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CALIFORNIA DOCUMENT

CALIFORNIA HIGHWAYS AND PUBLIC WORKS

Official Journal of
THE DEPARTMENT
of PUBLIC WORKS
State of California

JUNE
1931

*Making a Road
Out of a Mountain,
Kings River Canyon*

976

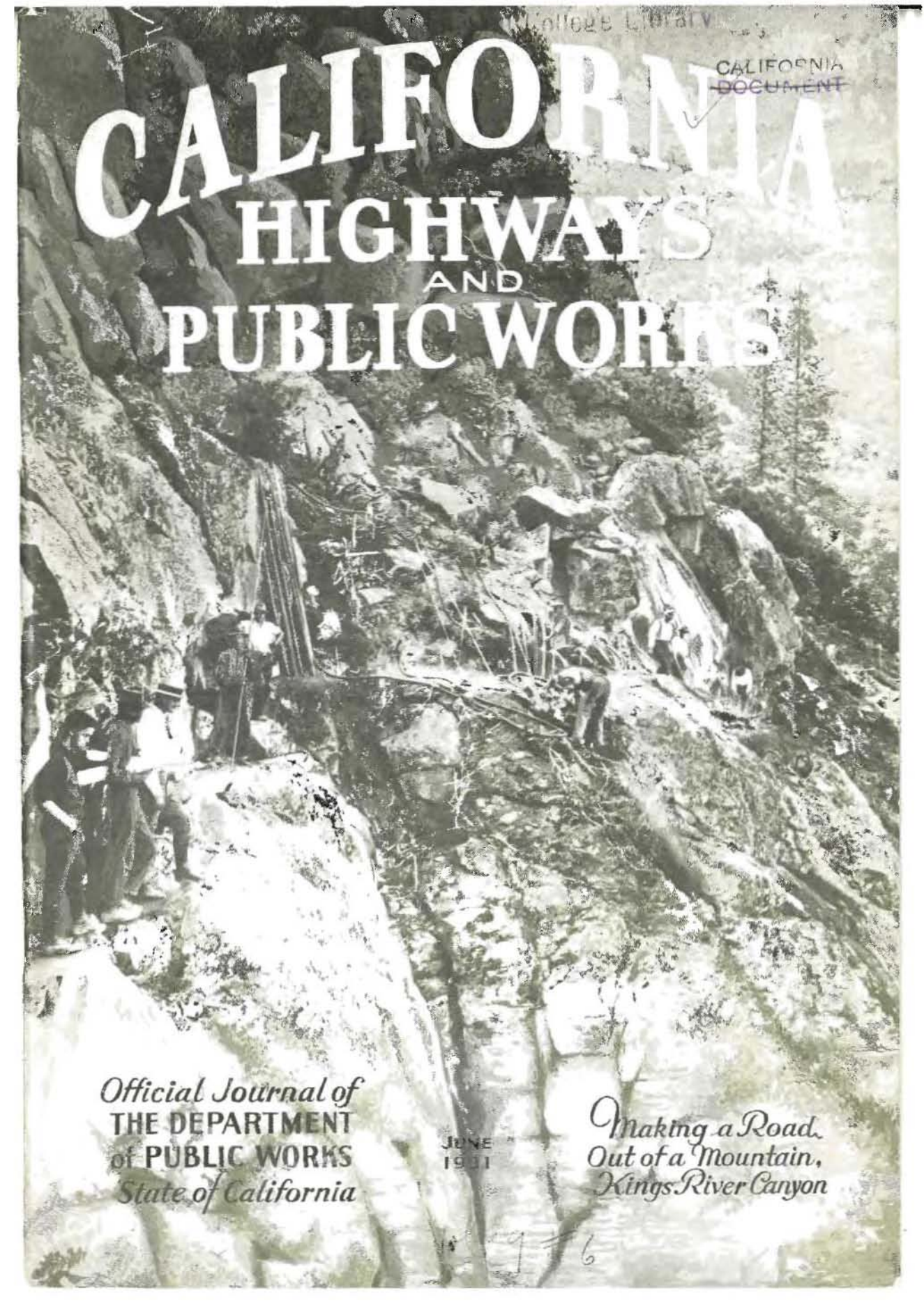




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STOP

Red Menace
By
Preventing

FIRES

CITING extreme water shortage, high temperature and low humidity as alarming factors increasing the fire hazard this summer in the forests and fields of California, Governor James Rolph, Jr., coordinating all his available agencies in the State government, has organized by proclamation the California Fire Emergency Committee to combat the situation through an educational campaign.

With Governor Rolph as honorary chairman, and Charles S. Howard, San Francisco, directing chairman, the headquarters of the Fire Emergency Committee have been placed in the Division of Forestry, Department of Natural Resources, with State Forester M. B. Pratt as executive secretary in direct charge of the activities of the committee.

According to information from the secre-



Charles S. Howard



M. B. Pratt

tary's office the campaign was in full swing on May 20th, the day following the issuance of Governor Rolph's proclamation. Within three days, more than 7000 men officially in direct contact with the forests and fields of California were patrolling against fires in their respective lines of duty.

In the coordinated State agencies, Col. Walter E. Garrison, Director of Public Works, was the first leader in issuing instructions to his field forces for fire prevention activities as outlined in the proclamation. This lead was quickly followed by Superintendent E. Raymond Cato, Highway Patrol; President I. Zellerbach, Fish and Game Commission; Director Daniel H. Blood, Department of Natural Resources; Avery S. Hoyt, Director of Agriculture; and Vierling Kersey, Director of Education.

(Continued on page 16.)

San Francisco-Oakland Bay Bridge May Be Completed by July, 1937

THE San Francisco-Oakland Bay Bridge completed by July, 1937!

That's the hope held out by Charles H. Purcell, State Highway Engineer.

He anticipates that design work will proceed with sufficient rapidity to be able to determine an accurate estimate of the entire project by July 1, 1932, so that bonds may be sold immediately thereafter.

Progress toward starting actual construction of the great project has been largely along the lines of legislative action, by the recent Legislature, and on preliminary field engineering and preliminary design.

The 1931 Legislature has passed very important legislation on this subject and by so doing has assured early commencement of work on the actual design and construction of the bridge.

The legislation referred to was sponsored by Governor Rolph and his administration, together with prominent members of the Senate and Assembly.

NEW BILLS PASSED

Two new bills were passed and the former Toll Bridge laws amended in such a way as to make them more practical in their application to the problem.

Senate Bill No. 460 introduced by Senator Fellom made certain minor changes in the former Toll Bridge law which render it more workable in its application to the general toll bridge problem of the State.

Senate Bill No. 337, introduced by Senators Fellom, Tubbs, Maloney, Breed, Jones, Young, Crittenden, Sharkey, Inman and McCormack, appropriates the sum of \$650,000 out of the general fund to be expended by the Department of Public Works for the purpose of preliminary engineering and design of the bridge. This appropriation is made in the form of a loan to be repaid with 4 per cent interest out of the first bond issue.

IMPORTANT STEP

It is a very important step toward construction of the bridge and establishes beyond doubt the faith of the Legislature in the project and should be a strong influence toward favorable sale of bonds.

Senate Bill No. 336, introduced by Senators Fellom and Breed, stipulates that the Department of Public Works may accept and adopt, for purposes of maintenance only, said highway crossing as a State highway at such time as it may deem it for the best interests of the State. The wording of this bill is susceptible of broad interpretation. Under it the Department of Public Works may use State highway funds for maintenance after the bridge is completed. As a result, this action of the Legislature has a very favorable influence on the sale of bonds for the project because maintenance of the structure is guaranteed out of funds other than those received from income from tolls.

These three bills were signed by Governor Rolph May 25th. More than 70 prominent business, civic and labor leaders attended the ceremonies in the Governor's office.

SURVEYS COMPLETED

The appropriation of \$650,000 for engineering will not become available until August 15th because of the 90-day period required by law after adjournment of the Legislature. For this reason intensive effort on the design of the bridge can not go ahead until that time. There has been, however, certain small amounts available for preliminary work from the former money made available by the 1929 Legislature and the cities of San Francisco and Oakland.

Surveys of Yerba Buena Island for the necessary right of way over government property, required in the War Department permit, have been completed and right of way maps will soon be completed. Formal application for the final permit will then be made to the War Department. This permit has already been approved by the War Department with the provision that rights of way be obtained across Yerba Buena Island. The filing of the maps will comply with this stipulation. The War, Navy and Commerce departments, all of whom have reservations on the island, have given the department the fullest cooperation and no delay is anticipated in obtaining their approval.

In addition to the right of way surveys, work is being started on key maps of the



IS EVERYBODY HAPPY? They look it. It's the occasion of the signing of the three San Francisco-Oakland Bay Bridge bills by Governor Rolph, signalling realization of a dream come true. Congressman Richard Welch, E. B. de Golia, President of San Francisco-Oakland Bay Bridge Commission, the Governor and Col. Walter E. Garrison are seen in the front row as the Governor is handed the pen to sign the first measure. In the second row from left to right are: Senator Thomas Maloney, Judge George Steiger, Rolland A Vandegrift, Director of Finance, Senator Roy Fellom, Charles H. Purcell, State Highway Engineer, Earl Lee Kelly, Chairman Highway Commission, Mayor Davie of Oakland, Timothy Reardon, Highway Commissioner, and Mayor Rossi of San Francisco. And below, the happy delegation on the steps of the Capitol after the signing.

entire area affected by the bridge and approaches. This map will give all the physical data, contours, buildings, tracks and public service equipment involved and will form a basis for final studies of the entire bridge layout and approaches.

Work on preliminary triangulation has been started. Control monuments are being set and their exact locations determined. These will be used to locate borings, piers and all physical parts of the structure.

An engineering organization has been formed in the East Bay area, composed of the

various city engineers of the cities involved. This committee has made studies of the general street systems of the East Bay and has made a preliminary report on procedure. They will further cooperate with the Department of Public Works' engineers in working out a proper distribution system in the East Bay. The City Engineer's Office of San Francisco has been of great assistance in furnishing maps and data on the areas affected by the bridge approaches.

One of the first problems to be met is the moving of numerous submarine cables which

(Continued on page 5.)

Californians! Stop, Read and Heed!

By CHARLES H. PURCELL, State Highway Engineer

DESPITE the fact that California, a pioneer in highway development, has expended to date on its highway system a total of approximately \$225,000,000, we have not kept pace with the majority of states in the Union. Forty-four others have a greater per capital expenditure than California!

Further we rank only fifteenth in the United States in the percentage of paved highways!

And yet this State ranks second in motor vehicle registration and sixth in population.

And merely to serve adequately the traffic over our roads for the ten-year period ending 1940, the Division of Highways estimates \$365,000,000 will be needed for maintaining and improving the highway system.

These facts may startle the average Californian who firmly believes this State a leader in road making. So let me clear up this mistaken belief.

The present status of the California State Highway System is:

Mileage paved (concrete, asphalt or bituminous macadam)-----	2591
Mileage surfaced (rock or oiled rock)-	1915
Mileage unsurfaced (earth)-----	1831
Total -----	6337

Only 34.4 per cent of the California Highway System is now paved, while 14 other states have a higher percentage paved.

The total mileage surfaced and paved is 4506, which ranks California nineteenth among the states for this item, and three states have their entire state highway system surfaced.

During the year 1930 California improved or surfaced approximately 550 miles of the State Highway System, while 28 states exceeded this figure.

Considering population and motor vehicle registration the present state of improvement of the California State Highway System is below the average for other states of comparable population and motor vehicle registration. Not only is this true, but the present rate of State highway expenditure is still below the average annual State highway expenditure in those states.

The Division of Highways of California has, during the past two years, completed a thorough engineering and economic study of State highway needs and finances in California for the ten-year period ending 1940. A thorough study was made of the improvements necessary to serve traffic during this ten-year period as well as of the funds which will become available during that period.

The estimated cost of maintenance and improving the State highway system, not to the ultimate standard of pavement, but to the standard adequate properly to serve the traffic during this period is \$365,000,000. The estimated revenue, under existing laws, for State highway purposes is \$320,000,000.

There can be no diversion of State highway funds without seriously damaging the improvement of our State highway system and further lowering California's position when compared to the State highway development in other states.

The modern highway is a paying investment and is essential to the social and economic development of our country.

DO YOU KNOW THAT

California measures up against the other forty-seven States in the Union as follows:

In population-----	<u>Sixth</u>
Motor vehicle registration -----	<u>Second</u>
Percentage of paved State highway -----	<u>Fifteenth</u>
Per capita expenditure for State highways--	<u>Forty-fifth</u>
Mileage of highways improved in 1930----	<u>Twenty-ninth</u>
Total mileage of State highways paved and surfaced -----	<u>Nineteenth</u>

Models to Decide Bridge Safety

ONE-HUNDREDTH the size of the actual structure to be built, but complete in every detail, miniature bridges are to be constructed by scientists as models for the gigantic San Francisco-Oakland Bay Bridge. From these models will be chosen the type of structure to cross San Francisco Bay.

This is the announcement of Charles H. Purcell, State Highway Engineer, in making public the fact that Prof George E. Beggs of Princeton University, one of the foremost bridge experts in the world, had consented to work with the University of California at Berkeley in constructing models.

The effect of all loads, wind, temperature—indeed all the elements will be tested with the models.

Every detail of the mammoth bridge will be put into the structural models of the several possible types of design; even the same kind of material to be used.

Each model will be "loaded" in the same

proportion as the full-sized bridge would be, thus permitting the scientists to measure the actual stress upon the structure together with the deflections in temperature ranges.

In this way the safety of the structure is actually proved before it is built.

Dr. Beggs, leading authority on model bridge building, constructed the miniatures for the Mount Hope Bridge.

He is now in California on his Sabbatical year and had planned to take his family on a yacht cruise to Alaska. So interested, however, has he become in the mammoth task of bridging the bay, that he has given up his cruise and will begin actual scientific work this week.

He will be assisted, not only by the University of California scientists under Professor Davis, but a corps of Department of Public Works engineers under Purcell and Charles E. Andrew, the department bridge engineer.

Work Being Rushed on Bay Bridge

(Continued from page 3.)

are now in the vicinity of the bridge center line. These cables must be moved before final borings are started and before pier work can proceed.

The very important detail of determining the type of structure to be used between San Francisco and Yerba Buena Island is being developed as rapidly as limited funds will permit. Studies and plans of numerous types have been made and preliminary cost estimates determined. Types studied involve cantilever and suspension type.

Studies to date indicate that a double simple suspension type with central anchorage is desirable from an economic standpoint when simplicity and safety are considered. Three span and two span continuous suspension types have been studied. These types compare in some measure with the cost of the double simple suspension with central anchorage, but are much less rigid and do not guarantee the degree of safety afforded by the central anchorage type.

However, it has been decided, tentatively, that the suspension type is desirable and further studies are being made.

A board of eminent engineers has been appointed as consultants to the Board of Public Works engineers. Mr. Ralph Modjeski is chairman and Moran and Proctor, foundation authorities, are members. It is probable that the board will be increased to include other prominent bridge engineers. All preliminary plans, studies and estimates of the department have been submitted to the consulting board and the tentative recommendations of the department have been approved, in a preliminary way, by the consultants.

All things considered, it is believed that preliminary work on the project is progressing as rapidly as possible with the limited funds available. Intensive work will begin when the larger appropriation becomes available in August.

State Road Workers Fight Blaze On Ranch; All Units to Volunteer

CALIFORNIA district highway engineers and their staffs of road workers have an enviable record for quick, thorough and efficient action in emergency.

Last month they added to their laurels by turning out as fire fighters, assisting in quelling a grain blaze which threatened to assume disastrous proportions.

Carrying out the orders of Col. Walter E. Garrison directed to Charles H. Purcell, State Engineer, the road workers throughout the

entire State have enlisted to battle this summer's fire menace. They stand ready, night or day, to assist in combating the yearly scourge of flame which takes such a devastating toll of California's wealth.

Spurred on by the proclamation of Governor James Rolph, Jr., to the citizenry of California, orders have been issued to all Department of Public Works employees to constitute themselves fire fighters in times of emergency. Already there have been results as the following letters will indicate:

LET'S HELP

May 20, 1931.

Mr. C. H. Purcell,
State Highway Engineer,
Sacramento, California.

Dear Mr. Purcell:

Governor Rolph has directed that every agency of the State be placed in cooperation with Federal and local forces engaged in the fighting of fires now raging over the entire State of California.

You will at once issue orders to all of our district highway engineers to acquaint each and every employee of this Department with the acute fire menace now existing and direct their full cooperation along these lines.

Also place all of our facilities and equipment at the disposal of fire fighting agencies.

Both Governor Rolph and myself expect the full cooperation of each and every one of the 2000 men in our employ in the field in this matter.

Very truly yours,

WALTER E. GARRISON,
Director of Public Works.

WE WILL

May 20, 1931.

To the District Engineers,
Division of Highways.
Gentlemen:

Due to the acute fire menace now confronting the State, Governor Rolph is taking an active interest in fire prevention, and has appointed Colonel Garrison as a member of a State-wide committee having as its object the prevention, suppression, and control of fires.

Colonel Garrison has requested that the Division of Highways cooperate with this committee in every way possible. We are taking this opportunity, therefore, to emphasize again the instructions contained in the 1930 Construction Department Manual and in our circular letters of April 23 and May 13 relative to fire control and burning operations.

Please make sure that your resident engineers and superintendents, as well as your entire district personnel, are fully alive to the gravity of the situation.

Yours very truly,

C. H. PURCELL,
State Highway Engineer.

AND THEY DID!

Davis, California,
May 22, 1931.

State Division of Highways, Sacramento.
Sirs:

On behalf of the West Plainfield Fire Protection District, I wish to take this means of expressing their appreciation of the help rendered by the superintendent and his men of District Ten, at a fire that burned several acres of grain on the G. W. Pierce place.

It certainly is very gratifying to the fire commissioners to know that they have such hearty support of the highway men as was shown on that day, and on their behalf wish to extend to you our many thanks.

Yours sincerely,

THOMAS W. LILLARD,
Secretary, West Plainfield
Fire Protection District.

Executive Department
State of California

Proclamation

To the People of the State of California:

MY FELLOW CALIFORNIANS:

I have just been informed by the State Forester's office that the thing we have been fearing for weeks has occurred—the 1931 fire season has started with outbreaks all over the State.

A genuine emergency confronts the State. Woods and fields are in powder-dry condition. The greatest drought in California history has been predicted for this year. Playgrounds and watersheds are threatened. Unless drastic steps are taken to prevent it the entire State may be afire by the middle of summer.

I am, therefore, dedicating every resource of the State Government at my command to meet this situation. The task is too great for one body such as the State Board of Forestry, or the State Forester to handle. It calls for the best efforts of every county, every civic and public body, every man, woman and child of California.

For the coordination of all State and private agencies to meet this crucial condition I am appointing a CALIFORNIA FIRE EMERGENCY COMMITTEE to consist of the following members:

Charles S. Howard, San Francisco (Chairman)
M. B. Pratt, State Forester (Executive Secretary)
Kolland A. Vandegrift, Director of Finance
Col. Walter E. Garrison, Director of Public Works
E. Raymond Cato, Superintendent, California Highway Patrol
Daniel H. Blood, Director of Natural Resources
Seth E. Howard, Adjutant General, California National Guard
Virling Kersey, Director of Education
Avery S. Hoyt, Director of Agriculture

Jay Stevens, State Fire Marshal
I. Zellerbach, President, State Fish and Game Commission

STATE BOARD OF FORESTRY:
Swift Berry, Camino
Herbert S. Gilman, San Dimas
Ernest G. Dudley, Eureka
E. Walton Hodges, Jr., San Juan Bautista
B. A. McAllister, Piedmont
Robert C. Harbison, San Bernardino

I further wish to call upon every civic and public body in California to work with this committee, and request that similar emergency groups be formed in every county of California, with the county boards of supervisors taking the initiative.

It will be noted that this committee includes representatives of all State agencies that well might take part in this great program. The National Guard should be available in such fires as Mill Valley and Berkeley; its airplanes ready to patrol during emergency periods.

The entire California Highway Patrol will be used for establishing lines of communication on going fires, and every traffic officer instructed to enforce the law against throwing cigarette stubs or any burning material from automobiles.

Eastern tourists and visitors entering the State by automobile will be warned through the border quarantine stations of the State Department of Agriculture. Fish and game wardens will be instructed to aid forest rangers and inspectors in every way when they are fatigued by directing fire-fighting operations.

A thorough campaign of education should be waged from now until the first rains of next fall. To this end, I am inviting the aid and suggestions of the United States Forest Service, "Stop Forest Fires" Committee, the Automobile Associations, State Chamber of Commerce, California Forest Protective Association, Los Angeles Conservation Association, American Legion, Native Sons, Service Clubs, Airplane Transportation Companies, Stage Lines and Railroads.

I have every confidence in the ability of California to meet this emergency. The first duties of the Emergency Committee will be to call it sharply to the attention of every citizen that extreme care is needed during the crucial fire period. If we can prevent fires before they are started we will be going a long way toward holding the fire loss to a low figure this year.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the Great Seal of the State of California to be affixed this 19th day of May, 1931.

Governor

Solemn
Warning
and an
urgent
plea to
citizens
is made
by the
Governor
in asking
cooperation
of all to

PREVENT
FIRES
this
summer.
He
tells of
grave
danger
to the
State
in his
appeal,
facsimile
of which
appears
here.

\$10,000,000 Work on State Highways Planned to Relieve Unemployment

APPROXIMATELY \$10,000,000 work on highways in three months!

That's the aim of the Department of Public Works—the goal to be reached by June 30th!

Hewing close to the policy of Governor Rolph that the State government bend every effort to relieve unemployment throughout the State by pushing public work as fast as engineering limitations permit, \$2,563,300 contracts have been awarded since April 29th; \$2,754,700 projects advertised; \$4,541,400 worth of work proposed for advertising by June 30th.

Col. Walter E. Garrison, Director of the Department of Public Works, announces that the highways to be constructed with this money, will cover 1013 miles.

