mutual problems, and bring in outside experts to give talks to broaden their view point.

WINTER TRAFFIC COUNT ON STATE HIGHWAYS

(Continued from page 25.)

Station location	January, 1930		January, 1931	
	Sun. 12	Mon. 13	Sun. 11	Mon. 12
Dyerville at Je. C.R. to South Fork,				
S. on 1.....	394	313	540	520
E. on C.R.....	145	177	180	290
N. on 1.....	353	312	500	510
W. on C.R.....	10	26	60	50
Fernbridge at Je. C.R. to Fernalde,				
S. on 1.....	788	524	2,309	1,312
W. on C.R.....	402	323	1,166	780
N. on 1.....	747	496	2,218	1,319
Eureka S. of Cy. Lts.	2,329	1,773	3,270	2,390
Eureka N. at Eureka Slough Bridge	2,330	1,665	3,060	2,370
Arcata N. of Cy. at Je. Rt. 20 to Weaverville,				
S. on 1.....	1,243	734	2,210	1,390
E. on 50.....	563	360	870	700
N. on 1.....	726	385	1,420	710
Orick Je. Rt. 1 and C.R. to Weitchpec,				
S. on 1.....	183	149	400	290
E. on C.R.....	21	10	30	40
N. on 1.....	169	138	380	260
Klamath Bridge	194	129	350	270
Crescent Cy. S.E. of Cy. at Je. Rd. to Crescent Cy.,				
S. on 1.....	467	429	503	634
N. to C. C.....	819	651	1,039	845
E. on 1.....	522	329	711	412
Hiochi Bridge, C.R. to Smith River				
S. on 1.....	305	139	360	100
W. on C.R.....			50	50
N. on 1.....	70	41	120	80
Oregon Line	76	41	120	80
Route 2. San Francisco to San Diego				
District IV				
Colma Je. with road to S. San Francisco,				
N. on 2.....	14,893	7,695	22,000	8,200
E. on C.R.....	2,133	1,737	4,100	1,900
S. on 2.....	12,764	5,958	18,000	5,400
San Bruno Je. with Bay Shore Rd. to S. San Francisco,				
N.W. on 2.....	11,743	5,533	17,000	5,200
N.E. on C.R.....	1,712	2,027	2,900	2,300
S. on 2.....	13,455	7,562	20,000	8,400
San Mateo S. of Cy. at 16th Ave.	14,846	9,830	22,000	12,000
Redwood City N. of Cy. Lts.	12,661	8,666	20,000	10,600
Palo Alto at Federal Telegraph Station	9,538	7,044	15,434	7,525
9 Mi. N. of San Jose on Rt. 2,				
N. on 2.....	3,038	6,272	8,200	5,300
W. on C.R.....	1,290	1,085	2,800	1,500
S. on 2.....	7,243	6,333	10,000	5,100
5 Mi. N. of San Jose	6,693	5,873	9,300	6,800
4 Mi. N. of San Jose	8,590	9,288	9,800	8,500
San Jose N. of Cy. Lts. at Lumber Yard	14,370	20,760	17,300	20,600
San Jose S. of Cy Lts.	5,015	5,806	8,200	6,300
5 Mi. S. of San Jose	3,563	3,175	5,600	3,600
10 Mi. S. of San Jose	3,713	3,151	4,800	4,800
15 Mi. S. of San Jose	3,621	3,223	5,800	3,500
Gilroy N. of Cy. at Je. with Mt. Madonna Rd. to Watsonville,				
N. on 2.....	4,443	4,854	6,800	4,700
W. on C.R.....	750	727	1,300	800
S. on 2.....	4,531	4,671	7,000	4,800
District V				
San Juan Bautista N. of Cy. at Je. with R. 67 Chittenden Rd.,				
N. on 2.....	2,589	2,199	2,800	1,800
W. on 67.....	1,404	1,051	1,200	850
S. on 2.....	2,225	2,009	2,600	1,700
San Juan Bautista S. of Cy. at Je. R. 22 to Hollister,				
N. on 2.....	2,431	2,160	3,300	2,400
E. on 22.....	1,494	1,338	1,900	1,200
S. on 2.....	2,657	1,663	2,500	1,900
S. Bt.-Mon. Co. Line	1,867	1,827	2,300	1,500
Saltinas N. of Cy. Lts.	2,936	3,151	3,900	3,900
Saltinas S. of Cy. Lts.	2,147	2,610	3,200	3,100
Gonzales 3 Mi. W. of Town	1,628	1,722	2,200	1,900
Soledad S. of Milk Plant	1,585	1,734	2,400	1,700
San Lucas S. of Cy. at Je. R. 10 to Coalinga and C.R. to Jolon,				
N. on 2.....	1,151	1,155	1,095	873
E. on 10.....	75	92	116	95

Station location	January, 1930		January, 1931	
	Sun. 12	Mon. 13	Sun. 11	Mon. 12
W. on C.R.	54	127	146	104
S. on 2.....	1,079	1,066	678	823
Paso Robles N. of Cy. Lts.	1,164	1,203	1,600	1,600
Paso Robles S. of Cy. Lts.	1,581	1,850	2,300	1,500
San Luis Obispo N. of Cy. Lts.	1,916	1,726	2,100	1,800
San Luis Obispo S. of Cy. Lts. at R. R. Xing.	2,650	2,768	3,600	2,800
Santa Maria N. of Cy. at Je. R. 37 to Bakersfield,				
N. on 2.....	1,827	1,929	2,700	1,800
E. on 57.....	261	70	260	120
S. on 2.....	2,073	1,981	2,900	1,900
1 Mi. S. of Zaca Jo. Los Olivos Rd.,			676	880
N. on 2.....				80
E. on C.R.....				840
S. on 2.....				890
Buellton at Intersection with Co. Rds. W. to Lompoc and Easterly,				
N. on 2.....	1,291	1,329	1,100	1,200
E. on C.R.....	210	245	520	650
W. on C.R.....	208	256	520	480
S. on 2.....	1,325	1,435	1,300	1,500
Gaviota W. on Rd. to Gaviota Sta. Orelia, opposite Orelia Sta.	1,407	1,411	1,800	1,000
Santa Barbara W. of Cy. at Je. San Marcos Rd.,				
N. on 2.....	3,218	3,731	4,200	3,500
On San Marcos Rd.....	1,949	571	940	570
S. on 2.....	3,694	3,880	4,900	3,800
Santa Barbara W. of Cy. Lts. on 2.	4,871	5,685	6,600	5,700
Santa Barbara 300 Ft. E. of Cy. Lts.	5,783	7,074	8,800	9,700
Santa Barbara-Ventura Co. Line.	3,101	3,154	5,600	3,100
District VII				
Ventura W. of Cy. at Bridge	3,378	3,523	6,600	3,800
Ventura E. of Cy. Lts.	4,263	5,102	7,600	5,500
El Rio Intersection,				
N. on 2.....	3,703	4,134	6,900	4,100
N. to Saticoy.....	912	1,153	1,200	1,000
S. on 60.....	2,800	3,610	6,200	3,800
E. on 2.....	1,970	1,949	3,000	2,100
Ventura-Los Angeles Co. Line	2,111	1,797	3,300	1,900
W. of Hollywood-Ventura Blvd. at Sepalveda St.	4,628	5,368	10,400	5,200
L. A. E. at Indiana St.	10,458	14,270	16,457	14,763
Whittier at Je. with Hadley St.				
W. on 2.....	11,619	14,012	14,300	12,200
N. on Hadley.....	2,800	3,894	3,000	4,300
E. on 2.....	9,185	8,947	12,400	9,100
La Habra E. Cy. Lts. at Je. Rds. to La Habra and Brea,				
N. on 2.....	3,824	3,141	8,100	4,600
W. to La Habra.....	2,334	2,257	4,100	2,800
E. of Brea.....	2,534	2,257	4,000	2,700
S. on 2.....	3,344	3,962	8,800	5,900
Anaheim N. of Cy. Lts.	7,131	8,881	19,400	9,600
Santa Ana N. of Cy. Lts. at Je. C.R. to Orange,				
N. on 2.....	5,804	6,697	5,200	3,100
E. on C.R.....	4,560	4,796	7,500	6,600
S. on 2.....	6,766	8,142	5,300	4,800
Tustin W. of Cy.	3,562	4,390	6,200	5,700
Serra Je. Rt. 60,				
N. on 2.....	1,971	1,697	3,400	1,800
W. on 90.....	1,895	1,873	4,400	2,700
S. on 2.....	3,440	2,493	5,700	2,700
Oceanside N. S. Cy. Lts.	3,977	3,508	6,500	4,100
Delmar at S.P. R.R. Xing	3,354	2,590	5,600	2,800
Route 3. Sacramento to Oregon Line				
District III				
Sacramento N. at Je. Garden Highway,				
W. on 3.....	9,288	9,723	14,380	13,600
N. on Garden Highway.....	607	734	2,050	2,100
E. on 3.....	6,931	9,302	11,320	11,000
Ben All Xing Je. C.R.,				
W. on 3.....	4,672	3,383	5,620	3,800
N. on C.R.....	374	324	560	380
S. on C.R.....	373	683	820	790
E. on 3.....	5,318	2,844	5,250	3,100
Je. C.R. to Folsom N. of 12 Mi. House,				
S. on 3.....	4,440	2,031	4,412	2,774
E. on C.R.....	407	218	656	345
N. on 3.....	4,738	2,131	3,779	2,537
Roseville S. of Cy. Lts.	5,149	2,725	5,530	3,600
Roseville N. of Cy. Lts.	1,346	1,297	1,560	1,600
Marysville, S. of Cy. at Je. Hammon-ton Rd.,				
S. on 3.....	1,664	1,019	1,840	1,400
Hm. Rd.....	423	602	730	820
N. on 3.....	1,570	1,798	3,110	2,200
W. on C.R.....	253	339	830	580

