

## NEW HYDROELECTRIC ERA FOR ARKANSAS

Many Millions of Dollars Being Spent by Power Company in State.

6-25-31 *Arizette*  
A new hydroelectric era, hastening the growth of state industries and developing the vast water power resources of the state, is taking place in Arkansas now, Rex I. Brown, assistant to Vice President C. J. Griffith of the Arkansas Light and Power Company, said yesterday.

The state now is coming into an unparalleled age of hydroelectric production and consumption, Mr. Brown said, which is resulting in a gain for Arkansas in new industries and prosperity.

Since 1912 the number of electric consumers in Arkansas has risen from 20,000 to 134,000, and the number of industrial power consumers has increased from three to about 2,500. The present consumption of electricity averages about 425 million kilowatts annually, which is at least 30 times the average electrical consumption 15 years ago.

Arkansas now has within its boundaries more than 5,000 miles of power lines which serve a total of 400 cities, towns and villages, and many thousand rural communities.

**Carpenter Dam Near Completion.**  
The most notable power plant now under construction is the Carpenter hydroelectric dam on the Ouachita river, a \$7,700,000 plant now being completed by the Arkansas Power and Light Company. The initial power installation of this dam will be 56,000 kilowatts or 80,000 horsepower. Present plans provide for the dam's being in operation by October 1, Mr. Brown said.

The Carpenter dam is the second project in a great hydroelectric construction series of three plants to be constructed by the Arkansas Power and Light Company for the development of 300,000 horsepower of hydroelectric energy from the Ouachita river. The first of these, the Rammel dam, was completed in 1924. The Carpenter plant is located 10 miles above the Rammel site, while the third and last will be located 24 miles above the Carpenter site at Blanco Springs. The last project will be larger than either of the others, and will represent an investment of about \$10,000,000.

**White River Project.**  
Another important power development project is that being planned for the White river in northwestern Arkansas by the White River Power Company, a subsidiary of the Arkansas Power and Light Company. This project will involve an investment of at least \$50,000,000, and will center its production forces upon the development of a new mining area, a vast section of hill country, hitherto unexploited. Lead and zinc manganese are the ores of immediate commercial interest.

Preliminary tests for the White river "Wildcat Shoal" project have been under way for the past 18 months, representing a preparatory investment of several hundred thousand dollars. Although the river bed is underlain by a stratum of limestone which varies from 40 to 100 feet in thickness, the limestone holds numerous cavities and earth cups which must be filled and adjusted properly before dam construction can be undertaken with any degree of safety.

**Four Projects Planned.**  
This new plan anticipates the building of four major hydroelectric plants with a vast frontage of artificial lakes. The estimated cost of the Wildcat Shoal power site is \$30,000,000. The dam is to be 225 feet in height, with a top length of about half a mile. Its flood area will be at least 60 square miles. Another dam across the north fork of White river will cost about \$12,000,000. Plans also are being made for building two smaller dams on

Buffalo creek at costs of \$6,000,000 and \$4,000,000 respectively.

The outstanding figure in Arkansas power development has been Harvey C. Couch, president of the Arkansas Power and Light Company and also of several affiliated corporations, including the Louisiana Power and Light Company, Mississippi Power and Light Company and the White River Power Company.

Mr. Couch began his electrical enterprise with a small steam power plant, operated with refuse from a lumber mill. This experiment proving successful, he ventured a first 20-mile highline project, and subsequently extended the line to furnish electric power for pumping water with which to flood rice plantations.

Since that time Arkansas power resources have been developed to unprecedented heights. Its success has been based upon the single principle of strategic power line distribution. This system not only has increased the state's power of consumption 30 fold, but also has made possible the highline exportation of power to neighboring cities and towns.

# Billions of Gallons of Water Flood Rice Fields

July 26, 1931

By LAVERNE SWIM.

Irrigation machinery—powerful oil engines and electric motors and large centrifugal pumps—run day and night for a period of about three months each year to supply the large amount of water necessary for the rice crops of Arkansas. Enough water comes to the surface of the ground each 24 hours to furnish baths for every man, woman and child in the United States.

Figures that show the huge amount of water brought to the rice fields of the state from the underground water beds each year are figures that will make the reader secure a paper and pencil and engage in a little multiplication.

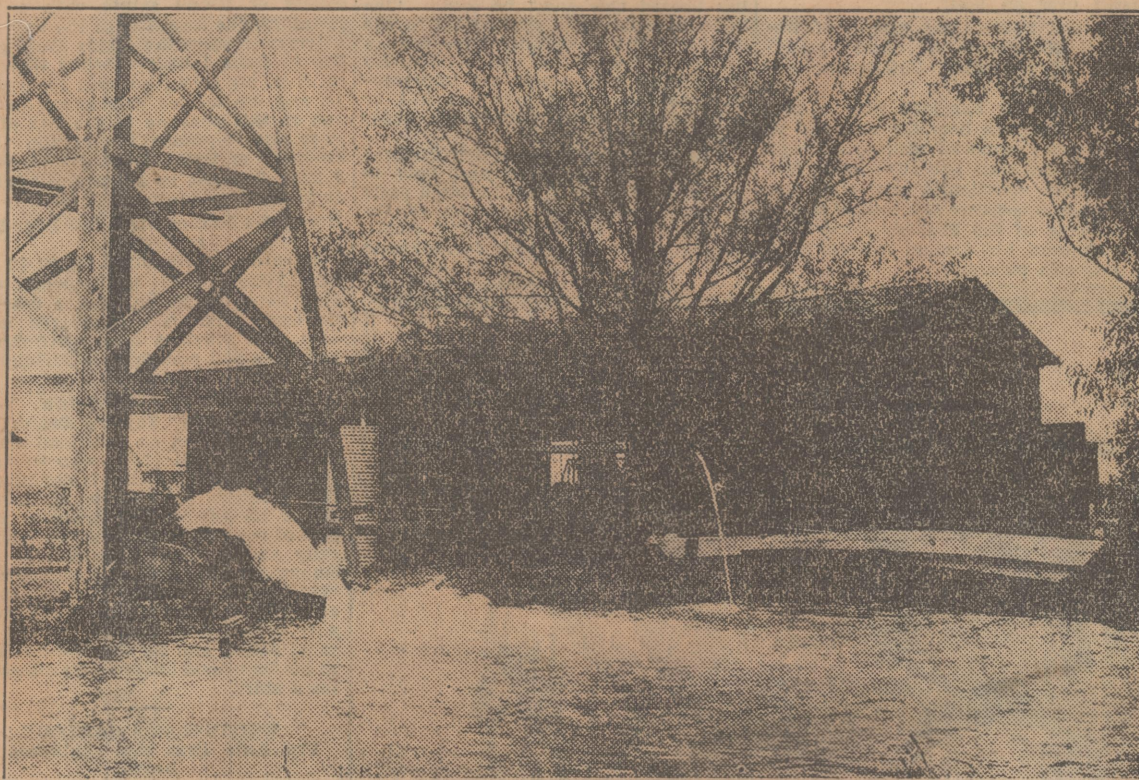
Approximately 1,399,680,000,000 gal-

lons of water are pumped from its discharge pipe at a rate of from 400 to 4,500 gallons per minute. There are about 1,500 irrigation wells in Arkansas and during the dry seasons they are kept running for a period of from 90 to 120 days. The average production is estimated by well men to be 900 gallons per minute. Fifteen hundred wells producing 900 gallons of water per minute bring to the surface 1,350,000 gallons per minute, 81,000,000 gallons per hour, 1,944,000,000 gallons per day or 1,399,680,000,000 during the average pumping season.

The above figures may sound almost unbelievable, but they are based on facts gathered by men who have spent a lifetime studying the problems confronted

and most of the water runs off the fields into drainage ditches. One ingenious farmer built a large reservoir near Stuttgart several years ago and his move is being followed by others who have found that the cost of water production by the latter method is small compared to the cost of pumping.

Land that cannot be used for farming is converted into a reservoir by merely throwing a levee around it. Rains fill the enclosure and water is supplied the rice by the same system of canals and levees used by other farmers. A small motor can draw as much water from a reservoir as a large and powerful engine can lift from the underground bed. Water that has been



Here is one of the 1,500 irrigation wells which supply the rice fields of Arkansas with more than a trillion gallons of water each year. Water is drawn from the above well by a pump driven by an oil engine.

lons of water are pumped from its underground supply each year and spread over the rice territory. Possibly the entire population of the world could wash its face and ears in that amount, which is almost 700 million tons. After all the people of the world had washed their ears and faces there probably would be enough of the fluid left to sprinkle all the dusty streets in the South. Statisticians of the Department of the Interior estimate the amount of water pumped from the irrigation wells of Grand Prairie, which comprises about 20 per cent of the Arkansas rice territory, during a year, to be equal to the minimum flow of the Arkansas river.

The United States Geological Survey, with the assistance and co-operation of the Arkansas Geological Survey and the Arkansas Agricultural Experiment Station, has completed an exhaustive study of the ground water of the Grand Prairie. The detailed report, including more than 200 pages, is available in the office of the state geologist at the capitol and in the office of the Stuttgart Chamber of Commerce.

People not familiar with the rice growing industry are astounded when they first see one of the pumps in action, throwing its large stream of

water into the air.

The method employed in bringing this huge amount of water from underground is very simple but costly. The average well is from 100 to 150 feet deep but a small amount of water is pumped from the 700 and 900-foot depths. Pump discharge pipes vary from six to 12 inches in diameter, the average being nine and five-eighths inches. Screws at the bottom of the wells revolving at a speed of from 800 to 1,500 revolutions per minute force the water to the surface. Water coming from discharge pipes goes into weir pools and then through a series of canals into the fields where its flow is controlled by levees.

Water coming from the upper stratum is almost too cool for swimming purposes on even the hottest days of summer but it makes an excellent drink because it is so pure that it may be drunk without danger of impurities just as it comes from the ground.

In addition to the regular pumping equipment, small motors and relief pumps are used to raise water from small streams and rivers.

The newest irrigation wrinkle used by rice growers in the vicinity of Stuttgart is the reservoir system. The rainfall there is heavy during most years

turned off the fields in some cases is pumped back into the reservoir and is used again. Rice growers see a great future in the use of reservoirs and it is thought that many of them will be built during the next few years.

It stands to reason that water can be pumped from the ground faster than it can be supplied from its natural sources and a government survey shows that the water head of Grand Prairie has been lowered through years of steady pumping. The situation, while not considered serious at the present time, is one that must be remedied if the rice industry is to continue in Arkansas.

Irrigation specialists and geologists say that there are several methods that can be employed to assure an inexhaustible underground water supply. Recharge wells that will let the surface water into underground water beds are seen as one means of combatting a shortage problem. One such well has been drilled north of Stuttgart and Harry Ragland, well known well man, who is in charge of the experiment, recently said he would have little trouble in letting a huge amount of water back into the ground after it had been properly filtered. The use of reservoirs

is seen as another method of irrigating rice without endangering the natural underground water supply.

This season has been exceptionally good for rice growers because of the large amount of rainfall. It has been necessary to supply from wells only a small part of the water needed for proper irrigation. The rice crop is at the present time considered one of the best that has been under cultivation for many years.

Water, the prime factor in rice growing, is being put to other uses on Grand Prairie. Swimming pools are filled with water that is later turned on the fields. Water that has been used on rice is turned into small canal systems that carry it into fields in which dry crops are grown. Surprising results have been obtained from cotton, corn and other dry crops when a small amount of water was turned into the fields.

Vegetable gardens are made to bloom during even the driest seasons by supplying water to the plants.

Farmers who for many years depended entirely on rice for their income have in recent years diversified and as a result have canned vegetables in their storerooms, feed for their livestock and money in the bank that they would not have had, had they confined their fields to rice alone. Ground that was being gradually worn out by the constant growing of the one crop, rice, is being rebuilt by a systematic method which assures the rice grower that he will have land on which he can raise a normal amount of his favorite crop for years innumerable.

Rice growers have learned how to take the proper care of their land and they are gradually learning that they must preserve what was once considered an inexhaustible supply of water if they are to continue to gain a living from the ground.