COUNTIES TO BENEFIT

The following counties share in the contracts awarded and pending award:

Placer, Sacramento, Orange, Lassen, Modoc and Humboldt. While projects are advertised for the following: San Joaquin, Colusa, Imperial, Mono, Nevada and Ventura. Some of the more important projects follow:

In Placer County, 1.4 miles of road is to be built from Wise Power House to Auburn on the Victory Highway (Sacramento-Truckee lateral). Constructed of Portland cement concrete, this piece of highway will cost \$160,900.

IMPROVE COAST HIGHWAY

Seven and two-tenths miles of the same type of road, to cost \$216,200 will be constructed from Brighton to Mills on the Lincoln Highway (Sacramento-Placerville-Tahoe Route) in Sacramento County.

Asphalt concrete will be used in Orange County in building five and one-half miles of road on the Coast Highway from San Mateo Creek to Serra. The cost will be \$324,100.

Forty-eight miles of bituminous treated crushed rock will stretch from Hillside to Hat Creek as part of the Redding-Alturas lateral, \$278,200 being spent on this project in Lassen and Modoc counties.

A steel and reinforced concrete bridge is to span the Eel River at Dyerville in Humboldt

County as part of the Redwood Highway link. The structure will cost \$112,300.

Among the more important projects bids for which have been opened but contracts not yet awarded, are:

Seven and one-tenth miles of road from Turner Station to Stockton in San Joaquin County, part of the Valley Route. Portland cement concrete is to be used.

In Colusa County the same type of road is to be used between Williams and Maxwell on the West Side of the Pacific Highway. Eight and six-tenths miles are to be constructed.

Asphalt concrete widening over a distance of 21 miles is to be done in Imperial County from East Highline Canal to Sand Hills on the El Centro-Yuma lateral.

NEW BRIDGE PLANNED

The Bishop-Lake Tahoe road in Mono County is to be improved from Yerby's to Casa Diablo Springs with 12.3 miles of bituminous treated crushed rock.

Eight and eight-tenths miles of the same type will be constructed between Truckee and Hinton on the Victory Highway (Sacramento-Truckee Route) in Nevada County.

ARCHITECTURAL AWARDS

For Month of May

AGNEWS STATE HOSPITAL—Employees' Quarters at Farm, contract for general work to A. Nelson, San Francisco, \$56,440; contract for heating and plumbing to Hateley and Hateley, Sacramento, \$17,773; contract for electrical work to Roy M. Butcher, San Jose, \$3,060.

PATTON STATE HOSPITAL—Fourteen cottages for employees, contract for general work to Fred Walsh, San Bernardino, \$21,392; contract for plumbing and heating work to Munger & Munger, Pasadena, \$7,826; contract for electrical work to Aylsworth Electric Company, Inglewood, \$898.

CALIFORNIA INSTITUTION FOR WOMEN near Techachapi—contract for general work to Wm. Rohrbacher, Santa Ana, \$124,850.

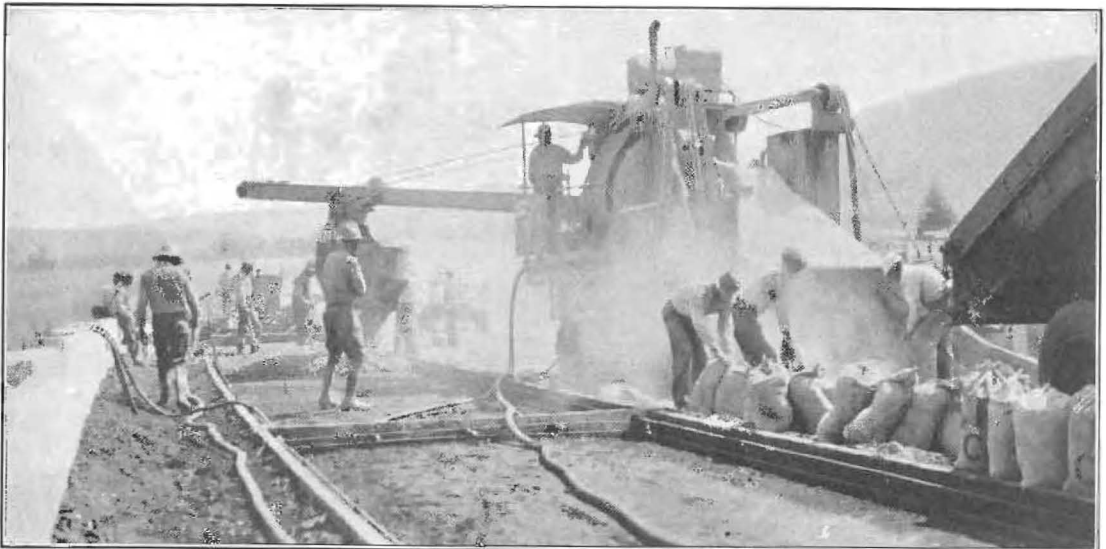
CHICO STATE TEACHERS COLLEGE—Addition to Assembly Building, contract for general work to A. Frederick Anderson, Oakland, \$24,153; contract for plumbing and heating work to W. H. Robinson, Monterey Park, \$4,031; contract for electrical work to Roy M. Butcher, San Jose, \$1,244.

Our highways are making the people of California neighborly, and in that they are dealing a deathblow to the spirit of selfish sectionalism. The roads of California must be so built that they are both adequate for traffic needs and that they also invite and encourage the free flow of travel from every part of the State to every other part.

--GOVERNOR JAMES ROLPH, JR.



LIKE ANTS ON AN ANT HILL—Putting the finishing touches to a \$653,424 highway, the Ridge Route Alternate which will be finished next month. The construction extends over seven miles.



ACTION SPEAKS LOUDER—There's plenty here on the Galvan line change in Orange County.

Telephone System to Help Traffic

LIKE firemen, the men of the California Highway Patrol are to be on call at all times.

On orders of E. Raymond Cato, Superintendent, a telephone communication system is being planned throughout California on all State highways. The general public will be invited to use the same in cases of emergencies, thus being able quickly to secure a traffic officer.

The system primarily will be employed to enable the patrol to be in constant touch with their police work throughout the State.

And in the offing, is the possibility of establishment of a radio system for the Highway Patrol.

RADIO SYSTEM STUDIED

Mr. Cato, in his May report of departmental activities to Col. Walter E. Garrison, Director of the Department of Public Works, states that considerable time has been spent in going over the entire radio system of the San Francisco Police Department, the Boeing Aircraft System and the Department of Forestry system with a view of working out a plan of communication for the California Highway Patrol that will add to its efficiency.

Mr. Cato further reports progress in building up the equipment of the Patrol to a high point. Fourteen old automobiles were replaced and purchase of 25 new motorcycles was recommended. Permission was granted by the Department of Finance to salvage 12 Henderson motorcycles.

EQUIPMENT INSPECTED

In this connection, announcement was made of appointment of Mr. C. C. Warden to the new position of Traveling Supervisor of Equipment. He was transferred from the California Highway Commission to the Highway Patrol. The head of the bureau, accompanied by Mr. Warden, toured the southern part of the State, going down the Valley route as far as El Centro, back up the Coast route as far as Fruitvale, and into Sacramento, stopping at all counties and inspecting equipment. The outstanding county as far as appearance of both men and equipment was concerned was Riverside, and the outstanding district that of Inspector Duncan, No. 11.

Mr. Cato's report then continues:

A further decrease in the number of applications for driver's licenses was noted during the month of April, amounting to 2428 applications. The total number of applications received was 41,189.

LICENSES DECREASE

The actual number of licenses issued was less by 1820 than the total issued in April when 35,613 licenses were issued. Of these, 59 per cent were operators, 19 per cent duplicate operators and 22 per cent chauffeurs licenses. The number of chauffeurs licenses issued was less by 2628 than the figure for March.

State examiners conducted 54 per cent of the examinations, and 46 per cent were given by the auto clubs, police and other authorized agencies.

The regular quarterly inspection of the headlight adjusting stations was made in April. Practically all stations were examined and reports made, except Los Angeles County. The enforcement work for March and April shows a substantial increase over February. During the month 16 headlight adjusters were appointed and one canceled; 17 headlight stations were appointed and 22 cancelled.

BAD BRAKES ON WANE

Increased activity in the testing of brakes showed a decrease in the number of defective brakes being found.

Alterations, changes and repairs to the school conducted by the Bureau of Traffic Education at the State Fair Grounds were completed just the day before the present class came in.

The tenth class, composed of 44 men, reported to the school on April 19, 1931. Instruction has been carried on very successfully. All the students at the school have displayed a keen desire to improve themselves.

The mailing of the annual statistical pamphlet was started during the month by the Bureau of Research, Statistics and Traffic Safety. In connection therewith announcement regarding the issuance of this pamphlet in the newspapers has brought a number of requests from the general public.

Speech Explains Building Policy

Clear exposition of the highway policy of the Department of Public Works and the California Highway Commission was expressed Saturday, June 6th, at Lucerne by Col. Walter E. Garrison, Director of the Department, while speaking on behalf of Governor James Rolph, Jr., at ceremonies commemorating opening of the Ukiah-Clear Lake-Tahoe road. While Colonel Garrison's speech deals with one locality mainly, nevertheless it definitely sets forth the aims and policies of the Rolph administration in the matter of road building and maintenance, and therefore, is of singular interest to the whole State. The speech follows, in part:

DEDICATION of this, another link in the great highway system of our beloved State, has indeed been a happy occasion. Happy because it has knit more closely the people of Lake County to its neighbors, because it helps to open up this section of the State for travel, produce and trade, and because, from my point of view as Director of the Department of Public Works, it is a promise fulfilled to the people of this section.

I am happy to be here in my official capacity, and also as a private citizen. In the first place because I feel, with the California Highway Commission, a deep sense of satisfaction over a construction job well done. In the second place because I am a fellow Californian, interested as you are, in any work or achievement which advances the interests of our glorious State. * * *

The people are paying for this highway which has been opened so appropriately, just as they pay for every unit of construction and maintenance in our entire road structure. The Department of Public Works and the Highway Commission are your agents. We are striving to serve you in ratio to the money allowed us and the limits set down for us by law.

GOVERNED BY MONEY

Therefore, I beg of you when you may feel inclined to be a little impatient, to remember that there are many equities to be considered in advancing different road units throughout the State.

We would, indeed, be in hot water, were we to build roads here and there, willy-nilly.

We must and do give each proposed route or highway improvement deep and honest thought and careful reflection. And money, ladies and gentlemen, the root of all evil, governs us too—did I say “governs us”—perhaps it would be better to say “rules us” when it comes to building highways.

Which brings you and me face to face with the situation confronting roads in northern California in general and Lake County in particular. Now please rest easy—I'm not going to bore you with a mass of figures sonorously proclaimed with appropriate gestures. Rather a few pertinent ones on roads in their relation to Lucerne, Lakeport, Lake County as a whole.

SECONDARY ROADS

First: The secondary road construction fund available for the northern section of the State in the coming biennium of the eighty-third and eighty-fourth fiscal year amounts to \$1,887,000.

Second: Lake County gets \$431,454 for maintenance and construction, slightly less than one-fourth of the total. Very fair and generous, don't you think?

Three: Total expenditures on State highways in this county up until May 1, 1931, were \$2,085,933.

Four: Route 50, the Rumsey-Lower Lake road is now under construction from the junction with Route 15 (Tahoe-Ukiah) at Bear Valley to Rumsey.

Five: A number of other important secondary roads such as Pacheco Pass, Skyline Boulevard, Placerville-Tahoe, carry a large amount of traffic, and demands for their improvement are very pressing.

GO “FAST SLOWLY”

Most of these are in mountainous country and expensive to build, requiring large appropriations to effect any appreciable improvement.

Therefore, I feel you will agree with me when I state that the amount set aside for Lake County roads seems reasonable and generous, doubly so when we bear in mind that we must, perforce, go “fast slowly” with new roads in the northern section of the State since the mileage of secondary roads already totals 1778 miles to which this Legislature has just added only 171 more miles.

Egypt, Siam, Guam; 91,247 Visit State From All Nations

All the way from sunny Italy; from the lands "down under," Australia and New Zealand; the picturesque Siam; from Egypt, Haiti, Germany, Great Britain and Guam—they all come to California!

Figures given out by the Motor Vehicle Department show that a total of 91,247 non-resident permits were issued during 1930.

California's most numerous visitors were from the state of Washington; Oregon came second during the past year; Arizona next. Illinois and Michigan lead the other states from the eastern side of the Rockies. The figures follow:

Alabama	190	Missouri	2,155
Alaska	36	Montana	1,040
Arizona	6,924	Nebraska	2,105
Arkansas	455	Nevada	1,810
Australia	1	New Hampshire	94
Canada	1,870	New Jersey	1,045
China	2	New Mexico	810
Colorado	5,490	New York	3,660
Connecticut	455	New Zealand	1
Cuba	2	North Carolina	177
Delaware	42	North Dakota	500
Dist. of Columbia	400	Nova Scotia	1
Egypt	1	Ohio	3,695
England	6	Oklahoma	2,715
Florida	720	Oregon	8,885
France	6	Panama	35
Georgia	172	Pennsylvania	1,895
Germany	1	Peru	1
Great Britain	1	Philippine Islands	14
Guam	1	Porto Rico	4
Haiti	1	Rhode Island	159
Hawaii	270	San Salvadore	1
Idaho	1,690	Siam	1
Illinois	5,420	South America	3
Indiana	2,030	South Carolina	62
Iowa	2,710	South Dakota	675
Italy	1	Switzerland	2
Kansas	2,310	Tennessee	360
Kentucky	240	Texas	4,815
Louisiana	360	Utah	1,800
Maine	140	Venezuela	1
Maryland	334	Vermont	1
Massachusetts	810	Virginia	244
Mexico	57	Washington	11,120
Michigan	4,160	West Virginia	98
Minnesota	1,950	Wisconsin	1,170
Mississippi	122	Wyoming	630
Total			91,247

One thing about the good old days, if you bought a horse you could be pretty sure the model wouldn't change next month.

Helen: "I heard that Ella had eloped with Mr. Brown. Has her mother forgiven them?"

Mable: "I don't think so—she has gone to live with them."

Being A Friend

By ROY YOUNGBLOOD,

Assistant Superintendent Highway Patrol

There are leaden men with souls of flint,
And hearts as hard as stone,
Who live for themselves throughout this life,
Live for themselves alone.

Without a thought of another's plight,
Their only thought is of self,
To crush the weak and grind them down,
In the maddened fight for wealth.

Who never see a chance to serve,
Never a chance to aid,
Never a helping hand to lend,
To some poor devil who strayed.

Ah, it's easy to feast with those who feast,
But to fast with those who fast:
To share the hunger of him who wants;
To cheer him to the last.

To shoulder his burdens; his sorrows to bear;
To help him when he's down:
With a smile each mile
On the highway of life, with never a trace of a frown.

To see the light; to forget the gloom;
To stand by him to the end;
And shoulder to shoulder to see him through,
That's being a real friend.

REVISED FORMS PUBLISHED BY HIGHWAY DEPARTMENT

The California State Highway Department has published an announcement of interest to contractors, as follows:

"Revised forms for Contractors' Statement of Experience and Financial Condition have been mailed to all contractors who are on the qualified list for plans, specifications and proposal forms for State highway work. These revised forms provide for the affidavit of accountant to be made by a certified public accountant, but, in those cases where the contractor does not desire to qualify for above \$50,000, the accountant's affidavit will not be required. Effective April 20, 1931, no names will be retained on the qualified list except those who have filed the revised form statement or whose present statement shows the financial condition as of a date now prior to December 31, 1930.

"Accompanying the statement forms will be a limited supply of forms to be used when requesting plans and specifications. On this latter form there is a provision for a supplemental statement of contracts covering the period subsequent to the date of the filed copy of the Contractor's Statement of Experience and Financial Condition. This supplemental statement will be required in all cases."

No matter how tired we get hearing that 2 and 2 make 4, still they do.

In Which Phil Stanton is Reminiscent; And Hands Out a Chuckle or Two

By PHIL A. STANTON, Highway Commissioner

SIXTY-THREE millions to be spent by the State and \$31,000,000 by counties in the coming two years on highway construction and maintenance!

I could not suppress a chuckle when I read those figures shortly after becoming a highway commissioner. They turned my mind back through the years to 1905.



Phil. A. Stanton

As a member of the Assembly in that year I was asked to introduce the County Bonding Act which would permit the counties of California to build roads outside municipalities. The automobile was just coming into vogue then and the young swain sought egress from the narrow confines of the city. He wanted to drive far afield in this new horseless buggy.

And I was asked to father the measure which would open up the highways between towns.

DIDN'T LIKE IDEA

But I was too wise! Why should they try to hand me a lemon like that to sponsor. Roads into the country! Oh, no. The thing was absurd. I handed it to my colleague and he put the measure through.

It has been a great thing for California, this highway system. It must continue to be a great thing, great in every sense of the word. Careful thought must be given to the expenditure of every penny of the people's money in the construction and maintenance of roads.

In 1909, when I was then Speaker, the Assembly voted the very first money for a State highway system. Eighteen million dollars was appropriated for road work subject to ratification of the people at the general election in 1910. This ratification was given by a majority of ONLY 12,786 votes.

STILL NOT ENOUGH

But birth was given to the gigantic system of highways which we now enjoy and we legislators went home proud that we had secured sufficient moneys to last for MANY, MANY years to come.

However, when 1915 rolled around \$15,000,000 was voted in legislation and ratified by the people at the 1916 election by a majority of 405,132 votes, not a single county voting the bonds down.

Again in 1920, \$40,000,000 was provided by constitutional amendment, a special election being held. Only 27,992 throughout the State voted no.

The Good Roads gospel had gone over with a bang.

HERE'S A PROPHECY

And now with \$63,000,000 to be spent by the State alone during the next two years, what does the future hold?

Let me quote from the bulletin of the Board of Highways in 1896, a prophecy by R. C. Irvine:

"The influence of the bicycle upon this agitation for improved highways can not be overestimated. Millions of dollars have been

(Continued on page 24.)

Analysis of New State Legislation

By A. L. BANKS, Assistant Deputy Director

PUBLIC sentiment in California has given almost constitutional force to certain policies affecting expansion of the State's great highway system.

An orderly State-wide plan affecting primary and secondary highways guides both legislation and administration. By legislation, the primary routes have been definitely selected and are being progressively improved; and in the orderly inclusion or addition of secondary roads to the system, the test of service and equity guides official action.

The late Legislature upheld these general principles both in its acceptance of plans reflected by the budget and in its measures dealing with additions to the secondary group of highways.

In conformity with a concurrent resolution of the Legislature of 1929, the State Department of Public Works, after a comprehensive survey of the existing State highway system, submitted its findings and recommendations to the Legislature of 1931. From the inevitable mass of claims of local origin, the department selected and recommended the addition of 23 secondary highways to the State system.

Three Major Points

Three major considerations determined the selection of these particular roads, namely, the large volume of inter-county or State traffic they are carrying, and, in other instances, the relief they will bring to other over-taxed primary roads, and also their service as important links in interstate traffic.

Governor James Rolph, Jr., Col. Walter E. Garrison and the State Highway Commission gave united support to the legislation effectuating the Department's recommendations. The Legislature decisively endorsed the administration's stand. The Edwards (Senate) and Kline (Assembly) bills, companion measures, were promptly passed and as promptly signed by the Governor.

These new acts are: Senate Bill No. 46, (Chapter 82, Statutes 1931)—Senators

Edwards, Breed, Allen, Baker, Cassidy, Duval, Harper, McCormack, McKinley, Riley, Sharkey, Swing and Waggy, authors; and Assembly Bill No. 7 (Chapter 96, Statutes 1931)—Assemblyman Kline, author.

These measures are identical in language, authorizing and directing the Department of Public Works to lay out and construct as secondary State highways the following 23 highways:

(a) Alturas to Oregon State line near New Pine Creek.

(b) Quincy to State Highway Route 29, near Chats.

(c) Vallejo to State Highway Route 8.

(d) Walnut Creek to Oakland.

(e) Weed to California-Oregon State line near Calor.

(f) Bishop to California-Nevada State line (Montgomery Pass).

(g) Bakersfield to Mojave.

(h) Red Box Divide to Pine Flats (Route 61 to Route 62).

(i) State Highway Route 26 near Colton via Pomona to Los Angeles.

(j) State Highway Route 43, Waterman Canyon via Santa Ana Canyon to Newport Beach.

(k) Beaumont to Riverside (Jackrabbit Trail).

(l) Riverside to San

Diego (Inland route).

(m) Pomona to Temecula.

(n) Blythe to California-Arizona State line at the Colorado River and State Highway Route 64 to State Highway Route 26, near Indio.

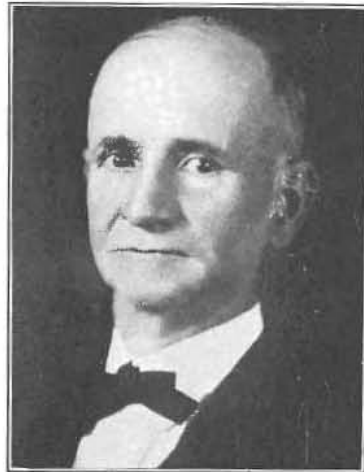
(o) National City to International boundary line near Tia Juana.

(p) El Centro to Calexico.

(q) Oasis to California-Nevada State line.

(r) State Highway Route 2 near Ventura to State Highway Route 4 at Castaic Junction.

(s) From State Highway Route 31 near Cajon Pass to State Highway Route 23 near Lancaster.



A. L. Banks

Relation of Laws to Highway Work

(t) Pomona to Fullerton via Brea Canyon.

(u) Cambria to San Luis Obispo.

(v) Santa Barbara to State Highway Route 2 at Zaca via San Marcos Pass.

(w) State Highway Route 14 near Crockett to American Canyon route near Vallejo.

To Continue the Study

After the foregoing legislation was passed, the 1931 Legislature, upon the recommendation of the Department of Public Works, adopted Senate Concurrent Resolution No. 10 (Chapter 58, Statutes 1931), Senators Slater and McCormack, authors. This resolution provides for a study and report by the Department of Public Works, to be ready for the 1933 Legislature, recommending another orderly addition of new roads to the secondary State highway system.

