

VOLUME TWENTY-FIVE

LAS VEGAS, CLARK COUNTY, NEVADA, TUESDAY MORNING, JULY 2, 1929.

BOULDER DAM SECTION

## A LITTLE HISTORY OF THE LONG FIGHT FOR THE GREAT ENTERPRISE

### Why Project Is Necessary—Why Opposition Arose—Necessity For Inter-State Compacts—Power Corporations Satisfied.

The necessity for controlling the floods of the Colorado River was first made a public issue by the disaster which befell Imperial Valley in 1905, when the river left its channel during high water and flowed unhampered for many months into Salton Sea. The damage to the Valley by the flood waters and the certainty that the entire region surrounding Salton Sea would be submerged unless the river was forced back into its regular channel caused widespread demand for a remedy.

The Southern Pacific Company, after the Imperial Valley had exhausted its resources in the fight, finally by the expenditure of about \$2,500,000, managed to check the flow into Salton Sea, turning the Colorado back into an old channel through which it again found its way to the Gulf of California.

With this disaster and narrow escape from entire destruction fresh in mind, the people of Imperial Valley started their demand for flood control on the Colorado. The plans at that time were vague, but it was apparent that a dam must be built somewhere on the Colorado River to hold flood waters. This incidentally would furnish additional irrigation water to lands in the Valley.

With this necessity ever in view the idea was gradually spread that the federal government should construct the work and the officials of the U. S. Reclamation Service began a more intensive study of the river. Nothing of a very definite nature was developed during the following 15 years although a great amount of information was gathered by Arthur P. Davis, director of reclamation.

The Editor of the Age, from the time of his arrival in Las Vegas in 1905, had frequently called attention to the perfect site for a great dam at or near Boulder Canyon. In 1914, just prior to the beginning of the World War, Henry C. Schmitz completed a preliminary survey for a dam at Boulder Canyon. With his associates who had ample capital at their command, he applied for a permit to construct the dam, after having complied with all the governmental requirements. This permit was about to be granted when the World War caused the U. S. government to frown on the enterprise at that time. This ended Mr. Schmitz's efforts.

Early in 1920, the city of Los Angeles, seeing the future need of both water and power, proposed that a convention be held to promote the subject of development of the Colorado. As the result the League of the Southwest held a great convention April 1, 2 and 3, 1920, at which were present some 2,000 delegates representing the organizations of the southwest and great organizers, financiers and statesmen from all over the nation.

Knowing the interest of the Editor of the Age in the matter, Gov. Emmet D. Boyle appointed C. P. Squires as his personal representative at that convention. Capt. S. S. Arentz (now Congressman), Dr. R. W. Martin, E. W. Griffith, Charles S. Sprague, James Cashman, C. E. Smith and George A. Duncan were other Nevadans who were delegates.

At that convention C. P. Squires was member for Nevada of the committee on resolutions. At a later hour the evening of April 2, the second day of the convention, the hearings of the committee came to a close after listening to many feasible and infeasible suggestions and to many protests, most of them from women's clubs of Los Angeles against building a dam and destroying the wonders of the Grand Canyon.

and because of the prominence given to Boulder Dam, the governor of Colorado invited the governors of the Colorado River states to meet in Denver. At this meeting Nevada again was represented by the Editor of the Age. And at this meeting the necessity of an agreement with the upper basin states on the division of water for the preservation of their future was seen to be a preliminary which must be accomplished before Boulder Dam could be built.

At a continuation of this conference in August 1920 the form of a bill was adopted which was afterward passed by congress, creating a Colorado River Commission with a representative of the federal government as a member; also bills for adoption by each of the states.

Herbert Hoover, then Secretary of Commerce, was appointed federal member of the commission and became chairman. For the next two years, during which State Engineer Scrugham, Ed W. Clark, and C. P. Squires represented Nevada, were held in various parts of the west, hundreds of statements received and witnesses heard and a vast amount of information on the Colorado River secured.