Station location		January, 1930		January, 1931		Station location		January, 1930		January, 1931	
		Sun. 12	Mon. 13	Sun. 11	Mon. 12			Sun. 12	Mon. 13	Sun. 11	Mon. 12
Route 5. Stockton to Santa Cruz via Oakland						Route 7. Tehama Junction to Benicia					
District X						District X					
French Camp, N. on 4..... 1,787 1,991 S.W. on 5..... 1,560 1,630 S.E. on C.R. 276 411 Jr. Old Rt. 4 N. of French Camp R. R. King, N. on 5..... 3,200 2,800 S. on 5..... 3,000 2,500 N.W. on C.R. 580 480 S.E. on C.R. 870 860 Mossdale Jr. Rt. 66 to Manteca, N. on 5..... 1,986 1,837 2,730 1,900 E. on 66..... 1,855 1,387 2,687 1,524 S. on 5..... 3,839 3,222 5,286 3,435 Tracy W. of Cy. at Jr. C.R. to Byron Sta., E. on 5..... 3,819 2,744 4,800 2,800 N. on C.R. 356 401 580 350 W. on 5..... 3,813 2,803 4,200 2,400						W. on 7..... 2,320 2,103 3,200 2,500 N. on 7..... 1,881 1,709 2,000 1,500 Banica N. of City..... 822 826 490 290 Cordelia Jr. Rt. 8 to Napa, S. on 7..... 235 208 240 190 W. on 8..... 2,290 1,459 2,800 1,800 E. on 7..... 2,471 1,853 2,900 2,000 West of Cordelia, Old Jr. Rts. 7 and 8, S. on 7..... 470 300 E. on C.R. 500 220 N. on 7..... 630 170 Cordelia Jr. C.R. to Suisun, W. on 7..... 438 330 E. on C.R. 447 348 N. on 7..... 276 219 Fairfield E. of City..... 2,886 2,005 3,000 2,500 Dixon S. of City..... 2,308 1,836 2,800 2,000 Woodland Wye Jr. Rt. 6, W. on 7..... 2,320 2,103 3,200 2,500 E. on 6..... 2,633 2,707 3,900 3,100 N. on 7..... 1,881 1,709 2,000 1,500					
District IV						District III					
Altamont at R.R. Sta..... 3,501 2,292 4,700 2,600 Livermore E. of Cy. at Jr. C.R. to Livermore, E. on 5..... 3,499 2,687 5,300 3,000 S. on C.R. 1,927 985 2,100 1,100 W. on 5..... 2,593 1,728 3,200 1,900 Santa Rita Inn Jr. C.R. to Pleasanton, E. on 5..... 3,934 2,240 5,300 2,600 S. on C.R. 695 486 870 600 W. on 5..... 4,307 2,439 5,600 2,800 Dublin Jr. C. R. to Martinez, E. on 5..... 4,491 2,383 5,700 3,100 N. on C.R. 1,691 573 1,700 540 W. on 5..... 5,233 2,561 6,200 3,200 Dublin Jr. C.R. to Niles, E. on 5..... 5,177 2,612 6,200 3,000 S. on C.R. 631 258 1,100 330 W. on 5..... 5,225 2,608 6,300 3,100 Hayward Jr. with Castro Valley Road, E. on 5..... 5,947 3,205 8,400 4,400 N.W. to Castro Valley..... 1,331 1,108 1,900 1,300 S.W. on 5..... 4,515 2,101 6,420 3,000 At Alameda Co. Hospital..... 6,189 2,731 7,900 3,600 Hayward S. of Cy. Lts. 3,252 2,523 7,400 3,000 Niles N. at Hotel Bellevoir..... 2,535 2,188 6,100 2,700 Niles at Jr. Niles Canyon Road, N. on 5..... 3,363 3,014 6,100 3,100 E. on C.R. 1,009 1,030 1,500 840 S. on 5..... 3,078 2,749 3,700 2,900 Niles S. of Cy. at Jr. C.R. to Centerville, N. on 5..... 2,792 2,228 5,600 2,800 W. on C.R. 1,144 1,390 1,700 1,500 S. on 5..... 1,851 1,161 4,200 1,000 Mission San Jose Jr. C.R. to Livermore, N. on 5..... 1,654 912 3,600 1,300 E. on C.R. 1,030 785 1,700 800 S. on 5..... 489 1,599 5,100 1,900						Woodland S. of City..... 1,802 1,802 2,010 1,700 Woodland N. of Cy. at Browns Corner Jr. with C.R. W. & S., E. on 7..... 2,070 1,947 2,940 2,100 S. on C.R. 231 179 340 210 W. on C.R. 708 813 1,400 950 N. on 7..... 1,468 1,189 1,900 1,200 Williams S. of City..... 1,180 867 1,700 1,200 Williams N. of City..... 847 678 1,600 1,400 Willows S. of City..... 1,057 978 1,250 1,000 Willows N. of City at Maint. Sta. 1,560 1,420 1,640 1,500 Orland N. of City..... 826 832 1,350 1,200					
District X						District II					
9 MI. N. of San Jose Jr. C.R. to Centerville, N. on 5..... 2,031 1,137 4,000 1,500 N.W. on C.R. 3,446 1,960 3,800 1,800 S. on 5..... 5,542 3,699 7,800 3,800 5 MI. N. of San Jose..... 6,434 4,226 10,000 4,500 San Jose N. of Cy. at Jr. with Gish Road..... 4,257 3,691 6,900 3,000 San Jose W. of City at Sanitarium..... 6,121 8,171 11,000 11,300 Los Gatos N. of City..... 1,859 1,832 3,200 2,000 Los Gatos S. of City Lts. 2,134 1,533 3,900 2,290 Santa Clara-Santa Cruz Co. Line..... 1,910 718 2,600 960 Santa Cruz N. of City..... 1,371 1,074 2,600 1,800						Red Bluff, S. of town at Reed Creek Bridge..... 935 870 1,040 1,000					
District X						District IV					
West of Sacramento, W. of Underpass..... 3,011 3,078 4,800 4,290 Davis E. of Cy. Underpass..... 2,810 2,744 4,000 3,400 Woodland Wye Jr. Rt. 7 W. to Benicia and N. to Woodland, E. on 6..... 2,633 2,707 3,900 3,190						Petaluma Creek Bridge..... 941 432 1,780 650 Schellville Jr. Rt. 51 to Santa Rosa, S.W. on 8..... 1,117 581 1,600 830 N. on 51..... 794 411 900 590 N.E. on 8..... 792 464 1,200 540 Jr. Rt. 8 and C.R. to Vineburg, W. on 8..... 1,100 596 E. on 8..... 2,000 970 N. on C.R. 1,100 570 Napa Wye Jr. C.R. to Vallejo, N. on 8..... 3,407 2,291 4,500 2,190 S. on C.R. 4,693 2,804 5,700 3,190 E. on 8..... 3,093 2,178 3,500 2,190					
District X						District X					
Cordelia Jr. Rt. 7..... 2,290 1,459 2,800 1,800						Cordelia Jr. Rt. 7..... 2,290 1,459 2,800 1,800					
District VIII						Route 9. District VII					
S. Bd.-L. A. Co. Line..... 12,973 3,029 18,600 3,700 Uplands E. of Cy. at Jr. C.R. to Uplands, W. on 9..... 4,738 1,712 9,800 2,690 S.W. on C.R. 1,434 1,204 1,300 1,030 E. on 9..... 5,619 2,883 10,100 4,200 Uplands at Euclid Ave Intersection, W. on 9..... 7,116 2,619 5,971 2,401 N. on Euclid Ave..... 6,613 2,078 6,338 1,885 S. on Euclid Ave..... 4,299 2,432 3,676 2,106 E. on 9..... 6,019 2,239 11,533 2,322 S. Bd. W. of City..... 5,790 3,836 10,500 4,690						Tufunga W. of Sunset Blvd..... 6,152 3,081 6,800 3,200 La Crecente W. of Penn. Ave..... 9,847 3,826 8,200 4,800 La Canada at School St..... 5,296 3,472 8,600 4,800 Pasadena E. of Cy. Lts. 10,553 7,140 17,500 8,200 Azusa W. of City Limits..... 11,173 5,633 21,600 6,400					
District V						District VIII					
San Lucas S. of City at Jr. Rt. 2..... 75 92 116 85						S. Bd.-L. A. Co. Line..... 12,973 3,029 18,600 3,700 Uplands E. of Cy. at Jr. C.R. to Uplands, W. on 9..... 4,738 1,712 9,800 2,690 S.W. on C.R. 1,434 1,204 1,300 1,030 E. on 9..... 5,619 2,883 10,100 4,200 Uplands at Euclid Ave Intersection, W. on 9..... 7,116 2,619 5,971 2,401 N. on Euclid Ave..... 6,613 2,078 6,338 1,885 S. on Euclid Ave..... 4,299 2,432 3,676 2,106 E. on 9..... 6,019 2,239 11,533 2,322 S. Bd. W. of City..... 5,790 3,836 10,500 4,690					
District V						District VIII					
San Lucas S. of City at Jr. Rt. 2..... 75 92 116 85						S. Bd.-L. A. Co. Line..... 12,973 3,029 18,600 3,700 Uplands E. of Cy. at Jr. C.R. to Uplands, W. on 9..... 4,738 1,712 9,800 2,690 S.W. on C.R. 1,434 1,204 1,300 1,030 E. on 9..... 5,619 2,883 10,100 4,200 Uplands at Euclid Ave Intersection, W. on 9..... 7,116 2,619 5,971 2,401 N. on Euclid Ave..... 6,613 2,078 6,338 1,885 S. on Euclid Ave..... 4,299 2,432 3,676 2,106 E. on 9..... 6,019 2,239 11,533 2,322 S. Bd. W. of City..... 5,790 3,836 10,500 4,690					