The requirements of the resolution are:

Additions recommended shall total not more than 15 per cent of the secondary State highway mileage as constituted by the Breed State Highway Classification Act of 1927, said mileage to be added in the ratio of not less than three nor more than four miles in the south to one mile in the north. The study is to be of routes, which by reason of the large volume of State traffic they are carrying, or by reason of the relief they would afford to heavy traffic upon present State highways, or as highways serving as important State links, should be added to the State system.

Basis for Inclusion

Senate Concurrent Resolution No. 18 (Chapter 50, Statutes 1931), Senator Ingels, author, is a "rider" on the resolution just summarized. It provides: "That the California Highway Commission and the State Department of Public Works when planning, constructing or improving the State highway system, shall give due consideration and regard to the development of the natural resources of the State and the improvement of agricultural marketing facilities as well as traffic needs."

Important Bridge Legislation

Bridge legislation, dealing with one of the highest phases of the State's development, received attention that will make history. The last Legislature was most friendly and

responsive to all bills prepared and submitted by the Department of Public Works for the purpose of facilitating the construction of the gigantic San Francisco Bay Bridge, which is to cross from San Francisco via Goat Island to Oakland. These bills were passed practically without dissenting votes. Legislators from every section of the State broadmindedly united in the promotion of this project.

The trio of bills which were designed to hasten the construction of the great bridge are:

The San Francisco Bridge

Senate Bill No. 337 (Chapter 400, Statutes 1931), Senators Fellom, Tubbs, Maloney, Breed, Jones, Young, Crittenden, Sharkey, Inman and McCormack, authors.

This act appropriates the sum of \$650,000 for the survey, plans, estimates, preliminary engineering and other preliminary expenses for the new San Francisco Bay Bridge to be expended through and upon authorization of the Department of Public Works. This appropriation is in effect a "loan," as the California Toll Bridge Authority is directed to return this appropriation to the State General Fund out of the proceeds of the first sale of revenue bonds issued for the construction of the bridge, with interest thereon at the rate of 4 per cent per annum.

Bridge in Highway System

Senate Bill No. 336 (Chapter 399, Statutes 1931), Senators Fellom and Breed, authors, gives discretionary authority to the Department of Public Works when the San Francisco Bay Bridge is *completed*, to make it a part of the State highway system *for maintenance purposes only*.

Revenue Bonds Validated

Senate Bill No. 460 (Chapter 401, Statutes 1931), Senator Fellom, author.

This act provides for certain technical amendments to the California Toll Bridge Authority Act of 1929 which will make the revenue bonds, issuable thereunder for the acquisition or construction of toll bridges, more readily marketable.

The Bridge Memorial

While the measure, which has since become a law, granting a permit for the construction

(Continued on page 26.)

Two Manuals Prepared For Guidance in Work Of Highway Employees

Manuals of Instruction, of intense interest to contractors, have just been issued by the Department of Public Works. One is from the Construction Department, the other prepared by the Department of Surveys and Plans.

The manuals are the guide and authority to be consulted on all features of work performed under the jurisdiction of the department and not properly pertaining to specifications.

C. S. Pope, construction engineer, in a message to the employees of the Division of Highways, says:

"These instructions are founded on experience, common sense and precedent and, in general, are the result of years of analytical thought and study on the part of many different engineers of the Division of Highways who have sought to improve construction methods and standardize the attitude of the department in many matters of public policy."

YOU CAN'T AFFORD TO OVERLOOK THIS!

AUTOMOBILE OWNERS—Who pays your insurance bill? You do, of course. But who is responsible for the increase in your rates? *You are*, if you are careless. Reduction in accidents will mean a reduction in rates.

FATHERS—The protection of your loved ones is your paramount aim. Your family does not bear a charmed life—careless actions may rob you of your dearest possession. While you are busy working for the betterment of yourself and family, others are working for their protection.

MOTHERS—The guidance and protection of your little ones is your life. An agency working for their protection is more than deserving of your active support.

TO ALL—Fifty thousand five hundred persons were killed during the time the United States was in the World War. Fifty thousand nine hundred persons were killed by automobiles during the last 18 months in the United States. This slaughter **MUST CEASE**. It is a challenge to you—will **YOU** accept it?

—From The Berkeley (Cal.) Traffic Safety Commission.

WHEN A FELLER NEEDS A FRIEND AND FINDS A FLOCK OF 'EM

When one has been accustomed to assist in sending to press a daily newspaper and then jumps into the task of preparing a monthly official bulletin, then's when he needs a friend.

And so I can not thank too much my predecessor, Mr. George Mansfield, and State Printer Harry Hammond's fine aides who have so generously and willingly assisted in this, my first publication. I refer particularly to James F. Lyon, Harry Orman, Bert Taylor and Dan Sullivan.

Many thanks.

E. C.

FOREST FIRES

(Continued from page 1.)

Governor Rolph's proclamation requests the county governments within the State to cooperate through county fire emergency committees appointed by the boards of supervisors.

With the State and the county governments organized against fire, the Governor believes a thorough campaign of education should be waged. To this end, he has invited the following agencies, well known throughout the State for their active programs each summer in fire prevention work, to assist the State: United States Forest Service; "Stop Forest Fires" Committee; the Automobile Associations; State Chamber of Commerce; California Forest Protective Association; Los Angeles Conservation Association; American Legion; Native Sons; Service Clubs; Airplane Transportation Companies; State Lines and Railroads.

Governor Rolph is the first Governor since the days of Governor Arrillaga in Spanish rule of California to issue a proclamation to his subjects to assist in stopping losses from fire in the natural wealth of the State.

In 1793, based on the reports of the missionaries traveling El Camino Real of the losses to forests and pastures from fire, Governor Arrillaga promulgated a proclamation calling upon the parishes to conduct an educational campaign among the Christian and Pagan Indians against fire.

The press representatives in Sacramento as covered by the United Press, the Associated Press and the metropolitan dailies of the State have organized and placed their services at the disposal of State Forester Pratt in conducting the campaign laid out by Governor Rolph.

Highway Commission Inspect Kings River Canyon Road Project

AT the invitation of the Fresno County Chamber of Commerce, the entire State Highway Commission and State Highway Engineer C. H. Purcell, met in Fresno at a dinner and conference on the evening of May 28th.

The announced purpose of the meeting was to discuss the Kings River Canyon Highway project which is now under construction beyond General Grant Park with convict labor.

Mr. Chester H. Warlow very ably presented statistics and data concerning the project, after which motion pictures were displayed, indicating something of the grandeur of the Kings River Canyon, together with some of the construction operations now under way beyond General Grant Park.

PARTY INSPECTS CAMP

Each of the commissioners was presented with a very attractive folio containing several large photographs of the Kings River Canyon and adjacent territory.

On the following day the commissioners, accompanied by approximately 25 members of the Fresno County Chamber of Commerce, visited Camp 19 and inspected the eight miles of completed highway, together with the construction operations which are now approaching the junction of the Middle and South Fork of the Kings River.

PLEASED WITH PROJECT

The commissioners expressed themselves as being very much pleased with the entire project.

After luncheon, which was served by the convicts, all the commissioners returned to their homes except Commissioner Hopkins, who continued on a trip into the canyon by horseback, accompanied by Mr. Warlow and a number of other members of the Chamber of Commerce.

Mr. Hopkins was much impressed by the attractiveness and magnitude of the Kings River Canyon country.

"Every man has his price."

"Yes, and every woman her figure."—*Exchange.*

The Old Philosopher says marriage is just like a railroad sign: when you see a pretty girl you stop, then you look, and after you're married you listen.—*Twin Twinkles.*

Carelessness Chief Cause of Grade- Crossing Accidents

THE following figures of grade-crossing accidents in 1930 compiled by the State Railroad Commission indicate that the great bulk of grade-crossing accidents are "avoidable."

Struck by head-end of train, 1215 accidents;
Struck by rear-end of train, 85 accidents;
Ran into standing train, 91 accidents;
Ran into moving train, 642 accidents;
Vehicles struck flagman, 5 accidents;
Vehicle ran through lowered crossing gates, 300 accidents;
Vehicle struck fixed objects, 54 accidents.
Other causes, 63 accidents.

Cloudy, foggy, or rainy weather did not result in producing more accidents than clear weather, the record showing 1379 accidents in clear weather in daylight, as against 57 in dusk, and 677 in the dark. Cloudy weather showed 95 accidents during the daylight, four during dusk, and 54 in the dark. Foggy weather evidently merely increased the caution of drivers as there were but 66 accidents during fog conditions, and 123 during rainy weather.

The fact that 1746 grade-crossing accidents occurred at crossings where the view was unobstructed would appear to emphasize the need for greater caution on the part of drivers. There were 658 accidents at crossings where the view was impaired, due to other causes than cars standing on adjacent tracks, and only 51 accidents at crossings where the view was impaired by cars standing on adjacent tracks.

The record shows that the larger the number of occupants of the vehicle the smaller the number of accidents occurred. For instance, there were 1680 accidents involving highway vehicles containing but one person, while there were 444 accidents involving two occupants, 150 involving three occupants, 86 involving four occupants, 39 involving five occupants, 14 with six occupants, three with seven occupants, and one with eight occupants, during 1930.

ROADSIDE BEAUTY COUNCIL

More than a hundred Santa Barbara and Montecito citizens have decided to form a County Council for the Preservation of Roadside Beauty for Santa Barbara County.

The fellow who does what must be done works for the fellow who does what ought to be done.

Legislature Makes Many Changes In Laws Governing Automobiles

By MARSHALL A. PAGE, Chief Clerk, Division of Motor Vehicles

THE 1931 Legislature made numerous changes in the vehicle laws of California, many of which are of vital interest to the motorist.

Practically every phase concerning the ownership, registration and operation of a motor vehicle is affected by this legislation. Many sections of the present act are rewritten entirely to clear up ambiguities and to make the enforcement of the law less cumbersome.

These changes were embodied in Senate Bill 548 by Senator A. H. Breed and Assembly Bill 785 by Assemblyman W. B. Hornblower.

The Breed bill embodied the principal changes, being a redraft of the present vehicle act aimed to improve the existing act and make the highways safer, while the Hornblower bill divorces the Division of Motor Vehicles and the California Highway Patrol from the Department of Public Works and sets them up as a part of an independent department of the State government with a director in charge who shall be a member of the Governor's Cabinet.

Both these bills have been signed by Governor James Rolph, Jr., and will become effective in August.

Outstanding in public interest are the maximum speed limit changes in the Breed bill which raise the limit on the open road from 40 to 45 miles per hour; in residential districts from 20 to 25 miles per hour and in business districts from 15 to 20 miles an hour.

The present limit of 15 miles in school zones, at blind intersections, grade crossings and around curves remains unchanged.

Motorists should note carefully that the increased speeds are permissible only when conditions permit such speeds with safety.

To a degree, the new maximum limits are the results of a compromise as a very determined effort was made in the Legislature to remove speed restrictions entirely. This move

was opposed by officials of both the patrol and the division.

A new section is added making it unlawful to drive at a speed so slow that the reasonable flow of traffic is retarded. Traffic officers are given authority to enforce this provision. This is the first legislative recognition of the fact that it may be as dangerous to drive slowly under some conditions as to drive too fast.

The Legislature also recognized the fact that many cars may be operating along the highways in an unsafe condition. New provisions make it unlawful to operate such a vehicle and give traffic officers the authority to stop any car suspected of being mechanically unsafe.

Enumerated below are other important changes in the law:

Definition of semitrailer amended to permit such vehicle to have more than one axle and two wheels.

Motocycles are included as emergency vehicles when publicly or privately owned if used by a peace officer, forest ranger or fire warden.

Division of Motor Vehicles required to furnish synopsis of California driving regulations with each registration.

Serial numbers and number of cylinders required on application for registration in addition to present data.

Provides that the Department of Public Works may issue a permit for the operation of a vehicle subject to registration when the operation is only for the purpose of crossing any highway from one property to another.

Requires that certificates of registration and ownership for out of state cars be of a different color than those issued for resident cars.

Plates must be installed at least 16 inches from the ground instead of 24.

Requires the seller as well as buyer to notify Division of Motor Vehicles of sale or transfer of his interest in a vehicle.

Nonresident cars are permitted to operate on nonresident plates as long as such plates



Marshall A. Page

Slow Driver Must Keep to Right or Receive a Ticket

are good in the state in which it registered. The present law requires a nonresident to secure a California license after he stays six consecutive months in the State.

Garage keepers required to report to police when they receive cars showing evidence of having been struck by bullets.

Division must revoke the license of a minor upon death of parent or guardian who signed application for such license.

Minimum age of person to whom license may be issued fixed at 16 instead of 14 years except upon special request of parent or guardian.

Licenses of minors under 18 twice convicted within six months for speeding, reckless driving or driving while intoxicated must be revoked by division after notification by court.

Division permitted to impose restrictions on licenses issued to physically handicapped persons.

Licenses of persons convicted of driving while intoxicated or hit and run shall be suspended unless and until they are able to give proof of financial responsibility by furnishing cash bonds, real estate or by proper insurance.

Provides a new schedule of stopping distances for commercial vehicles other than those carrying passengers.

Restricts the use of siren by officers when serving as escorts to processions.

Prohibits the operation of vehicles from which matter, other than clear water, is leaking or sifting.

Requires two red lights instead of one be placed on the rear of projecting loads.

Unlawful to display signs using terms "State Division of Motor Vehicles," or "Motor Vehicle Department."

Excessive speed not regarded as negligence in civil suits unless the plaintiff in such suits is able to establish that such driving constituted negligence.

Unlawful to maintain glaring or dazzling lights along the highway.

Business and residence districts must be posted with signs showing the legal speed limits.

AUTOISTS! ATTENTION!!

Some important points for the motorist to remember about the new California Vehicle Act are as follows:

Speed limits are raised five miles an hour but only when conditions permit such speeds with safety.

It will be unlawful to drive at a speed so slow as to retard the reasonable flow of traffic.

It will be unlawful to crowd so many persons into the front seat that the driver's view is obstructed.

No vehicle mechanically unsafe may be driven and officers have the right to stop any vehicle and examine it.

Pedestrians have the right of way at cross walks.

It will be legal to pass a vehicle moving in the same direction, on the right on roads where there are two or more parallel traffic lanes running in each direction.

Drivers descending grades on one-way roads must back up to permit ascending cars to pass.

Minimum age for issuance of an operator's license raised from 14 to 16 years with provisions for issuance to minors between 14 and 16 by special application of parent or guardian.

Driver of vehicle descending grade required to back up to a place where vehicle coming up grade may pass.

Pedestrians given the right of way at cross walks.

Vehicles carrying explosives or inflammables must display signs.

Division authorized to conduct complete investigations and research concerning the cause of motor vehicle accidents.

Uniform Directional Signs Are Favored for Highway Installation

IN response to many questions from communities all over California, asking permission to erect directional signs, State Highway Engineer C. H. Purcell has prepared the following statement:

I would advise that signs can be installed on State highway rights of way only under permits issued by the Division of Highways. We endeavor to follow a single standard in making installations of warning and directional signs.

We do not favor the installation of special types of signs, as we feel that the advantage of all warning and directional sign service is in its uniformity and simplicity. The Division of Highways, of course, has no jurisdiction over the county roads in regard to this matter.

Did you know that Californians apparently would "rather ride than eat"? At least that is indicated in figures recently released by the United States Department of Commerce. It is noted that while the State's population spends 20.29 per cent of its income for food, it spends 23.56 per cent of its money for automobile purchases.

Survey of Toll Bridge Is Ordered

(Continued from page 15.)

of the San Francisco Bay Bridge, was pending in Congress, the Legislature, in January of this year, adopted Senate Joint Resolution No. 7 (Chapter 17, Statutes 1931), Senator Fellom, author. This resolution memorialized Congress to pass such enabling congressional consent to the building of the bridge across San Francisco Bay.

Toll Bridge Policy Declared

Looking forward to a possible purchase of the great Carquinez Straits Bridge (built some years ago as a privately owned toll bridge) through the medium of revenue bonds, the 1931 Legislature adopted Senate Concurrent Resolution No. 36 (Chapter 78, Statutes 1931), Senator Fellom, author. The California Toll Bridge Authority is authorized thereunder to conduct a survey and investigation of said toll bridge with a view to the acquisition thereof by the State and report thereon at the next session of the Legislature.

Ehrenburg Bridge Purchase

The Colorado River Bridge near Blythe, Riverside County, California, and Ehrenburg, Arizona, is dealt with by Senate Bill No. 530 (Chapter 149, Statutes 1931), Senator Edwards, author.

While the bridges heretofore mentioned are located in northern California, southern California had a toll bridge problem of interest to itself as well as to the remainder of the State. A privately owned toll bridge is now being operated across the Colorado River, near Blythe, California, commonly called the *Ehrenburg Bridge*. The highway departments of the states of Arizona and California had been conducting negotiations for the possible joint purchase of this bridge and making it a free interstate bridge, thereby releasing a large amount of Federal aid road moneys which otherwise would not be relinquished by the Federal Government if this bridge remained a privately owned toll bridge.

Governors Hunt and Rolph, of Arizona and California, respectively, interested themselves in the matter, and as a result of several friendly exchanges, the Legislatures of the two states passed urgency enabling acts authorizing the purchase of this property and throwing it open to the public as a free bridge. The purchase of the bridge is

expected to be consummated in the very near future and the burden of paying tolls at this State entrance removed from interstate traffic forever.

Motor Vehicle Department

Assembly Bill No. 785 (Chapter 478, Statutes 1931), Assemblyman Hornblower, author, was the only act making any important change in the organization structure of the Department of Motor Vehicles. This act removes the Division of Motor Vehicles from this department and creates a new State department to be known as the Department of Motor Vehicles. This new department will consist of the Division of Registration and the Division of Enforcement, to be known as California Patrol.

Advertising Public Work

Some change was made by Assembly Bill No. 1202 (Chapter 831, Statutes 1931), Assemblyman Easley, author, in the procedure for advertising public work. The bill amends the present State Contract Law as requested by the State Department of Public Works, providing that notice of any work to be done by contract under the direction of the State Department of Public Works shall be published once a week for AT LEAST TWO CONSECUTIVE WEEKS, instead of the inflexible period of once a week for three consecutive weeks as in the present law.

On large contracts, the Department of Public Works expects to continue the three weeks' advertisement, but in the case of urgency jobs to handle unemployment situations or readvertisement of jobs, the department will be in a position to advertise for two consecutive weeks.

Moreover, on large projects, the department desires the privilege of advertising for more than three consecutive weeks. A longer period of notice may be deemed expedient. This also has been provided for.

Interdepartment Work

Interdepartmental service charges are provided for in Assembly Bill No. 1167, Assemblyman Nielsen, author.

This act permits the Department of Public Works to do work for other State departments in its highway shop located at Sacramento

Workingman Protected by Two Bills

(Continued from preceding page.)

and in its several other shops operated by the department in various sections of the State, such work to be paid for from the funds of such other State departments.

Two Labor Regulations

Two new labor acts of interest to State highway contractors were passed by the 1931 Legislature and signed by the Governor. The first of these is Senate Bill No. 26 (Chapter 397, Statutes 1931), Senator Inman, author.

The title of this act explains itself. "An act to provide for the payment of not less than the general prevailing rate of wages on public works, and not less than the general prevailing rate of wages for legal holiday and overtime work on public works, providing for the ascertainment of such general prevailing rate by the public body awarding the contract and its insertion in the contract and the call for bids for the contract, providing for the keeping of records by the proper public officials, providing for a forfeiture for each calendar day, or portion thereof, any worker is paid less than the said rate and for a stipulation to this effect in the contract, and providing other penalties for violation of the provisions thereof."

Joint Highway Procedure

The "Alien Labor Law," or Senate Bill No. 83 becomes Chapter 398, Statutes 1931. Senator Maloney was the author.

This act prohibits the employment of aliens by contractors and subcontractors on all public work in California, except in certain specified cases of extraordinary emergency. The term "alien" is used in the act to mean any person who is not a born or fully naturalized citizen of the United States. Penalties for violations of the act are provided.

A new Joint Highway Act, set up in Senate Bill No. 578, becomes Chapter 1025, Statutes 1931. Senator Fellom was the author.

This act radically amends the present joint highway procedure. The act provides that all existing joint highway districts may continue to function under present procedure, or may elect to reorganize and come within the provisions of the new act.

Cooperative Highway Law

Assemblyman Biggar's Cooperative Highway Bill is now Chapter 463, Statutes 1931.

This act provides for cooperative construction or improvement of highways by the State and counties. It applies only to the improvement of an existent highway or the construction of a proposed highway in a county, supplying an extension of a forest highway system road or national park road *already built or under construction*, to connect with any highway which forms a part of the State highway system of California, provided that such connecting road shall not exceed 50 miles in length.

To Care for Markers

Assembly Bill No. 170 (Chapter 170, Statutes 1931) by Assemblyman West authorizes the California Highway Commission to keep in repair and to erect signs and markers upon or adjacent to State highways indicating landmarks of historical interest.

Discretionary, in Street Work

The claims of cities to street improvements for connecting highways, and the discretionary authority of the Highway Commission are set forth in Senate Bill No. 810 (Chapter 807, Statutes 1931) by Senator Breed.

This is an act reaffirming the authority of the Department of Public Works, *in its discretion*, to take over and construct links of State highway within municipalities. It also empowers the department to acquire rights of way for such purpose by purchase, condemnation or donation within municipal limits.

Grade Crossing Problem Study

The grade crossing problem received attention by Assembly Concurrent Resolution No. 23. It becomes Chapter 45, Statutes 1931. Assemblymen Biggar and Jones are joint authors.

This resolution directs the Department of Public Works and the Railroad Commission of the State of California to make a joint and complete study of the matter of grade crossings within this State and report their findings and recommendations to the 1933 Legislature.

Highway Beautification

Highway beautification is proposed by Assembly Concurrent Resolution No. 34 (Chapter 85, Statutes 1931), Assemblywoman Eleanor Miller, Assemblymen Biggar, Clouds-

(Continued on page 24.)

State Teachers College at San Jose First to Get Modern Gymnasium

By RODERICK MILES, Architectural Designer.

THE San Jose State Teachers College is to be the first of California's normal schools to have complete gymnasium facilities for athletic training when they take occupancy, this fall, of the new men's gymnasium.