## Two Hot Springs Hot Water Reservoirs Completed.

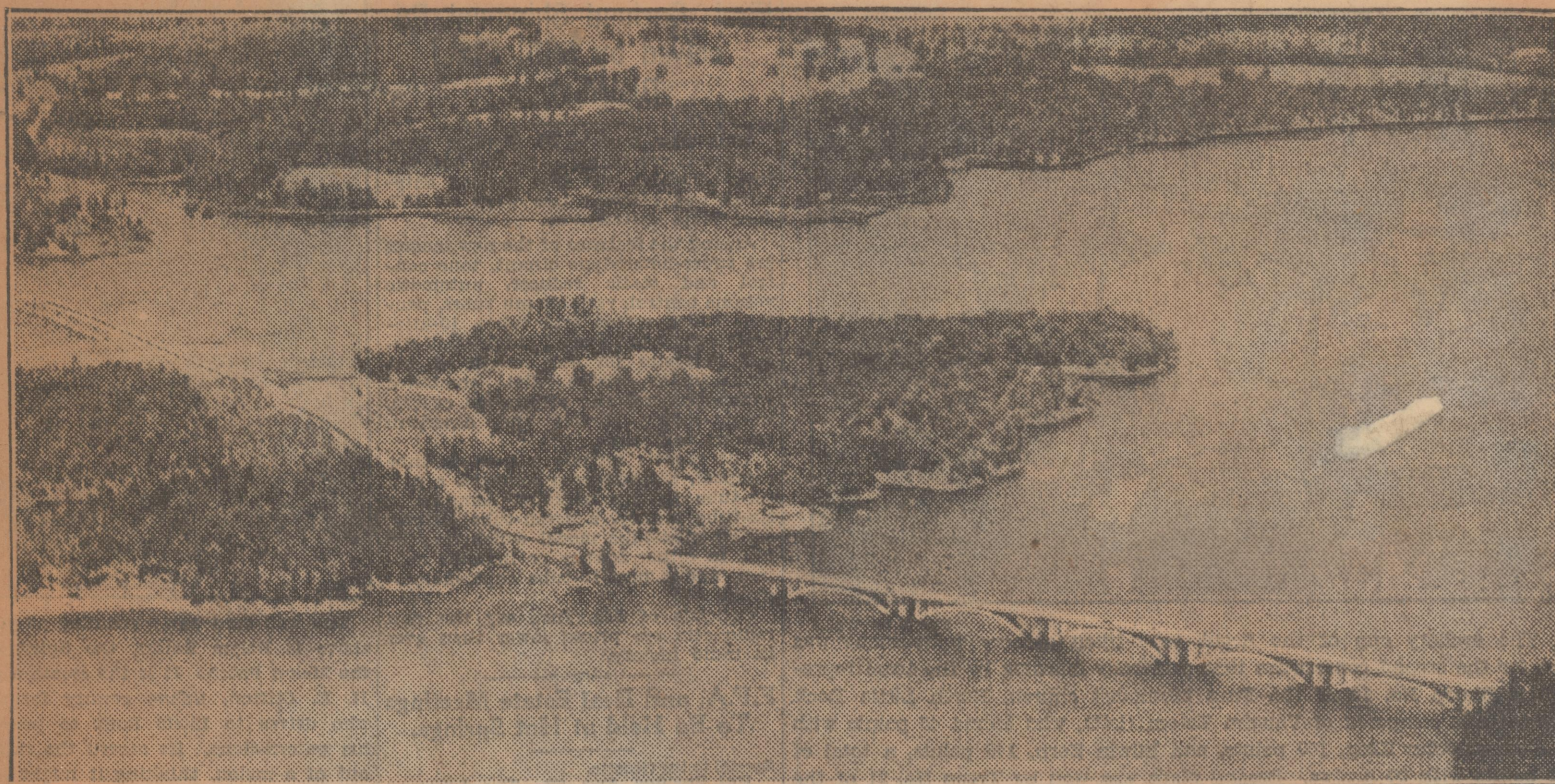
Special to the Gazette, Aug. 8, 1931  
Hot Springs, Aug. 7.—With completion of two reservoirs to hold hot medicinal water from the 36 springs on Hot Spring mountain, meters have been installed in each bathhouse and every establishment of that kind will be able to determine the exact amount of water it is using daily.

The upper reservoir has a capacity of 100,000 gallons, and the larger one of 400,000 gallons. A test showed that water pumped into the upper reservoir at 126 degrees lost but six degrees in eight days, park officials said.

The new hot water system also has added heat to the water in the bathhouses and drinking fountains along "Bathhouse Row." Cost to the government of the change was \$140,000.

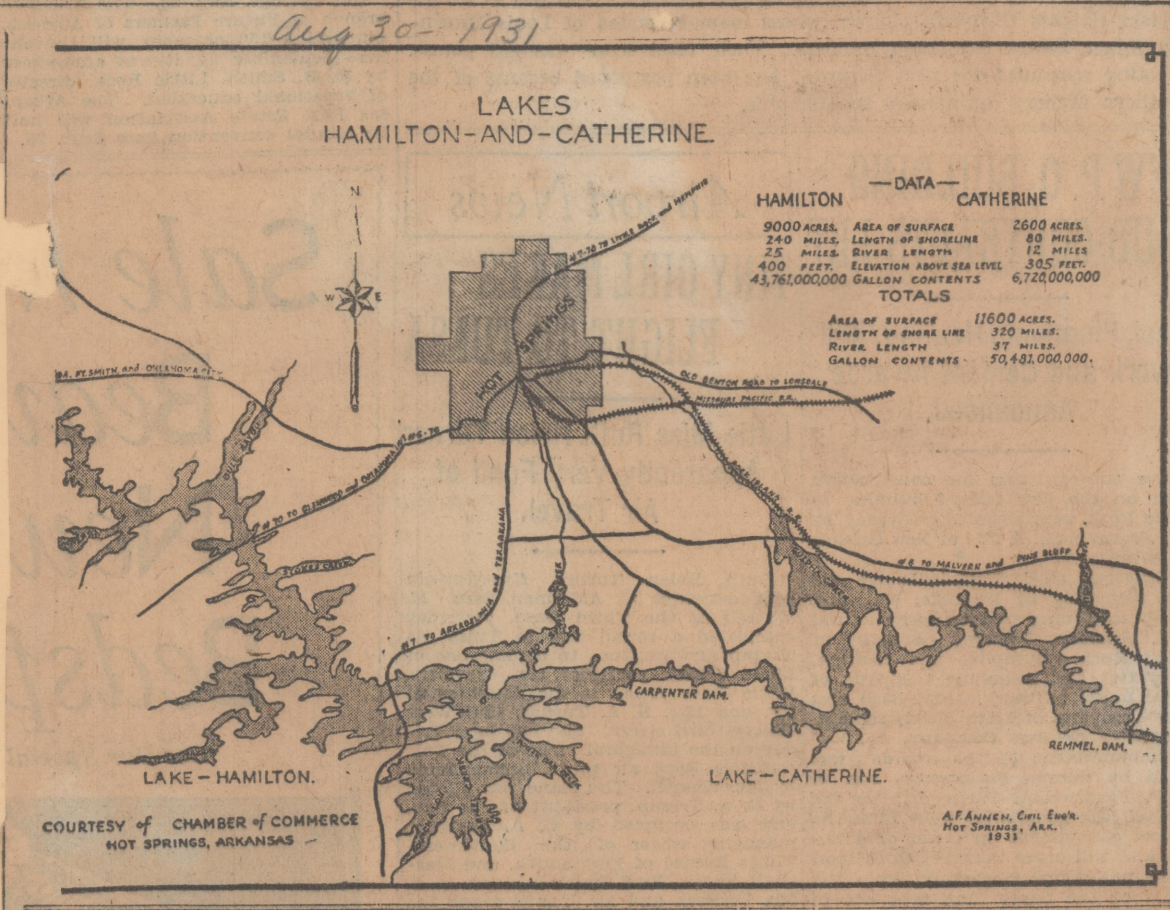


# Lakes Catherine and Hamilton, Notable for Their Scenic Beauty, Are Rapidly Becoming Famous for Their Pleasure Resorts and Lake Shore Homes



The photograph shows the highway bridge across the newly-formed Lake Hamilton.

The map shows the position of Lakes Hamilton and Catherine with reference to Hot Springs.



## BIG WATER PROJECT BEING CONSIDERED

Federal Power Board Engineer Confers on White and Buffalo River Dams.

Special to the Gazette.

Yellville, Nov. 13.—Dr. Blanchard, an engineer for the Federal Power Commission, Washington, D. C., has been here in conference with Capt. Charles LeVasseur, consulting engineer for the White River Power Company, on matters relating to the proposed hydro-electric projects on the White and Buffalo rivers, near here.

These water power developments, on which more than \$1,000,000 has been expended for engineering and preliminaries, are being sponsored by Harvey C. Couch, aided by the Electric Bond and Share Company. Perfected plans were approved several months ago by the Power Commission. Total cost of construction will involve the expenditure of between \$40,000,000 and \$50,000,000, according to authoritative estimates. Due to unfavorable financial conditions, plans for construction have been held up in New York. However, a high official in the organization said recently that the original undertaking will be carried out.

On the other hand, there is more or less speculation over the object of the recent visit by a Power Commission engineer, some maintaining the idea that the federal government has its eye on the water power resources of this section. A movement asking the federal authorities to take over the White river and its tributaries under a plan of water power development similar to its undertaking in the Tennessee valley was launched a few months ago, and is receiving strong backing in Springfield, Mo., as well as in upper White river cities and towns.

The potential water power possible of development by a series of dams on these rivers would be several hundred

thousand horse power, perhaps surpassing the total capacity of the Tennessee river developments, now under government control for such power equipment. Aside from the feature of unlimited water power to be thus afforded, it is pointed out that the construction of a system of hydro-electric dams on the rivers of northern Arkansas and southern Missouri by the government also would be a feasible means of flood control in the lower White river valley to the mouth of this stream.

## RICE IRRIGATION PLAN DISCUSSED

Advisory Board Wants Assurance Project Would Be Self-Liquidating.

Three engineers, H. F. Minnis of Stuttgart, E. T. Brown of Pine Bluff and D. A. MacCrea of Little Rock appeared before the state Advisory Board of the Public Works Administration yesterday in the Federal building to discuss further the construction of the proposed \$1,250,000 rice-irrigation system in Lonoke and Prairie counties.

Mr. Minnis and Mr. Brown were retained by the Arkansas Industrial and Relief State Agency which submitted the proposal to the state Advisory Board, while Mr. MacCrea is a consulting engineer of the state Advisory Board, Hayley M. Bennett, secretary to the board, said yesterday. The application for the loan was submitted Wednesday by Al G. Meehan of Stuttgart, vice chairman of the state agency.

The plan calls for construction of a lake approximately 20,000 square acres created to serve territory of about 100,000 acres in the Stuttgart area, Mr. Bennett said. Two separate reservoirs capable of impounding water from Bayou Lagrue, Bayou Meto and Two River bayou, would be provided.

"The board brought up the question of the continued use of the facility to the committee yesterday," Mr. Bennett said. "The value of the project and the ability of the project to liquidate itself depends, of course, upon its adoption by rice growers as a source of supply to irrigate their fields. In view of this fact it was the further opinion of the board that some definite assurance must be given that the water, when provided, would be used. The engineers were advised to return to the vicinity of the proposed project and attempt to place 50 per cent of the acreage to be served under contract to assure the government of its self liquidation."

Other Projects Discussed.

Several delegations appeared before the board yesterday to discuss projects with the members. F. C. Nolan of Holly Grove, Monroe county, conferred with the board regarding the proposed Negro school building at Holly Grove.

Opie Rogers and Garner Fraser of Clinton, Van Buren county, informed members of the board that a special election has been called to vote upon issuing bonds for a proposed \$20,000 loan for a new courthouse.

M. C. Bowman of West Memphis discussed proposed construction of a new electric light plant at Osceola, Mississippi county.

A. N. McAninch, Little Rock architect, called upon the board to discuss the granting of a \$50,000 loan for construction of a self-liquidating teachers' apartment building at the state A. M. & N. School for Negroes near Pine Bluff.

A formal application for a loan of \$173,000 for construction of an electric light plant at Paragould, Greene county, was filed with the Engineering Department by representatives of W. A. Fuller & Co. of St. Louis, engineers.

## Road and Ferry Survey Made in Proposed Dam Area.

Special to the Gazette.

Yellville, Oct. 24.—A survey of roads and ferries that will be affected by the reservoir from the proposed dam at Wild Cat Shoal has been finished by engineers for the White River Power Company. The investigations disclose that 38 miles of public roads will be submerged, and that four new ferries will be necessary at road crossings of tributaries where the water will rise to depths of 50 to 100 feet. Because of the great increased width and depth of the river that will result, the five flatboat ferries at highway crossings will be replaced with larger boats, with motor equipment. The change in type of ferries, together with installation of others, and necessary relocation of roads is estimated to cost around \$50,000.

Drill borings to test the foundation for the 250-foot dam were finished recently, after 18 months continuous operation with five diamond core drills and one churn drill. Approximately 250 holes were bored to an average depth of 150 feet, three of which reach a depth of 400 feet at about sea level. Except for local fractures and cavities which are characteristic to the geological formation, solid rock was encountered to the extent of explorations made, and is considered of sufficient density to support the structure. Pumping and water pressure tests in drill holes are under way day and night to determine the extent of probable underground leakage through cracks and cavities which the drilling revealed. These tests so far are said to disclose favorable conditions. Another month will be required to complete this phase of the work.

## Water Pressure Tests on Dam Site Completed.

Special to the Gazette.

Yellville, Dec. 18.—The White River Power Company has finished the series of water pressure tests in drill holes on its dam foundation at Wild Cat shoal, six miles east of here, yesterday. Drilling was completed about three months ago when about 250 holes had been bored to depths of 100 and 450 feet. Pumping of water under pressure of 200 pounds per square inch into these holes in order to determine the resistance of the foundation against leakage has occupied the time since.

Drilling operations were started in September, 1930, with six diamond core drills and one churn drill. Every foot of core rock removed has been kept, together with a record showing the formations at each foot. Cracks and cavities were encountered at some places, and these will be plugged with concrete. This work was under the direction of Capt. Charles H. LeVasseur of Yellville, engineer for the White River Power Company, and C. S. Lynch of Pine Bluff, chief engineer of the Arkansas Power & Light Company, and under the inspection of H. M. Darnell, assistant engineer for the Federal Power Commission. Probably a month will be required in which to compile final computations and reports to be submitted to headquarters in Washington and New York.

## Two Plans Considered for Power Dam on Current River.

Special to the Gazette.

Poplar Bluff, Mo., April 15.—A contest between two firms over which will build a hydro-electric power dam in the Ozarks at a cost of several million dollars on Current river, may be decided within the next few weeks, Robert G. McWhorter, chief engineer for the Federal Power Commission, said after inspection of two proposed sites.

Both firms have requested permits for construction of the dam. The Current River Power Company proposed to construct a dam at Hargis Eddy, while the hydro-electric company of Doniphan, desires to develop power at Gartman Rock.

## Rice Region Water Supply To Be Studied

Three Agencies to Make Survey—Ground Water Level Falls.

Fayetteville, Sept. 8.—(Special.)—A joint research project to further investigate the ground water supply in the Grand Prairie rice area of Arkansas was approved today by University of Arkansas college of agriculture officials.

The projective will be a co-operative study between the rice branch experiment station of the University of Arkansas college of agriculture in Arkansas county, the United States geological survey and the Arkansas geological survey.

A preliminary joint study made in 1928 and 1929 showed that the ground water supply was being consumed in excess of its accumulation with consequent lowering of the ground water level and increased irrigation costs for rice production. It is for this reason that more knowledge is sought of the water resources for use on the rice crop.

The study's report further states, "It is therefore imperative that consideration be given to methods for remedying the situation by increasing the supply or reducing the consumption. Of the several possible remedial methods that have been suggested, the use of water from deeplying beds and the substitution of other crops for rice may be practiced by the farmers individually. This study was made in Lonoke, Prairie, Arkansas and Jefferson counties.