District VI

Station location	January, 1930		January, 1931	
	Sun. 12	Mon. 13	Sun. 11	Mon. 12
Monterey-Presno Co. Line	189	43	80	30
Parkfield Jc.				
W. on 19	237	76	150	70
S. on C.R.	48	42	30	30
E. on 19	264	105	180	90
Coolings S. of City	572	365	590	420
Coolings 3 Mi. E. at Jc. C.R. to Oilfields				
W. on 10	784	1,056	870	665
N. on C.R.	207	254	230	300
E. on 10	576	893	630	560
Oilfields at Oil King School				
W. on 10	464	424	846	576
N. on C.R.	199	200	490	500
E. on 10	326	281	110	460
Kings River Bridge	248	348	370	260
Lemoore Jc. C.R. to Lemoore				
N. on 10	447	522	630	500
E. on C.R.	431	459	580	480
S. on 10	426	496	420	420
Hanford W. of Cy. Lts.	1,259	1,904	1,290	1,300
Hanford E. of Cy. at Interx. C.R. N. to Kingsburg & S. to Corcoran				
W. on 10	2,421	2,418	2,590	2,500
N. on C.R.	1,205	1,322	1,590	1,400
S. on C.R.	1,371	1,437	2,090	1,690
E. on 10	1,737	1,970	2,290	2,600
Goshen, Jc. Rt. 4				
W. on 10	1,614	923	1,290	940
N. on 4	1,795	1,941	2,800	2,200
S. on 4	1,597	1,594	2,690	2,600
E. on 4	1,316	1,385	1,590	1,500
Visalia Wye, Jc. Rt. 4 W. to Goshen & S. to Bakersfield and Rt. 19 E. to Visalia				
W. on 4	1,845	2,074	2,430	2,200
S. on C.R.	1,272	1,410	1,490	1,300
E. on 10	2,920	3,293	3,430	3,500
Visalia E. to Cy. at Exeter Jc.				
W. on 10	1,791	1,854	2,090	2,400
S. to Exeter	970	1,073	860	580
E. on 10	1,691	975	1,890	2,100
Lemon Cove Jc. C.R. to Woodlake				
W. on 10	1,692	426	690	440
N. on C.R.	723	274	430	290
E. on 10	1,508	427	890	490
Three Rivers E. of Town at Jc. C.R. northerly				
W. on 10	1,368	231	720	590
N. on C.R.	61	62	170	119
E. on 10	1,521	231	790	286

Route 11. Sacramento to Nevada Line via Placerville

District III

Station location	January, 1930		January, 1931	
	Sun. 12	Mon. 13	Sun. 11	Mon. 12
Sacramento E. of Cy. Lts.	2,855	1,932	3,820	3,300
Perkins Jc. with C.R. to Plymouth				
W. on 11	2,225	1,894	3,710	3,100
S.E. on C.R.	1,646	894	1,610	1,300
E. on 11	2,442	1,063	2,630	2,230
Folsom W. of Cy. Jc. Pratt Road				
W. on 11	1,501	759	1,490	940
E. on C.R.	360	290	450	300
W. on 11	1,187	612	1,090	700
Folsom E. of Cy. at High School				
N. on 11	1,115	335	1,140	590
W. on C.R.	396	183	250	169
E. on 11	1,333	421	1,140	610
El Dorado Jc. Rt. 65				
W. on 11	921	378	430	550
S. on 65	56	54	130	260
E. on 11	876	358	950	560
Placerville W. of Cy.	1,160	1,084	1,330	860
Placerville E. of Cy.	729	519	1,590	790
Headquarters Camp	161	40	2,220	269
Between Riverton and Kyburz	24	14		
Alpine Jc.				
W. on 11	Road closed	Road closed	Road closed	Road closed
S. on 28	Road closed	Road closed	Road closed	Road closed
E. on 11	Road closed	Road closed	Road closed	Road closed
Jc. Rt. 33 to Lake Tahoe				
W. on 11	Road closed	Road closed	Road closed	Road closed
N. on 38	Road closed	Road closed	Road closed	Road closed
E. on 11	Road closed	Road closed	Road closed	Road closed
Lakeside at Connellys Ser. Sta. Jc. C.R. to Ripon				
W. on 11	Road closed	Road closed	Road closed	Road closed
N. on C.R.	Road closed	Road closed	Road closed	Road closed
E. on 11	Road closed	Road closed	Road closed	Road closed

Route 12. San Diego to El Centro

District VII

Station location	January, 1930		January, 1931	
	Sun. 12	Mon. 13	Sun. 11	Mon. 12
San Diego E. of City Euclid Ave. at Cajon Ave.	6,978	3,781	10,000	5,200
El Cajon W. of Cy. Lts.	5,620	2,814	7,400	5,200
At Sweetwater Bridge	3,981	427	2,500	850
Jacumba at Jc. C.R. El Campo				
W. on 12		Road closed	1,290	600
S. on C.R.		736	417	280
E. on 12		1,691	410	1,390

District VIII

Station location	January, 1930		January, 1931	
	Sun. 12	Mon. 13	Sun. 11	Mon. 12
On Imp.-12-B	No report, snow		1,290	630
El Centro W. of Cy. at Jc. Rt. 28 to S. Bd.				
W. on 12	2,961	2,158	3,560	2,624
N. on 23	4,896	4,593	3,978	5,899
E. on Mulberry Lane	2,377	2,752	2,949	3,473
S. from Intersection	5,078	4,494	6,671	5,651