The justification of this building is by no means of recent birth, for "San Jose" has enjoyed for years the largest enrollment and the greatest number of men student-teachers in the State. Even at the time of construction of the women's gymnasium four years past the need was felt. But as the junior college and four-year courses were added, attracting a greater enrollment percentage of men, this need moved into the acutely imperative class. The remedy was not another building of limited purpose, such as the women's physical instruction program necessitated, but a structure with the potential ability to serve the entire school organization efficiently and completely by satisfactory answers to each item of a list of heterogeneous requirements demanded by existing conditions. The Division of Architecture accomplished these answers by the inclusion of features and arrangements in a plan to give an altogether multi-purpose design.

On the first consideration of the planning problem it was evident that because of the three major classifications of activities the building would take the form of three units so arranged, as to be used either independently or conjointly.

The central unit contains the main gymnasium floor, 72 feet wide by 102 feet long, which makes possible a maximum size basketball court for intercollegiate matches or two minimum courts running across the width for practice, and is ample for athletic exercise classes of more than 150 students at one time. This is surrounded by bleacher type seats accommodating more than 1700 persons and along the sides are 300 more seats that can be

let out of the walls to floor level, raising the total audience to more than 2000. The arena is completed by a vaulted roof supported on steel trusses with 120 feet span that clear the playing floor 30 feet. There are four stair towers so planned that one or all may be used as entrances, and with the addition of four stairways from seat space to main floor, total eight exits. While the towers are circular the stairs are designed in straight runs with right angle turns at landings, but no corners or wall set backs which eliminate all possibility of congestion in case of panic.

The ground floor is three feet below the gymnasium floor and are those portions of the central unit covered by the arena seats.

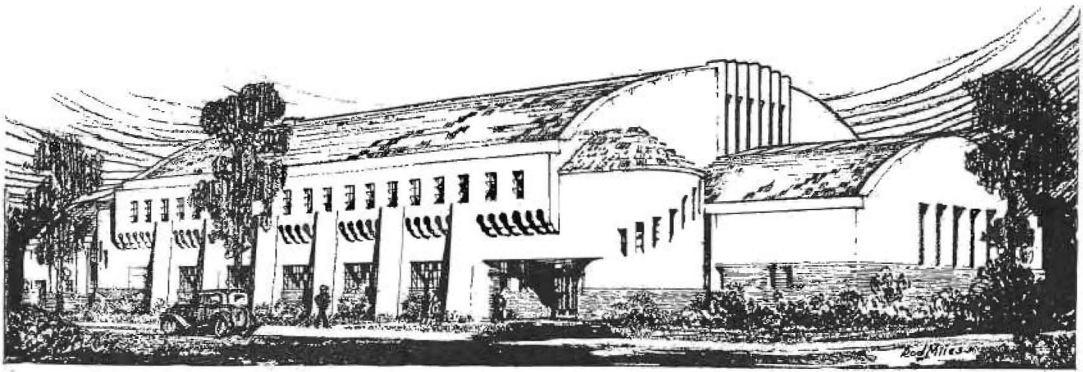
These areas are occupied by the main men's dressing room which is equipped with lockers, shower, toilet, towel and first aid rooms and is directly connected to two of the lobbies, which in turn give into the main gymnasium floor. One of these lobbies also connects the men's dressing room with the foot bath which all swimmers must pass through to reach the pool. On the opposite side of the building, under the seat space, will be found two more lobbies, one of which connects the main gymnasium floor with the boxing and wrestling room.

This room is equipped and designed to be used as a team clubroom, and also by visiting basket ball teams. A passage gives from one end of this room to the director's, secretary's, instructors' offices and to a fourth lobby, which in turn is connected to one of the aforementioned lobbies by a wide corridor that is on the same level with the main gymnasium floor and connects it to the apparatus gymnasium, which we will call the south unit of the building.

This south unit houses one large room 40 by 60 feet for instruction in the use of gymnasium apparatus and corrective physical exercises. The walls and floor are marked off



Roderick Miles



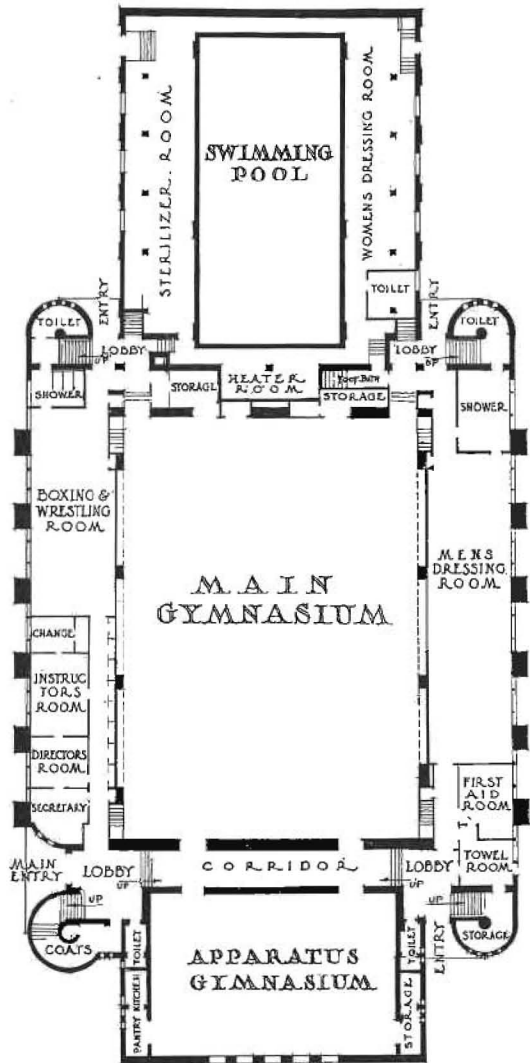
SOUND BODIES, SOUND MINDS—The thought behind construction of this attractive and serviceable gymnasium for the San Jose State Teachers College. This is a drawing of the exterior of the building which is 260 feet long.

into handball courts, et cetera. A room of ample size for the storage of apparatus not in use is provided at one end, and at the other end a pantry kitchen to provide refreshments when this gymnasium is being used for entertainment or at such times that the main gymnasium is being used for a pageant or ball.

The north unit is the natatorium with a swimming pool 35 feet wide by 70 feet long, making possible a 50-yard dash for six swimmers, by once doubling the length, which is the shortest dash now recognized in official intercollegiate meets. The pool is lined with light colored tile with lane and depth markers of a complementary color. A five-foot walk way borders the sides and the shallow end of pool, while at the deep end there is an area 14 feet wide giving the swimmers a chance for running dives and play space. Spectator seats are provided the full length of both sides of the pool, seating an audience of more than 450 persons. Under one tier of seats is the women's dressing room to be used by swimming classes only. It has the usual equipment of individual dressing stalls and showers, a towel room, hair dryer, etc. The only entrance is from the exterior directly, and its only access to the pool is through the foot bath.

The mechanical equipment of the pool, filters, sterilizer and pumps is taken care of in the space under the tier of seats on the opposite side. Then there is a small heater room for a water heater and storage tank.

Each unit of the building is heated separately by steam with individual controlled heaters which either provide fresh air or heat the air in the room by recirculation.



GROUND FLOOR PLAN

MUCH IN LITTLE—Everything, even the kitchen stove, seems to be provided in this new gymnasium.

Beautification of Highways Urged in Assembly Measure

(Continued from page 21)

ley, Kline, Head, Snyder, Easley, Quigley, Reid, Crowley, Greene, McDaniel, Patterson and Craig share in the authorship.

This resolution directs the Division of Highways of the Department of Public Works and the Division of Parks of the Department of Natural Resources to formulate a coordinated State-wide plan of highway beautification and report back to the 1933 Legislature.

These acts constitute the major results of late legislation affecting the Division of Highways. There are others of importance relating to the Water Resources Division deserving of a special review later.

ROAD PROBLEMS OF OTHER DAYS TOLD BY MR. STANTON

(Continued from page 13.)

invested in the manufacture of these easy and graceful machines of locomotion and this agitation for better roads is due more directly to the efforts of the wheelmen than to any other cause.

FORTY MILES A DAY

"Any machine which enables a man to travel with pleasure, without discomfort and practically without expense, 40 miles a day, is evidently one which has come to stay and the number of wheelmen will surely reach extraordinary proportions in the years to come."

I am not a prophet. The figures I've quoted in this article; the determination of Californians to open up every section of their State to travel and trade—these things make me fight shy of prophecy in this year of 1931.

You try.

GOLD FOR ROADS

Approximately \$1,500,000,000 is being spent for road-building in the forty-eight states during the current year on a program which calls for the improvement of around 60,000 miles of new highways, according to a report submitted to the twenty-ninth Annual Convention of the American Automobile Association held this month at West Baden, Indiana.

The report, based on a survey made by the A. A. A. National Good Roads Committee, showed that thirty-five states have enlarged their 1931 road programs, as compared with 1930, from both the standpoint of expenditures and mileage to be improved.

9 Patrol Officers Cited for Work; 10 Others Win Praise

NINE members of the California Highway Patrol were cited this month for services of an especially meritorious nature performed during May.

Ten others received honorable mention because their activity during the month resulted in the capture of 12 persons convicted of stealing automobiles.

Outstanding among commendatory acts was that of Officer J. N. Nobel of Ventura County who saved the life of a girl who had been carried out to sea, by giving her first aid and artificial respiration.

Officer Walter M. Walsh of Imperial County was commended for giving first aid and setting the broken arm of a person injured in an automobile accident.

Officer J. L. Randolph of Mendocino County was commended for taking to a physician a boy who had been shot.

Capt. E. J. Johnstone was cited for the arrest of a man wanted by the sheriff of his county on a felony warrant. It was necessary to disarm the man before he could be taken into custody.

Charles Golden and James Olsen, border checkers of Humboldt County, received mention because they removed a fallen tree from the highway. The work was done after midnight because the men were unable to locate members of the highway crew at that hour.

I. D. Christie, border checker of the same county, was commended for assisting a woman whose ankle had been sprained.

Officer Elmer King of Solano County was commended for the capture of a bad check passer wanted by the police, and Capt. G. B. Daley of Siskiyou County was commended for his cooperation after a burglary and shooting affray.

The officers given favorable mention for the capture of automobile thieves included Officers C. R. Avellar and H. T. Hendricks of Alameda County; Officers Harold McCoy and Dan Rentle of Ventura County; Capt. Fred J. Bly and Officer Sam Kirkpatrick of Humboldt County and Officer E. W. Crane of Santa Barbara County.

We are told that "this year's world output of motor cars will run into millions." We are glad of this hint, and shall try our best not to be one of those millions.

California Water Shortage Grave; Steps are Taken to Prevent Waste

By HARLOWE M. STAFFORD, Sacramento-San Joaquin Water Supervisor

IN the April and May issues of this Journal the water situation facing the State this season has been touched upon in the report of information as published in the monthly bulletins of Snow Survey and Precipitation Data of the Division of Water Resources.

Based upon the snow surveys at the end of March (beginning of the melting period) at some 160 snow courses throughout the major stream basins, and upon all available precipitation data to April 1st an estimate was made of the seasonal run-off in per cent of normal for each basin. Realization of the estimates was contingent to some extent of course upon the precipitation to occur subsequently to April 1st. At the end of May further snow surveys were made at "key courses" to show the extent of melting and the data thus derived together with the fact that another month of subnormal precipitation had gone by warranted a downward modification of the earlier run-off estimates.

FIGURES COMPARED

As estimated early in May, the 1931 seasonal stream flow in per cent of normal (mean of 40-year period, 1889-1929) is shown in the following tabulation which also shows the actual seasonal stream flow in per cent of normal for 1924, the previous driest year of record.

Stream	Seasonal stream flow in per cent of 40-year mean (1889-1929)	
	Estimated 1931	Actual 1924
Sacramento River at Red Bluff	34	36
Feather River at Oroville	26	25
Yuba River at Smartsville	34	23
American River at Fair Oaks	27	18
Sacramento River at Sacramento (including tributaries)	30	30
Mokelumne River at Clements	30	22
Stanislaus River at Knights Ferry	32	19
Tuolumne River at Jacksonville	36	28
Merced River at Exchequer	34	23
San Joaquin River at Friant	26	22
San Joaquin River near Vernalis including tributaries	32	24
Combined Sacramento and San Joaquin Rivers (including tributaries)	30	28
Kings River at Piedra	24	21
Kaweah River at Three Rivers	26	23
Kern River near Bakersfield	30	28
Combined Kings, Kaweah and Kern Rivers	26	23

In the Sacramento Valley, next to the estimate of seasonal run-off, the rice acreage is the major factor to be taken into consideration in endeavoring to forecast what minimum stream flow is to be expected at lower river points. In the early April estimates preliminary data indicated an increase in the rice acreage of about 10 per cent over that of 1930, and based upon this assumption, certain minimum flows were predicted as well as the approximate degree of salinity to be expected at various points in the Sacramento-San Joaquin Delta due to the insufficiency of fresh water inflow to prevent the encroachment of salt water from San Francisco Bay.

By early May, however, an actual check of the rice under diversions from the Sacramento River and tributaries indicated considerably greater than 10 per

cent increase over 1930, and accordingly, the estimates of minimum flow and salinity were revised as shown in the following tabulations which give also the corresponding actual data for 1924.

Stream	Minimum flow in second-feet		
	Estimated 1931	Actual 1924	Date
Sacramento River at Red Bluff	2800	2810	July 6
Sacramento River at Colusa	900	1470	July 21
Sacramento River at Sacramento	800	705	July 17
Feather River at Nicolaus	50	0	Aug. 2
American River at Sacramento	30	0	Aug. 1
San Joaquin River near Vernalis	450	391	July 22
Combined Sacramento and San Joaquin River flow to Delta, minimum 10-day flow	1300	1280	July 10 to 19 incl.

Delta stations	Maximum salinity (high tide) in parts of chlorine per 100,000 parts of water		
	Estimated 1931	Actual 1924	Date
Oakland and Antioch Ferry	1350	1345	Aug. 28
Collinsville	1150	1150	Aug. 16
Antioch	1050	1080	Aug. 20
Emmaton	750	802	Aug. 6
Jersey	650	708	Aug. 30
Three Mile Slough Bridge	600	692	Aug. 30
Rio Vista	550	608	Aug. 12

These data indicate conditions for the 1931 season practically the same if not more serious than were those of 1924.

In the latter year it will be recalled that some 200 water users from all parts of the valley met in Sacramento late in January at the first Sacramento-San Joaquin River Problems Conference. They met to consider with State and Federal officials what could be done in the face of the extremely dry season which was indicated that year as early as January.

GOOD WORK DONE

As the result of that conference there was appointed to represent the water users, what is known as the Permanent Committee of the Sacramento-San Joaquin River Problems Conference. This committee was charged with the responsibility not only of taking every possible step to relieve the situation of 1924, but of seeking a permanent solution to these water difficulties of the valley.

The steps taken in 1924 are past history, but it should be remembered that through the splendid cooperation of all water users both in the delta and upriver, the committee, and the State and Federal agencies, the season was passed with a minimum of loss, with the greatest relief possible to the delta in its salinity encroachment, with restraint by the War Department in the strict enforcement of its authority to require that the river flow be maintained for navigation, and of tremendous importance, with active prosecution of the Delta vs. Upriver litigation, affecting practically every water user in the valley, held in abeyance.

TO PREVENT WASTE

It was in this year that the office of Water Supervisor was established to work for maximum conserva-

Water Conservation Campaign Begun

(Continued from page 25.)

tion and waste prevention and to commence the collection of records of all diversions, stream flow, return flow, salinity, and water requirements and uses throughout the Sacramento-San Joaquin territory. As one method of best utilizing existing water supplies and in lieu of any adjudication of water rights, it was considered that this collection of all data might furnish the basis ultimately for a mutual agreement as to water allocation and its distribution accordingly by a water master.

The Permanent Committee has actively continued its work in the succeeding subnormal seasons, and now with a repetition of 1924 before it in 1931 has taken action to proceed in cooperation with the State, represented by the Division of Water Resources, in much the same manner as in 1924. The Federal Government has a vital interest in the situation from the standpoint of navigation, and is, therefore, through the District Engineer, Corps of Engineers U. S. A., an active party to the cooperative effort.

WARNING TO USERS

As the result of an early meeting of the Permanent Committee with State and Federal officials on March 26, 1931, letters were sent out to all water users calling attention to the situation and recommending as the most effective step which could be taken at that time, the reduction and elimination as much as possible of crop plantings such as rice which would require large amounts of water in July and August. Letters with a similar recommendation were sent out also by the District Engineer, Corps of Engineers, United States War Department, and by the office of the California Rice Growers' Association. Junior permittees under appropriate water rights before the Division of Water Resources were also apprised of their inferior position in the event that the water shortage should require the cutting of diversions in the inverse order of priority.

There was a fair response to these letters, but in spite of every action, the check in early May indicated that the rice acreage being irrigated from the river and tributaries above Sacramento was approximately 26 per cent greater than the 1924 acreage and above Colusa, 34 per cent greater.

STREAM FLOW FIGURES

At a meeting on May 28th the facts presented to the committee showed the following stream flow:

	<i>Second- feet</i>
Sacramento River at Red Bluff.....	3300
Sacramento River at Butte City.....	2060
Sacramento River at Colusa.....	1870
Sacramento River at Knights Landing.....	1000
Feather River at Nicolaus.....	760
Sacramento River at Verona.....	1600
American River at Sacramento.....	950
Sacramento River at Sacramento.....	2300
San Joaquin River near Vernalis.....	400
Combined flow of Sacramento and San Joaquin Rivers to delta.....	*2700

* A lesser flow than that in 1924 at the corresponding time.

It was shown also that there was a draft by major projects only on the Sacramento River from Red Bluff to Sacramento of 3900 second-feet; that this was being diverted for approximately 75,000 acres of rice and 68,000 acres of general crops or a total of 143,000 acres; that water levels were such that on the section of river between Colusa and Knights Landing a drop of very little more would cause the intakes of two or more of the largest pumping plants to be out of water; that tests in the upper bay and lower delta area evidence a salinity encroachment considerably in advance of that in 1924 at the same period; and that without consideration of the delta requirements and the salinity problem, not only low levels but an actual shortage of water for upriver acreage appeared to be impending.

MOVE TO HALT WASTE

A comparison of river diversions with the waste and return water as measured in the various drainage channels indicated that there existed a waste possible of and demanding prevention, and in view of all facts as presented, the decision was reached that an intensive campaign for conservation and waste prevention should be immediately inaugurated.

Letters were sent out to all upriver water users presenting the absolute necessity for the prevention of waste and advising that the rule to be followed by the Water Supervisor would be to cut river diversions by the amount of wastage found under them. The responsibility for waste prevention by adequate provision for inspectors, water masters, etc., in their field organization was placed upon the larger projects and each of the major districts was asked to designate a Conservation Officer to patrol and represent his district in its cooperation with the State Water Supervisor and the Federal officials. Arrangements were made for the inspection of the use and regulation of water on the various projects by a representative of the War Department and the Water Supervisor in cooperation with the Conservation Officer.

These measures are being effected at this writing and the indications are for a ready and sincere response upon the part of the water users as a whole. It remains to be seen whether or not a strict prevention of waste without further and more drastic regulation, will be sufficient to meet the situation and avert conflict.

Done o'Clock

The time of day I do not tell,
As some do, by the clock,
Or by the distant chiming bells
Set on the steeple rack,
But by the progress that I see
In what I have to do.
It's either Done o'Clock to me
Or only Half-Past Through.

—John Kendrick Bangs.

A highway tree-planting program has been developed in Orange County calling for beautification of scenic roads and sections along other highways where there are no orchards.

Cato Speech Stirs Patrol Officers

Grizzly inspectors of the California Highway Patrol, many of them grey-haired veterans of police work in the State, went to school again this month. They spent nearly two weeks at the patrol school in the Fair Grounds attending classes, and they liked it. As proof, here follows an article by one of them, lauding the work done and the policies laid down.

By F. G. YODER, District Inspector and Senior Instructor

IF the enthusiasm displayed by the executive class of the California Highway Patrol, just adjourned at the State Fair Grounds, can be taken as a criterion or barometer of the future success of the patrol, that future success is assured.

We of the school have watched with considerable pride the growing confidence, not only of the public in the patrol, but of the patrol in itself. You may ask, "Why has not the patrol always had confidence in itself?" The answer is simple, and we believe you are entitled to it. They have not had complete confidence in themselves, because of dual control, because of questioned ratings, because of doubtful seniority, and because of the lack of a uniform interpretation of their duties and administration policy.

CATO MAKES HIT

The training school has, aside from instruction, done much to standardize control and responsibility through the contracting of various units throughout the State, but the big and final argument, the one that put the executive class on the "dotted line," occurred when Superintendent E. Raymond Cato stood before the class and said:

"Submit to me your ideas as to the best method of conducting the business of your district. Tell me your troubles, I want to share them with you. This is **OUR** organization, not **MY** organization. I want to make it the best law enforcement agency of its kind in the world. I can not do it, but **WE** can, and after we have agreed upon a policy that will give to the people of this State the utmost protection and service, go back to your districts, put into effect that policy and I will stand behind you."

GIVEN IMPETUS

No man has ever stood before the executives of this organization and sold them to themselves as did Superintendent Cato. No organ-

ization could expect a superior to say more, and with these thoughts and assurances fresh in their minds they set about the formulation of plans and policies that, when put into effect, will make the patrol one of the greatest agencies for the protection of life, limb and property and for the promotion of the motorists' welfare and happiness in the history of automobiles.

Governmental efficiency was very clearly explained to the executives by California's Director of the Department of Finance, the Hon. Rolland A Vandegrift, and the motorist viewpoint was frankly discussed by Ivan E. Kelso, General Council of the Automobile Club of Southern California. Both pictures were well presented, understood and appreciated.

The department heads and district inspectors left with a spirit of unity and a desire to serve. They will carry "a message to Garcia." You Californians who have been accused of boosting things Californian, keep your eye on the California Highway Patrol.