The final meeting of the Colorado River Commission with Hoover as chairman and Gov. Elect Strugman, Ed W. Clark and C. P. Squires representing Nevada, was held at Santa Fe, New Mexico, beginning November 9, the second day after the general election. On November 14, the Colorado River Compact, dividing the water into allocations of 7,500,000 acre feet per annum to the upper and lower basins, with an additional 1,000,000 acre feet to the lower basin, was signed in the historic Palace of the Governors at Santa Fe.

But fate, in the shape of the voters of Arizona, had played an unhappy prank. In the election of November 1922, Governor Campbell of Arizona was a candidate for reelection. His opponent was Governor Hunt, who was elected after a bitter campaign.

Governor Campbell and his Arizona water commissioner, W. S. Norviel, were both present at the Santa Fe conference. Both favored the development of the river and were satisfied with the compact.

All the governors-elect of the interested states had been invited to sit with the commission, but Gov. Hunt peremptorily refused the invitation. It was apparent to all, days before the compact was formed and before any man could know that it would provide, that Gov. Hunt would be against whatever would come out of the Santa Fe conference. And it is a matter of history that he was against it and that during the six years he remained governor of Arizona, Governor Hunt and his supporters devoted their time and talents in an attempt to justify the arbitrary position assumed because of their personal and political hostility to former Governor Campbell.

During the six years of the Hunt administration Arizona had no Colorado River policy except the policy of opposition and destruction. From an untenable position to another the Arizona governor shifted with the winds of circumstances, misinforming and misleading the people, until his final defeat by Governor Phillips last fall.

The years of effort made by the Nevada Colorado River Commission of which Dr. Martin, Levi Syphus, James Cashman, Ed Clark and C. P. Squires were members, to secure an agreement with Arizona were years of discouragement. Finally despairing of arousing a spirit of fairness in the Arizona governor and commission, Congress last December passed the Boulder Dam bill, leaving it to Arizona to stay out or come in as she pleased.

The six months period within which the bill was held inoperative for Arizona's benefit has expired. Promptly on the day the period ended, Secretary of the Interior

The Massive, Towering Walls Where Colorado Will Be Dammed.



View of the Black Canyon Boulder Dam Site, Through Which Visiting Elks Are Taken in a Power Boat

## IMMEDIATE ACTION IS ASSURED BY INTERIOR DEPARTMENT'S PLANS

### Secretary Wilbur and Commissioner of Reclamation Mead Pushing Preparations For Work—Assurances of Contracts For Power Remove Last Fear of Delay.

The years of waiting during which the Boulder Dam project trembled in the realm of uncertainty are at an end.

The Boulder Dam bill was passed December 14, and signed by the President December 21, 1928. Six months have elapsed while waiting for Arizona to make up her mind. The bill is now in full effect and it makes no difference to the project whether Arizona comes into agreement with her sister states or not.

President Hoover has issued his proclamation which was the starting gun.

Secretary Wilbur and Dr. Mead with the engineers of the reclamation service, have been here, made their plans for the work and started the machinery of the government.

The power interests, for years bitter antagonists of Boulder Dam, have given up the fight. They recognize the futility of further moping and have come out cheerfully saying they will take all the power they can get and cooperate with the government in the project.

The Southern California municipalities not depending on the power corporations, have themselves given assurances that they will take all the power or any portion they are not had for the power has been knocked into a cocked hat. The assurance of complete financing for permitted to take.

The project is unquestioned.

President Hoover, Secretary Wilbur, Dr. Mead and every agency of most positive assurance that there will be no delay. The incidental preliminaries are being fast arranged and within a few months the greatest engineering work of all the centuries will be going full blast right in the back yard of Las Vegas.

Many an "up-stater" is not familiar with conditions in Las Vegas, now the child of destiny of Nevada. The visit of prominent Nevada Elks here should help familiarize the rest of the state with this city.

Wilbur, Commissioner of Reclamation Mead and engineers of the department came to Las Vegas, visited the dam site and announced in terms which cannot be misunderstood that the government will proceed with preparations for building the dam with all speed.