"There are approximately 1,000 wells in the Grand Prairie section alone with an estimated investment of \$5,000,000 and an annual irrigation cost estimated at \$1,250,000," states Deane G. Carter, agricultural engineer, who will represent the University of Arkansas as one of the project leaders.

George C. Branner, state geologist, will represent the Arkansas geological survey.

## HYDRO-ELECTRIC DAM SUGGESTED

Public Works Advisory Board Discusses Proposed Loan of \$1,500,000.

Henry Rector, Little Rock attorney, and F. E. Hatch, engineer, appeared before the state Advisory Board of the Public Works Administration yesterday to discuss filing application for a \$1,500,000 loan for construction of a proposed hydroelectric dam and smeltering plant on the Buffalo river in Newton county.

Application for \$69,000 for construction of a new Poinsett county jail at Harrisburg was filed with the board, as were applications for \$37,000 for construction of a sewer system at Waldo, Columbia county, and \$35,916.47 for construction of a school building at McNeil.

A delegation from Blytheville conferred with the board to obtain information regarding a \$200,000 loan for purchasing a water plant at Blytheville and building additions to the plant. Delegations from Huntsville and Rison appeared to discuss construction of a water and sewer system and a new school building respectively.



# LEVEL OF WATER IN RICE AREA HIGHER

Results of Geological Survey Study in Eastern Arkansas Revealed.

January 23, 1934

An increase in the height of the water level in wells in the rice irrigation district has been recorded, W. G. Mendenhall, director of the United States Geological Survey, informed George C. Branner, state geologist, yesterday.

Mr. Branner said the information is of great importance to rice growers of eastern Arkansas, because of reports which had shown that the water level had dropped considerably in previous years.

In September, 1927, the United States Geological Survey first set out to study ground-water levels in the rice country of Arkansas. For several years there had been reports of a decline in the height of the water in wells in that region. Such a decline, if permanent, would be a serious menace to rice growing, Mr. Branner said.

In a preliminary report published by Daniel G. Thompson, it was said that before any final conclusions could be reached regarding the danger of the situation, the study would have to be conducted over a period of years. This study was undertaken through the cooperation of the state and national Geological Surveys and the College of Agriculture of the University of Arkansas.

Its object was to determine where the geological limit of the removing of water from the main water-producing sands in that area lay, so that when it was reached the farmers could stop and the danger point could be passed.

In the fall of 1933, for the first time since the measurements (taken every spring and fall) were begun, the water level was higher in a majority of the wells than on corresponding dates a year ago. Because of its great interest to the rice growers, a preliminary report was immediately sent in.

"This rise in water is presumably due to a reduction in the quantity of water pumped during the irrigation season," Mr. Mendenhall wrote, "but it is not yet certain as to the cause of this reduction, whether to heavy rainfall at critical times in the irrigation season, to an increased substitution of water from surface sources or to a reduction of acreage irrigated."

"Any reduction due to the first and third causes may be only temporary. The higher water level in the fall of 1933, nevertheless, is a favorable condition, for it appears to definitely establish the fact that recovery from the overdraft in recent years is possible, if there is a sufficient reduction quantity of water pumped."

Records giving information in regard to location, depth, etc., for the observation wells, and also the records of measurements on which the present summary is based, have been filed in the office of Mr. Branner and with the secretary of the Stuttgart Chamber of Commerce, where they are available for consultation.

# RECALLS DRILLING WELLS NEAR HERE

Engineer Says Project 20 Years Ago Caused Many to Follow Example.  
Feb. 11, 1934

Solution of the problem of developing an auxiliary supply of water from wells for the city of Little Rock led to nationwide operations, H. B. Allen Sickel, engineer in charge of compiling data on water wells and springs in Arkansas for the coastal plain division, Arkansas Geological Survey, said yesterday at the meeting of the Little Rock Engineers Club at the Hotel Ben McGehee.

Mr. Sickel said that there was much agitation about 20 years ago for a water supply for Little Rock other than the Arkansas river.

"A receiver had been appointed for the water company and the courts had ordered it to install a reservoir in the hills to collect surface water as a reserve supply at times when the river water was not potable," he said.

The company by which Mr. Sickel was employed discovered a possible well field across the river from Fort Roots. The field was developed, proved sufficient for a satisfactory water supply at all times and effected a large saving over the proposed reservoir plan, he said.

"Several years later when Little Rock was attempting to secure the location of Camp Pike, all requirements of government engineers for a favorable report had been met except the question of developing a water supply for the camp, separate and distinct from the Arkansas river," Mr. Sickel said. "These government engineers would not consider the fact that in North Little Rock, the Missouri Pacific railroad had wells producing 4,000,000 gallons daily."

Well Drilled in Four Days.

Mr. Sickel was consulted about drilling a well to prove that water could be obtained in North Little Rock. Under ordinary circumstances it would have required three or four weeks to complete the well, but Mr. Sickel said that the work was carried on day and night, and a well producing 2,000,000 gallons daily was drilled in four days.

"There was so much iron in the water, however, that it was not potable and was of no value for the purpose," Mr. Sickel said. "The drilling rig was torn down, moved to a new location and a second well installed. This well produced ample and very potable water."

and Little Rock secured the location of Camp Pike." The program for the Arkansas Engineers Club meeting at the Hotel Marion February 23 and 24 was announced yesterday. Those who will speak include: T. J. Allen, superintendent of Hot Springs National park; Alexander Allaire, state PWA engineer; R. C. Limerick, state CWA consulting engineer; James R. Rhyne, state director of highways; E. M. Ratliff of Fayetteville; Wallace Townsend, United States attorney; C. L. Sadler of Washington, D. C., United States Geological Survey engineer; W. C. Holland of Washington; M. J. McCollm of Denver, representative of the National Park Service; Col. Clarence Goldsmith of Chicago, assistant chief engineer of the National Board of Fire Underwriters, and F. E. Coker, personnel supervisor of United States Coast and Geodetic Survey projects in Arkansas.

# SAYS RICE SECTION SUFFERS INJUSTICE

Stuttgart Banker Charges Discrimination by Land Bank.  
2-22-34

Special to the Gazette. Stuttgart, Feb. 21.—Charges that the Federal Land bank does not intend to lend money in the Grand Prairie rice territory and that the bank here proposed a second survey of the underground water supply of the section "in an effort to get its skirts clean," were made here today by Paul McCoy, president of the Peoples National bank of Stuttgart.

Criticizing regulations which prohibit the bank from making loans to farmers in this territory, McCoy said:

"The Federal Land bank man, W. A. Kelly, has one idea—that this territory will not produce anything but rice and that there is not enough water for rice. He will not consent to hear evidence to the contrary."

"I asked him to look at some of the other crops that could be grown on the prairie, when he was here last June, but he wouldn't even look at them."

McCoy declared that if a second survey is made it will be conducted by men selected by the land bank to confirm the results of a survey made in 1930. He said that the bank has been lending money to impoverished sections whose crops are threatened by drought each year, while the relatively wealthy rice territory with "permanent crop insurance in the form of irrigation." Has received not one penny from the land bank in three years.

"There is plenty of water here for rice," he said, "but even if there wasn't, farmers could make more money than now by irrigating dry crops—using only one-tenth of the amount of water necessary for rice."

Lists Favorable Factors.

Factors the land bank failed to consider when refusing to lend money to the rice area, McCoy said, are:

1. Unlimited supply of water for irrigation through the use of deep wells, the drilling of which does not exceed the former cost of sinking shallow wells.
2. Increase in the height of the water level since 1930 as a result of decreased pumping, and the probability of further reduced drain on the supply because of the government acreage reduction program.
3. Increased use of surface water for irrigation. Eight large reservoirs already are available and the building of additional ones appears certain.
4. High quality of irrigated dry crops compared with those of other sections.

# SURVEY OF WATER SUPPLY STARTED

State Geologist to Provide Data Sought by Rice Growers.

Mar. 23, 1934  
A survey of water supply conditions in the Grand Prairie water level in Arkansas county is being conducted by George C. Branner, state geologist, to determine whether sections of the area will lack water for irrigation of rice fields in the future.

The Federal Land bank of St. Louis discontinued loans to rice farmers in the area several weeks ago, apparently on the grounds that possibility of lack of water for irrigation purposes in the future destroyed the security of future rice crops on long-term loans, Mr. Branner said last night.

Mr. Branner Tuesday received a letter from Joe Morrison of Stuttgart, who said he represented approximately 500 rice growers interested in a re-examination. The geologist said he began the second survey in order to have facts pertaining to the water level ready for use of rice growers or others.

While the survey will not be completed for another two weeks, Mr. Branner said last night it is possible that several sections of the area will be exempt from the order stopping all loans to the growers.

# KELLY, IN CITY, REFUSES TO TALK

Visit of Land Bank Official Veiled in Secrecy

"GENERAL SURVEY"  
Party of Ten or Fifteen Escorts Banker on Tour Through Rice Territory

By J. M. DRUMMOND, JR.

W. A. Kelly was in town today.

But the Federal Land bank official, much-accused as the man behind an unjust ban on loans to the rice territory, refused to make a definite statement regarding his business here.

He made only one reference to whether or not the bank will open up loans here: "The situation has not changed."

Coming down to Stuttgart with ten or fifteen men from St. Louis and Washington, D. C., Kelly managed to transact the business of what he termed "a general survey" in the utmost secrecy.

He evidently took care to escape Stuttgart without meeting any of the people who have lodged protests against the bank within the past few weeks. As far as the Arkansas sawyer could learn, he contacted no bankers, credit men, leading business or rice men here. He and his party having arrived this morning, left by auto about 1:30 p.m. for an unannounced destination.

Hearing late this morning that Kelly was in Stuttgart, the Arkansas sawyer finally located him in front of the Riceland Hotel at about 1:30 p.m.

He was seated in the rear of an automobile, nearly ready to leave. The reporter, who had never seen him before, approached a member of his party asking: "Where can I find Mr. Kelly?"

"What's your business?" was the query.

"I'm representing the Arkansas sawyer. I want to get a statement from Mr. Kelly."

"Mr. Kelly has no statement to make to the Arkansas sawyer."

"But where is Mr. Kelly?"

"I don't know."

Inside the hotel, the reporter was informed that he had been standing within a few feet of Kelly. Returning to the automobile, he tapped on the glass.

"Mr. Kelly? I want to know whether you are down here relative to opening up loans in the rice territory."

"We're down here on a general survey."

"Are you surveying the rice region relative to making loans here?"

"The situation regarding that hasn't changed."

"Is there any possibility of loans here being made on the basis of dry crop values?"

"I can't say."

"When will you have more information regarding loans to this section?"

"I don't want to make a statement."

Kelly and his party then rolled up the window and drove away.

Calls to all parts of Stuttgart late this morning and early this afternoon failed to divulge any-

thing more specific than that "I've heard Kelly is in town." Where he went and what he did during his stay here remains a secret.

# ASKS BRANNER'S AID IN LOAN BAN FIGHT

Farmers Union Asks Survey of Thompson Water Level Report

WANT ACTUAL FACTS

Express Confidence in Ability of State Geological Department Head

Stuttgart, Ark., March 22, 1934

With interest in the fight to lift a ban on Federal Land Bank loans to farmers of the Grand Prairie aroused by the un-announced and somewhat mysterious appearance of W. A. Kelly, representative of the bank, here yesterday, the Arkansas County Farmers Union today made public a letter soliciting the aid of Arkansas Geological Survey in determining the actual condition of the irrigation water supply in this section.

The letter, prepared by Joe Morrison, secretary of a committee appointed by the union, asks an examination of the preliminary water level survey made by David T. Thompson of the Department of the Interior several years ago.

"Facts Would Help"

Findings of the geological department, the letter states, "would be most helpful in getting before the proper authorities" of the bank "actual facts as they exist in the rice territory."

The letter, addressed to George C. Branner, director of the geological survey, says:

"The undersigned committee of the Farmers Union has been directed by that organization to take any measures possible to secure the lifting of the ban that now exists in the Federal Land Bank of St. Louis against the lending of money in a larger portion of the rice territory, requests your department to make an examination of the preliminary survey issued by David T. Thompson from the Department of the Interior on the 26th day of January, 1931, which was the results of his investigations in the rice territory in the years 1928 and 1929.

Maintain Survey

"Knowing that your department has since the issuance of the preliminary report been maintaining continual observation of the water level and the general conditions of the water supply in the rice territory in conjunction with the Department of the Interior, and knowing your ability as a geologist is not only unquestioned but has been recognized by your election as national president of the American Society of Geologists, we feel that an examination by yourself or your department under your direction of this preliminary report, together with the information that you have since acquired, and the interpretation of both the preliminary report and findings of your department, would be most helpful in getting before the proper authorities of the Federal Land Bank the actual facts as they exist in the rice territory."

"The suggestion has been made that an examination and interpretation be made by engineers outside of the rice belt, the personnel of which to be selected by others. But the Farmers Union,

of which more than 500 farmers in the rice belt are members has full and complete confidence not only in your integrity but in your ability to get at the actual facts, and in the event the action herein requested from you should prove to be unfavorable to the desire of the rice farmer, they will still feel that such action is solely the result of the facts as you find them.

"In view of the dire necessity of action in this matter and that if it is possible to have a favorable culmination of it that it must come at an early date to be of any benefit to a large number of owners of land in the Grand Prairie, it is urgently requested that you use your best efforts to expedite this matter."



# THINKS KELLY MADE OWN SECRET SURVEY

Rice Grower Is Barraged With Questions by Tourists  
*Mar. 23, 1934*  
**ASK ABOUT WATER**

Men Claiming to Be Real Estate Agents Interested in Irrigation Facilities

*Stuttgart, Ark., March 23, 1934*  
Possibility that W. A. Kelly of the Federal Land bank was conducting his own private survey when he was in this territory Wednesday was revealed today by Mike Prislowsky, farmer of seven miles north of Stuttgart.

Prislowsky said he was roundly questioned Wednesday morning (at an hour shortly before the Kelly party reached Stuttgart) regarding his rice irrigation system and the productiveness of his farm for dry crops by a group of men in a small car who stopped on the road adjacent to his farm. They said they were interested in real estate.