MAKE ACTING CAPTAINS

E. Raymond Cato, Superintendent of the California Highway Patrol, announces that Otto Buer, former traffic officer of Orange County, and W. H. Rutherford, former traffic officer of Santa Barbara County, have been named acting captains in Inyo and Santa Barbara counties, respectively.

It was also announced that Officer Ernest Carr of Fresno County had been transferred temporarily to Mono County.

Wisconsin is now busily building overhead railroad grade crossings with two thoughts in mind—elimination of her most heavily traveled and dangerous grade crossings and opening up of employment. Twenty-six overhead crossings had been awarded for construction during May and bids have been received on seven more, and since then ten more have been advertised for bids. The Wisconsin program calls for the construction this year, with the cooperation of the railroads, of the 90 overheads which were to have been built in 1931, 1932 and 1933.

Millions Turned Into Trade Channels As Governor's Work Program Speeds Up

GOVERNOR ROLPH'S program for speeding up public improvements as a measure of alleviation for unemployment, is well under way and with gratifying results.

The State Department of Public Works is fully up on the schedule of activities assigned to it. The figures covering the first six months' progress are substantial evidence of accomplishment.

Employment has been provided for thousands of citizens. Millions of dollars have been turned into the channels of trade. The improvements have been well planned. They are being carried forward under careful supervision.

MANY MEN EMPLOYED

The Highway Division makes an excellent showing. The following figures speak for themselves:

Showing, as of June 10th, the number of men *exclusive of staff and office force* employed directly or by contractors on improvement work by the Division of Highways, State Department of Public Works:

District	Men employed	
	Day labor	Contract labor
1.....	507.....	225.....
2.....	438.....	314.....
3.....	276.....	274.....
4.....	405.....	262.....
5.....	228.....	289.....
6.....	297.....	66.....
7.....	599.....	410.....
8.....	220.....	602.....
9.....	113.....	20.....
10.....	247.....	169.....
Bridges.....		300.....
Total.....	3330.....	2931.....

Total day labor and contract.....	6261
Total of contracts under way as of June 1.....	\$16,117,000
Total day labor (not including penal).....	2,237,000
Total work to be awarded next three months.....	8,150,000
Total maintenance costs for 1931.....	6,502,170

The minimum cost of labor on this class of work is 70 per cent of the total. Of the remaining 30 per cent (for materials, etc.) labor takes an equal share.

These figures do not include any staff employees nor any labor from the penal camps.

ACCELERATED PROGRAM

The Division of Architecture is carrying forward an accelerated program of construction that is at this date giving employment to 2042 men. The contracted outlay calls for \$5,868,000. About 100 projects are represented in the activities under way.

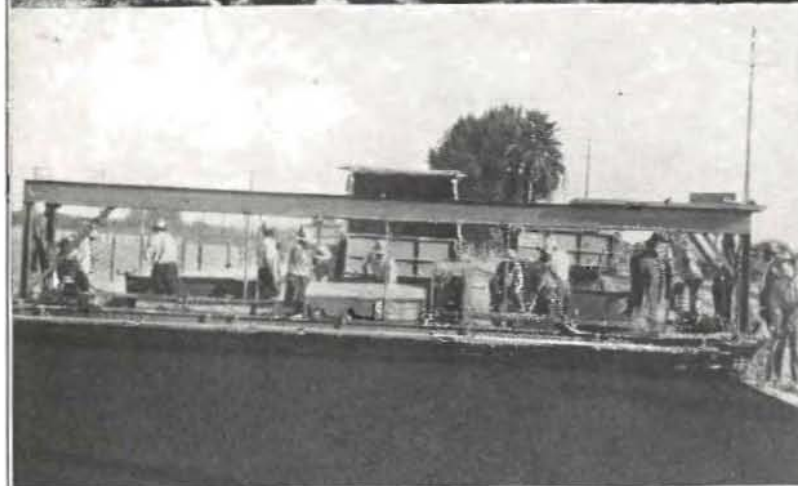
The division has a program for the next six months that will add about 80 per cent to the total of expenditures and to the number of men employed. Sixty projects, of the aggregate cost of \$4,751,000 and providing employment for 1650 men, will be launched. The average period of employment is 10 months. In other words, this division has a \$10,000,000 program for the year, and it is being advanced on schedule.

The list of projects for the next six months is about ready for announcement. Meanwhile, the list of those under way will be of much interest.

Institution	Project	Amount
Agricultural Park.....	Live stock building.....	\$140,000
Calif. Polytech. School.....	Dormitory.....	40,000
Agnews Hospital.....	Farm unit No. 2.....	355,000
San Francisco State Bldg.....	Completion.....	210,000
Whittier School.....	Cottage for boys.....	45,000
Mendocino Hospital.....	Completion of ward 7.....	70,000
Norwalk Hospital.....	Night attendants' building.....	40,000
Norwalk Hospital.....	Day attendants' building.....	36,000
San Diego College.....	Students' union.....	16,000
San Diego College.....	Athletic field.....	15,000
Norwalk Hospital.....	Assistant physician's cottage.....	10,000
Stockton Hospital.....	Employees' cottage.....	40,000
Patton Hospital.....	Infirmiry unit No. 2.....	40,000
Agricultural Park.....	Poultry building.....	66,625
San Diego College.....	Linoileum installation.....	10,000
Agnews Hospital.....	Attendants' quarters.....	100,000
Pacific Colony.....	Employees' quarters and garage.....	54,000
Div. of Highways.....	Improvements, Sacramento office.....	1,200
San Jose College.....	Completion of natatorium.....	50,000
Cleco College.....	Completion of auditorium.....	49,000
Div. of Highways.....	San Luis Obispo Office Bldg.....	36,000
Sonoma Home.....	Commissary.....	26,500
Mendocino Hospital.....	Ward building.....	30,000
Pacific Colony.....	Hospital building.....	113,000
Pacific Colony.....	Administration building.....	33,000
National Guard.....	Yuba City armory.....	25,000
Patton Hospital.....	Employees' cottages.....	50,000
San Diego College.....	Scrapps cottage.....	11,000
Div. of Motor Vehicles.....	Improvements, Sacramento office.....	500
National Guard.....	Oakland rifle range.....	7,500
Narcotic Hospital.....	Sewer line.....	840
Cal. Inst. for Women.....	Two ward buildings.....	166,000
Cal. Inst. for Women.....	Administration building.....	100,000
Sonoma Home.....	Water system.....	9,500
San Diego College.....	Sewage plant work.....	5,225



THE START—A long trek ahead in Del Norte County. Clearing operations, these, for a new highway but a pretty bumpy spot right now.



DOWN THE STRETCH—But no stretch of the imagination to picture the top scene as looking like this one pronto. This is a finishing machine at work south of Fresno. And on the right we see how the State keeps up the good work. The man with the funny looking dingbat is plugging up small holes on an otherwise perfectly good highway.

Institution	Project	Amount	Institution	Project	Amount
San Quentin Prison	Wharf	12,000	School for Deaf	Dormitory, kitchen and commissary	300,000
Los Angeles State Bldg.	Completion	607,350	Whittier School	Kitchen	80,000
Napa Hospital	Improvements to water well	1,800	Stockton Hospital	Hospital building	92,000
Sacramento State			Narcotic Hospital	Ward building	22,000
Office Bldg.	Improvements on fifth floor	1,000	Narcotic Hospital	Industrial shop and gymnasium	10,500
Cal. Inst. for Women	Service connections	51,000	Stockton Hospital	Industrial building	25,000
Div. of Motor Vehicles	Improvements, Sacramento office	200	Agnews Hospital	Ward unit No. 1	342,500
Pacific Colony	Miscellaneous improvements	3,500	Agnews Hospital	Physician's cottage	10,000
Agricultural park	Well and pump	4,785	Patton Hospital	Quarters for infirm patients	45,000
Ventura School			Whittier School	New boiler	18,000
for Girls	Pump	1,625	Pacific Colony	New boiler	16,500
School for Deaf	Painting	857	Sonoma Home	Alterations to dining room	10,200
Norwalk Hospital	Well and pump	18,637	Los Angeles State Bldg.		1,250,000
Preston School	Water supply	69,000	Narcotic Hospital	Receiving building	28,000
Folsom Prison	Sewage disposal	50,000	Napa Hospital	Repairs and improvements	12,300
Preston school	Industrial shop building	14,500	Norwalk Hospital	Refrigeration	6,800
San Quentin Prison	Warehouse	50,000	Patton Hospital	Miscellaneous construction	7,381
Preston School	Alterations to Refectory building	5,000	Patton Hospital	Roof repairs	10,600
San Quentin Prison	Extension to dining room	74,600	Veterans' Home	Boiler	15,100
Sonoma Home	Alterations to dining room	10,200	Agnews Hospital	Elevators	4,320
San Quentin Prison	Library building	24,000	San Diego College	Roads and walks	6,000
Folsom Prison	Foundations for cell block	25,000	Pacific Colony	Industrial building	10,000
Folsom Prison	Guards' cottages	25,000	San Diego College	Irrigation system	7,000
San Quentin Prison	Laundry	45,000	Attorney General	Improvements in San Francisco office	7,500
Folsom Prison	Remodel old Administration Bldg.	20,000	Stockton Hospital	Alterations to calf barn	2,500
Sau Quentin Prison	Guards' cottages	25,000	Stockton Hospital	Fire line	1,865
Folsom Prison	Cannery	29,000	School for Blind	Grading	1,750
Folsom Prison	Heating system	3,950	Div. of Highways	Repairs to vault, Sacramento	200
Sonoma Home	Laundry addition	19,900	Narcotic Hospital	Superintendent's office	1,500
Preston School	Superintendent's cottage	33,500	Veterans' Home	Gas and oil burners	3,900
Chico College	Assembly building	189,000			
San Jose College	Gymnasium	130,000			
			Total		\$5,868,010

Bridge Links Entire Pacific Coast

THE entire Pacific coast, from British Columbia to the Mexican line, joined hands on May 23 in celebrating opening and completion of the new bridge spanning the Rogue River, northern terminus of the Redwood Empire, at Grants Pass. The celebration was sponsored by the Redwood Empire Association in cooperation with the Grants Pass Chamber of Commerce and the Oregon Cavemen, Inc.

The bridge is a \$125,000 concrete structure, requiring 11 months to construct.

STRATEGIC POINT

High Federal, State, provincial, county and city officials were in attendance, together with executives of large and small community and

Garrison, Director of California State Department of Public Works, officially representing Governor Rolph of California; George W. Joseph, Jr., officially representing Governor Julius L. Meier of Oregon; C. H. Purcell, California State Highway Engineer; Edward Morris, President of the Redwood Empire Association; O. S. Blanchard, Vice President of the Redwood Empire Association and master of ceremonies; and Maj. Gen. Smedley Butler, and other dignitaries.

GREATER TRAVEL

Preceding the dedication ceremonies and celebration features, there took place in Grants Pass Friday evening, May 22d, and at Saturday noon, May 23d, a speaking pro-



HE'S A CAVEMAN—It's General Butler of the Marines in an unusual pose. The officer is being initiated as a caveman or what have you by a band of fierce looking warriors at ceremonies attending dedication of the Rogue River Bridge.

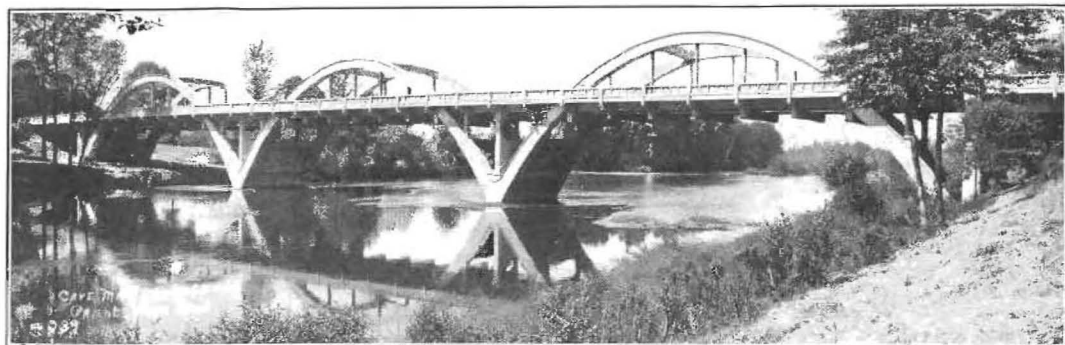
district advertising and publicity institutions, chambers of commerce, transportation executives, newspaper publishers, and others from California, Oregon, Washington and British Columbia.

The bridge was officially dedicated to "Greater Pacific coast travel," by virtue of its strategic location at a main distributing point for Pacific coast travel.

The "barrier"—in the form of a wide ribbon—was clipped by H. B. Van Dusen of Portland, Chairman of the Oregon Highway Commission, surrounded by Col. Walter E.

gram, in which presidents, directors and managers of major community and district advertising institutions, also chambers of commerce and auto club executives, presented ideas about greater interchange of travel on the Pacific coast, which movement was initiated and sponsored by the Redwood Empire Association.

Grants Pass was the objective for huge delegations from various Pacific coast points, coming in by caravans numbering 50 to 60 cars each, by airplane, by special train, and in the form of individual parties.



A THING OF BEAUTY and a joy forever—The Rogue River Bridge, northern terminus of the Redwood Empire at Grants Pass. The structure built at a cost of \$125,000 was opened May 23d with ceremonies attended by a large delegation from Pacific coast points.

“Don’t Speed” Signs Along Roads Urged To Prevent Crashes

Signs along open stretches of State highway, where the temptation to speed is greatest, warning the motorist that the maximum speed limit must not be exceeded, are being considered by State highway officials as a means of reducing the automobile’s toll of death and injured.

Believing that the major part of all fatal accidents may be traced to excessive speed, E. Raymond Cato, Superintendent of the California Highway Patrol, has made the suggestion for such signs in a letter to T. H. Dennis, Maintenance Engineer of the Division of Highways.

Conferences are being arranged between Cato, Dennis, Col. W. E. Garrison, Director of Public Works, and other highway officials to discuss the feasibility of the plan.

The new maximum speed limit of 45 miles an hour becomes effective August 14. Cato is determined that this shall be the limit in fact as well as in name and has so instructed his officers.

In going into the matter, Cato has discovered there are plenty of signs all over the State designating the maximum speed limits in business and resident districts, but that there are no signs whatever out on the open highway where many of the fatal accidents occur.

The patrol superintendent suggests in his letter that such signs be displayed at convenient points about the State calling attention to the maximum speed limit that will prevail when the new law goes into effect.

Road Builders Meet In Detroit in 1932 for Convention and Show

The twenty-ninth annual convention and road show of the American Builders’ Association will be held in Detroit, January 9 to 15, 1932.

Decision as to the location of the road show has just been made by association officers after consideration of the advantages of several large cities that made strong efforts to get the road show.

The Detroit Airport Building will be used for both the convention and the road show. All exhibit space is on the ground floor and the huge doors make possible the setting of the largest equipment without difficulty.

A new plan of housing delegates will be followed this year. An effort will be made to house all road builders whose interests are alike in the same hotel, city people to one hotel, county in another, Pan-American in still another and so on through the list. This plan will facilitate locating people at their hotels.

Headquarters hotels will be the Statler and the Book-Cadillac. Division headquarters will be maintained at these hotels.

All classes and types of equipment and material for the construction, maintenance and operation of streets and highways will be on display.

Hardly more than a score of toll roads still exist in the United States, all of them being privately owned. The total length is estimated at less than 150 miles, according to the Bureau of Public Roads, U. S. Department of Agriculture, as contrasted to the 3,000,000 miles of the public-road system. Thirty-five states have no toll roads of any kind.

Highway Bids and Awards for May

ALPINE COUNTY—Between Hangmans Bridge and the State Highway Camp. About 10.6 miles to be oil treated. Dist. X, Rt. 23, Sec. C, D and E, Pacific Tank Lines, Inc., Los Angeles, \$3,164; U. B. Lee, San Leandro, \$2,950; D. McDonald, Sacramento, \$3,181. Contract awarded to Basalt Rock Company, Inc., Napa, \$2,822.

ALPINE, CALAVERAS AND TUOLUMNE COUNTIES—Between Long Barn and the foot of Sonora Pass grade, about 25 miles; between Big Trees and Lake Alpine, about 19.5 miles, oiling. Dist. X, Rts. 13 and 24, Sec. E F G & H, F G & A, D. McDonald, Sacramento, \$12,816. Contract awarded to Basalt Rock Company, Inc., Napa, \$12,525.

EL DORADO COUNTY—Between Placerville and Railroad Crossing. About 1.7 miles to be graded and surfaced with untreated crushed gravel or stone. Dist. III, Rt. 11, Sec. D, Fred W. Nighbert, Bakersfield, \$68,041; Force Construction Co., Piedmont, \$61,786; Tiffany-McReynolds-Tiffany, San Jose, \$74,686; Kennedy-Bayes Construction Co., Biggs, \$73,312. Contract awarded to Finnell Company, Inc., Sacramento, \$52,593.

KERN COUNTY—Oiling between Canebrake Creek and junctions with Routes 57 and 23, 11.37 miles. Dist. IX, Rt. 57, Sec. K & L, F. W. Nighbert, Bakersfield, \$4,467; Gilmore Oil Co., Los Angeles, \$3,323; California Road Oil Service Co., \$3,720. Contract awarded to Pacific Tank Line, Los Angeles, \$3,100.

LASSEN AND MODOC COUNTIES—Between Hillside and Rush Creek. 24.5 miles to be surfaced with bituminous treated crushed gravel or stone. Dist. II, Rt. 28, Sec. A B A, Granite Construction Co., Watsonville, \$135,834; Fred W. Nighbert, Bakersfield, \$148,796; Hein Bros. & Basalt Rock Co., Napa, \$136,873; A. Teichert & Son, Inc., Sacramento, \$138,118. Contract awarded to Hemstreet & Bell, Marysville, \$129,646.

LOS ANGELES COUNTY—Between Santa Clara River and 0.6 mile north of Castaic School, 6.3 miles, oiling shoulders. Dist. VII, Rt. 4, Sec. A & B, Wm. P. Andrews Oil Co., Long Beach, \$1,466; The Petrol Corporation, Los Angeles, \$1,734; Pacific Tank Lines, Inc., Los Angeles, \$1,833; California Road Oil Service Company, Ltd., Wilmington, \$1,931; Gilmore Oil Company, Ltd., Los Angeles, \$2,227. Contract awarded to California Crane Service, Los Angeles, \$1,339.

LOS ANGELES AND ORANGE COUNTIES—Between San Gabriel River and Corona del Mar, 15.4 miles, oiling shoulders. Dist. VII, Rt. 60, Sec. E A & B, California Crane Service, Los Angeles, \$6,336; The Petrol Corporation, Los Angeles, \$6,638; Leonard C. Pulley, Long Beach, \$7,060; California Road Oil Service Co., Wilmington, \$7,483; Gilmore Oil Company, Ltd., Los Angeles, \$8,026. Contract awarded to Square Oil Company, Inc., Los Angeles, \$5,310.

LOS ANGELES AND VENTURA COUNTIES—Between Calabasas and top of Conejo Grade, 21.2 miles; between Camarillo and Telegraph Road, Ventura, 13.2 miles, oiling shoulders. Dist. VII, Rt. 2, Sec. C A B & C, C. A. Cook & J. J. Clark, Santa Barbara, \$2,487; California Crane Service, Los

Angeles, \$2,487; The Petrol Corporation, Los Angeles, \$2,587; Pacific Tank Lines, Inc., Los Angeles, \$2,587; Square Oil Company, Inc., Los Angeles, \$2,646; Gilmore Oil Company, Ltd., Los Angeles, \$3,164. Contract awarded to California Road Oil Service Company, Ltd., Wilmington, \$2,467.

LOS ANGELES AND VENTURA COUNTIES—Between Santa Monica and Calleguas Creek. Oiling shoulders, 31.6 miles. Dist. VII, Rt. 60, Sec. A and B, Square Oil Company, Inc., Los Angeles, \$8,095; California Crane Service, Los Angeles, \$9,825; California Road Oil Service Co., Wilmington, \$10,060; The Petrol Corporation, Los Angeles, \$11,004; Pacific Tank Lines, Inc., Los Angeles, \$11,161; Gilmore Oil Company, Ltd., Los Angeles, \$12,651. Contract awarded to Wm. P. Andrews Oil Co., Long Beach, \$8,017.

MODOC COUNTY—Between Rush Creek and Hot Creek. 23.5 miles to be surfaced with bituminous macadam treated crushed gravel or stone surfacing. Dist. II, Rt. 28, Sec. A and B, Finnell Company, Inc., Sacramento, \$157,260; Granite Construction Co., Ltd., Watsonville, \$135,600; U. B. Lee, San Leandro, \$142,435; F. W. Nighbert, Bakersfield, \$147,200; A. Teichert & Son, Inc., Sacramento, \$143,310; Hemstreet & Bell, Marysville, \$136,415. Contract awarded to Hartman Construction Co., Bakersfield, \$134,875.

MONO COUNTY—1.9 miles south of Coleville to 1.2 miles south of Coleville, grading. Dist. IX, Rt. 23, Sec. K, D. C. Follis, Compton, \$6,022; Robinson-Roberts Co., Los Angeles, \$6,484. Contract awarded to Kennedy-Bayles Construction Co., Biggs, \$5,290.

MONTEREY COUNTY—Between Chaualar and Salinas, about 10.1 miles to be oiled 8 feet each side of existing pavement. Dist. V, Rt. 2, Sec. B, C, A. Ladeveze, South Gate, \$18,248; Fred W. Nighbert, Bakersfield, \$17,305; Cornwall Construction Co., Santa Barbara, \$17,294; W. A. Dontanville, Salinas, \$19,371; J. F. Knapp, Oakland, \$15,497; Granite Construction Company, Ltd., Watsonville, \$16,508; U. B. Lee, San Leandro, \$19,203. Contract awarded to C. W. Wood, Stockton, \$15,104.

MONTEREY COUNTY—Between San Lucas and 0.9 mile east of San Lorenzo Creek, about 14 miles to be seal coated. Dist. V, Rt. 10, Sec. A & B, Roselip Products Co., San Luis Obispo, \$8,056; Cornwall Construction Co., Santa Barbara, \$8,990; Fred W. Nighbert, Bakersfield, \$11,950. Contract awarded to Granite Construction Co., Watsonville, \$7,894.