Route 13. Salida to Route 23 at Junction

District X

Station location	January, 1930		January, 1931	
	Sun. 12	Mon. 13	Sun. 11	Mon. 12
Salida Jc. Rt. 4	191	171	550	390
E. of Salida at McHenry's Jc. C.R. to Modesto				
W. on 13	311	348	480	350
S. on C.R.	1,484	1,442	1,890	1,200
N. on 13	1,503	1,483	1,900	2,500
Oakdale W. of Cy.	1,379	1,316	1,500	1,500
E. of Oakdale	1,739	792	2,100	850
Mountain Pass Jc. Rt. 40 to Yosemite				
S.W. on 13	1,211	295	1,890	400
S.E. on 40	137	60	190	76
N.E. on 13	1,127	223	1,790	370
Senora S. of City	1,736	1,029	3,690	1,900
Senora E. at Sullivan Creek Bridge				
E. on C.R.	335	347	580	710
N. on 13	823	365	2,190	630
W. on 13	1,646	690	1,990	1,160
Jc. S.H. & C.R. at Pooleys				
W. on 13	898	185	2,690	430
E. on 13	960	251	2,990	480
S. on C.R.	245	98	510	180
Between Confidence and Bakers Sta.			Road closed	Road closed

District IX

Jc. Rt. 23			Road closed	Road closed
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Route 14. Albany to Martinez

District IV

Station location	January, 1930		January, 1931	
	Sun. 12	Mon. 13	Sun. 11	Mon. 12
Albany at County Line	14,666	12,209	19,090	13,600
Jc. C.R. to Richmond				
S. on 14	13,210	10,921	18,000	12,790
W. on C.R.	3,961	4,115	5,400	3,390
N. on 14	9,815	7,020	13,990	8,200
Jc. Franklin Canyon Rd.				
S. on 14	5,474	3,953	7,600	4,400
E. on C.R.	1,695	1,170	2,400	1,200
N. on 14	4,254	2,986	6,500	3,500
Carguinez Straits Bridge	3,116	2,654	4,189	2,455
Crockett 1 Mi. S. at Jc. C.R. to Crockett				
S. on 14	791	907	1,930	1,600
N. on C.R.	637	938	1,290	1,400
N. on 14	788	851	1,890	1,300
Martinez W. of Cy Lts.	550	398	790	390

Route 15. Route 1 Near Catpella to Route 37 Near Glise

District IV

Ukiah N. at Jc. Rt. 1	377	311	670	490
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District III

Station location	January, 1930		January, 1931	
	Sun. 12	Mon. 13	Sun. 11	Mon. 12
Upper Lake, S. of Cy. Jc. C.R. to Lakeport				
W. on 15	316	336	630	609
S. on C.R.	163	179	410	479
N. on 15	389	399	750	610
Jc. C.R. and Lakeport Cut-off				
W. on 15			240	170
E. on 15			520	330
Upper Lake, Jc. C.R. to Bartlett Springs				
N. on 15	128	153	450	259
E. on C.R.	6	0	40	78
S. on 15	122	153	470	240
Lower Lake Jc. 1/2 Mi. W. Sweet Hollow Summit				
E. on 15	95	103	120	70

Station location	January, 1930		January, 1931		Station location	January, 1930		January, 1931	
	Sun. 12	Mon. 13	Sun. 11	Mon. 12		Sun. 12	Mon. 13	Sun. 11	Mon. 12
S. on 49	36	46	150	150	Los Angeles Co. Line E. City Limits				
W. on 15	79	105	170	180	Pomona, New Road	2,427	2,488	4,200	5,700
Near Vensda Jc. C.R. to Bartlett Springs					Bet. Pomona & Ontario at Chino				
W. on 15	37	36	150	110	Cross Roads				
S. on C.R.	13	6	40	60	N. on C.R.	824	788	180	140
E. on 15	62	45	160	180	S. on C.R.	800	927	400	420
Williams W. of Cy.	329	314	380	430	E. on 19	1,849	1,743	3,500	2,700
Williams E. of Cy.	468	423	600	550	W. on 19	2,174	1,951	3,000	2,200
Colusa R. of Cy.	509	689	1,140	659	East of Ontario, E. Cy. Lts. at Jc. of New S. Bd.-19-B, with Old Road				
Sutter City					W. on 19, New Road	650	479	2,000	1,500
W. on 15	616	667	960	770	E. on 19, New Road	420	389	5,160	3,000
N. on C.R.	314	166	390	220					
E. on C.R.	309	409	350	530					
S. on 15	671	699	1,050	780					
Marysville E. of Cy.	571	486	1,040	530					
Smartsville N. of Jc. N. & S. Side Road									
E. on 15	169	46	540	120					
W. on side road	35	14	50	60					
W. on 15	201	57	570	120					
Grass Valley W. of Cy	253	121	750	280					
Nevada City E. of Cy.	100	69	1,600	120					
Route 16. Hepland to Lakeport									
District IV									
Hepland at Jc. Rt. 1	405	363	610	300					
Lakeport S. of Town at Jc. C.R. to Kelseyville									
N.E. on 14	430	459	1,060	800					
S. on C.R.	615	438	800	750					
W. on 16	90	43	300	280					
Route 17. Roseville to Nevada City									
District III									
Roseville E. of Cy.	4,071	1,256	3,710	1,700					
Auburn S. of Cy. Jc. Ophir Rd.									
E. on 17	1,677	602	2,640	800					
N. on C.R.	45	91	180	210					
W. on 17	2,164	623	1,906	880					
Auburn N. of Cy. Jc. Country Club Road									
N. on 17	762	189	1,390	620					
E. on C.R.	20	31	140	70					
S. on 17	700	199	1,380	660					
Grass Valley S. of City	1,285	305	1,780	750					
Nevada City S. of City	612	422	2,250	920					
Route 18. Merced to Route 40 Near Sequia									
District VI									
Merced 1.6 Mi. E. at Inters. C.R. at 21st St.									
W. on 18	1,195	1,010	1,390	1,500					
E. on 18	1,488	1,422	1,560	1,500					
W. on C.R.	394	414	1,600	2,100					
Merced 12 Mi. E. at Inters. C.R. to Le Gravel									
W. on 18	730	177	530	370					
S. on C.R.	50	26	50	150					
E. on 18	761	174	550	360					
Mormon Bar at Inters. with C.R. to Mormon Bar									
S. on 18	714	206	1,690	490					
E. on C.R.	14	19	120	110					
N. on 18	657	188	1,710	480					
Briceburg to Bear Creek Bridge on 18	471	100	850	170					
El Portal Jc. County Road									
W. on 18	646	184	1,260	390					
W. on C.R.	87	75	230	110					
E. on 18	539	156	1,190	170					
Route 19. From Route 9 West of Claremont to Riverside									
District VIII									
Los Angeles Co. Line E. Cy. Lts. Pomona-Old Road	0,560	6,033	15,000	6,900					
Bet. Pomona & Ontario at Chino Cross Rds.									
W. on 19, Old Road	9,649	5,956	12,800	6,000					
N. on C.R., Old Road	113	81	160	100					
S. on C.R. to Chino, Old Road	459	563	590	750					
E. on 19, Old Road	9,739	6,138	12,600	6,200					
East of Ontario, E. City Lts. at Jc. of New S. Bd.-19-B with Old Road									
N.W. on 19, Old Road	1,991	1,645	3,490	1,800					
At S. Bd.-Riv. Co. Line on 19, Old Road	2,663	1,957	4,890	2,600					
Winerville E. of Cy., Old Road	2,837	2,211	10,490	5,500					
Riverside W. of Cy. at Santa Ana River Bridge, Old Road	4,499	4,450	7,890	5,100					
Route 20. Route 1 Near Arcata to Redding via Weaverville									
District I									
Arcata N. of Cy. at Jc. Rt. 1	563	369	870	700					
Willow Creek Jc. C.R. to Hoopa									
W. on 20	25	13	70	80					
N. on C.R.	37	37	60	80					
E. on 20	27	27	70	70					
Humboldt-Trinity Co. Line	42	39	190	210					
District II									
Big Bar Vicinity	14	12	60	70					
Weaverville, 3 Mi. S.	45	40	110	190					
Bet. Redding & Tower House	62	60	320	360					
Route 21. Route 3 Near Richvale to Quincy									
District III									
Richvale Wye	310	241	470	340					
Oroville W. Jc. Marysville Road									
E. on 21	1,634	1,120	1,810	1,500					
W. on 21	644	723	1,290	1,100					
S. on Marysville Road	429	437	810	470					
Oroville E. of Cy.	204	827	1,570	1,400					
River Road			420	180					
Feather River Br.			320	50					
Miners Ranch									
E. on 21	155	60	240	110					
S. on C.R.	246	99	160	200					
W. on 21	295	171	360	270					
Bidwell Bar Bridge	45	35	190	120					
Berry Creek	9	4	180	60					
Meadow Valley									
W. on 21	25	11	50	30					
N. on C.R.	25	11	40	30					
E. on 21	6		40	20					
Quincy	40	20	50	50					
Route 22. San Juan Bautista to Route 32 Via Hollister									
District V									
San Juan Bautista S. of Cy. at Jc. Rt. 2	2,431	2,160	1,500	1,200					
District IV									
Hollister, Jc. Rt. 32	707	331	460	330					
Route 23. Saugus to Route 11 at Alpine Junction									
District VII									
Saugus Jc. with Rt. 4	7,677	2,051	7,390	1,600					
Palmdale S. of Cy. Lts.	2,818	995	5,200	1,000					
Lancaster Jc. with Rt. 59 to Neonach									
S. on 23	1,822	1,168	3,000	1,900					
W. on 23	450	529	1,200	1,000					
N. on 23	962	685	1,900	800					
Los Angeles-Kern Co Line	631	302	1,300	530					
Route 23. District IX									
Mojave Jc. Rts. 58 and 29									
S. on 23	505	306	350	410					
E. on 58	47	92	170	170					
N. on 23	545	381	630	530					
Mojave Jc. C.R. to Bakersfield									
S. on 23	542	270	560	300					
N.W. on C.R.	430	189	420	250					
N. on 23	136	95	400	650					
Freeman 1 Mi. N. Jc. to Rt. 57									
S. on 23	43	20	220	60					
N. on 57	8			40					
N. on 23	51	20	220	100					
Kern-Inyo Co. Line	21	31	179	150					
Olancha Jc. C.R. to Keeler									
S. on 23	46	47	150	106					
E. on C.R.	14	10	40	50					
N. on 23	48	44	90	200					
Lane Pine S. Cy. Lts. C.R. to Keeler									
S. on 23	144	171	250	190					
E. on C.R.	27	32	190	100					
N. on 23	121	143	350	290					