Prislowsky said he thought it was queer that the men did not take the name of a local real estate agent he referred to them.

"I am accustomed to answering questions of people who pass along the road," he said, "but not so many questions as they asked me. One of them took out his notebook and entered some of the information I gave him."

Prislowsky said the men, one of whom he described as resembling Kelly, asked him "whether my well ever runs dry, how much water was being pumped from a neighboring well, and why I was not getting more water."

"I told him I had only a small pumping outfit," Prislowsky said. They also asked land values, Prislowsky said, and what factors make for a difference in land values.

Kelly and his party arrived in Stuttgart about 10 a.m. Wednesday, as nearly as the Arkansawyer could learn. The above conversation took place at 9:30 a.m.

Prislowsky said that although the men told him they were from Iowa, he noticed that their car, a small Chevrolet, bore an Arkansas license.

# PRAIRIE SECTION DEMANDS RIGHTS

Discrimination in Farm Loans Charged by Speakers at Stuttgart.

*April 1, 1934*  
Special to the Gazette.  
Stuttgart, March 31. — The Grand Prairie Rice section's fight to lift a ban on Federal Land bank loans to farmers of this territory will "come to a head" soon, N. J. Rollison of DeWitt, Arkansas county secretary of the Land Bank organization, predicted at an open meeting held here by the Arkansas County Farmers Union today.

He said that information on the underground water supply and productivity of dry crops in this section obtained during a recent survey, coincide with statistics of the Department of Agriculture and the State Geological Survey. This information and other data will be placed before the "proper authorities" in an effort to obtain the lifting of the land bank ban, which is said to have resulted from reports of a receding underground water supply.

**To Complete Survey.**  
The union, on learning that \$150 will be needed to complete a water survey started several months ago by Dr. O. C. Branner, state geologist, subscribed that amount.

Rollison said that although dry crop productivity in this section exceeds that of many other areas where land bank loans are available, no farmer in the Grand Prairie region can borrow from the bank.

Roy Henderson of Little Rock, state union organizer, said that the Frazier bill, providing federal loans for farmers at a low rate of interest, is on the speaker's desk at Washington and that signatures of 19 representatives are needed to force a vote. He said only three Arkansas congressmen have agreed to work for the bill.

W. E. Green of Little Rock, former head of the State Federation of Labor and a union leader for many years, urged the organization and co-operation of farmers.

**Visitors Welcomed.**  
Visitors from the Stuttgart, Almyra, DeWitt, Gillett, Ulm, Roe and Stillwell districts were welcomed by Mayor D. D. Barris of Stuttgart and I. M. Bennett of Almyra, president of the Arkansas County Farmers Union.

Short talks were made by L. K. Buerkle of Stuttgart, the Rev. George W. Patterson of Stuttgart and Mrs. G. H. Banks of Prairie Dell.

Musical numbers were given by the Stuttgart band, the Farmers Union quartet and the Misses Frances and Mary Nell Patterson of Stuttgart.

Lunch was served by the Goldman-Sunshine Home Demonstration Club at the First Christian church at noon.

# RICE FARMERS TO BE GRANTED LOANS

Approval Will Start at Once Under Revised Code Provisions.

Special to the Gazette.  
Stuttgart, April 9.—Approval of rice production loans will start immediately under revised code provisions permitting the pledging of 40 per cent benefit payments to growers participating in the government production control program, bankers and credit men announced following a hearing here today.

A credit association official estimated that \$275,000 will be loaned to growers of this territory within the next few weeks. Making of loans had been held up, because there had been no method for creditors to attach benefit payments if farmers refused to pay them. "Bonus" payments, however, cannot be used to liquidate debts except those made in the production of this year's crop.

Farmers who must pledge the 40 per cent for production loans will be required to designate their creditors as payees in making loans. The 60 per cent parity payment will not be effected by the ruling.

Paul R. McCoy, president of the Peoples National Bank of Stuttgart, estimated that the amount of money sought by farmer-borrowers here this year will be less than was loaned last year because of the 20 per cent reduction in acreage.

Today's meeting was attended by J. R. Cosgrove of the Federal Intermediate Bank of St. Louis and by bankers and credit association officials of this section.

# ADEQUATE FINANCES FOR RICE FARMERS

Landlords and Tenants, Having No Acreage Agreements, to Be Aided.

Special to the Gazette.  
Stuttgart, April 10.—Adequate financing of landlords and tenants whose allotments under the government rice production control program do not correspond with the agreements made among themselves as to the acreage they will plant this year, will be provided by the plan now in effect in Louisiana, Al G. Meehan, Stuttgart lawyer, said today.

"The AAA policy in dealing with this situation in Louisiana and Texas," he said, "is to make the benefit payments to the landlord and tenant in proportion to their respective interests in the 1934 crop, disregarding the allotment carried by each."

The benefit payment will be 40 per cent of the price of rice sold by growers taking part in the production reduction program.

Meehan said that farms for which landlord-tenant agreements had been made would not be allowed to have an increased allotment.

"However, before the benefit can be paid in proportion to the interest of the landlord and tenant, both landlord and tenant must designate the same payee," he said.

Banks and credit association men, Meehan explained, had not known whether the credit they could extend to a tenant was limited by his allotment or the agreement he had made with his landlord.

# Survey of Grand Prairie Water Supply Nearly Completed.

Special to the Gazette.  
Stuttgart, April 13.—Working at the request of a group of farmers who are seeking to lift a ban on Federal Land bank lending in the Arkansas rice region, employees of the state Geological Survey probably will complete tomorrow night a survey of the underground water supply of Grand Prairie.

The work is supervised by H. B. Allen Sickle, chief engineer, assisted by E. Curtis, engineer, Charles B. Carter, draftsman, and Mrs. L. D. Wilder, secretary. Dr. C. C. Branner, director of the state Geological Survey, is directing the project.

# PLENTY OF WATER UNDER RICE BELT

Survey Shows Stratum Averaging 70 Feet Beneath Entire District.

*April 15, 1934*  
Special to the Gazette.  
Stuttgart, April 14.—Lifting of a ban on Federal Land bank lending to the Grand Prairie region is forecast by farmers, who believe they have found conclusive proof that the future of the rice industry is not endangered by an inadequate water supply.

Charts and graphs compiled by the Arkansas Geological Survey under direction of Dr. G. C. Branner and Chief Engineer H. B. Allen Sickle show a water stratum averaging 70 feet in depth running under the entire prairie, which is about 50 miles in length and 40 miles wide. The data from the survey reveal that although the water level in many wells receded during heavy pumping seasons of the past few years, a level in the stratum has not yet been reached and that the water still is under heavy pressure except at high points in the water-bearing sand. Geologists explained that recession of the level in wells will continue if pumping is continued on its former scale, but that it will stop when a stratum level is reached.

Twenty per cent acreage reduction this year under the government production control program will decrease pumping to a point which probably will stop the lowering of the well levels, Sickle said.

# RICE DELEGATION WILL SEEK LOANS

Plans Trip to Washington to Lay Question Before President.

*April 22, 1934*  
Special to the Gazette.  
Stuttgart, April 21.—The Arkansas rice section will send a delegation to Washington in an effort to lift a ban on Federal Land bank loans to farmers of the Grand Prairie area, it was learned here today. Members of the delegation will seek an interview with President Roosevelt, before whom they plan to lay the history of the Land bank's ban in this territory. They will seek loans on the thesis that there never has been sufficient reason for withholding loans.

This action followed closely the completion of a survey of the Grand Prairie underground water supply by geologists working under the direction of Dr. George C. Branner, director of the Arkansas Geological Survey. The data obtained indicate that there is sufficient water to continue the rice industry indefinitely.

The Arkansas County Farmers Union is making a drive for funds to send the delegation to the capital.

# RICE GROWERS MAY SEE MR. ROOSEVELT

Hope to Advance Plans to Obtain Federal Land Bank Loans.

*April 29, 1934*  
Special to the Gazette.  
Stuttgart, April 28.—Announcement that a letter had been sent to W. A. Kelly of the Federal Land bank of St. Louis, asking him to attend a projected interview between representatives of the Arkansas Rice section and President Roosevelt, and that a delegation will leave here for Washington in the next two or three days, were today's developments in a movement to lift the ban on the bank's lending to farmers of the Grand Prairie section.

Joe Morrison, city attorney of Stuttgart, who drafted the letter, said that he had "serious charges against Kelly and the land bank" to make to the president. The letter says:

"We have collected a lot of information with reference to the value of rice land for general farming purposes, and information showing that the water supply from the shallow strata is sufficient to irrigate the present acreage indefinitely and for a period far longer than the life of your loan, with the view of convincing yourself and anyone else responsible for the present position of the Federal Land bank that the underground water supply of the Grand Prairie region is in danger, is mistaken."

"Since you stated 'no' in a meeting here in answer to my question, 'would competent evidence that the water level had ceased falling and had commenced to rise and that there is sufficient rainfall here to fill all the reservoirs that may be constructed were presented to you, would that change your mind?' your answer in the negative to that question convinces us that it is foolish for us to waste any further time in trying to change the mind of the present engineer-appraiser."

"We, therefore, are appealing directly to Roosevelt and we are advising you of this action so that you can be present and be heard to present your position and justify it if possible."

"The very serious condition in which the farmers of this community are placed by the attitude of your bank makes immediate action imperative."

Morrison charged that the bank took growers' appraisal fees although it had no intention of making loans when applications were received.

He presented figures to show that approximately two per cent of the total loans made in Arkansas, Missouri and Illinois during the 11 months prior to March 31 of this year, was received by farmers of this state. "Not one penny of that slightly more than a million dollars (received by Arkansas farmers during the 11 months) was turned loose in the rice section," Morrison declared.

# PLENTY OF WATER UNDER RICE BELT

Will Meet Present Demand for at Least 94 Years, Reports Dr. Branner.

# GIVES RESULTS OF STUDY

Geologist Cites Many Statistics to Prove Grand Prairie Has No Occasion for Alarm.

The underground water supply in the rice-producing area of Arkansas, the Grand Prairie, is sufficient to meet the present rate of consumption for irrigating rice fields for at least 94 years, Dr. George C. Branner said in a report filed with Governor Futrell yesterday.

The report was based on a study of water supply in the rice belt undertaken by Dr. Branner at the request of Governor Futrell after W. A. Kelley, engineer-appraiser for the Federal Land bank at St. Louis had indicated that loans could not be made to rice farmers because of the possibility that rice growing would be handicapped within a few years by scarcity of water.

The study was made under Dr. Branner's direction by H. B. Allen Sickle, a water supply engineer of 30 years' experience, assisted by E. Curtis and A. H. Prince, water supply engineers.

Mr. Branner said the report is intended primarily to continue the interpretation of information made available by the United States Geological Survey in 1931.

**Much Data Included.**  
The report included several tables and much technical data to show the draw-down (lowered water level) in wells during the pumping season and the recharge during the off season. The result of these tests showed that the net average loss of head from 1929 to 1933 was 7.22 inches and that the loss from 1931 to 1933, inclusive, was only 3.07 inches. Mr. Branner said the fact that the local rainfall in the area during 1929 and 1930 was far below the 40-year average rainfall would account for the heavier loss of head in the wells during those two years.

# Average Loss Considered.

The report in part follows:

"In considering the average loss of head in wells in Grand Prairie, the fact should be kept in mind that the average depth of the water in the water-saturated sands in that area was about 75 feet in 1929. This figure is based on the assumption that the average elevation of the water in 118 key wells was 149.82 feet above sea level in 1929, and that the average elevation of the bottom of the water-bearing beds is about 75 feet. Since the average loss of head for the period 1929 to 1933, inclusive, was only 7.22 inches, and since the loss of head from 1931 to 1933, inclusive, was only 3.07 inches, such losses of head may, therefore, be considered to be comparatively negligible. The five-year average loss corresponds with an estimated average annual consumption of 201,200-acre feet, which is 26,200-acre feet above the safe yield estimated in the United States Department of the Interior press release of 1931."

"Average rainfall during this five-year period was 7.95 inches, which is 3.33 inches below the 40-year period average of 11.28 inches."

"Assuming that but 75 per cent of the height of the ground water in the wells is available for economic pumping, then a yearly average draw-down of 7.22 inches would be 1.06 per cent of the available supply, and such supply would be sufficient to last for 94 years, assuming the 40-year average rainfall, and not taking into consideration the probable increased production due to the usual development of a steeper water level gradient adjacent to the wells as water is withdrawn."

# Summary and Conclusions.

"The safe annual yield of ground water from the pleistocene beds of Grand Prairie apparently approximates the estimate of 175,000-acre feet, which was made in the United States Department of the Interior press release of 1931. It, therefore, seems reasonable to conclude that, so long as the consumption does not increase substantially above that figure, there will be little possibility of the exhaustion of the ground water supply in Grand Prairie, or of lowering the average head to a point at which pumping is not economical. Several factors are now causing a reduction of the ground water consumption in Grand Prairie and these may reasonably be expected to prevent any dangerous increase above 175,000-acre feet per year."

"It should also be kept in mind that the source from which the water supply in Grand Prairie is derived is part of a water-saturated sand blanket of approximately 6,000 square miles in area, and that the percolation into Grand Prairie, both vertically and laterally, will continue indefinitely and from a practically unlimited supply. The rate of recharge, however, from the surrounding beds has not yet been determined."

"Continued study of the water situation in Grand Prairie for several years to come is recommended in order that a check be kept on the ground water situation there."

Dr. Branner pointed out that construction of surface reservoirs to irrigate approximately 8,000 acres has demonstrated that surface water can be impounded and used more economically than it can be obtained from deep wells.

# Report Should Help Section.

Joseph Morrison, Stuttgart city attorney, and secretary of a special committee seeking to have the ban on farm loans withdrawn, said he believed the report would be of assistance in getting the engineer appraisal department of the Federal Land bank to change its position.

He said Mr. Kelly, the engineer-appraiser, at an open meeting in February, declined to agree for the bank that a new investigation and report would be acceptable. He added that he received a letter yesterday in which Mr. Kelley wrote that he now is willing to consider the new report and other evidence to show that farm loans would not be endangered by lack of water.