## NEVADA WILL BENEFIT GREATLY BECAUSE OF BUILDING OF PROJECT

### Las Vegas Is Gateway to Boulder Dam and Headquarters for Operations—Millions of Payroll to Flow Through Las Vegas Business Channels—To Have Cheapest Power.

That Nevada will reap benefits greater in proportion to her present population and wealth than any other state through the construction of Boulder Dam is evident to the most casual observer.

Las Vegas occupies a position of advantage unique and unprecedented in the history of great projects. She is the only city near the site, on a transcontinental railroad and with an ample water supply for the building of a city of 50,000 or 100,000 people. These features make it necessary that Las Vegas be the Gateway City through which the business of the great enterprise will be carried on. There is no other city able to compete for that position because of geographical and physical conditions.

During construction of the dam, Las Vegas will be the business center through which will flow most of the millions to be paid for labor. This payroll money will, perhaps average \$10,000,000 per year.

Such an amount represents tremendous business possibilities especially when one counts the turnover several times of the money reaching the channels of business.

Second only to the direct payroll on the work will be the vast amount of money to be spent by tourists and travelers from every country to view the Canyon and the gigantic work there undertaken.

Not only the work of the dam site will contribute to the business of Las Vegas during the constructive period, but many minor industries incidental to the work will have their plants in Las Vegas.

After completion of the dam, those who have made the closest study of the situation are convinced that the greatest benefits to Las Vegas and the state at large will come after the Boulder Dam is completed and cheap power is available.

Great metallic and non-metallic resources in southern Nevada, now of little value are awaiting the time electric chemical plants for the separation of ores, smelting and refining plants; quartz glass industries when cheap power is at hand for development. Great mills and manufacturing plants of every variety will seek this location because of power advantages.

The agricultural and horticultural districts of the valley will be irrigated by cheap power for pumping and the newly created market here will assure prosperity to the farmers.

The establishment of great sanitariums, hotels and pleasure resorts on Boulder Lake will through all the years attract many thousands of people of means who will contribute largely to the business of Las Vegas.

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## ENGINEERING FEATURES PRESENTED IN BUILDING BOULDER DAM PROJECT

### Massive Barrier Highest Dam Ever Proposed—Forms Greatest Artificial Body of Water On Globe—One Million Horse Power Electrical Energy Available.

Dr. Elwood Mead, commissioner of the U. S. Bureau of Reclamation, in his address in Las Vegas June 22, gave some interesting facts relative to the Boulder Dam project.

One of the first steps is the building of a laboratory in Las Vegas for testing materials, money for which was appropriated by Congress.

A highway must be constructed immediately, a permanent highway from the two ends of the dam until it reaches out into the open country. That will be built now because it will wind along and around those cliffs and would be a dangerous and very difficult operation after the dam is erected and a great power plant built below, so that will be one of the first features of construction undertaken.

We went through the canyon in a boat provided by the city. We went down stream twenty miles an hour and came back treating a current that ran 15 feet per second.

Then we have to provide for the comfort of the people who are down there, not a great city, but a considerable city of several thousand people, who will have to live there close to the dam to carry out its operations, and they will have to live there not a few months but seven or eight years, and all provisions must be made for a city exactly as though it was going to endure, as it probably will.

Water from the river will have to be lifted eleven hundred feet, eight hundred feet for the city.

We will have to provide elevators to carry the laborers from the city where they live down to where they will work for the first two or three years, and up to the top of those cliffs. It would be impossible to climb and for that purpose we will have to install elevators that will be twice as high as the Woolworth building.

When construction begins the first great operation will be the building of four tunnels, the aggregate of which is over three thousand feet or over three miles. These tunnels will be fifty feet each in diameter, which is considerably more than the great Hudson tunnel under that river in New York City, and which is known as one of the world's greatest achievements. These tunnels will be a fourth larger.