District X		January, 1930		January, 1931	
Station location	Sun. 12	Mon. 13	Sun. 11	Mon. 12	
Big Pine Jc. Rt. 63 to Oasis,					
S. on 23.....	132	176	110	170	
E. on 63.....	15	38	30	50	
N. on 23.....	139	156	120	100	
Bishop 1/2 Mi. N. at Jc. C.R. N. to Laws & Dirt Road Easterly,					
S. on 23.....	331	410	623	555	
N. on C.R.....	163	265	330	326	
E. on C.R.....			41	17	
W. on 23.....	189	171	289	197	
Leaving Jc. Rts. 40 and 23					
On 40.....Road closed, snow					
On 23.....	24	35	90	77	
Mono Ferry Co. Line.....	28	21	30	44	
Mono-23-I.....Road closed, snow			110	177	
Bridgeport at E. Cy. Lts.....					
On Mono-23-K.....					
Sonora Jc., Jc. Rts. 13 and 25,					
S. on 23.....					
W. on 13.....					
N. on 23.....					
S. of Markleville Jc. Rt. 24,					
On 23.....Road closed, snow					
On 24.....Road closed, snow					
Jc. S.H. and C.R. at Woodfords,					
S.E. on 23.....	5	9	60	14	
N.E. on C.R. to Minden.....	4	9	70	50	
N.W. on 23.....	2		40	20	
Picketts Jc., Jc. Rt. 34,					
E. on 23.....Road closed, snow					
W. on 34.....Road closed, snow					
N.E. on 23.....Road closed, snow					

Route 24. Route 4, Near Lodi, to Route 23, Near Silver Creek

District X		January, 1930		January, 1931	
Station location	Sun. 12	Mon. 13	Sun. 11	Mon. 12	
Lodi Jc. Rt. 4.....	1,007	1,042	1,400	1,200	
Jc. Rt. 24 and C.R. to Ione,					
W. on 24.....	1,316	728	1,400	480	
N. on C.R.....	279	282	600	350	
E. on 24.....	1,057	511	850	770	
Bet. San Andreas and Valley Springs	1,045	216	940	370	
Jc. Rt. 24 and C.R. to Vallecita,					
N. on 24.....	421	150	1,300	290	
S. on C.R.....	65	60	180	100	
W. on 24.....	453	174	1,200	240	
Jc. Rt. 24 and C.R. to Murphys,					
S. on 24.....	405	118	1,600	280	
N. on C.R.....	299	137	800	300	
E. on 24.....	534	154	1,700	300	

Route 25. Nevada City to Downieville

District III		January, 1930		January, 1931	
Station location	Sun. 12	Mon. 13	Sun. 11	Mon. 12	
Nevada City N. of Cy.....	30	57	200	120	
Camptonville N. of Cy.....	9	19	110	150	
Downieville Jc. Rts. 25 and 38,					
W. on 25.....	17	12	110	100	
N. on 36.....			10	10	
E. on 25.....	17	13	120	90	

Route 26. San Bernardino to El Centro

District VIII		January, 1930		January, 1931	
Station location	Sun. 12	Mon. 13	Sun. 11	Mon. 12	
S. Bd. S. of Cy. at N. end Santa Ana River Bridge, Jc. C.R. to Colton,					
N. on 26.....	2,020	2,230	3,323	2,866	
W. on C.R.....	1,732	1,918	3,541	2,038	
S. on 26.....	4,398	3,690	6,692	4,507	
Bet. S. Bd. & Redlands on 26 at Jc. of Hunt's Lane,					
E. on 26.....	4,510	3,877	6,300	4,600	
W. on 26.....	4,607	3,795	6,300	4,600	
At Inters. with Mt. View Ave. W. of Redlands,					
E. on 26.....	4,219	3,190	6,500	4,200	
S. on C.R.....	675	745	1,000	1,100	
N. on C.R.....	740	834	1,200	1,100	
W. on 26.....	4,416	3,245	6,200	4,200	
Colton Ave. at W. Cy. Lts. of Redlands	4,938	3,751	6,700	4,600	
S.E. of Redlands Jc. C.R. to Yucaipa,					
N.W. on 26.....	3,471	2,068	4,700	2,700	
E. on C.R.....	456	468	620	590	
S.E. on 26.....	3,148	2,119	4,100	2,100	
At S. Bd.-Riv. Co. Line.....	No count, snow		4,000	2,100	
Beaumont Jc. Jack Rabbit Trail,					
N. W. on 26.....	No count, snow		3,700	1,900	
W. on Jack Rabbit Trail.....	No count, snow		2,000	880	
E. on 26.....	No count, snow		5,300	2,600	
Banning W. of Cy. Lts.....	No count, snow		5,400	2,600	

District VIII		January, 1930		January, 1931	
Station location	Sun. 12	Mon. 13	Sun. 11	Mon. 12	
At Jc. with C.R. to Palm Springs,					
E. on 26.....	No count, snow		2,400	1,300	
S.E. to Palm Springs.....	No count, snow		2,500	670	
W. on 26.....	No count, snow		4,600	1,900	
Coachella S. of Cy. at Jc. C.R. to Thermal and Mecca,					
N. on 26.....	No count, snow		2,900	1,700	
E. on C.R.....	No count, snow		4,200	300	
W. on C.R.....	No count, snow		360	360	
S. on 26.....	No count, snow		2,100	1,800	
1 Mi. S. of Indio at Jc. of C.R. S. to Coachella and Thermal and Mecca,					
N. on 26.....	No count, snow		1,300	1,300	
S.E. on 26.....	No count, snow		2,000	1,300	
S. on C.R.....	No count, snow		1,000	1,100	
At Imp. Co. Line.....	1,299	868	2,000	1,400	
Vendel's Service Sta. 5 Mi. W. of Westmoreland	1,299	979	2,000	1,200	
Westmoreland E. of Cy. Lts.....	2,660	2,730	3,500	2,400	
Brawley at W. Cy. Lts. Jc. with Western Ave.,					
W. on 26.....	3,465	4,022	4,400	3,700	
N. on Cy. St.....	231	230	500	290	
E. on Cy. St.....	3,362	3,920	1,300	3,600	
S. on Cy. St.....	396	395	860	640	
Brawley, Jc. S.W. of Cy.,					
S. on 26.....	2,665	2,857	4,700	3,900	
N. on Cy. Street.....	2,805	3,730	4,200	3,600	
N.W. on C.R.....	188	191	730	640	
El Centro W. of Cy. Jc. Rt. 12.....	4,598	4,593	5,970	5,699	

Route 27. El Centro to Yuma

District VIII		January, 1930		January, 1931	
Station location	Sun. 12	Mon. 13	Sun. 11	Mon. 12	
El Centro E. of Cy. at Jc. C.R. N. to Brawley and S. to Calexico,					
W. on 27.....	2,396	3,086	4,100	4,700	
N. on C.R.....	162	265	390	410	
S. on C.R.....	187	266	300	300	
E. on 27.....	2,311	2,903	3,900	4,300	
E. of Holtville.....	2,206	1,992	3,200	2,800	
Sand Hills Maint. Sta. on Rt. 27.....	891	657	*1,054	*965	
Yuma at S.D. A. Plant Quarantine Sta.	2,708	2,530	3,300	2,300	

*24-hour count.