## SURVEY FAILS TO LIFT LENDING BAN

Federal Land Bank's Decision  
Unaltered by Branner  
Report.

Stuttgart, May 4.—A telegram from W. A. Kelly of the Federal Land Bank at St. Louis, saying that the Branner survey of the underground water supply of this section "does not change our conclusion" that loans should not be made by the bank to farmers of the Grand Prairie, was received here today, and plans were being made tonight to send a delegation to Washington in an attempt to lift the ban on lending.

"It is more imperative now than ever that we go straight to Washington to present our case before President Roosevelt," said Joe Morrison, who received Kelly's telegram.

Kelly's reason for continuation of the ban was that "he (Branner) analyzes the water supply for the project as a whole and does not consider local or community conditions."

Dr. Branner's report said that the underground water supply at its present rate of depletion would last 94 years of economic production.

Morrison late today's message in that "I am not in advance what the report of Dr. G. C. Branner, national president of the American Society of Geologists, who was so conscientious in his devotion to truth that he almost leaned over backwards, means nothing to you, what does?"

"In Stuttgart meeting you condemned the community as a whole. You now refuse to accept Branner's report showing the community as a whole has an adequate water supply."

"We shall appeal directly to President Roosevelt and find out which is the more important, to sustain your unfounded prejudices or save hundreds of farms of rice growers."

### THE NEW JERUSALEM OF OUR PUBLIC AFFAIRS.

In the Boeuf spillway troubles of Desha and Chicot county property owners and the ban on federal loans in the Stuttgart rice section Arkansas has two situations which throw light on the reverse side of centralized government, with its inevitable bureaucracy.

Spokesmen for Desha and Chicot counties have already gone to the national capital to lay their case before the federal authorities. And after the Federal Land Bank at St. Louis had refused to change its position, in spite of the report of the Arkansas state geologist, Dr. G. C. Branner, on the sufficiency of the underground water supply for rice irrigation, plans were made to send a delegation of Stuttgart people to Washington in an attempt to get the difficulty straightened out.

Arkansas citizens have had a lot of "going straight to Washington" to do since the various emergency programs have been in force. They would have a lot more if the federal government entered upon the permanent support or aid of the public schools.

This increasing centralizing of government has another effect. It takes more of the time and labor of senators and representatives at Washington for local affairs in their states and districts. As it is, there is probably no senator or congressman who could not spend his whole time attending to the affairs of his constituents without ever setting foot in the Senate or the House of Representatives.

The more we trade control of state and local affairs for federal money, the more difficulty we shall have in making our needs and problems and emergencies understood at Washington, the more we shall have to attend upon and plead with officials at Washington. This centralizing process is a silent revolution which is changing the whole character of American government.

### A MATTER OF PLAIN JUSTICE TO SPILLWAY LANDOWNERS.

Having crossed the river from Arkansas to Mississippi in their semi-annual inspection tour, the members of the Mississippi River Commission heard W. A. Percy, a leading attorney of Greenville, say that residents of his section favor the Boeuf spillway feature of the Jadwin flood control plan.

Naturally, on the Mississippi side of the river, people would favor this proposal to make them safer from floods. They have everything to gain and nothing to lose by a "fuseplug" spillway that would run excess flood waters down through Southeastern Arkansas, reducing the pressure on their main levees and easing back-water problems on the Yazoo.

But Mr. Percy rose above sectional self-interest when he urged that landowners in the spillway area should be paid a fair price for their lands.

The position of Arkansas in this matter can be stated in few words. If the Boeuf spillway is necessary as an emergency outlet for major floods, it should be built. But in justice Arkansas landowners should not be made to suffer financial loss or be kept in in-

Morrison and White said that they did not believe a loan on the Trullinger farm would be made. "Trullinger has been refused twice," Morrison said. They said that Trullinger's application for a loan had been rejected before Kelly had appraised his property, although the refusal said the loan "had been carefully considered."

Charges of further discrimination were made by Rollison, who said the land bank scaled down a loan of 240 acres of tillable land in the southern part of Arkansas county, outside the "condemned" area, to \$3,800. He said he had seen papers closing a loan in Benton county on 350 acres, 100 of which were used for farming. The bank granted \$5,500.

## CHANGES IN RICE PROGRAM SOUGHT

Co-operative Association Of-  
ficials to Submit New Plan  
to Administrators.

Stuttgart, May 22.—Changes in the government rice program which will result in a "growers' program" and not a millers' program are being sought by the American Rice Growers Co-operative Association, Paul W. Daniels, of the Arkansas division of the association, said today.

From a committee of association officials, who are conferring with representatives of the rice section on the proposed hit particularly at the present of discounts on rough rice, the definition of the "customary point of delivery," provisions which "have virtually resulted in fixing rough rice prices at the minimum base price" cost of conversion and lack of grower representation on the rice industry's Control Committee.

"We have drafted a complete outline of our position on every part of the present marketing agreement," the letter stated, "and we have definitely proposed certain changes and amendments to the administration's rice program. These suggestions are being carefully considered by officials of the rice section at the present time."

Upon completion of the new plans, they will be submitted to the industry at a public hearing. It is our understanding that the administration will probably ask for suggestions from both growers and millers as to what the new plan should contain.

"In our arguments we have particularly opposed the present schedule of discounts and we are assured that radical changes will be made. We have insisted upon a change in the definition of the 'customary point of delivery' which at the present requires free delivery of rice to the mill if it is within 25 miles of the mill."

"We have insisted that Sections 1 and 2 of Article IV in the present agreement be eliminated entirely and another plan substituted. These are the previously which virtually resulted in fixing rough rice prices at the minimum base price and have about stopped the movement of rough."

"We are opposing the ridiculously high conversion charges that mill are required to make."

"We are insisting that the Control Committee should be composed of growers as well as millers."

"In addition to the above, there are a number of other points that we are working for, but it is not possible for us to mention them all here. The question of grading is a serious one and it is being given a large part of our time, and we feel quite certain that something can be worked out that will materially relieve the situation."

"We have found a most sympathetic attitude and a complete willingness to work with us in every way possible to change the program in such a way as to reflect a maximum benefit to growers. We made it perfectly plain here that the program to date has been highly unsatisfactory to us."

"We do not believe there is much possibility of immediate action, but everyone in the rice section is working overtime and it is our belief that matters will move much more swiftly than they have in the past."

"Nothing connected with the government apparently ever moves very fast, but in this case it is our opinion that the results, as far as growers are concerned, may be worth waiting on for a reasonable time."

"It has been made very plain to us, following our protests, that in the future we can expect a growers' program and not a millers' program."

## CHANGE IN RICE AGREEMENT SOUGHT

Growers Expected to Back  
Elimination of Process-  
ing Tax.

Stuttgart, May 26.—Hope that the marketing agreement for the Southern rice industry can be re-drafted without imposing a processing tax is expressed in a statement received here today from Thomas S. Plunket, field contact representative of the AAA rice section.

"Discussion of such a tax may present favorable aspects which are somewhat deceptive," Plunket said. "Adoption of the tax as a means to the accomplishment of certain ends which must be accomplished involves the admission that an effective degree of co-operation cannot be obtained in the industry. The Agricultural Adjustment Administration does not believe that such a condition exists in the rice industry."

"In a casual examination, the processing tax appears attractive; however, I do not believe in its application it would be entirely satisfactory to either growers or millers. I hope the elements of the industry will work together under a revised marketing agreement which will make the tax unnecessary."

Asks Growers' Opinions. "The rice section of the Agricultural Adjustment Administration asks the rice growers of the South for expressions as to what shall be incorporated in any marketing agreement which may be suggested for 1934 production control and marketing operations," Plunket quoted Charles G. Miller, rice administrator, as saying.

He said that it will be the policy of the rice section, "insofar as may be found practicable," to offer to the industry for consideration an agreement "based upon what the industry wants." "Suggestions are invited from every interest, particularly individual growers," Plunket said. "When these recommendations have been received and considered, an agreement based upon them will be offered to the industry at a public hearing which will be held in the South. Mr. Miller will be disappointed if he does not receive a general response to this request."

"If they (AAA officials) are right and the growing interests of Arkansas, Texas and Louisiana will unitedly support the rice administration in its efforts to secure fair prices for rough rice it will not be a difficult matter to align the millers on a proposition which will mean the payment of the secretary's price for rough rice and co-operation in the essential production control program."

## GLOVER TRYING TO LIFT LENDING BAN

Makes Sharp Reply to Let-  
ter of Land Bank Com-  
missioner

### GOSS UNSYMPATHETIC

Says Branner Report "Evidently  
Is General Summary of  
Present Conditions"

"There is no reason on earth" why farmers of the Grand Prairie rice region "should be discriminated against for a loan" from the Federal Land Bank of St. Louis, declared Congressman D. D. Glover in a reply to Land Bank Commissioner A. S. Goss' statement that the ban "was based on a careful examination in detail and report by the Water Research branch of the United States Geological Survey."

Commissioner Goss' statement to Congressman Glover, received this afternoon by the Arkansas lawyer, said that "you probably are aware that the action of the Federal Land Bank of St. Louis to

restrict loans to certain areas in the Grand Prairie region where water conditions are favorable, was based on a careful examination in detail and report" of the survey made in the rice territory several years ago.

"Dr. Branner's report, which you mention, and of which we have a copy," Goss said, "evidently is a general summary of the present condition in the Grand Prairie region as a whole and does not attempt to analyze ground water conditions in detail in critical parts of the area. Even if, as Dr. Branner states, the water supply for the project, at a whole may not fail for 94 years, there are several areas where the supply is now seriously depleted and other areas where conditions will become unsatisfactory long before the supply for the entire project fails."

"Correspondence in our files indicates that a number of farmers in the rice region realize the necessity for supplementing the ground water supply and are putting forth efforts to remedy the situation. Dr. Branner, in his report, states that preliminary engineering work has been done on reservoirs to water 40,000 additional acres of rice on Grand Prairie from new reservoirs, some of which may soon be constructed. This work, if successfully completed, should materially aid in improving conditions."

"Please be assured that this administration desires that loans be made to those portions of the Grand Prairie region where it can be done on a sound basis. At the request of a delegation from Stuttgart, a hearing will be held on this subject early next week (June 6)."

Answering the letter, Congressman Glover said:

"I certainly think that the report of Dr. Branner is absolutely correct. There never has been any justification, in my opinion, for an alarm to be made about a shortage of water in the rice territory. As you know, the White river, Arkansas river, Mississippi river and two large bayous practically surround this rice belt. The territory around it is perfectly level and when one goes to the bed of these streams that surround it, which is at a very low depth of just a few feet, that a water supply that is inexhaustible is reached, and there never can be a shortage of water."

"The people in my district, in the rice fields, have become thoroughly convinced that their trouble has been brought about by the engineer-appraiser, Mr. W. A. Kelly, who they think is wholly incorrect in his decision."

"You speak of the forty thousand and addition acres they want to water by irrigation reservoirs. That is true, and they have some of them now in use. The reason they prefer that to the pumping is that it can be watered with reservoirs at about \$2.00 an acre, whereas it costs about four times that amount to pump water on the land. You know that water is not exhausted when it is pumped on the land, it simply stands there in a pond and goes back into the soil and into the streams after it has been used. There is very little evaporation or waste of waters, and it seems to me that this ban should be lifted entirely from loans in the rice fields."

"There is another reason why this decision is wholly unjustifiable, is that these lands are fine and susceptible to almost any other crop that grows in the state. There is no reason on earth why they should be discriminated against for a loan."

"We certainly hope you will immediately remove this restriction from the rice territory and I have every reason to believe that the loans that are made will be as safe as they are on any lands in our state."

"I will be glad to meet with you when the delegation from Arkansas is here to take up the matter."

## THE EVENING STAR.

### Water in Arkansas Rice Area Declared Safe for 94 Years

By the Associated Press.  
LITTLE ROCK, Ark., May 4.—Dr. George C. Branner says Arkansas' rice-producing area has sufficient water supply for at least 94 years, if not indefinitely.

Rice farmers of the area have sought to obtain Federal loans on their lands, but the Federal Land Bank of St. Louis has declined to grant them on the grounds that the water supply was in danger of exhaustion.

Officials believe the State geologist's report will be of assistance in having the ban on loans lifted in the area.

## HEARING FOR RICE GROWERS DELAYED

Delegation Stopped as It Pre-  
pares to Leave for  
Washington.

Stuttgart, May 18.—Just 30 minutes before they were scheduled to leave for Washington to lay before President Roosevelt charges that the Federal Land Bank of St. Louis had discriminated against farmers of Grand Prairie, members of a rice growers' delegation today received a telegram from Land Bank Commissioner Goss saying that the hearing had been postponed until June 6.

Inability of engineer appraisers of the land bank to attend the hearing was given as the reason for the delay. Mr. Goss conferred by telephone this afternoon with Joe Morrison, chairman of a growers' committee sponsoring the movement and a member of the delegation. Others who planned to go to the capital were H. B. Allen Sickle, who directed a recent survey of the rice section's underground water supply, N. J. Rollison and Starley White.

More Charges Heard. Charges that the bank is attempting to quiet a protest against its ban on lending to this territory by "spotting" a few important loans in various parts of the section were heard here today. A representative of the bank, Ross Hanson, who has been here since May 15, disclaimed any connection with "the lending end" of the bank or with W. A. Kelly, engineer-appraiser at whom most of rice growers' charges have been aimed.

Clint Trullinger, well known grower, however, said that Hanson had investigated his water supply and had assured him that a favorable report of his farm would be sent to St. Louis.



# REPORT OF WATER SURVEY

May 1, 1934

Farmers Educational & Cooperative Union of America, Stuttgart, Arkansas. Gentlemen:

In accordance with a request from Governor Futrell, dated February 13th last, that this department undertake an investigation of the groundwater conditions in the rice district of Grand Prairie, for the purpose of determining whether or not the water supply of that area is in danger of exhaustion; and also in accordance with your own request of March 20th that this department undertake an independent review of all facts bearing on that situation, I am enclosing herewith a report setting forth the results of your study.