MONTEREY COUNTY—Between San Lucas and a point 3.5 miles north, oiling shoulders. Dist. V, Rt. 2, Sec. F & G, Fred W. Nighbert, Bakersfield, \$5,616; Cornwall Construction Co., Santa Barbara, \$4,976; Roselip Products Co., San Luis Obispo, \$5,460; W. A. Dontanville, Salinas, \$5,850; Tiffany-McReynolds-Tiffany, San Jose, \$7,722. Contract awarded to Granite Construction Company, Ltd., Watsonville, \$4,976.

NEVADA COUNTY—Between Donner Lake and one mile west of Truckee, placing underdrains at various locations. Dist. III, Rt. 37, Sec. D, Martin Murphy, Berkeley, \$8,970. Contract awarded to Harms Bros., Galt, \$5,103.

Work Covers All Sections of State

ORANGE COUNTY—Between San Mateo Creek and Serra. About 5.5 miles to be graded and paved with Portland cement concrete and asphaltic concrete. Dist. VII, Rt. 2, Sec. A, C. G. Willis & Sons, Inc., Los Angeles, \$309,631; Southwest Paving Co., Los Angeles, \$298,087; Ed. Johnson & Sons, Los Angeles, \$339,200; Geo. H. Oswald, Los Angeles, \$307,999; David H. Ryan, San Diego, \$294,083; Gibbons & Reed Co., Burbank, \$338,867; O. A. Lindberg, Stockton, \$345,383; Macco Construction Co., Clearwater, \$356,571; Daley Corporation, San Diego, \$307,912; Griffith Company, Los Angeles, \$324,244. Contract awarded to Jahn & Bresal Construction Co., Inc., Los Angeles, \$282,107.

ORANGE COUNTY—Reconstructing and widening bridge across Santa Ana River 2 miles north of Newport Beach. Dist. VII, Rt. 60, Sec. A, J. S. Metzger & Son, Los Angeles, \$69,217; R. R. Bishop, Long Beach, \$71,718; Owl Truck Company, Inc., Compton, \$70,763; Merritt-Chapman & Scott Corporation, San Pedro, \$64,298; Herbert M. Baruch Corporation, Ltd., Los Angeles, \$72,549; Oberg Bros., Los Angeles, \$64,340. Contract awarded to Nead Construction Co., Wilmington, \$59,947.

PLACER COUNTY—Between Wise Power House and Auburn. About 1.4 miles to be graded and paved with Portland cement concrete. Dist. III, Rt. 17, Sec. B, Clark & Henery Construction Co., San Francisco, \$182,063; C. W. Wood, Stockton, \$174,699; Granfield, Farrar & Carlin, San Francisco, \$171,307; Gist & Bell, Arcadia, \$209,886; W. H. Hauser, Oakland, \$161,787; George Pollock Co., Sacramento, \$184,707; McCray Co., Los Angeles, \$195,121. Contract awarded to Fredrickson & Watson Construction Co., and Fredrickson Bros., Oakland, \$147,585.

SACRAMENTO COUNTY—Between Brighton and Mills, 7.2 miles grading and paving with Portland cement concrete. Dist. III, Rt. 11, Sec. B, Clark & Henery, San Francisco, \$222,076; C. W. Wood, Stockton, \$210,390; N. M. Ball, Porterville, \$200,584; Hanrahan Co., San Francisco, \$202,060; A. Teichert & Son, Sacramento, \$241,561; M. J. Bevanda, Stockton, \$222,187. Contract awarded to Busich Brothers, Torrance, \$199,365.

SAN BERNARDINO COUNTY—Between Fawnskin and County Road to Pine Knot. About 6.4 miles, heavy fuel oil to be furnished and spread. Dist. VIII, Rt. 43, Sec. D, Pacific Tank Lines, Inc., Los Angeles, \$1,901; California Road Oil Service Co., Wilmington, \$2,209. Contract awarded to Gilmore Oil Company, Ltd., Los Angeles, \$1,608.

SAN BERNARDINO COUNTY—Between Kern County line and Barstow, 37.1 miles to be oiled. Dist. VIII, Rt. 58, Sec. A B C & D, Pacific Tank Lines, Inc., Los Angeles, \$7,369; California Road Oil Service Co., Wilmington, \$7,752; Gilmore Oil Company, Ltd., Los Angeles, \$7,098; California Crane Service, Los Angeles, \$7,472; Petrol Corporation, Los Angeles, \$7,121. Contract awarded to Square Oil Company, Inc., Los Angeles, \$6,257.

SAN DIEGO AND ORANGE COUNTIES—Between San Diego and San Mateo Flat and between Galivan and Irvine, oiling shoulders, 32.2 miles. Dist. VII, Rt. 2, Sec. A B C D B, The Petrol Corporation, Los Angeles, \$6,012; California Road Oil Service Co.,

Wilmington, \$6,380; Pacific Tank Lines, Inc., Los Angeles, \$6,701; Orange County Refining Co., Los Angeles, \$6,747; Gilmore Oil Company, Ltd., Los Angeles, \$6,976. Contract awarded to Square Oil Company, Inc., Los Angeles, \$5,186.

SAN JOAQUIN COUNTY—Between French Camp and Stockton, 3.5 miles, to be graded and surfaced with bituminous treated gravel. Dist. X, Rt. 5, Sec. B, Willard & Biasotti, Stockton, \$46,855; Force Construction Co., Piedmont, \$50,512; Fred W. Nighbert, Bakersfield, \$55,390; Valley Paving and Construction Co., Fresno, \$44,830; Clark & Henery Construction Co., San Francisco, \$51,813. Contract awarded to C. W. Wood, Stockton, \$44,660.

SAN LUIS OBISPO COUNTY—Between San Simeon and Piedras Blancas Lighthouse, about 6.2 miles to be oiled. Dist. V, Rt. 56, Sec. A, Tiffany-McReynolds-Tiffany, San Jose, \$3,120; Granite Construction Company, Ltd., Watsonville, \$3,142; Brisco & Son, Arroyo Grande, \$1,971; Roselip Products Co., San Luis Obispo, \$1,981; Bradley Truck Co., Santa Maria, \$1,620. Contract awarded to W. A. Dontanville, Salinas, \$1,609.

SANTA BARBARA COUNTY—Reconstructing floor of Santa Ynez River Bridge, about 1 mile south of Buellton. Dist. V, Rt. 2, Sec. D, Oberg Bros., Los Angeles, \$24,639; Gist & Bell, Arcadia, \$19,718; Johnson Construction Co., Los Angeles, \$23,649. Contract awarded to Neves & Harp, Santa Clara, \$18,099.

SANTA BARBARA COUNTY—Between Guckhorn Creek and second crossing of Cuyama River, about 15.5 miles, to be surfaced with asphaltic treated screenings. Dist. V, Rt. 57, Sec. B, Santa Maria Construction Co., Santa Maria, \$12,375; Lang Transportation Co., \$16,160. Contract awarded to J. F. Knapp, Oakland, \$11,782.

SANTA CRUZ COUNTY—Between 1 mile north of Santa Cruz and Santa Cruz, to be graded and surfaced with crusher run base and paved with bituminous macadam. Dist. IV, Rt. 5, Sec. A, W. H. Hauser, Oakland, \$64,073; Healy-Tibbitts Construction Co., San Francisco, \$48,486; Granfield, Farrar & Carlin, San Francisco, \$50,558; J. L. Conner, Monterey, \$43,737; Granite Construction Company, Ltd., Watsonville, \$42,789; Contoules Construction Co., San Francisco, \$48,539; Irving L. Ryder, San Jose, \$48,485; Ariss-Knapp Co., Oakland, \$52,999. Contract awarded to C. W. Wood, Stockton, \$42,084.

TRINITY COUNTY—Bridge across North Fork of Trinity River near Helena, one 150-foot through steel truss span and two 47-foot, 2-inch concrete girder spans on concrete piers and abutments. Dist. II, Rt. 20, Sec. E & F, F. J. Maurer & Son, Inc., Eureka, \$43,658; A. Young, Yreka, \$50,674; Ralph McLeran & Co., San Francisco, \$43,483; A. T. Howe, Santa Rosa, \$42,581; R. B. McKenzie, Red Bluff, \$45,700. Contract awarded to F. H. Nielson, Orland, \$39,089.

TRINITY COUNTY—Approaches to Browns Valley Creek and Trinity River Bridges. About 0.5 mile to be graded and surfaced with untreated crushed gravel or stone. Dist. II, Rt. 20, Sec. A, A. Young, Yreka, \$21,126; Chas. N. Chittenden, Napa, \$21,852.

(Continued on next page.)

Quick Thinking and Officers' Skill Save Lives of Two Trapped Fishermen

QUICK work on the part of two California Highway Patrolmen and the skill of a Highway Maintenance Department Foreman, saved the lives of two fishermen a few weeks ago and won the commendation of the citizens of Ventura County.

Officers R. J. Parr and Joe Nobel and Foreman Glenn Cheeseman were the principals in the thrilling rescue of Jack Eaton of Santa Monica and Byron Woodford, Venice, caught by high tide and a heavy sea on a rock 300 feet off Deer Canyon along the Roosevelt Highway.

As a result of the near tragedy, Thornhill Broome, owner of the property, has placed ropes and life savers at strategic points on his land for use of the highway patrol in the event of another emergency. The following story from the Los Angeles Times gives details of the rescue:

Two men, Jack Eaton, 31 years of age, of 18 Grant street, Santa Monica, and Byron Woodford, 31, of 811 Crestmore place, Venice, owe their lives to the California Highway Patrol as a result of a spectacular and timely rescue which occurred on the Roosevelt Coast Highway about 15 miles south of Oxnard.

A crowd of several hundred excited motorists lined the edge of the highway that skirts the rugged coast to watch State Officers Bob Parr and Joe Nobel rescue the two men from what would have been a certain watery grave.

Eaton and Woodford, with their wives, were fishing from the rocks earlier in the day. The two women retreated to the highway far above the surf at noon. The two men, intent upon catching more fish, ventured out to the end of a 300-foot strip of rock. By 3 o'clock the tide, unnoticed by anyone, had risen completely surrounding the two fishermen.

Officers Parr and Nobel, patrolling the highway, noticed the two men offshore, apparently unaware of their danger. The open ocean lay before them while a pounding surf beat on the rocks behind them. They were fishing from a high spot on the rocks not more than six feet in circumference.

The officers secured a long rope from the State Highway Maintenance Camp at Sycamore Canyon, several miles away, and with the assistance of Foreman Glenn Cheeseman, started the rescue. It was not until then that Eaton and Woodford realized the seriousness of the situation.

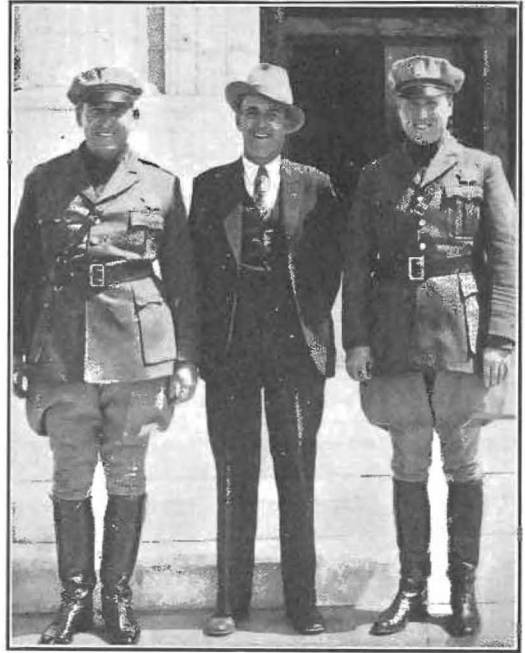
Abandoning their fish and lines, they tried to catch the life line. Fourteen attempts were made before Eaton was pulled from the rock to safety. The water by this time had reached the top of the rock.

Woodford was washed from the spot by mounting waves almost the instant he finally caught the weight at the end of the rope that was flung to him by one of the officers who was perched on a nearby ledge. Although badly tossed about by the heavy seas he managed to hang on and was dragged to safety.

An hour later the rock on which the men had been fishing was under water with high waves pounding on all sides.

Had they not been spotted by the two officers in time they undoubtedly would have soon been

washed away and dashed to death. Last year seven people lost their lives in similar manner along this coast, and several at this very spot.



THREE MUSKETEERS—They look happy and they should for they are the lads whose quick thinking and skill saved the lives of two anglers. From left to right—Joe Nobel, Glenn Cheeseman and R. J. Parr.

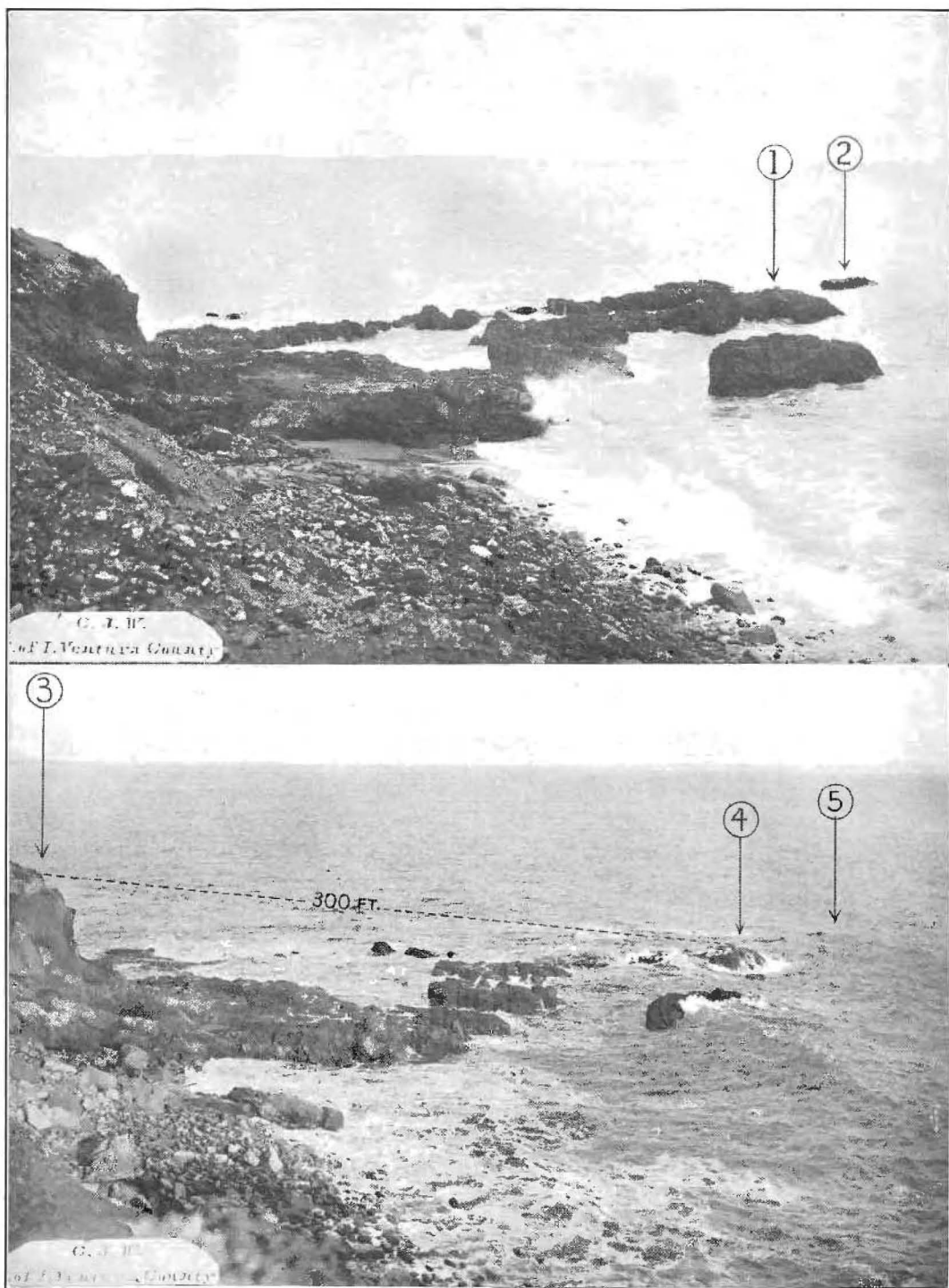
HIGHWAY CONSTRUCTION WORK AWARDED DURING PAST MONTH

(Continued from page 33.)

Contract awarded to H. H. Boomer, San Francisco, \$19,809.

TULARE COUNTY—Between Goshen and Kingsburg, constructing 4 new bridges and widening 2 bridges. Dist. VI, Rt. 4, Sec. E, Fredrickson and Watson, Oakland, \$40,767; Thermotite Construction Co., San Jose, \$37,209; Geo. J. Ulrich Construction Co., Modesto, \$37,294; Oberg Bros., Los Angeles, \$46,085; L. C. Clark & C. E. Doughty, Visalia, \$36,322. Contract awarded to J. S. Metzger & Son, Los Angeles, \$36,290.

YOLO AND COLUSA COUNTIES—Between Dunnigan and 1 mile south of Arbuckle, 8.7 miles, rock borders. Dist. 11, Rt. 7, Sec. C A, A. Teichert & Son, Sacramento, \$24,495. Contract awarded to Fred W. Nighbert, Bakersfield, \$24,140.



WHERE LIVES WERE SAVED—Above are the rocks at low tide, number 1 showing the spot at which two men were fishing. Number 2 the farthest rock out on the point at Deer Canyon, Ventura County. Below is the same scene when the tide came in and the sea whipped up. The fishermen were trapped at point 4, unable to get ashore. Number 5 is the farthest rock, or rather where it was located at low tide. Officers Nobel and Parr with Highway Foreman Cheeseman, threw a rope from point 3 to the men, a distance of 300 feet, and saved them.

May 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 May, 1931.

SIERRA COUNTY—Application 6948. William F. Bickel, c/o James D. Stewart, 138 Commercial St., Auburn, Calif., for 25 c.f.s. from unnamed springs and Mill Creek tributary to Little Canyon Creek, thence Canyon Creek and South Fork of Yuba River. To be diverted in Sec. 33, T. 21 N., R. 10 E., M. D. B. and M., for mining purposes.

MODOC & LASSEN COUNTIES—Application 6949. Big Valley Water Users Association by Peter Gerig and L. W. Kramer, Trustee, Bieber, Calif., for 500 c.f.s. from drainage, seepage and return water in Pit River from Hot Springs Valley Irrigation District tributary to Sacramento River. To be diverted everywhere along Pit River from the south line of Sec. 24, T. 40 N., R. 7 E., M. D. B. and M., to the west line of Sec. 14, T. 37 N., R. 7 E., M. D. B. and M., for irrigation and stock watering purposes (10,500 acres).

PLUMAS COUNTY—Application 6950. C. E. McGrath and R. L. Morgan, c/o C. E. McGrath, Greenville, Calif., for 2 c.f.s. from Echo Creek tributary to Rush Creek. To be diverted in Sec. 35, T. 26 N., R. 8 E., M. D. B. and M., for mining and domestic purposes.

LOS ANGELES COUNTY—Application 6951. Dr. Joseph A. Polia, 269 S. Lake St., at W. Miramar, Los Angeles, Calif., for 0.0001 c.f.s. or approximately 65 g.p.d. from an unnamed spring tributary to Mojave Desert. To be diverted in Sec. 1, T. 4 N., R. 10 W., S. B. B. and M., for irrigation and domestic purposes (1 acre).

SAN DIEGO COUNTY—Application 6952. Alice R. Hale Gaudian, Ramona, Calif., for 1 c.f.s. from an unnamed spring tributary to Dry Wash. To be diverted in Sec. 35, T. 13 S., R. 1 W., S. B. B. and M., for irrigation and domestic purposes (5 acres). Estimated cost \$500.

TRINITY COUNTY—Application 6953. L. E. Wheeler and W. W. McCumber, Burnt Ranch, Trinity County, Calif., for 1.0 c.f.s. from South Fork of East Fork of New River tributary to Trinity River. To be diverted in Sec. 7, T. 36 N., R. 12 W., M. D. B. and M., for mining purposes. Estimated cost \$700.

HUMBOLDT COUNTY—Application 6954. Peter H. Brandt, Fortuna, Calif., for 0.53 c.f.s. from Strong Creek tributary to Pel River. To be diverted in Sec. 2, T. 2 N., R. 1 W., H. B. and M., for irrigation purposes (15 acres). Estimated cost \$500.

SAN BERNARDINO COUNTY—Application 6955. William E. Wilson, 435 E. 19th St., Long Beach Calif., for 0.1 c.f.s. from Ferner Springs (underground) tributary to Dry Sandy Wash. To be diverted in Sec. 23, T. 8 N., R. 18 E., S. B. B. and M., for mining and domestic purposes. Estimated cost \$3,760.

SAN BERNARDINO COUNTY—Application 6956. Wayne Courtney, 1318 W. 94th St., Los Angeles, Calif., for 8 c.f.s. from Arrastra Creek tributary to Lucerne Valley. To be diverted in Sec. 22, T. 3 N., R. 2 E., S. B. B. and M., for irrigation and domestic purposes.

SAN BERNARDINO COUNTY—Application 6957. Wayne Courtney, 1318 W. 94th St., Los Angeles, Calif., for 10 c.f.s., 7240 ac. ft. per annum from Baldwin Lake tributary to Lucerne Valley. To be diverted in Sec. 7, T. 2 N., R. 2 E., S. B. B. and M., for irrigation and domestic purposes (2000 acres). Estimated cost \$75,000.

SAN BERNARDINO COUNTY—Application 6958. Wayne Courtney, 1318 W. 94th St., Los Angeles, Calif., for 6 c.f.s. from Rattlesnake Canyon tributary to Lucerne Valley. To be diverted in Sec. 18, T. 3 N., R. 3 E., S. B. B. and M., for irrigation and domestic purposes.

SANTA CRUZ COUNTY—Application 6959. Maurice Bernstein, c/o G. A. Elliott, Eng., 1103-4 Merchants Exchange Bldg., San Francisco, Calif., for 1/6 c.f.s. from San Lorenzo River tributary to Pacific Ocean. To be diverted in Sec. 1, T. 9 S., R. 3 W., M. D. B. and M., for irrigation and domestic purposes (10 acres). Estimated cost \$3,000.