To excavate those tunnels, to remove the sand and gravel out of the bottom of the river at the spot where the dam will be built, before it can be built, will require the moving of about three million cubic yards, and before we can begin to operate on the sand and gravel, we must pump out the water that will be impounded between the cofferdams, and that will mean over 1,700,000 cubic yards of water.

The capacity of those tunnels will carry the floods of the river around the dam, which is about equal to the flow of the Mississippi at St. Louis. They will carry as much water as the Mississippi carries. They will carry as much water as goes over Niagara Falls. They will have to do that because this is a great river.

After the tunnels are built and the cofferdams installed, these cofferdams will create a lake 30 miles long.

And after these things are done we will begin what is to be the greater structure ever attempted by man, and perhaps the greatest of the kind ever to be built, because it is only where nature has done as much as this here that it is possible to build a structure like Boulder Dam.

That structure will require about 3,000,000 yards of concrete. This is about six times as much as will be used at the Owyhee dam which is the largest dam so far undertaken in this country.

It will hold enough water to cover the entire state of Kentucky a foot deep. It will take the entire flow of the river for a year and a half. It will be ten times as large as the Elephant Butte reservoir, the largest in this country.

The dam will be seven hundred feet high.

It will produce 1,000,000 horsepower or as much as can be produced at Niagara Falls without despoiling its scenic value.

The building of this dam and the development of that many horse power will mean the opening up of latent resources. It will mean that this will become one of the great health and pleasure resorts of the country.

though the plans for the dam have been modified in some respects since that date, the figures remain still sufficiently accurate for purposes of comparison.

Among other things, Mr. Young said:

The concrete to construct the dam and appurtenant structures would be sufficient to build a column 100 feet in diameter three miles high and of weight 9,500,000 tons being four times the concrete in the Arrowrock and Elephant dams combined.

The amount of concrete would be sufficient to build 56 of the great skyscrapers of Los Angeles, solid, without roofs.

The cement to build the dam, if carried in 80,000 pound carloads, would require 22,600 cars for transportation, making a solid train 19 miles long.

Of machinery and steel, 50,000 tons will be used, requiring 1,250 cars, sufficient to make a solid train 10 miles long.

The aggregate material required as sand, gravel, cobblestones, etc., for the concrete amounts to 6,400,000 cubic yards. Moved in 30 yard carloads, in a separated condition it would require 218,000 cars making a train 1,800 miles long.

If all excavated materials from foundations, diversion tunnels, etc., were hauled in 30 yard cars, it would require 167,000 cars, making a train 1,400 miles long.

The movement of all materials necessary in the construction in cars, divided into 40-car trains, would require 10,000 such trains.

If each train were supplied with one locomotive and all trains coupled together they would make a train long enough to extend from New York to Los Angeles over the Pennsylvania and Union Pacific systems, with enough left over to make a train which would reach from Los Angeles to San Francisco.

In the above figures no account is taken of the machinery, equipment, fuel and other supplies necessary to supply the camp or for the transportation of the thousands of men employed during the progress of the work.

## Guests Will Be Given Free Rides to Resort

Free transportation by bus between Las Vegas and Lorenzi's resort will be given visitors who have guest cards during the three days of the Elks' convention here, it has been announced.

Pickwick stages have been chartered and private cars will supplement these if necessary, according to the committee. The three-mile stretch of road to the resort, where most of the festivities will be held, will be a pleasant one, between lanes of trees and without the loads of dust which used to make driving hazardous when there was much traffic on the road.

This service will be available during all the festivities at the resort.

Las Vegas has gotten the habit of seeing real big-time wrestling matches. First falls here saw the Dem. world champion light heavyweight, "airplane spin" Leo Lappanous to defeat. They saw Papiamos brow the Canadian champion, Al Buford, over the ropes to defeat. Now they're going to see a world championship Greco-Roman wrestle. Friday between Papiamos and Kotomatos, who claims that title.

Elks who are here long enough to make the grade will not regret if they take the trip up of the desert into the forested region of Ft. Charleston to see the contrast of desert and wooded mountains within a few short miles of each other.