The study has been undertaken under my direction by Mr. H. B. Allen Sickel, a water supply engineer of thirty years' experience, assisted by Mr. E. Curtis and Mr. A. H. Prince. Mr. Curtis is a water supply engineer, and Mr. Prince has been employed in recent years by the U. S. Geological Survey to measure the water levels in wells in eastern Arkansas. Mr. Prince continued these measurements for us in 1934, and has assisted in compiling data. Two draftsmen and clerical help were furnished for a period of four weeks.

This study was made possible by funds contributed by the CWA of Arkansas, the Federal Land Bank of St. Louis, the Farmers Union of Arkansas County, and the Arkansas Geological Survey.

The report is intended primarily to continue the interpretation of information made available by the U. S. Geological Survey, and set forth in the U. S. Department of the Interior Press Release of 1931, "Groundwater Supplies for Rice Irrigation in the Grand Prairie Region, Arkansas." This press release covered the period 1928-1929 only, and the present report continues the interpretation from 1930 up to and including the spring of 1934. Field data for the period from 1930 to 1933 inclusive, was furnished by the U. S. Geological Survey.

In view of the fact that the Department of the Interior Press Release of 1931 only carried its investigation through 1929, an effort has also been made to review certain tentative findings set out therein, and to suggest certain modifications which, in view of the later information now available, appear to be justified.

The report is as follows:

## I. Basic Statistics and Conclusions Therefrom

Basic statistics for the years 1928 to 1933 inclusive, relative to the area in the Grand Prairie region, concerning acreage irrigated by pumping, rainfall, and estimated water pumped from wells, have been assembled and are set forth in the following table:

Table 1

Year	Estimated area irrigated by pumping a*	Local rainfall June to August inc. (in.) c*	Estimated quantity water pumped (basis 1.5 acre foot per acre)
1929	128,540	5.54	192,800
1930	140,960	2.56	211,400
1931	146,330	12.19	219,500
1932	132,730	10.24	199,100
1933	122,105 b*	9.31	183,200

a\* According to preliminary estimate compiled by the State Committee of the Rice Acreage Control under the AAA.

b\* Estimated 8,000 acres watered by surface reservoirs and canals and wells on Little Prairie, has been deducted.

c\* According to U. S. Weather Bureau, Stuttgart Station.

Inasmuch as the water level in certain wells drilled near White River and Bayou Meto are shown in field data collected by the U. S. Geological Survey to be definitely affected by their proximity to these streams, the records from these wells were eliminated and new calculations made accordingly. The following table sets forth the net average loss of head for the years 1929 to 1933 inclusive, after making the eliminations.

Table 2

Year	No. Wells in which readings were taken (Fall)	Average draw-down (ft.)	No. wells in which readings were taken (Spring)	Average recharge (ft.)	Net average loss of head (ft.)
1929	101	4.27	75	3.12	1.12
1930	91	5.04	78	3.71	1.00
1931	86	3.21	79	2.95	.26
1932	72	3.25	79	2.24	.36
1933	75	1.73	70	1.56	.14

Combining essential figures of Tables 1 and 2, for the purpose of comparison, we have:

Table 3

Year	Estimated acre feet pumped	Rainfall in inches	Net average loss of head (ft.)
1929	192,800	5.54	1.12
1930	211,400	2.56	1.00
1931	219,500	12.19	.26
1932	199,100	10.24	.36
1933	183,200	9.31	.14

The fact that the local rainfall for the year 1929 and 1930 was much below the 40-year average rainfall (11.28") would account for the relatively heavy loss of head during those two years.

In considering the average loss of head in wells in Grand Prairie, the fact should be kept in mind that the average depth of the water in the water-saturated sands in that area was about 75 feet in 1929. This figure is based on the assumption that the average elevation of the water in 118 key wells was 149.82 feet above sea level in 1929, and that the average elevation of the bottom of the water-bearing beds is about 75 feet. Since the average loss of head for the period 1929 to 1933 inclusive, was only 7.22 inches, and since the loss of head from 1931 to 1933 inclusive, was only 3.07 inches, such losses of head may, therefore, be considered to be comparatively negligible. The 5-year average loss corresponds with an estimated average annual consumption of 201,200 acre feet which is 26,200 acre feet above the safe yield estimated in the U. S. Department of the Interior Press Release of 1931.

It should be further noted that the average rainfall during this 5-year period was 7.95 inches, which is 3.33 inches below the 40-year period average of 11.28 inches.

Assuming that but 75 per cent of the height of the groundwater in the wells is available for economic pumping, then a yearly average draw-down of 7.22 inches would be 1.06 per cent of the available supply, and such supply would be sufficient to last for 94 years, assuming the 40-year average rainfall, and not taking into consideration the probable increased production due to the usual development of a steeper water level gradient adjacent to the wells as water is withdrawn.

The formation of the steeper gradient referred to, with the consequent increase in flow, is becoming an increasingly important factor in the relatively low pressure area of Grand Prairie described in the U. S. Department of the Interior Press Release of 1931.

In this connection, it should be added that the assumption made in the U. S. Department of the Interior Press Release of 1931, that the average loss of head in any major portion of Grand Prairie averaged 1.5 feet per year over any considerable period prior to 1928, is probably one which is open to serious question. Early records were taken in such a manner that little reliance can be placed in them, perhaps the safest policy, therefore, is either to disregard them or to use them with due caution.

## II. Certain Factors Affecting The Present Water Consumption From Wells In Grand Prairie

1. The groundwater consumption has already been materially affected by the use of surface reservoirs. In 1933, approximately 8,000 acres of rice on Grand Prairie were irrigated from canals and surface reservoirs. This was 6.5 per cent of the acreage under cultivation during that year. Preliminary engineering work has been done in reservoirs to water 40,000 additional acres of rice on Grand Prairie from new reservoirs, some of which may soon be constructed. The justification for reservoir installation lies in the fact that it has been found that these reservoirs constitute much the cheapest known source of water for rice irrigation, irrespective of past or future pumping conditions in Grand Prairie.

2. The groundwater demand in Grand Prairie will doubtless be materially affected by the plan of the Federal Government to control rice acreage under the AAA. The acreage which the farmer voluntarily binds himself to plant in 1934 will be .80 per cent of his 5-year average during the years 1929 to 1933 inclusive. This should reduce the water consumption on Grand Prairie from 201,200 acre feet to 161,000 acre feet, estimated on the basis of an annual consumption of 1.5 acre feet per acre cultivated.

## III. Factors Affecting The Availability of Groundwater in Certain Areas in Grand Prairie

Three factors which did not affect the pumping situation in early years are now affecting groundwater recoveries in Grand Prairie. These are (1) the use of recent-type gravel wall well construction in wells in the fine-sand areas, (2) the use of several shallow small-capacity wells in place of one deep well in fine-sand areas, and (3) the successful drilling of deep wells into the Tertiary beds.

(1) The use of improved gravel wall well construction has resulted in substantial increases in water production in wells which have been drilled in areas in which sand porosities have been so low that water production has been seriously limited. The utilization of this construction has resulted in substantial improvement in water production in such areas. Wells drilled in a fine-sand area of approximately 4 miles in length and 3 miles in width located about 13 miles south of Stuttgart, and containing secs. 34, 35, and 36, T. 3 S. R. 5 W., and secs. 1, 2, 3, 10, 11, 12, 13, and 14, T. 4 S. R. 5 W., are cases in point.

(2) By installing a number of shallow, low-capacity wells, spaced to prevent one well from affecting another, a larger total quantity of water is being removed with a lesser draw-down per well than has been possible when one large-capacity well has been used to water the same area.

(3) A few deep wells have been drilled into the Tertiary beds since 1930. The cost of these has not been substantially greater than that of wells which were drilled into the Pleistocene beds prior to 1930. The static head of these deep wells has not changed materially since their installation and certain of them were drilled as much as 10 years ago. The safe yield of these deeper beds, however, is not known. The recent utilization of non-corrosive tubing and strainers has eliminated failures due to the corrosion of these elements.

## V. Summary And Conclusions

The safe annual yield of groundwater from the Pleistocene beds of Grand Prairie apparently approximates the estimate of 175,000 acre feet, which was made in the U. S. Department of the Interior Press Release of 1931. It, therefore, seems reasonable to conclude that, so long as the consumption does not increase substantially above that figure, there will be little possibility of the exhaustion of the groundwater supply in Grand Prairie, or of lowering the average head to a point at which pumping is not economical. Several factors are now causing a reduction of the groundwater consumption in Grand Prairie and these may reasonably be expected to prevent any dangerous increase above 175,000 acre feet per year.

It should also be kept in mind that the source from which the water supply in Grand Prairie is derived is part of a water-saturated sand blanket of approximately 6,000 square miles in area, and that the percolation into Grand Prairie, both vertically and laterally, will continue indefinitely and from a practically unlimited supply. The rate of recharge, however, from the surrounding beds has not yet been determined.

Continued study of the water situation in Grand Prairie for several years to come is recommended in order that a check be kept on the groundwater situation there.

Respectfully submitted,

George C. Branner,  
State Geologist

## U. S. DECLINES TO DISTRIBUTE RICE

Growers Association Declares It Is Treated Unfairly in Relief Program.

Special to the Gazette.

Stuttgart, May 12.—Charges that poor distribution of rice during April and decreased usage of the product resulted in part from the government program of distributing surplus farm commodities to the destitute are contained in a letter sent today by the Arkansas Rice Growers Co-operative Association to its members.

"It is our understanding that the distribution of a good many other food items is disappointing—the same as rice—and which can be accounted for, to a certain extent at least, to the fact that the government bought up and distributed large amounts of surplus food items such as pork," the letter states. "Repeated efforts were made to induce them to include rice, but without results. The relief policy of the administration is commendable, but certainly we think it unfair and unjust to favor some food items and neglect others."

### April Distribution Low.

Pointing out exceptionally low distribution for April, the letter says:

"The amount of rice distributed, according to the Rice Millers Association, for the month of April was 436,129 pockets and for April a year ago 1,101,619 pockets. Distribution to date for the season is 6,267,166 pockets and for the same period last season 7,841,531 pockets. Receipts of rough rice in April were 191,376 barrels and for the

same month last season 1,032,473 barrels. Stocks of rough in mills' hands as of May 1 were 664,001 and for the same time last season 760,000 barrels. Stocks of clean were 1,549,331 and for the same period last season 1,073,106 pockets.

"It is estimated that stocks of rough rice in farmers' hands as of May 1 were 460,000 barrels as compared to 740,000 a year ago. Thirty-seven thousand barrels of the amount was in Arkansas.

"Shipments so far this season to Puerto Rico total 1,744,000 pockets, which is 70,000 less than at the same time last season. Stocks on hand in Puerto Rico are 358,000 as compared to 350,000 pockets a year ago. Shipments for export to April 22 were 569,045 pockets as compared to 872,386 pockets one year ago.

"The per capita consumption of rice in the United States for the past five years has been from 5.30 low point to 6.13 high point. The greater consumption was last season. In tabulating the amount of rice consumed last season shipments from the mill were taken into consideration, and which probably accounts for the heavier-than-normal consumption figure. The distribution for both March and April last season was better than a million pockets each month and the succeeding months were about normal. No doubt a good part of the heavier receipts for the months of March and April last season were carried into the new season and which accounts for the low distribution for this season."

## RICE DELEGATION OFF FOR CAPITAL

Will Seek to Lift Lending Ban on Farms of Grand Prairie Sector.

Special to the Gazette.

Stuttgart, June 2.—Although they have no appointment with officials at Washington, members of a rice growers' delegation will leave tomorrow for the capital to attempt to lift a lending ban placed on this section by the Federal Land Bank of St. Louis.

Joe Morrison, chairman of the group, said today that a hearing set by Land Bank Commissioner Goss for June 6 had been postponed, supposedly because Department of Agriculture engineers had been sent to the drought-stricken West. Mr. Morrison said he did not know what connection the engineers would have with the hearing.

### To Travel Economically.

The delegation, composed of Morrison, H. B. Allen Sickel, N. J. Rollison and Starley White, plans to obtain a hearing if they have to remain in Washington all summer, it was said. They will travel in White's automobile and visit his relatives at the capital, thus saving a considerable amount of the fund rice growers provided for their expenses.

"We will stay until we get a hearing or until our money runs out," Morrison declared.

If the attempt to lift the ban fails, Morrison said, many farms in this territory will be foreclosed.

Decision to go to the capital was reached by the delegation after two proposed hearings had been postponed. The delegation will allege discrimination by the Land bank in its refusal to make loans to farmers of the prairie. It will charge that the bank never has taken into consideration dry crop values and that various actions show the ill faith of W. A. Kelly, engineer-appraiser, who is blamed for the ban, regarding this part of Arkansas.

It has been charged that Kelly is attempting to justify his own position in the matter and that he has made no effort to find reason for lifting the ban, based on the contention that the water supply of the area is inadequate. The bank recently turned down a survey conducted by Dr. George Branner of the state Geological Survey, who said the supply was sufficient to meet the requirements of this section for at least 94 years.

The delegation will make every effort to obtain a decision at Washington. Aid of Congressmen D. D. Glover and John Miller and Senator Hattie W. Caraway has been enlisted.

## IRRIGATION PROJECT PLANS PROGRESSING

Sponsor of \$1,500,000 Undertaking Appears Confident of Success.

Special to the Gazette.

Stuttgart, June 2.—Possibility that a \$1,500,000 irrigation project for Grand Prairie will be approved at Washington appears more favorable now than at any other time, Mike McCuing of Stuttgart, one of its sponsors, said today.

Statements and letters received by McCuing make it apparent, he said, that outsiders have taken an interest in the project and that final action will be rushed.

Answering a request of officials at Washington, McCuing recently submitted a brief showing details of the plan and pointing out its probable benefits. Additional information about the water supply of this section will be given in Washington by a rice farmers' delegation soon.

McCuing estimates the cost of the project at \$1,500,000. It would be built in two parts, the first to cost about \$500,000 and the second twice that amount. They would be joined by a canal system.



## EXPECTS LIFTING OF BAN ON RICE LOANS

Banker Says Water Survey to Aid Farmers of Grand Prairie.

Special to the Gazette.