Route 28. Redding to Nevada Line Via Alturas

District II		January, 1930		January, 1931	
Station location	Sun. 12	Mon. 13	Sun. 11	Mon. 12	
Redding S. of Cy. at Jc. with Rt. 3	269	285	719	730	
Montgomery Creek	48	47	180	190	
4 Mi. E. of Pittville at Maint. Sta.	42	23	110	140	
Canby	69	49	130	500	
5 Mi. N. of Alturas at Jc. Lakeriew Rd.,					
S. on 28.....	41	41	180	370	
N. on C.R.....	6	4	80	170	
E. on 28.....	36	40	100	200	
East of Cedarville, 2 Mi.....	2	10	30	130	

Route 29. Red Bluff to Nevada Line Near Purdy's

District II		January, 1930		January, 1931	
Station location	Sun. 12	Mon. 13	Sun. 11	Mon. 12	
Red Bluff E. at Jc. Rt. 3.....	317	287	949	550	
Morgan Springs at Tehama-Plumas Co. Line	47	31	139	90	
2 Mi. W. of Westwood.....	97	63	350	240	
Susanville 1 Mi. W. of Town.....	188	145	349	250	
Susanville 1 Mi. E. of Town.....	505	468	820	780	
12 Mi. E. of Milford at Maint. Sta.	59	60	89	100	
5 Mi. S. of Constantia at Maint. Sta.	98	78			
Jc. Quincy Rd. with Rt. 29,					
Rt. 29.....			230	240	
C.R.....			130	110	

Route 31. San Bernardino to Nevada Line Near Jean

District VIII		January, 1930		January, 1931	
Station location	Sun. 12	Mon. 13	Sun. 11	Mon. 12	
North of Cy. at Jc. with Mt. Vernon and Highland Ave.,					
S. on Mt. V.....	No count, snow		7,300	1,900	
E. on Highland.....	No count, snow		4,400	1,900	
W. on Highland.....	No count, snow		2,800	1,300	
N.W. on 31.....	No count, snow		5,700	860	
Verdenant Jc. Rt. 31 and Kendall Dr.,					
N. on 31.....			10,400	1,300	
S. on 31.....			8,700	890	
S. on Kendall.....			1,900	430	
Jc. Rt. 31 with State Street,					
N.W. on 31.....	No count, snow		7,700	980	
S. on State.....	No count, snow		2,700	400	
S.E. on 31.....	No count, snow		5,800	700	

Station location	January, 1930		January, 1931	
	Sun.	Mon.	Sun.	Mon.
N. of Cajon Jc. C.R. to Swatout Valley.				
S. on 31	No count, snow		9,700	970
W. on C.R.	No count, snow		8,700	230
N. on 31	No count, snow		3,800	750
Victorville S. of Cy. Lts.	No count, snow		1,900	800
Helendale	No count, snow		580	490
S.W. Town Lts. of Barstow	No count, snow		990	650
Yermo E. of Cy. Lts.	No count, snow		*228	*392
Baker	No count, snow		210	230
Nevada State Line	No count, snow		170	70

*24-hour count.

Route 32. Route 2, Near Gilroy, to Route 4, Near Califa

District IV				
Hollister Jc. Rt. 22,				
W. on 22	702	329	600	429
S. on 22	707	334	490	330
E. on 22	1,267	573	900	590
Pacheco Pass at Santa Clara-Merced Co Line	1,153	459	940	360

District VI				
Junction-Jc. C.R. to Gustine,				
W. on 32	1,067	460	750	433
N. on C.R.	241	193	220	199
E. on 32	923	391	670	400
Los Banos at Jc. S. P. Crossing (Near Maint. Yard)	1,701	2,232	1,900	2,300
E. of Los Banos at Jc. C.R. to Des Pales,				
W. on 32	1,034	1,229	1,400	1,200
S. on C.R.	619	507	980	850
E. on 32	884	1,010	1,200	940
Merced-Madera Co. Line at Jc. C.R. to Merced,				
W. on 32	739	747	890	590
N. on C.R.	303	390	410	370
E. on 32	488	475	600	330
Califa Jc. Rt. 4	481	470	220	150

Route 33. Paso Robles to Route 4, Near Bakersfield

District V				
Paso Robles E. of Cy. Lts.	849	1,117	1,400	1,100
Paso Robles 1/4 Mi. E. of Cy. Lts.	586	724	940	820

District VI				
S. L. O.-Kern Co. Line	307	340	253	200
Blackwell's Cor. Jc. C.R. N. to Coalings and S. to Taft,				
W. on 33	366	365	230	120
N. on C.R.	163	173	150	220
S. on C.R.	154	146	150	200
E. on 33	367	377	270	150
Lost Hills Inters. of Main St.,				
W. on 33	536	582	500	710
N. on Main	26	24	40	50
S. on Main	154	176	210	260
E. on 33	535	571	540	640
Wasco Jc. Co. Rd. S. to Wasco, near S. P. R. Xing.				
W. on 33	650	734	670	700
S. on C.R.	644	832	730	950
E. on 33	735	821	800	900
Famosa Jc. Rt. 4	580	575	670	500

Route 34. Route 4, Near Arno, to Route 23, at Picketts Junction

District X				
Twin Cities Jc. Rt. 4	355		550	470
W. of Ione Jc. C.R. to Michigan Bar,				
W. on 34	117	71	190	90
N. on C.R.	46	60	190	120
E. on 34	142	128	270	200
W. of Jackson Jc. Rt. 65 to Piacerville,				
E. on 34	781	845	1,790	1,200
N. on 65	692	774	1,590	1,600
S. on 34	338	227	630	380
Jc. S. H. and C.R.,				
S.W. on 34	71	33		
N.W. on C.R.	33	29		
E. on 34	91	82		
Pine Grove E. of Town,			280	120
W. on 34			170	160
N. on C.R.			490	290
E. on 34				
Picketts Jc. Rt. 23 and 34	No count		No count	

Route 35. Peanut to Kutz

District I				
At Peanut	2	2	7	6

Route 37. Auburn to Nevada Line Near Verdi

Station location	January, 1930		January, 1931	
	Sun.	Mon.	Sun.	Mon.
District III				
Auburn E. of Cy.	2,275	723	2,370	790
Colfax E. of Cy. Grass Valley Road,				
W. on 37	448	171	1,560	290
N. on C.R.	190	121	150	190
E. on 37	386	153	1,450	120
Emigrant Gap Jc. Rts. 15 and 37,				
W. on 37	Road closed		Road closed	
W. on 15	Road closed		Road closed	
E. on 37	Road closed		Road closed	
Donner Lake Camp W. of Truckee,				
W. of Jc. with Rt. 38, S. to Lake Tahoe			Road closed, snow	
W. on 37			Road closed, snow	
S. on 38			Road closed, snow	
E. on 37			Road closed, snow	
Truckee at McIvers W. of Cy.			270	50
Truckee E. of Cy. at Jc. with Rd. 38 to Nevada Line,				
W. on 37	134	19	470	140
E. on 38	135	21	450	130
N. on C.R.	2	1	40	10