LAKE COUNTY—Application 6960. Oscar Terry

Boardman, Lakeport, Calif., for 1.0 c.f.s. from Scotts Creek tributary to Clear Lake. To be diverted in Sec. 12, T. 15 N., R. 10 W., M. D. B. and M., for irrigation purposes (32 acres). Estimated cost \$500.

MONO COUNTY—Application 6961. Rex M. Foster, Box 122, Bridgeport Calif., for 0.110 c.f.s. from spring tributary to Green River. To be diverted in Sec. 23, T. 3 N., R. 24 E., M. D. B. and M., for power purposes (42 h.p.). Estimated cost \$25.

SAN BERNARDINO COUNTY—Application 6962. Gaylord, Lauder milk & Yaeckel, c/o G. B. Gaylord, P. O. Box 146, Claremont, Calif., for 0.05 c.f.s. from Cascade Canyon tributary to San Antonio Canyon. To be diverted in Sec. 31, T. 2 N., R. 7 W., S. B. B. and M., for mining purposes. Estimated cost \$100.

SAN JOAQUIN COUNTY—Application 6963. C. H. Wallace and R. A. Caswell, Rt. 4, Box 304, Modesto, Calif., for 8.94 c.f.s. from Stanislaus River tributary to San Joaquin River. To be diverted in Sec. 3, T. 3 S., R. 7 E., M. D. B. and M., for irrigation and domestic purposes (715 acres). Estimated cost \$4,000.

SAN BERNARDINO COUNTY—Application 6964. Robert M. Stapp, Lake Arrowhead, Calif., for 0.008 c.f.s. from unnamed spring tributary to Burnt Mill and Little Bear Creek. To be diverted in Sec. 28, T. 2 N., R. 3 W., S. B. B. and M., for recreational and domestic purposes. Estimated cost \$350.

SAN BERNARDINO COUNTY—Application 6965. Ralph P. Morrill, 4213 Halldale Ave., Los Angeles, Calif., for 400 g.p.d. from unnamed spring tributary to Lake Arrowhead. To be diverted in Sec. 20, T. 2 N., R. 3 W., S. B. B. and M., for domestic purposes. Estimated cost \$20.

SIERRA COUNTY—Application 6966. W. S. Coffin, Upland, Calif., for 3 c.f.s. from Rock Creek tributary to North Fork of Yuba River. To be diverted in Sec. 10, T. 19 N., R. 10 E., M. D. B. and M., for mining purposes. Estimated cost \$600.

YUBA COUNTY—Application 6967. George W. Lischer, Comptonville, Yuba County, Calif., for 25 c.f.s. from Willow Creek tributary to North Fork of Yuba River. To be diverted in Sec. 25, T. 19 N., R. 8 E., M. D. B. and M., for mining and domestic purposes.

SAN DIEGO COUNTY—Application 6968. George L. Dodds, I. P. Janssen, F. L. Cox, H. F. Beauchamp and Maurice M. Myers, c/o George L. Dodds, Escondido, Calif., for 10 c.f.s. and 10,000 ac. ft. per annum from Escondido Creek tributary to Pacific Ocean. To be diverted in Sec. 3, T. 13 S., R. 3 W., S. B. B. and M., for irrigation and domestic purposes (about 7500 acres).

HUMBOLDT COUNTY—Application 6969. Dugald McKellar, Box 756, Eureka, Calif., for 0.025 c.f.s. from unnamed stream tributary to Humboldt Bay. To be diverted in Sec. 21, T. 5 N., R. 1 E., H. B. and M., for irrigation and domestic purposes (10 acres). Estimated cost \$20.

Permits to appropriate water issued by the Department of Public Works, Division of Water Resources, during the month of May, 1931.

LOS ANGELES COUNTY—Permit 3697, Application 4048. City of Monrovia, Monrovia, Calif., May 1, 1931, for 1000 acre-feet per annum from Sawpit Canyon in Sec. 13, T. 1 N., R. 11 W., S. B., for municipal purposes.

LOS ANGELES COUNTY—Permit 3698, Application 5083. City of Monrovia, Monrovia, Calif., May 1, 1931, for 10 c.f.s. from Sawpit Canyon in Sec. 13, T. 1 N., R. 11 W., S. B. M., for municipal purposes.

LOS ANGELES COUNTY—Permit 3699, Application 5959. County of Los Angeles, Los Angeles, Calif., May 2, 1931, for 0.4 c.f.s. from 4 unnamed springs in Sec. 2, T. 3 N., R. 8 W., S. B., for domestic purposes. Estimated cost \$150,000.

LOS ANGELES COUNTY—Permit 3700, Application 5960. County of Los Angeles, Los Angeles, Calif., May 2, 1931, for 0.1 c.f.s. from four unnamed springs in Sec. 2, T. 3 N., R. 8 W., S. B., for domestic purposes.

SAN BERNARDINO & LOS ANGELES COUNTIES—Permit 3701, Application 5961. County of Los Angeles, Los Angeles, Calif., May 2, 1931, for 0.4 c.f.s. from two

Vital Statistics on Dam Construction

unnamed springs, Spring No. 43 in Sec. 19, T. 3 N., R. 7 W., S. B. and Spring No. 44 in Sec. 30, T. 3 N., R. 7 W., S. B., for domestic purposes. Estimated cost \$5,000.

LOS ANGELES COUNTY—Permit 3702, Application 5962. County of Los Angeles, Los Angeles, Calif., May 2, 1931, for 1.3 c.f.s. from seven unnamed springs, No. 6 in Sec. 3, T. 3 N., R. 8 W., S. B. and Nos. 7, 8, 10, 11, 12 and 13 in Sec. 33, T. 3 N., R. 8 W., S. B., for domestic purposes. Estimated cost \$100,000.

LOS ANGELES COUNTY—Permit 3703, Application 5963. County of Los Angeles, Los Angeles, Calif., May 2, 1931, for 0.325 c.f.s. from six unnamed springs in Secs. 34, 35 and 27, T. 4 N., R. 8 W., S. B. Estimated cost \$10,000.

LOS ANGELES COUNTY—Permit 3704, Application 5964. County of Los Angeles, Los Angeles, Calif., May 2, 1931, for 0.75 c.f.s. from two unnamed springs and Prairie Fork in Secs. 23, 22 and 15, T. 3 N., R. 8 W., S. B., for domestic purposes. Estimated cost \$20,000.

LOS ANGELES COUNTY—Permit 3705, Application 5965. County of Los Angeles, Los Angeles, Calif., May 2, 1931, for 0.64 c.f.s. from six unnamed springs in Secs. 28 and 29, T. 3 N., R. 9 W., S. B., for domestic purposes. Estimated cost \$28,000.

LOS ANGELES COUNTY—Permit 3706, Application 5966. County of Los Angeles, Los Angeles, Calif., May 2, 1931, for 0.1 c.f.s. from three unnamed springs in Sec. 21, T. 3 N., R. 9 W., S. B., for domestic purposes. Estimated cost \$30,000.

EL DORADO COUNTY—Permit 3707, Application 6859. Magnus Jensen, Camino, Calif., May 4, 1931, for 0.025 c.f.s. from Fill Canyon in Sec. 33, T. 11 N., R. 12 E., M. D. M., for irrigation on 3 acres. Estimated cost \$200.

LOS ANGELES COUNTY—Permit 3708, Application 6584. John J. Johnson, Sunland, Calif., May 4, 1931, for 0.0556 c.f.s. from an unnamed spring in Sec. 2, T. 2 N., R. 14 W., S. B., for domestic and irrigation purposes on 83 acres. Estimated cost \$1,500.

MONTEREY COUNTY—Permit 3709, Application 6313. Sidney W. Fish of New York City, New York, May 5, 1931, for 0.2 c.f.s. from San Jose Creek in Sec. 24, T. 16 S., R. 1 W., M. D., for irrigation and domestic purposes on 165 acres. Estimated cost \$12,500.

MONTEREY COUNTY—Permit 3710, Application 6555. Sidney W. Fish, New York City, New York, May 5, 1931, for 0.5 c.f.s. from Palo Corona and tributaries in Sec. 5, T. 17 S., R. 1 E., M. D., for irrigation and domestic purposes on 165 acres.

EL DORADO COUNTY—Permit 3711, Application 6138. El Dorado Irrigation District, Placerville, Calif., May 6, 1931, for 5000 ac. ft. per annum from (1) North Webber Creek and (2) South Webber Creek in Secs. 18 and 21, T. 10 N., R. 12 E., M. D., for irrigation and domestic purposes on 30,702 acres. Estimated cost \$450,000.

TULARE COUNTY—Permit 3712, Application 6880. J. H. Garner, Springville, Calif., May 11, 1931, for 0.42 c.f.s. from Bear Creek in Sec. 3, T. 20 S., R. 30 E., M. D., for irrigation on 34 acres. Estimated cost \$500.

LASSEN COUNTY—Permit 3713, Application 6523. Antone Avilla, Bieber, Calif., May 13, 1931, for 1825 ac. ft. per annum from Juniper Creek in Sec. 3, T. 36 N., R. 8 E., M. D., for irrigation purposes on 996 acres. Estimated cost \$10,000.

SANTA BARBARA COUNTY—Permit 3714, Application 4552. B. F. Barca, Harriston, Calif., May 13, 1931, for 2 c.f.s. from unnamed well from underground source adjacent to Los Alamos Creek in Sec. 20, T. 8 N., R. 33 W., S. B., for irrigation purposes on 165.4 acres. Estimated cost \$4,000.

SISKIYOU COUNTY—Permit 3715, Application 6647. Buzzard Hill Mine, Inc., Happy Camp, Calif., May 13, 1931, for 2.75 c.f.s. from Buzzard Creek in Sec. 4, T. 15 N., R. 7 E., H. B. M., for power purposes. Estimated cost \$2,000.

SANTA CRUZ COUNTY—Permit 3716, Application 6218. Santa Cruz Development Co., Santa Cruz, Calif., May 14, 1931, for 3.5 c.f.s. from West Branch of Branciforte Creek in Sec. 6, T. 11 S., R. 1 W., M. D.,

for irrigation and domestic purposes on 102.5 acres. Estimated cost \$100,000.

LASSEN COUNTY—Permit 3717, Application 6890. The Western Pacific Railroad Co., San Francisco, Calif., May 16, 1931, for 0.4 c.f.s. from Horse Creek in Sec. 15, T. 35 N., R. 7 E., M. D. M., for industrial and domestic purposes. Estimated cost \$16,700.

EL DORADO COUNTY—Permit 3718, Application 6817. H. A. Linthicum and W. D. Meyers, Roseville, Calif., May 27, 1931, for 400 g.p.d. from an unnamed stream in Sec. 24, T. 11 N., R. 16 E., M. D. M., for domestic purposes. Estimated cost \$200.

SAN DIEGO COUNTY—Permit 3719, Application 6883. Harry E. Causey, Aguanga, Calif., May 28, 1931, for 7200 g.p.d. from an unnamed spring in Sec. 20, T. 9 S., R. 2 E., S. B. M., for irrigation and domestic purposes on 5 acres. Estimated cost \$300.

LOS ANGELES COUNTY—Permit 3720, Application 6882. Clarence A. and William H. Cruzan, Los Angeles, Calif., May 28, 1931, for 2 c.f.s. from (1) Warm Spring and (2) Whiskey Spring in Secs. (1) 4 and (2) 17, T. 5 N., R. 14 W., S. B., for mining purposes. Estimated cost \$5,000.

DAM APPLICATIONS, APPROVALS FOR MAY

Applications 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 May, 1931.

ALAMEDA COUNTY—Bowles Dam No. 592. Claremont Pines Corp., Beverly Hills, Calif., owner; earth, 38 feet above streambed with a storage capacity of 21½ acre-feet, situated on West Branch tributary to Glen Echo Creek in Sec. 23, T. 11 N., R. 5 E., M. D. B. and M., for diversion purposes for mining, domestic and irrigation use.

MODOC COUNTY—Caldwell Lower Pit Dam No. 156-4. G. L. Kramer, Bieber, owner; crib and flashboards, 8 feet above streambed with a storage capacity of 60 acre-feet, situated on Pit River tributary to Sacramento in Sec. 33, T. 42 N., R. 10 E., M. D. B. and M., for diversion purposes for irrigation use.

MODOC COUNTY—Caldwell Upper Pit Dam No. 156-5. G. L. Kramer, Bieber, owner; crib and flashboards, 6½ feet above streambed with a storage capacity of 40 acre-feet, situated on Pit River tributary to Sacramento in Sec. 34, T. 42 N., R. 10 E., M. D. B. and M., for diversion purposes, for irrigation use.

LASSEN COUNTY—Long Canyon Dam No. 244. Mr. John M. Hagata, Susanville, owner; earth dam, situated on Long Canyon in Sec. 7, T. 31 N., R. 13 E., M. D. B. and M.

SAN MATEO COUNTY—San Vicente Dam No. 615-2. Henry Cowell Lime & Cement Co., San Francisco, owner; earth dam, 19 feet above streambed with a storage capacity of 24 acre-feet, located in Corral de Tierra Palomares, for storage purposes, for irrigation use.

HUMBOLDT COUNTY—Camp Creek Dam No. 202. E. P. Hickey, Orleans, owner; log rock fill, 12 feet above streambed.

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 May, 1931.

LASSEN COUNTY—Dry Lake Dam No. 253-4. Antone Avilla, Red Bluff, owner; earth, 15 feet above streambed with a storage capacity of 1825 acre-feet, situated on Juniper Creek tributary to Pit River in Sec. 3, T. 36 N., R. 9 E., M. D. B. and M., for storage purposes, for irrigation use. Estimated cost \$500, fees paid \$20.

NEVADA COUNTY—Lower Lindsay Dam No. 97-36. Pacific Gas and Electric Company, San Fran-

(Continued on next page.)

Auto Registration in State Shows Big Gain Over Same Period in 1930

DEPRESSION or no depression the Californian must ride.

At least that's the impression gained by a perusa of the latest report of the Division of Motor Vehicles, prepared by Col. Frank G. Snook, Chief of that Division.

The report presents the amazing fact that the total registration for 1931 as of May 1st, exceeds that of the same period last year by 42,109.

And of this total the number of pleasure cars and commercial vehicles under 3000 pounds has increased 28,936.

Colonel Snook draws attention to a general move among truck owners to replace solid tires with pneumatic. The increase in regis-

tration of trucks so equipped is 11,732 and 5134 in pneumatic tire trailers, against a decrease of 3890 in solid tire machines and 1059 in the same type trailer. The Division report continues:

"As of May 1st, the Division has issued 21,104 nonresident permits, which is 493 less than the number issued in 1930.

"During the last month arrangements have been made to open a new office for registration work at Hollywood.

"Plans have been started for new offices at Salinas, San Jose and Stockton, which will include adequate quarters for the traffic offices of the California Highway Patrol, as well as registration."

VITAL STATISTICS ON WATER RESOURCES

(Continued from page 37.)

cisco, owner; earth and rock dam, situated on Texas Creek tributary to South Yuba River in Sec. 20, T. 18 N., R. 12 E., M. D. B. and M.

SANTA CRUZ COUNTY—Molino Creek Dam No. 632. Coast Dairies and Land Company, Davenport, owner; earth, 24 feet above streambed with a storage capacity of 26.3 acre-feet, situated on Molino Creek tributary to Pacific Ocean in Rancho Agua Puerca Las Trancas, for storage purposes, for irrigation use. Estimated cost \$2,650, fees paid \$26.50.

ALAMEDA COUNTY—Upper Alameda Creek Diversion Dam No. 10-9. City and County of San Francisco owner; 32 feet above streambed with a storage capacity of 15 acre-feet, slab and buttress type, situated on Upper Alameda Creek tributary to Calaveras Creek in Sec. 17, T. 5 S., R. 2 E., M. D. B. and M., for diversion purposes, for municipal and domestic use. Estimated cost \$106,000, fees paid \$1,030.

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 May, 1931.

SACRAMENTO COUNTY—Folsom Dam No. 97-56. Pacific Gas and Electric Company, San Francisco, owner; gravity, situated on American River tributary to Sacramento River in Sec. 24, T. 10 N., R. 7 E., M. D. B. and M.

LASSEN COUNTY—Long Canyon Dam No. 244. John M. Hagata, Susanville, owner; earth, situated on Long Canyon in Sec. 7, T. 31 N., R. 13 E., M. D. B. and M.

BUTTE COUNTY—Round Valley Dam No. 97-9. Pacific Gas and Electric Company, San Francisco, owner; earth, situated on North Fork Feather River tributary to Feather River in Sec. 30, T. 26 N., R. 5 E., M. D. B. and M.

LOS ANGELES COUNTY—Big Santa Anita Dam No. 32-2. Los Angeles County Flood Control District, Los Angeles, owner; arch, situated on Big Santa Anita Creek tributary to San Gabriel River in Sec. 10, T. 1 N., R. 11 W., S. B. 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 May, 1931.

AMADOR & CALAVERAS COUNTIES—Tiger Creek Afterbay Dam No. 97-105. Pacific Gas and Electric Company, San Francisco, owner; arch, 35 feet above streambed with a storage capacity of 3800 acre-feet, situated on North Fork tributary to Mokelumne in Sec. 23, T. 7 N., R. 13 E., M. D. B. and M., for diversion and regulation purpose for power use.

NEVADA COUNTY—Donner Creek Dam No. 311-7. Central Pacific Railway Company, San Francisco, owner; earth fill, 14 feet above streambed with a storage capacity of 140 acre-feet, situated on Donner Creek tributary to Truckee River in Sec. 16, T. 17 N., R. 16 E., M. D. B. and M., for storage and diversion purposes, for railroad use.

LOS ANGELES COUNTY—Chatsworth Highline Dam No. 6-32. City of Los Angeles, Los Angeles, owner; earth, 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. B. and M., for regulation and storage purposes, for irrigation and domestic 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 May, 1931.

LOS ANGELES COUNTY—Live Oak Dam No. 32-7. Los Angeles County Flood Control District, Los Angeles, owner; gravity arches, situated on Live Oak Creek tributary to San Jose Creek in Sec. 32, T. 1 N., R. 8 W., S. B. B. and M.

LOS ANGELES COUNTY—San Dimas Dam No. 32-10. Los Angeles County Flood Control District, Los Angeles, owner; gravity arched, situated on San Dimas Creek tributary to Puddingstone Creek in Sec. 24, T. 1 N., R. 9 W., S. B. B. and M.

LOS ANGELES COUNTY—Sawpit Dam No. 32-12. Los Angeles County Flood Control District, Los Angeles, owner; gravity arch, situated on Sawpit Creek tributary to San Gabriel River in Sec. 10, T. 1 N., R. 11 W., S. B. B. and M.

(Continued on page 44.)

Highway Patrolmen Praised

Courtesy to Motorists and Fairness in Arrests Are Cited in Letters

From John Stephen Zuckerman, Berkeley: Shades of Bill Hickock and Marshall Nix! The days of the "where the hell are you going" traffic officer seems to have passed forever, and in his place are courteous and efficient gentlemen. Surly and overbearing officiousness has been displayed by a real desire to aid the motorist.

I recently had the misfortune to have a rather bad accident between Coachello and Indio, California, and the promptness of the officers that patrol that territory in taking care of my car, and their politeness in helping us in every way possible was certainly gratifying. One of the officers, Ora E. Townsend, was especially efficient, courteous and helpful, and I wish to congratulate you in having such a fine man working for you. Under these circumstances, accidents become almost a pleasure.

With such men as this patrolling the State highways, I feel certain that the number of accidents will soon be minimized. More power to you!

* * *

ARREST IS PLEASURE

From Thomas O'Connor, San Diego: Recently one of our employees was arrested and fined for violation of a local ordinance.

I am taking this opportunity of commending the fairness and gentlemanly manners of the arresting officer, your Mr. Waite, No. 231, both at the time of arrest and in the courtroom. He is a credit to your splendid organization of officers, whose enforcement of the law must be trying enough at times.

* * *

EXAMPLE FOR OTHERS

From Arnold Klaus, Assistant Manager San Diego Chamber of Commerce: I wish to express the appreciation of the San Diego Chamber of Commerce Executive Board for the cooperation we received from you and Captain Otto Langer, of your patrol, in tendering to us the services of Mr. R. Schmoke, one of your motor officers in this division.

Mr. Schmoke proved to be a very excellent representative of your organization which is without par in this country. He proved his capabilities in many ways. First, by being consistently on the job; second, by being courteous and efficient in all his work; third, by his ability to meet people and obtain their good will, and fourth, by the capable way in which he presented the objects and purposes for which your organization is striving at the various dinners, when he was requested to take a part in the program.

I am sure that the group attending this National convention are envious of our California State Highway Patrol, and are doing everything in their power to see that a similar organization is created in their respective states. This I know is true of Texas, where their comparative division is eighteen months old, and in the newly organized Arkansas Patrol.

Child's Life Saved by Quick Work; Ventura Paper Lauds Training

From the *Ventura Free Press*.

First aid instruction, taught officers of the California Highway Patrol, yesterday was responsible for saving the life of Nancy Grosjean, 6, of 10632 Ayres avenue, Los Angeles, dragged to sea by a rip tide while bathing near Point Magu.

She was dragged from the water in an unconscious condition by her father Glenn M. Grosjean. Officer Joe Nobel of the California Highway Patrol, riding his beat on the Roosevelt highway, was summoned and administered first aid. He revived the child sufficiently to speed her to Oxnard where Officer Nobel and Austin Carpenter, member of the Oxnard fire department, applied a pulmotor and artificial respiration until the child was revived.

According to witnesses the child suffered a narrow escape and but for the timely arrival of the State patrolman possibly would have suffocated before a doctor could have been reached.

Officers of the patrol are given a thorough course in first aid to injured and drowned persons at the training course at Sacramento to which all officers of the patrol are now detailed. In addition to the State school course, all officers of the Ventura County patrol have received certificates of graduation from a course given Shell Oil Company employes here.