Stuttgart, June 21.—Paul R. McCoy, president of the Peoples National bank, today joined others in this section in the belief that a third survey of the Grand Prairie underground water supply, promised by Land Bank Commissioner Albert S. Goss, will result in lifting the ban placed by the Federal Land Bank of St. Louis on lending to this territory.

Rumor that a petition will be circulated in the prairie section, asking removal of W. A. Kelly as engineer-appraiser for the land bank, was heard here today. Kelly has been criticized by McCoy because he would not consider dry-crop values in the event

the growing of rice should become impractical.

"We will have the land bank loans here as soon as the federal survey is completed," McCoy said.

In the promised survey and the possible lifting of the ban is seen the culmination of a long fight by farmers of this section to obtain mortgage relief.

### Ban Placed in 1931.

The Land Bank ban was placed on the territory in 1931, resulting from a government survey which revealed gradual depletion of the prairie's underground water supply.

A recent survey, conducted under direction of Dr. George C. Branner, state geologist, indicated that this section has sufficient underground water to grow rice for 100 years.

A delegation composed of Joe Morrison, Starley White, H. B. Allen Sickel and N. J. Rollison, recently laid before farm administration officials in Washington data to show that the acreage planted to rice under the government control program will be decreased by at least 20 per cent, that the depletion of the upper stratum of the underground water supply does not indicate that the entire supply is endangered, that a dependable supplementary supply can be provided at any

time by reservoirs and that the fertility of the soil makes dry crop farming profitable.

On the basis of these claims, Commissioner Goss promised a third survey.

Morrison said following the Washington hearing, that Goss appeared to be favorably impressed by the information placed before him and predicted that the ban will be lifted.

## Loan Area in Rice Section Is Extended

Land Bank Says Water Problem in Some Districts Serious.

St. Louis, Dec. 5.—The area approved for land bank and commissioner's loans has been extended in the Grand Prairie rice regions centering around Stuttgart, Arkansas, according to an announcement made today by the Federal Land Bank of St. Louis.

The announcement said that the Farm Credit Administration and the Federal Land Bank of St. Louis have given every consideration and made every possible study in an effort to obtain the facts and to be of service to the Grand Prairie region. To be certain of the fairness of their stand in the making of loans in this area, the Farm Credit Administration and the Federal Land Bank caused an independent survey to be made by the best engineering talent obtainable. On the basis of the information thus obtained, together with that already developed through experience in the area, and from local sources, the region in which applications for loans may be submitted has been further extended.

A portion of the approved area is eligible for either land bank or commissioner's loans or both while a part is eligible for commissioner's loans only. The term of the loans will vary from 10 to 20 years depending on the water hazard and whether the loans are made by the Land Bank or the commissioner.

In some cases in the approved areas where there is a question of water supply or condition of equipment, it will probably be necessary for the Federal Land Bank to make tests and measurements to learn if loans can safely be made.

### Says Water Supply Ebbing.

In a few areas of the Grand Prairie region it is still doubtful if either land bank or commissioner's loans can be made due to the serious water hazard. The best information obtainable indicates that there has been a decided and definite lowering of the water table, which, if continued at the present rate, will cause the wells to begin to dry within a few years.

The land owners in this area can, no doubt, obtain at reasonable expense a satisfactory supplemental water supply which will not only be for their own protection but will enable the land bank and commissioner to give more favorable consideration to the areas which may be excluded.

Complete information and instructions regarding the extension of the loaning area has been furnished secretary-treasurers of national farm loan associations and direct loan correspondents of the Land Bank commissioner in the Grand Prairie region. These men will furnish additional information to those interested. They are: N. J. Rollison, secretary-treasurer, Arkansas County National Farm Loan Association, DeWitt; W. P. Fletcher Jr., direct loan correspondent, Lonoke; P. A. Smith, secretary-treasurer, Central Arkansas National Farm Loan Association, 408 National building, Pine Bluff; Robert Meurer, secretary-treasurer, Pulaski National Farm Loan Association, courthouse, Little Rock; F. F. Harrelson, secretary-treasurer, Four County National Farm Loan Association, Forrest City; John L. Daggett, secretary-treasurer, Marianna National Farm Loan Association, Marianna; A. P. Strother, secretary-treasurer, White County National Farm Loan Association, Searcy.

### Survey Showed Supply Ample.

George C. Branner, state geologist, who made a survey of the water supply condition in the Grand Prairie rice section, said today the approval of this area for loans by the Farm Credit Administration and the Federal Land Bank of St. Louis bore out the findings of his survey.

Mr. Branner's survey, requested by the Farmers' Educational and Cooperative Union and Governor Futrell, showed that the water supply in this territory would last 94 years based on the average rainfall for the past 40 years and the present annual water consumption. When the present water supply in the area is taken into count, Mr. Branner said, the annual shrinkage of 7.22 inches is not alarming.

## MORE RICE AREAS OPEN FOR LOANS

Federal Agencies Loosen Up Restrictions on Grand Prairie Section.

TELL OF WATER HAZARD

Announcement Says It Is Doubtful if Federal Credit Can Be Extended in Some Sections.

St. Louis, Mo., Dec. 5.—(AP)—The Farm Credit Administration and the Federal Land Bank of St. Louis have approved for loans additional areas in the Grand Prairie rice section of Arkansas with the length and amount to depend on the water hazard.

The bank today announced approval of the additional area where loans had been withheld due to what was feared was a diminishing water supply. Water is essential to rice production.

The Land Bank's announcement said the land owners in the Arkansas rice section can obtain at reasonable expense a satisfactory supplemental water supply which will be for their own protection and will enable the bank and commissioner to give more favorable consideration to the areas which may be excluded.

### A Few Areas Excluded.

The bank announced that in a few areas of the Grand Prairie region, it is doubtful if either Land Bank or commissioner's loans can be made because of the serious water hazard. The announcement said the best information obtainable indicates that there has been a decided lowering of the water table, which if continued, will cause the wells to begin to go dry within a few years.

Commissioner's loans will be available for some of the area opened to loans today while other parts will be open to Land Bank loans and some of it open to both types, to be made from a period of from 10 to 20 years. The bank said it will be necessary in some cases for it to make its own tests to determine availability of water for a long period.

Prospective borrowers were referred by the bank to the following agents of either the land bank or commissioner: N. J. Rollison, DeWitt; W. P. Fletcher Jr., Lonoke; P. A. Smith, Pine Bluff; Robert Meurer, Little Rock; F. F. Harrelson, Forrest City; John L. Daggett, Marianna, and A. P. Strother, Searcy.

## Arkansas Rice Belt Has Won After Long Struggle.

Special to the Gazette.

Stuttgart, Dec. 5.—Lifting of the ban on federal farm loans to the Grand Prairie section today brought to an end long and tedious negotiations in which growers, millers, bankers, business men and others interested in the rice industry joined with their representatives at Washington in an effort to disprove the theory that the area did not provide adequate security for loans.

The ban, restricting federal financing of dry crops as well as rice, was placed in effect several years ago following a survey of the section by engineers who reported that the underground water supply of the rice territory was not sufficient to provide adequate irrigation for rice in the future.

A movement to disprove this contention was started and continued until several weeks ago when representatives of the Farm Credit Administration at Washington and the Federal Land Bank of St. Louis came to the Grand Prairie region to investigate.

A survey of the underground water supply was conducted under the direction of Dr. George C. Branner, state geologist. Actively in charge of the field work was H. B. Allen Sickel, who has drilled hundreds of irrigation wells in Arkansas, other states and Canada. Dr. Branner announced at the conclusion of the survey that there was sufficient water under the prairie to irrigate rice for nearly 100 years. Funds for the survey were supplied by the Arkansas County Farmers Union and various individuals.

Joe Morrison, Stuttgart city attorney, and N. J. Rollison of DeWitt, secretary and treasurer of the Arkansas County National Farm Loan Association, were leaders in the movement in the county.

Decision to reopen the section to loans did not remove all restrictions. In certain districts it may be necessary for farmers to obtain adequate supplemental water supplies, which can be provided by reservoirs. Some growers will be restricted to land bank commissioner's loans while a majority will be entitled to borrow from the Federal Land Bank of St. Louis.

Full effect of today's decision to remove lending restrictions will not be felt here until after farmers begin financing their 1935 crops.

## Proposal for Rice Irrigation Reservoir Revived.

Special to the Gazette.

Stuttgart, June 13.—The Public Works Administration has agreed to reconsider an application for a loan of \$1,568,000 to build a rice irrigation reservoir northwest of Stuttgart, an official of the Farmers Water and Irrigation Company, a corporation set up to operate the reservoir system, announced today. An application for funds had been rejected previously.

The PWA made two stipulations. These are removal of as much of the speculative aspect of the project as possible and evidence that there will be sufficient business to justify the system.

Sixty farmers yesterday had signified willingness to be served by the company. They represent 7,605 of the 25,000 acres the company wants pledged before sending a representative to Washington. The project is designed to provide water for a maximum of 40,000 acres.

The company officials said the organization hoped to obtain between \$1,000,000 and \$1,100,000 from the PWA and to secure the remainder through "other methods of financing."

An estimated two years would be required for completion of the project. The reservoir would trap the main waters of Bayou Meto and create a large lake from which canals would lead to various parts of the rice territory. A pumping plant would send water into the main canal at a rate of about 400,000 gallons a minute.

The company hopes to provide water at a cost equal to the value of one fourth of the farmer's rice crops, provided the charge is not over \$9 an acre a year. The minimum charge would be \$5 an acre. Present irrigation costs are from \$10 to \$15 an acre.

The proposed project is one of several all backed by the company, sought for the Arkansas rice region. More than \$2,000,000 would be required to build all.

## WALLACE DECLARES BIG RICE SURPLUS

Action Probably Means U. S. Will Buy 500,000 Pockets for Relief.

Special to the Gazette.

Stuttgart, July 28.—Secretary of Agriculture Wallace today declared a 500,000 pocket surplus in the Southern rice industry, paving the way for removal of that amount of rice by the FERA in purchases for relief.

Informed of the secretary's action late this afternoon, the Arkansas Rice Growers Association immediately dispatched a telegram to the FERA asking the administration's consideration of a proposal that it buy part or all of the surplus.

J. E. Tull of the association said he previously had received word from the FERA that the administration planned to buy a quantity of rice "if a surplus is declared in the industry." Rice men here interpreted declaration of a surplus as a message from the government that it will buy rice.

Relief of the stagnant market by government purchase of rice would pave the way for setting of the 1934 rough rice parity (under the new marketing agreement, there is no clean rice parity). In addition, purchase for relief would assure growers of a higher price this year than last—they hope for from \$1 to \$1.25 a bushel—to counteract the 20 per cent reduction in acreage.

Most favored of all Arkansas crops, the reduced acreage of rice this year promises the highest yield in several years. Timely rains have contributed to the crops' excellence. Approximately half an inch of rain fell in the Stuttgart vicinity yesterday and today.

## SURVEY OF GRAND PRAIRIE STARTED

United States Department of Agriculture to Investigate Water Supply.

Special to the Gazette.

Stuttgart, July 7.—United States Department of Agriculture engineers, at the request of Land Bank Commissioner Albert S. Goss, this afternoon began a survey of the Grand Prairie underground water supply to determine if it is sufficient to provide irrigation for rice over many years. Whether the Federal Land Bank of St. Louis will lift its ban on lending to farmers of this territory on the basis of rice crop values depends on the survey.

If the survey reveals the supply inadequate for future irrigation, another Department of Agriculture survey will be made to gather data relative to dry crop values of the territory. Commissioner Goss told members of a delegation which recently went from here to Washington in an effort to lift the bank's ban.

B. S. Clayton, hydraulic engineer of West Palm Beach, Fla., and P. A. Ewing of Berkeley, Cal., an irrigation economist, arrived today to begin the survey, the third to be made in this section.

The ban was ordered as a result of a survey report by W. A. Kelly, engineer-appraiser of the land bank, which said that the water supply would be depleted to such an extent within four or five years that irrigation no longer would be feasible. A recent check of the area, made under direction of Dr. George C. Branner, state geologist, brought a statement from Dr. Branner that there is enough water under the prairie to provide economical irrigation for nearly 100 years. Because the two reports conflicted sharply, Commissioner Goss ordered the survey which began today.

Members of the delegation told Commissioner Goss that the upper stratum of the prairie has not been endangered, that the "deep well" stratum has been practically untouched, that the dry crop values of the section are high in comparison with those of other areas and that reservoirs could be constructed to provide a dependable supplementary water supply if necessary.

Sponsors of the move today urged farmers of the prairie to place at the disposal of the engineers all information they have regarding the water supply.



## TELLS LIMITATIONS OF HYDRO POWER

Engineer Discusses Its Place  
in Production of Electricity  
in Arkansas.

Hydroelectric power sites in Arkansas and their relative place in the development of electric power facilities are discussed by C. S. Lynch, chief engineer for the Arkansas Power and Light Company, in an article prepared at the request of the state Planning Board.

In view of the nature of Arkansas streams, only about 15 per cent of the state's total electrical development can be of the hydroelectric type without building up a power production cost so high as to make that power unsaleable, Mr. Lynch said.

"Arkansas has two hydroelectric plants with a capacity above 10,000 horsepower," he explained. "The larger one is the Carpenter hydroelectric station, located on the Ouachita river near Hot Springs, and the other is the Rammel hydroelectric station, 10 miles lower. Although their installed capacity is more than 10 times that amount, there is only 8,300 horsepower which is usable at all times. Though the two dams are equivalent to a water fall 140 feet high, the Ouachita is not a large river and its flow is erratic. When there is plenty of water there is plenty of power. When the river falls, the power decreases.

### Compared With a Cook.

"If one hired a temperamental cook at a very cheap rate, and had to pay her every week, whether she worked or not, and if she showed up for work only when it was raining, her services would be very unsatisfactory after a week of dry weather. Hydro plants are just like that. Some days they are so full of pep you just can't hold them down, and on others they won't do a thing. These lazy days cover nearly half the time."

Following the comparison, Mr. Lynch said that when the cook fails to show up the household does not declare a holiday on eating. If the members do not know how to cook, the baker and the canned goods supply are pressed into service, and the consumer incurs additional expense, he said.