Route 38. Myers to Nevada Line Via Truckee River

District III				
Tahoe City Jc. Rt. 39,				
S. on 38			Road closed, snow	
E. on 39			Road closed, snow	
N. on 38			Road closed, snow	
Truckee, W. of Cy. at Jc. Rt. 37			Road closed, snow	
Truckee E. of Cy. Jc. Rt. 37	135	21	450	150
California-Nevada State Line	275	58	800	110

Route 39. Tahoe City to Nevada State Line

District III				
Tahoe City Jc. Rt. 38			Road closed, snow	
Near Brookway Jc. C.R. to Truckee			Road closed, snow	

Route 40. Route 13, Near Montezuma, to Route 23, Near Mono Lake

District X				
Mt. Pass Jc. Rt. 13	137	60	100	70
1 MI. E. of Graveland on 40	37	17	70	100
Aspen Valley Checking Station on 40	No count		No count	
Gentry Checking Station on 40	No count		No count	
Mono 40-A. Jc. with Mono 23-31	No count		No count	

Route 41. General Grant Park to Kiras River Canyon

District VI				
W. of Home			No count	No count
E. of Home			No count	No count

Route 42. Saratoga Gap to State Redwood Park

District IV				
Waterman Switch,				
E. to Saratoga Gap on 42A	34	18	110	60
W. to Redwood Park on 42A	49	16	40	30
S. on C.R. to Boulder Creek	109	38	110	100
Saratoga Gap at Redwood Park Gate		4		

Route 43. San Bernardino to Big Bear Lake

District VIII				
Foot Waterman Grade	No count, snow		5,000	440
Waterman Canyon Jc. of New Forest Highway with Old Rd. on Switchbacks above Old Panorama Point,				
Old Rd. above Jc.			670	90
New Rd. above Jc.			5,000	250
New Rd. below Jc.			5,500	350
Squirrel Inn Jc. of New Forest Hwy. with Old Crest Drive,				
W. Old Rd.			920	70
E. on 43			4,290	70
N.E. on Old Rd.			710	30
S. on 43			1,100	150
Traffic up New Forest Hwy. turning toward Crestline			210	10
Traffic from Crestline turning down New Forest Hwy. at Squirrel Inn Jc.				200
Pinecrest Jc. C.R. to Lake Arrowhead,				
S.W. on 43	No count, snow		1,300	100
N.E. on C.R.	No count, snow		1,200	120
N.W. on C.R.	No count, snow		220	30
E. on 43	No count, snow		No count, snow	

Station location	January, 1930		January, 1931	
	Sun. 12	Mon. 13	Sun. 11	Mon. 12
Running Springs Park Jr. Cy. Creek Rd.,				
N. on 43.....	No count, snow		270	39
W. on Cy.-C.R.	No count, snow		60	19
E. on 43.....	No count, snow		920	30
W. End of Bridge over Big Bear Dam,				
W. on 43.....	No count, snow		960	90
E. over Dam.....	No count, snow		960	69
N.E. on 43.....	No count, snow		260	60
1 Mi. from end of Rt. 43 Jr. C.R. to Pineknut,				
W. on 43.....	No count, snow		110	20
S. on C.R.....	No count, snow		50	10
E. on 43.....	No count, snow		130	20
Mill Creek Lower Control—S. Rd. C. Jr. Big Meadows,				
S. to Meadows.....	Road closed, snow			
E. to Big Meadows.....	Road closed, snow			
N. to Big Bear Lake.....	Road closed, snow			
Big Bear Lake Desert Rt. Jr. E. of Baldwin Lake,				
N. to Desert.....	Road closed, snow			
W. to Big Bear Lake.....	Road closed, snow			
S. on E. side of Baldwin Lake.....	Road closed, snow			

Route 44. Boulder Creek to Redwood Park

District IV

Boulder Creek at Park Line.....	470	363	520	490
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Route 45. Willows to Route 3, North of Biggs

District III

Willows E. of City.....	418	550	719	616
Four Corners, W. of Butte City,				
N. on 45.....	165	219	419	390
E. on 45.....	226	250	469	510
S. on C.R.....	258	293	469	410
W. on C.R.....	167	79	130	120
Butte City E. of City,				
W. on 45.....	99	84	270	150
N. on C.R.....	80	43	130	80
S. on C.R.....	23	13	99	60
E. on 45.....	68	42	150	40
Cherokee Canal Jr. with C.R. to Richvale,				
W. on 45.....	128	101	240	100
N. on C.R.....	53	37	190	170
E. on 45.....	131	97	179	130

Route 46. Route 1, Near Klamath River, to Route 3, Near Cray

District I

Weitchee Jr. Co. Rds.....	14	8	79	90
Thompson Creek.....	13	28	69	70

District II

Cray N. of Cy. Jr. Rt. 3.....	87	63	170	130
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Route 47. Orland to Chico.

District III

Orland Jr. with Rt. 7.....	586	543	910	790
Gianelli Bridge.....	538	390	700	500
Chico W. of Cy,				
W. on 47.....	850	748	620	1,200
S. on C. R.....	230	247	280	500
N. on C.R.....	55	54	110	200
E. on 47.....	965	617	730	1,300

Route 48. Near McDonalds to Mouth of Navarro River

District IV

McDonalds Jr. Rt. 1.....	168	122	220	90
Boonville on 48.....	271	180	420	250
Navarro 2.3 Mi. W. of Town.....	216	152	220	130

Route 49. Callistoga to Lower Lake

District IV

N. of Callistoga at foot of grade.....	2,192	476	880	420
Middletown Jr. Cobb Mt. Rd.,				
N. on 49.....	389	390	1,200	1,130
S. on 49.....	532	517	1,360	1,100
W. on C.R.....	209	205	610	800
Lower Lake Jr. Kelseyville and Lower Lake Rd.,				
S. on 49.....	130	158	330	310
E. on L. L. Rd.....	234	272	619	550
W. on K. Rd.....	144	132	310	290

Route 51. Santa Rosa to Shellville

District IV

Station location	January, 1930		January, 1931	
	Sun. 12	Mon. 13	Sun. 11	Mon. 12
Santa Rosa E. of City.....	2,673	1,749	2,900	1,900
8 Mi. E. of Santa Rosa at Sonoma Cr. Bridge.....	1,151	717	1,400	910
Shellville Jr. Rt. S.....	1,117	581	900	500

Route 52. Alts to Tiburon

District IV

Belvedere Jr. Rt. 1.....	701	442	900	470
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Route 53. Fairfield to Lodi via Rio Vista

District X

Denverton at Overhead Xing.....	341	348	480	239
Rio Vista Bridge E. End,				
W. on 53.....	837	971	1,400	1,400
N. on 53.....	994	916	1,500	1,400
S. on C.R.....	568	623	540	730
Walnut Grove Bridge N. End,				
H. on 53.....	480	556	1,400	1,500
S. on 53.....	214	227	426	370
W. on C.R.....	551	583	1,500	1,600
Isleton Br. East End,				
N. on 53.....	155	236	296	400
S. on 53.....	548	1,136	2,006	1,900
W. over Br.....	830	1,038	1,700	1,700
Thornton Interx. C.R.,				
E. on 53.....	400	499	1,000	500
N. on C.R.....	206	240	499	300
W. on 53.....	363	412	929	780
Lodi N. of City.....	687	824	1,600	1,300

Route 54. Near Michigan Bar to Central House

District X

Central House Jr. Rt. 65 to Placer-ville and Jackson,				
W. on 54.....	280	201	600	480
N. on 65.....	232	136	560	540
S. on 65.....	275	244	710	510

Route 55. San Francisco to Route 5 Near Glenwood

District IV

Swimming Pool.....	5,616	1,191	13,000	1,900
Jr. C.R. to Celma,				
N. on 55.....	3,172	487	6,000	710
E. on C.R.....	1,691	494	2,400	430
S. on 55.....	3,326	738	6,700	960
Jr. C.R. to Belmont at Dirt Dam,				
N. on 55.....	2,643	696	3,700	530
S. E. to Belmont.....	1,090	237	1,800	260
W. to Half Moon Bay.....	2,751	723	3,300	650
Jr. with C.R. West to Half Moon Bay,				
N. on 55.....	2,761	604	3,100	620
W. on C.R.....	1,214	341	1,600	460
S. on 55.....	2,069	197	1,600	190
Saratoga Gap,				
N. on 55.....			530	20
S. on 55.....			29	3
E. on C.R.....			379	60
W. on 42.....			209	60
S. Cl-S. Cr. Co. Line Jr. Rts. 5 and 55	21	19	80	30