MARIN COUNTY OKEH

From Frank C. Sykes, State Board of Prison Directors: I could not let this opportunity go by without expressing to you the appreciation of President Neumiller, Warden Holohan, Parole Officer Ed. Whyte and myself for the courtesy shown us by three of your men in Marin County last night.

After spending two days and a night at the prison it was important that we reach San Francisco without being delayed, and thru the courtesy of Messrs. Wentworth, McClain and Monteverde we were greatly assisted in reaching the boat at Sausalito, thus avoiding a very long delay. It is a thing like this that makes a fellow feel that there are a few regular people left, and I intend to carry this message further. Let me congratulate you and your department in having such men with you.

* * *

AID IN EMERGENCY

From A. G. Dondero, San Francisco: On the night of May 8th I had some trouble with my car in the vicinity of Tracy, and I was assisted by officers A. L. Stuart and Clarence F. Brumbaugh to get to Tracy.

I wish to thank these gentlemen through you for their courtesy and civility.

If all your traffic officers are as courteous as these two gentlemen were to me on the night of my distress, I congratulate you.

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
ERIC CULLENWARD.....Editor

Address communications to California Highways and Public Works, P. O. Box 1103, Sacramento, California.

Vol. 9 JUNE, 1931 No. 6

State Wins Praise For Thoughtfulness

Santa Barbarans will be grateful to the State Highway Department for its trouble in working out a plan to save as many as possible of the fine poplar trees along the highway near Goleta.

This is one of the finest shaded lanes in the State and has attracted the attention of millions of visitors, and caused enthusiastic comment from every person who has ever driven beneath the stately branches of the unique collection of beautiful trees. They are practically the only ones of the kind in the State of California. Certainly there is no other grove so large.

Their destruction would have been a distinct loss to Santa Barbara and the county, as well as to the traveling public that has enjoyed them for so long. The decision to cut out only those that are dangerous and to take steps to prevent the others falling and injuring passing motorists is a thoughtful one on the part of the engineers of the State Highway Department, and is appreciated by the citizens generally.—*Santa Barbara Press.*

* * *

When a State Highway Department moves a strip of concrete that a historic landmark may be saved, the item is worthy of mention. The thing actually happened near San Miguel in San Luis Obispo County, where a two-story building stood on the right of way and in the path of destruction under plans to widen the road. When it was found the building could not be moved back the highway was rerouted a bit to the west and the old place still stands.—*Oakland Tribune.*

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."

Marriage and Trees Now Highway Problem

L. H. Gibson, district highway engineer, with headquarters in San Luis Obispo, does not always need a map to see the point. Indeed, he's in training to become a horticulturalist, a tree expert, forester or something.

It seems his department was busy securing rights of way for a road in District Five. In dealing with one property owner, a lady, assurance was given that an old oak tree on the property being secured from her for road purposes would be preserved. However, in the written agreement the promise was covered in this verbiage:

"It is not contemplated that the live oak tree in front of your property will be removed."

The property owner lost no time in nailing that one. Back came a letter to Mr. Gibson couched as follows:

"You say that you do not 'contemplate' the removal of the tree. Well, I seriously contemplated being an old maid, but got married the first chance I got, so that, to ME, that clause in the contract contains no assurance at all."

Needless to say, the lady got her "iron-clad" assurance.

PILGRIMAGE WINS O. K. OF GOVERNOR

Governor James Rolph, Jr., has approved the resolution adopted by both houses of the Legislature urging and requesting the heads of the various State departments to grant extended vacations with pay to all State employees who make the Pilgrimage to France sponsored by the Ninety-first Division Association.

The Pilgrimage leaves here on August 14th and returns on September 20th. It visits England, Belgium, Germany and France, and can be made for less than \$600 on an all inclusive expense plan. The battlefields and the American cemeteries will be the objects of special visitation.

"SLOW THE SPEED, SPARE THE CHILD"

With hundreds of thousands of school children in California released from their classrooms for the summer vacation, the California Committee on Public Safety has devoted the month of June to a State-wide campaign urging upon motorists the need for special care in driving in order to minimize child traffic casualties. State and local traffic police cooperated in making the effort of the committee an effective one. The campaign is one of a series conducted monthly throughout the year, each designed to emphasize some particular phase of safe driving rules. The June subject was that of endangering the safety of children at play through speed or inattention. "Slow the speed and spare the child," was the slogan.

The real test of will power is to refrain from applying imaginary brakes when someone else is driving.

The difference between a cow chewing her cud and a flapper chewing her gum is that a cow always looks as if she were thinking.

Report of Activities

in the

Division of Water Resources

AS OF JUNE 1, 1931

EDWARD HYATT, Chief of Division

Irrigation District
Activities



Applications for
Approval of
Dams

Flood Control and
Reclamation



Bulletins Issued on
Water Resources
Study

Activities of the Division of Water Resources of the State Department of Public Works for the month of May give an official picture of the Water situation throughout the State. The division, headed by Edward Hyatt, reports as follows:

WATER RIGHTS

Twenty applications to appropriate water were received during April, eight applications were rejected and twenty-five were approved. Three permits were revoked and six licenses were issued.

Applications of particular note received during the month were two by Pacific Gas and Electric Company proposing the appropriation of a total of 170 cubic feet per second from the augmented flow of Bear River in Placer County for irrigation purposes; one by Consolidated Irrigation District proposing the appropriation of 1000 cubic feet per second and 200,000 acre feet per annum from San Joaquin River in Fresno County for irrigation purposes and one from California Oregon Power Company proposing an appropriation of 3000 cubic feet per second from Klamath River in Siskiyou County, for power purposes.

Among the permits which were issued was one to Paradise Irrigation District allowing an appropriation of 5000 acre feet per annum from Little West Branch of Feather River in Butte County for the irrigation of 11,100 acres at an estimated cost of \$362,000.

A permit of unusual importance was one issued to Frederick Bradshaw allowing an appropriation of 125 cubic feet per second from Horse Linto Creek in Humboldt County for mining purposes at an estimated cost of \$200,000.

Inspection of projects under permit has proceeded during the past month in Sacramento, San Joaquin, Tuolumne, Stanislaus, San Mateo, Santa Clara, Santa Cruz, and Monterey counties.

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). Division's report as referee submitted to the Superior Court on May first.

Davis Creek (Modoc County). A tentative decree has been circulated among counsel and is now under consideration by the Superior Court.

Mill Creek (Modoc County). More than eighty per cent of the water users have signed the stipulation for consent judgment which was presented at the conference held at Lake City on March 17, 1931. The stipulation is now being circulated among the non-resident parties.

Deep Creek (Modoc County). Distribution of the waters of Deep Creek was continued throughout the month in accordance with the trial schedule of allotments which was adopted at the conference held at Cedarville on March 16, 1931.

Franklin Creek (Modoc County). Administration of the schedule of allotments for trial distribution during the 1931 irrigation season was continued throughout the month.

New Pine Creek (Modoc County). Field work on the investigation of the water supply and use of water on New Pine Creek was continued throughout the month.

WATER DISTRIBUTION

Cedar, Davis, Deep, Emerson, Franklin, Mill, New Pine, Owl and Soldier Creeks (Modoc County). Water master service on these streams was continued throughout the month.

Pine Creek (Modoc County). All water users on this stream have signed an agreement providing for water master service during the current season. Administration of the stream was commenced May 13.

Oak Run and Clover Creeks (Shasta County). Water master service was commenced on these streams for the current season about May 10.

North Cow Creek (Shasta County). Water master service was commenced on this stream for the current season on May 19.

Little Shasta River (Siskiyou County). Water master service on this stream was continued throughout the month.

DAMS

During May inspections have been continued on existing dams, many being inspected which have hitherto been inaccessible on account of their altitude. Frequent inspections have also been made on dams under construction and repairs.

Flood Control and Reclamation Details

Continued from preceding page

To date, 760 applications for approval of existing dams are on file; 67 for approval of plans and specifications for construction or enlargement and 150 for approval of plans for repairs or alterations.

APPLICATIONS RECEIVED FOR CONSTRUCTION OR ENLARGEMENT

Dam	Owner	County
*Dry Lake	Antone Avilla	Lassen
**Lower Lindsey	Pacific Gas and Electric Co.	Nevada
*Nolino Creek	Coast Dairies and Land Co.	Santa Cruz

APPLICATIONS RECEIVED FOR APPROVAL OF PLANS FOR REPAIR OR ALTERATIONS

Dam	Owner	County
Live Oak	L. A. County Flood Control Dist.	Los Angeles
San Dimas	L. A. County Flood Control Dist.	Los Angeles
Sawpit	L. A. County Flood Control Dist.	Los Angeles
Culbertson	Pacific Gas and Electric Co.	Nevada
Mammoth	Pacific Gas and Electric Co.	Placer
Folsom	Pacific Gas and Electric Co.	Sacramento
Round Valley	Pacific Gas and Electric Co.	Butte
Long Canyon	John M. Hagata	Lassen

PLANS APPROVED FOR CONSTRUCTION

Dam	Owner	County
Tiger Creek Afterbay	Pacific Gas and Electric Co.	Amador & Calaveras
Donner Creek	Central Pacific Railway	Nevada
Chatsworth Highline	City of Los Angeles	Los Angeles

PLANS APPROVED FOR REPAIR OR ALTERATIONS

Dam	Owner	County
Culbertson	Pacific Gas and Electric Co.	Nevada
Live Oak	L. A. County Flood Control Dist.	Los Angeles
San Dimas	L. A. County Flood Control Dist.	Los Angeles
Sawpit	L. A. County Flood Control Dist.	Los Angeles
Mammoth Reservoir	Pacific Gas and Electric Co.	Placer

ORDERS HAVE BEEN ISSUED AUTHORIZING USE OF THE FOLLOWING DAMS

Dam	Owner	County
Lake Madrone	Mansfield and McCallum	Butte
Salt Springs	Pacific Gas and Electric Co.	Amador & Calaveras

The Lake Madrone dam is an earth-fill dam built for recreational use in the foothills above Oroville.

The Salt Springs dam is a huge rock-fill structure built across the North Fork of the Mokelumne River and is part of the Pacific Gas and Electric Company's Electric System.

FLOOD CONTROL AND RECLAMATION

MAINTENANCE OF SACRAMENTO AND SAN JOAQUIN DRAINAGE DISTRICT

The maintenance force in Sutter County has been engaged in routine maintenance of structure, levees, canals and pumping plants. A small crew has been engaged in making fire breaks around the timber structures and in cutting noxious weeds. Emergency repairs are now being made on the Davis wier in the Sutter By-pass, at a cost of about \$4,000.

* New construction.

** Enlargement.

EMERGENCY FLOOD CONTROL AND RECTIFICATION OF RIVERS

Channel rectification work at the mouth of Little River in Humboldt County has been completed by the Hammond and Little River Redwood Company in cooperation with the State and Humboldt County.

FLOOD MEASUREMENTS AND GAGES

The gages maintained by this Division during the winter season have either been removed or transferred to other agencies for operation during the summer. The compilation of records for the flood seasons has been continued in the office, and reports will be issued shortly.

COOPERATIVE SNOW SURVEYS

Although the principal snow surveys as a basis for run-off estimates were made late in March and early in April and reported in the April 1st bulletin, additional surveys were made late in April and early in May at the key snow courses to furnish information for possible modification of earlier estimates and to indicate the extent of melting since April 1st. These later surveys complete the seasonal record of monthly surveys, February to May, for the key snow courses. In the May 1st bulletin the measured water content of the snow is given in per cent departure from the water content as shown by the April 1st surveys. This shows the extent of melting.

The snow surveys at the key courses showed a melting of the April 1st pack as measured at these courses, about as follows: Above 7500 elevation—Upper Sacramento and McCloud Basins (one course, Mt. Shasta) 25 per cent; Pit and Feather Basins (one course, Mt. Lassen) 4 per cent; American Basin (one course, Carson Pass) 34 per cent; Mokelumne Basin (one course, Blue Lakes) 63 per cent; Stanislaus Basin (one course, Lower Relief Valley) 45 per cent; Tuolumne and Merced Basins (average of six courses) 63 per cent; Upper San Joaquin Basin (one course, Kaiser Pass Meadows) 13 per cent; and Kings, Kaweah and Kern Basins (average of four courses) 68 per cent. The corresponding percentages of melting at practically the same courses in 1930 varied from zero to 48 per cent only. Below 7500 elevation—melting of 100 per cent at practically all courses.

The average precipitation to May 1st, in per cent of normal to May 1st, was about as follows for the various stream basins: Upper Sacramento, Pit, McCloud, Feather and Yuba, 58 per cent; American 60 per cent; Mokelumne, 64 per cent; Stanislaus, 72 per cent; Tuolumne, 65 per cent; Merced, 57 per cent; Mono, 57 per cent; Upper San Joaquin, 51 per cent; Owens, varying from 44 to 59 per cent; Kings, Kaweah and Kern, 62 per cent; and Los Angeles, San Gabriel and Santa Ana, from 65 to 80 per cent.

The lack of normal precipitation in April warranted a downward modification of the estimates given on April 1st for seasonal run-off. The estimated seasonal run-off for the Upper Sacramento

Rice Acreage Increase Shown in Report

(Continued from page 42.)

River was reduced to 34 per cent, or 2 per cent less than that of 1924; for the entire Sacramento Basin, including tributaries, the revised estimate was 30 per cent, or the same as 1924; and for the entire Sacramento-San Joaquin drainage including tributaries, 30 per cent, or 2 per cent above the 1924 percentage.

Work of the snow surveys for the next few months will consist, in the office, of computations to bring up long-time run-off estimates for the various stream flow stations selected to best reflect the snow run-off and all other compilations and studies necessary in determining completely the relation between precipitation, snow and run-off; in the field the usual contacts with the cooperative agencies in effecting the plans for next year's surveys and such work as may be necessary in gradually extending the scope of the surveys as funds permit. A conference was held at Yosemite on May 16th to go over the results during the past season in the Merced and Tuolumne Basins and to consider certain extensions in future work.

SACRAMENTO SAN JOAQUIN WATER SUPERVISOR

The salinity sampling in the Sacramento-San Joaquin Delta has continued at the thirty stations previously maintained, with fourteen stations added during the month. The additional stations are added as necessary to keep well in advance of the seasonal salinity encroachment. A check has been made of the rice acreage under river diversions above Sacramento. This shows an increase of 26 per cent over the rice acreage of 1930 which was practically the same acreage as in 1924. In the area above Colusa, the present season's rice acreage is 34 per cent greater than the acreage of 1924. This indicates very definitely that conditions probably worse than those of 1924 are to be anticipated. The accompanying table gives comparative stream flow data for 1931 and 1924. The recent salinity tests are also shown. No comparison can be given with the 1924 salinity as the stations were not established in 1924 until the later part of May.

Within the last few days the river has dropped very rapidly above Sacramento and further measures for conservation and control will soon be required. In view of this situation an early meeting of the Permanent Committee of the Sacramento-San Joaquin River Problems Conference has been called. As one measure, the possibility of a patrol of the upriver area to effect a reduction in river diversions to the extent of controllable wastes, is to be considered.

The following are comparative stream flow data for 1931, as against 1924:

Station	Discharge in Sec. Ft.	
	1931	1924
Sacramento River at Red Bluff	5/17 3630	5/17 3240
Sacramento River at Verona	5/22 2250	
Sacramento River at Sacramento	5/22 2975	5/22 2980
American River at H Street Bridge	5/22 1050	5/22 1130

Station	Discharge in Sec. Ft.	
	1931	1924
San Joaquin River near Vernalis	5/21 470	5/21 1120
Combined flow of Sacramento River at Sacramento and San Joaquin River near Vernalis	5/21 3980	5/21 5100

Recent Salinity Tests in the Sacramento-San Joaquin Delta show:

Station	Salinity in parts of chlorine per 100,000	
	5/6/31	5/10/31
Bullhead Point	1050	900
O and A Ferry	350	---
Collinsville	299	166
Emmaton	5	4
Three Mile Slough Bridge	7	3
Antloch	144	88
Jersey	38	6
Webb Pump	---	6

WATER RESOURCES

Napa Valley Investigation.—Measurements of stream flow on Napa River, Dry Creek, Conn Creek and Rector Creek were made during the month and data were obtained with respect to diversions to establish the facts relative to percolation losses, accretions, and the water crop. In addition thereto a selected group of 15 wells was gaged.

Preliminary investigation of streams for reservoir sites was completed from which it appears that only two sites—aside from known and hitherto explored sites on Conn Creek, Rector Creek, and Milliken Creek—offer any promise. These sites are located on Taplin Ranch about two or three miles east of St. Helena and on Dry Creek. These sites are relatively small, but would appear to justify further exploration and survey whenever storage of flood waters becomes of importance.

Ventura County Investigation.—This investigation has continued in a routine way. A special feature, however, was involved in that an investigation of possible reservoir sites on Piru Creek was made to determine whether the location of the new State highway will interfere with conservation of the waters of the creek. The proposed highway passes through two of the reservoir sites on the creek, but an additional reservoir was found several miles below where no interference with the highway could occur. At this site it is possible completely to conserve the waters of the creek, provided that drilling of the dam site discloses favorable conditions. The tentative conclusion of the geologist examining the site is favorable, but this of course might be changed by drilling explorations.

WATER RESOURCES REPORTS

Satisfactory progress has been made in completing the reports on the water resources investigations covering the State Water Plan for the coordination, development, conservation and utilization of the

Irrigationists Limit Amount of Water Used to Overcome Shortage

(Continued from page 42.)

water resources of the State, authorized under the provisions of Chapter 832 of the Statutes of 1929. The following bulletins are nearing completion and it is expected that the finished plates and texts for these publications can be placed in the hands of the State Printer during the latter part of June for publication.

Bulletin 26, "Sacramento River Basin."

Bulletin 27, "Salinity Control in Sacramento-San Joaquin Delta and Upper San Francisco Bay."

Bulletin 28, "Economic Aspects of a Salt Water Barrier Below Confluence with Sacramento and San Joaquin Rivers."

Bulletin 29, "San Joaquin River Basin."

MISCELLANEOUS ACTIVITIES

A study is being made to determine the acreage in the Delta riparian to the San Joaquin and Mokelumne Rivers and connecting channels. This study corresponds to the recent investigation made of the acreage riparian to the Sacramento River.

IRRIGATION

Compilation and preparation of data for the 1930 report on the activities of California irrigation districts have been completed and plans are being made for the publication of the report.

Office conferences have been held with a number of Sutter County orchardists who are now irrigating from wells and are looking forward to a means of supplementing their rapidly diminishing water supply.

Field visits were made and conferences held with officials of the Crenada, Big Springs and Montague irrigation districts, located in Siskiyou County, for the purpose of discussing matters connected with the economic operation of these districts.

An inspection was made of construction work in progress in the El Nido irrigation district located in Merced County. A preliminary investigation, general in character, has been made of the water situation in the orchard districts of Sutter County.

Owing to the serious water shortages which will be faced this season by nearly all the irrigation enterprises in the central and northern parts of the State, the directors and managers of irrigation districts are attempting to limit the use of water to the least amount that will mature crops.

At a meeting of the California Bond Certification Commission held on May 6, at Sacramento, action was taken on matters relating to irrigation districts as follows:

Grenada Irrigation District—Plan presented for reorganization and refinancing, approved.

Lindsay Strathmore Irrigation District—Agreement for the purchase of 200 shares of stock in the Peoples Ditch Company, approved.

Paradise Irrigation District—Transfer of \$6,742 from the construction fund to the general fund of the district, approved.

First Quarter of 1931 Opens With Greater Death Toll

CALIFORNIA motor vehicle deaths in March total 196 bringing the total for the first three months of 1931 to 566, according to a report received by Superintendent E. Raymond Cato from the Bureau of Research, Statistics and Traffic Safety of the California Highway Patrol.

The total of 566 deaths for the first quarter of 1931 is 8.42 per cent greater than the total for the corresponding period of 1930. This is a marked contrast to the first quarter of 1930, the total of which was 1.32 per cent less than the total for the first quarter of 1929.

The numerical increase of deaths in March this year over March last year was 26 or 15.29 per cent.

The report further states that in addition to the 196 persons killed in March, 3781 were injured in the 2708 accidents reported for the month.

VITAL STATISTICS ON WATER RESOURCES

(Continued from page 38.)

Angeles, owner; arch, situated on Sawpit Creek tributary to San Gabriel River in Sec. 13, T. 1 N., R. 11 W., S. B. B. and M.

PLACER COUNTY—Mammoth Reservoir No. 97-39. Pacific Gas and Electric Company, San Francisco, owner; earth, located in Sec. 12, T. 11 N., R. 7 E., M. D. B. and M.

SACRAMENTO COUNTY—Folsom Dam No. 97-56. Pacific Gas and Electric Company, San Francisco, owner; gravity, situated on American River tributary to Sacramento River in Sec. 24, T. 10 N., R. 7 E., M. D. B. and M.

CORRECTION

In the May publication of CALIFORNIA HIGHWAYS AND PUBLIC WORKS there appeared a tabulation of the Construction Record for 1930. Under the subtitle Road Oil Mix, there appeared a statement crediting E. A. Wolfe with being the resident engineer on a road job in Del Norte County with Paul Steenstrup as street assistant. This was a mistake in department records since Mr. Steenstrup was the resident engineer.

Matters now pending before the Commission which will receive consideration in the near future are:

Scott Valley Irrigation District—Request for approval of a refunding bond issue.

Linden Irrigation District—Consideration of protests against approval of a proposed bond issue.

Corcoran Irrigation District—Request for approval of an agreement between the district and Meridian Limited, a corporation, for the lease of certain wells and pumping equipment to be installed by the corporation on its own lands within the district.

STATE OF CALIFORNIA

Department of Public Works

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COLONEL WALTER E. GARRISON-----Director

JAMES I. HERZ-----Deputy Director

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T. E. STANTON, Materials and Research Engineer

FRED J. GRUMM, Engineer of Surveys and Plans

C. S. POPE, Construction Engineer

T. H. DENNIS, Maintenance Engineer

CHAS. E. ANDREW, Bridge Engineer

R. H. STALNAKER, Equipment Engineer

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CHARLES H. WHITMORE, District III, Sacramento

J. H. SKEGGS, District IV, San Francisco

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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