Route 56. District V

S. of Carmel Interx. Carmel Valley and Big Sur Roads.....	613	613	1,500	1,200
San Simeon 1 Mi. S.....	98	121	329	130

Route 57. Santa Maria to Freeman via Bakersfield

District V

Santa Maria N. of Cy. at Jr. Rt. 2 At Interx. Rt. 57 and Suey Road,	201	70	260	120
W. on 57.....	163	40	130	96
S. on Suey Rd.....	35	16	100	80
N. on 57.....	171	52	270	130
Bet. 2d Cuyama Xing and Kern Co. Line on 57 B. C.....	13	14	170	150

District VI

S. L. O.-Kern Co. Line.....	36	43	180	220
Mariocopa W. of Cy.....	602	526	329	340
Pentland at R. R. Xing.....	1,092	1,394	1,000	760
Bakersfield Jr. C.R. to Connor,				
W. on 57.....	86	87	530	310
N. on C.R.....	49	41	70	80
E. on 57.....	66	83	480	250

Station location	January, 1930		January, 1931	
	Sun.	Mon.	Sun.	Mon.
Jc. Rt. 57 and 4	72	69	489	250
Bakersfield E. Nile and School House Easterly Cy. Lts.	2,168	2,294	2,500	2,400
Bakersfield 10 Mi. E. at Jc. Co. Club Rd. and Ker. 57 E. on 57.	693	239	573	360
Bedfish at Interx. Rt. 57 with C.R. to Caliente.				
E. on 57	25	37	140	210
S. on 57	23	38	120	190
S. on C.R.	7	5	30	60

Route 58. Mojave to Arizona Line Near Topoc via Barstow

District IX				
Mojave	47	92	170	170
District VIII				
Kramer-Kern Co. Line	No count, snow		210	150
Barstow N. of Cy. at Jc. 31 to Yermo.				
S. on 58	No count, snow		\$19	880
N. on 58	No count, snow		450	590
N.E. on 31	No count, snow		440	490
Daggett Jc. Arrowhead Trail Old Trails Hwy.				
N. on C.R.	No count, snow		230	160
W. on 58	No count, snow		480	320
E. on 58	No count, snow		340	280
Vicinity Newberry Springs.	No count, snow		* 242	* 253
Vicinity Amboy	No count, snow		270	190
Near Bannock Jc. C.R. to Searchlight.				
W. on 58	No count, snow		180	160
N. on C.R.	No count, snow		50	40
E. on 58	No count, snow		210	190
Needles W. of Cy Lts.	No count, snow		690	460
Needles 5.7 Mi. S. Jc. to Parker and Blythe.				
S. on 58	No count, snow		230	160
S.W. on C.R.	No count, snow		30	30
N. on 58	No count, snow		360	220

Route 59. Lancaster to Baileys

District VII				
Lancaster Jc. Rt. 23	450	529	1,200	1,090
Bailey Ranch	1	No count	370	90

Route 60. El Rio to San Juan Capistrano

District VII				
El Rio Jc. Rt. 2 and 60	2,800	3,016	6,200	5,800
Oxnard South of City Lts. on Ven. 60-A	1,784	2,617	6,000	3,100
Topanga Canyon on 60	4,098	3,767	14,200	4,400
On C.R.	572	725	1,900	610
Santa Monica Interx. Beverly and L. A. 60-B Santa Ynez Canyon.				
W. on 60	1,980	1,068	14,100	4,100
On Beverly Blvd.	No count		5,200	1,000
E. on 60	2,030	1,700	16,500	5,100
On Santa Monica Canyon Rd.	6,778	6,254	10,600	3,000
Lemita on Redonde-Wilmington Rd. on 60	5,123	6,876	9,800	7,700
Seal Beach at L. A.-Orange Co. Line	5,603	5,344	11,300	6,200
Newport W. of Cy.	3,344	2,831	7,100	2,600
Newport at Interx. Newport-Tustin Road.				
W. on 60	2,653	2,208	5,600	2,600
N. on C.R.	2,958	2,912	4,100	3,500
S. on C.R.	1,781	2,240	4,900	3,100
E. on 60	3,370	2,882	6,800	3,100
Serra Jc. Rt. 2 and 60	1,805	1,873	4,460	2,700

Route 61. La Canada to Mt. Wilson Road via Arroyo Seco

District VII				
Pasadena at N. Cy. Lts.	3,061	605	3,200	760

Route 63. Big Pine to Oasis

District IX				
Big Pine, Jc. Rt. 23	15	38	30	50

Route 64. Mecca to Blythe

District VIII				
Desert Center	94	91	* 138	* 142
Blythe, S. D. A. Quarantine Sta.	101	66	40	35

* Twenty-four hour count.

Route 65. Auburn to Socona

Station location	January, 1930		January, 1931	
	Sun.	Mon.	Sun.	Mon.
District III				
Auburn at Wire Bridge, American River.				
N. on 65	40	53	402	290
E. on C.R.	7	9	173	160
S. on 65	34	30	234	190
Placerville N. of Cy. Jc. Georgetown Rd.				
N. on 65	129	167	541	519
N. on C.R.	13	28	159	190
S. on 65	142	196	515	560
El Dorado Jc. Rt. 11	39	41	130	260

District X

Station location	January, 1930		January, 1931	
	Sun.	Mon.	Sun.	Mon.
Central House Jc. Rt. 31 to Michigan Bar.				
N. on 65	232	196	500	540
W. on 54	289	291	660	480
S. on 65	275	244	718	510
N. of Jackson Jc. Rt. 34.				
N. on 65	602	774	1,500	1,060
E. on 34	784	845	1,700	1,200
S. on 34	338	227	630	380
S. of San Andreas at Sheep Camp W. of Sonora Jc. Co. Rd. to Jamestown.	1,061	881	1,200	590
N.W. on 65	102	70	260	360
S.W. on C.R.	52	35	150	90
S.W. on 65	198	26	220	330

Route 66. Masteca to Route 5 Near Massdale School

District X				
Massdale Jc. Rt. 5	1,855	1,587	2,637	1,521

Route 67. Fajaro River to Route 2 Near San Benito River Bridge

District V				
San Juan Bautista N. of City at Jc. Rt. 2	1,494	1,051	1,200	850

Route 68. San Francisco to San Jose

District IV				
N. Cy. Lts. S. San Francisco	8,933	7,949	14,000	11,700
S. San Francisco at Underpass	7,557	5,617	14,000	11,500
Burlingame Jc. Rt. 68 and Broadway.				
N. on 68	7,000	5,658	12,000	9,000
W. on Broadway	2,401	2,734	2,000	4,000
S. on 68	5,338	3,869	10,000	5,300

Route 69. San Quentin Road

District IV				
San Quentin Hill	2,049	1,135		
Richmond to San Rafael Ferry			1,267	585

Route 70. District IV

Ukiah Jc. Rt. 1	529	651	670	680
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Route 71. Crescent City to Oregon Line

District I				
Crescent City N. of Town at Maint. Yard	618	563	710	770
Oregon Line	198	132	270	370

"How old are you?" inquired the visitor of his host's little son.

"That is a difficult question," answered the young Boston lad, removing his spectacles and wiping them reflectively. "The latest personal survey available shows my psychological age to be twelve, my moral age four, my anatomical age seven, and my physiological age six. I suppose, however, that you refer to my chronological age, which is eight. This is so old-fashioned that I seldom think of it any more."—*Milwaukee Engineering.*

Man (to small boy eating apple): "Look out for worms, little boy."

Boy: "When I eat an apple the worms must look out for themselves."

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Department of Public Works

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 C. A. HENDERLONG, Assistant Mechanical Engineer
 W. M. CALLAHAN, Electrical Engineer

DIVISION OF MOTOR VEHICLES

FRANK G. SNOOK, Chief
 E. RAYMOND CATO, Superintendent of California
 Highway Patrol

**DIVISION OF CONTRACTS AND
 RIGHTS OF WAY**

C. C. CARLETON, Chief

DIVISION OF PORTS

Port of Eureka—William Clark, Sr., Surveyor
 Port of San Jose—Not appointed
 Port of San Diego—Edwin P. Sample

STATE HIGHWAYS IN CALIFORNIA SHOWING THE PRIMARY AND SECONDARY ROAD SYSTEMS AND THE DIVISION OF THE STATE UNDER THE BREED BILL.



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