"When the hydro takes a day off, our steam plants become our baker and canned goods supply and are pressed into service," he continued. "Owning and operating these plants also costs more money.

"All of this being true, you will wonder why we say that we have built and hope to build more hydro plants. Under proper conditions hydro plants produce cheaper power than steam.

Going back to our cook problems, if you knew today while the cook is on the job that she would be absent tomorrow, you could have her cook enough to last for a few days. Our cooked food supply is water held in the lakes. It is a source of ready power for use in emergencies and is more quickly available than steam power, because the steam plant must begin heating up hours before the need for the power actually arises."

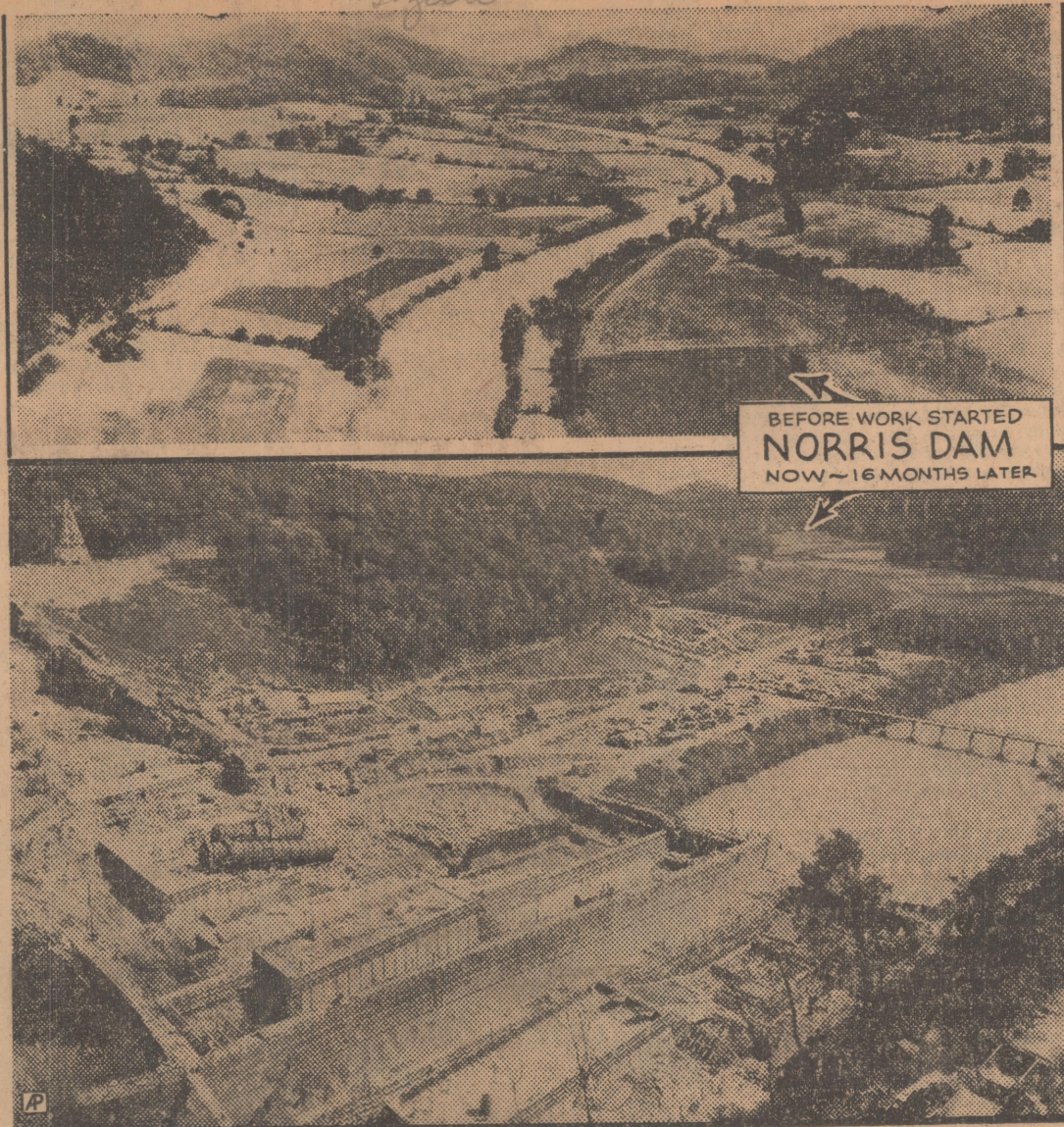
### Hydroelectric vs. Steam Power.

Water power possibilities in Arkansas offer only two methods of economical development under specified loading conditions, Mr. Lynch said. The first is to find some type of industry that can afford to operate in times of abundant rainfall and remain idle the rest of the year. This seems impractical.

The other is to establish a definite ratio between use of hydro plants and steam plants, based on the history and variance of load demands, and to follow it in mapping future power development for the state. A capacity of 364,700 kilowatts is available in Arkansas, Mr. Lynch added, but the load for the territory must increase to 10 times its present size before such a capacity can be absorbed.

"Growth of the use of electricity in the past 15 years in Arkansas has been tremendous," he said. "Potential use of power cannot be predicted with accuracy, since some invention may change the whole picture so far as domestic use is concerned. Industrial power usage is even harder to predict. Our future industrial development largely is in our own hands, and our future is going to be largely what we, as a people, have the energy and ambition to make it."

## Tennessee Valley Development Project Shows Great Advances in 16 Months' Constructive Work



The approximate site of the Norris dam on the Clinch river in east Tennessee is shown above as it looked 16 months ago, before the Tennessee Valley Authority started work on this big barrier. Below is a recent photograph of the dam showing the work that has been done. When completed, it will impound 2,550,000 acre-feet of water. President Roosevelt is expected to view this project on his trip south this month.

By ROY E. HUTCHENS.

Norris, Tenn.—(AP)—When President Roosevelt visits the Tennessee valley the middle of November he will see great strides made to bring true his dream of conservation and development of the Tennessee river drainage basin.

Eighteen months ago he named the Tennessee Valley Authority, a board of three members, to carry out the project.

Cheap electric power was to play a big part in the scheme to develop a program for the social and economic betterment of the valley and the authority set out to establish a "yardstick" to determine the relative cost of private and

public power operation.

The authority's power program so far has met with partial success.

### Oil Lamps Displaced.

Today giant turbines of the long-idle Wilson dam at Muscle Shoals are generating electricity which is flowing into homes and factories in rural sections and towns near the dam.

The towns of Tupelo, Miss., and Athens, Ala., are getting Muscle Shoals power at about half the former rates. The use of electricity has more than doubled in these two towns. Corinth, Miss., and nine counties in northeastern Mississippi also are getting TVA power.

The authority recently turned power into 68 rural lines serving 300 farm-

homes and 100 village homes in Lauderdale county which formerly were lighted by oil lamps.

### 200 Towns Want TVA Power.

More than 200 cities and towns in the Muscle Shoals area have applied for TVA power. Memphis, Tenn., largest city of the group, will vote soon on issuing bonds for a municipal distribution system served by government-generated electricity.

The authority's power program has been challenged in the courts and before the utility commissions of Alabama and Tennessee by ice and coal dealers and preferred stockholders of power companies.

Their actions have delayed the sale

to the TVA of \$2,200,000 worth of Alabama Power Company's properties in northern Alabama. A suit in federal court has delayed the sale of the Tennessee Public Service Company's properties in Knoxville to the TVA, which planned to turn it over to that city for operation.

### TVA Employs 12,000.

More than 12,000 people are now employed on TVA projects. The Norris dam, costing \$34,000,000, is being built on the Clinch river in east Tennessee. When completed, it will impound 2,550,000 acre-feet of water to flow southward to supplement Wilson dam on the Tennessee river.

Nearby the TVA has virtually completed its model town of Norris. Nearly 300 brick, stone and frame houses and 30 apartment houses have been built and are occupied by families of workmen and engineers.

### To Make Fertilizer.

Rapid strides are being made on the Joe Wheeler dam which will span the Tennessee river 15 miles above Muscle Shoals, augmenting the power at Wilson dam.

Sometime in November the first electric furnace for the production of phosphoric acid will be placed in operation at Muscle Shoals. This will be used in the manufacture of fertilizer.

## RICE AREA GETTING LOANS

Governor Commends Allen Sickel For  
Water Survey.

August 8, 1935.

Mr. H. B. Allen Sickel,  
De Valls Bluff, Arkansas.

Dear Mr. Sickel:

My attention has just been attracted by an article appearing in the Stuttgart Arkansawyer, in which the statement is made, over Mr. Neimeyer's signature, who is general agent of FCA for this district, that thirty-six land bank loans have been closed in Arkansas County, and that the agency has loaned \$236,900.00 in the Arkansas Rice area this year.

This calls to my memory the fight that was being made by Dr. M. F. Dickinson, President of the Arkansas Farmers' Union, last year to have this area opened for loans, the Federal Land Bank having placed restrictions upon much of the best rice land in Arkansas, because their engineer-appraisers had reported the underground water levels rapidly sinking.

When my attention was called to this matter I communicated with Dr. Branner, State Geologist, who with a committee of the Arkansas Farmers' Union proceeded to gather data to present to the Farm Credit Administration in Washington. You were appointed by Dr. Branner to make a survey of the water supply of that territory. Your report was clear and concise and I am told that you very ably defended this report in a personal appearance before the Farm Loan Commissioner and his appraisal department in Washington.

It seems only fitting that your splendid work on this occasion should be commended, and I am addressing you this letter to express, on behalf of the rice growers of Arkansas, and of this office, my appreciation of the result attained through your able investigation. Your knowledge of this subject matter by reason of your lifetime work in the development of large quantities of water from underground sources, and your ten years of experience developing rice wells in the Grand Prairie territory, especially fitted you for this, and gave you prestige in Washington that enabled you to convince the authorities there that they had been in error in their previous policy. Beyond any question, you are entitled to much credit for the fact that over a quarter of a million dollars has been loaned in this district by the Federal Land Bank this year.

Yours very truly,  
J. M. FUTRELL,  
Governor of Arkansas.





Group Picture Taken at the Joint Meeting of the Arkansas and Oklahoma Water and Sewage Conferences at Fayetteville, Ark.

## ARKANSAS AND OKLAHOMA GROUPS HOLD SUCCESSFUL JOINT MEETING

Two Associations Meet Together  
at Fayetteville, Ark., With Large  
Attendance—Important Papers Read

THE joint meeting of the Fifth Arkansas Water and Sewage Conference and the Tenth Oklahoma Water and Sewage Works Conference held in Fayetteville, April 16-18, was the most successful yet held in Arkansas. Among the papers scheduled were the following:

"Proposed Fort Smith Water Supply—Plans and Problems," by W. H. Vaughn; "Service and Discrimination," by Lloyd M. Rebsamen; "Responsibility of Municipal and Privately Owned Water Plants for Supplying Infected Water" by Edward R. Stapley; "Survey of Water and Sewage Situation in Oklahoma," by H. J. Darcey; "Survey of Water and Sewage Situation in Arkansas," by M. Z. Bair; "First Aid Demonstration," by J. E. Hymal; "Soil Conservation and Water Control as the First Step in Flood Control," by N. E. Winters. Symposium on Wells.—"Geological Formations Suitable for Well Supplies," by C. N. Gould; "Ground Water Conditions in Arkansas," by George C. Branner; "Supervision and Logs of Wells in Missouri," by H. S. McQueen; "Deep Well Equipment," by Arthur Collins; "Contamination of Well Water Supplies," by E. W. Boyce; "Water Softening," by Lawrence Cecil; "Rate Making," by W. N. Gladson; "Recent Developments in Water Treatment," by E. W. Boyce; "Bacteriological and Microscopic Tests," by A. B. Jewell; "Chemical Analyses and Tests," by O. M. Smith. Laboratory Demonstration and Tests, participated in by members of Conference, in charge of Harrison Hale, O. M. Smith, and A. H. Ullrich. "Recent Development in Sewage Treatment and Mechanical Equipment for Sewage Treatment," by LeRoy H. Scott; "Explanation of New Federal Works Program," by Phillip S. Donnell; "Demonstration of Chlorination Equipment," by E. W. Schouten.

The papers were of an unusually high order and the interest and discussions were unusually good. Attendance approached one hundred, well divided between the two states, though not all of these registered.

The two papers by Dr. E. W. Boyce, State Sanitary Engineer of Kansas, were features of the program, as was the illustrated paper of H. S. McQueen, Assistant State Geologist from Rolla, Missouri.

The Arkansas Group elected these officers: Chairman, Henry E. Nunn, Superintendent Water District, Van Buren; Vice-Chairman, A. H. Ullrich, Chemist and Purification Engineer, Fort Smith; Secretary, Harrison Hale, Head of Chemistry Department, University of Arkansas, Fayetteville; Executive Committee, W. R. Spencer, Professor of Civil Engineering, University of Arkansas, Fayetteville; Fletcher Thompson, Superintendent, Clarksville; M. H. Phillips, Superintendent, Paragould. Oklahoma will select officers later.

Among those present were the following:

W. F. Anderson, Superintendent, Tulsa, Okla., Water Dept.  
M. Z. Bair, Sanitary Engineer, State Board of Health, Little Rock, Ark.

Aldeen Baker, Superintendent, Municipal Light & Power Plant, Osceola, Ark.  
Chas. Barry, Badger Meter Mfg. Co., Guthrie, Okla.  
Leon Bennett, Superintendent of Water Plant, Holdenville, Okla.  
E. E. Bonewets, Consulting Engineer, Little Rock, Ark.  
Earrest Boyce, Engineer, State Board of Health, Lawrence, Kan.  
S. E. Campbell, Booneville, Ark.  
D. G. Carter, College of Agriculture, University of Arkansas, Fayetteville  
Lawrence K. Cecil, Sales Engr., International Filter Co., Tulsa, Okla.  
J. E. Chism, Superintendent, Water Plant, Broken Arrow, Okla.  
Ed Chouteau, Jr., City Manager, Nowata, Okla.  
M. Cunningham, Collector, City Water Co., Fayetteville, Ark.  
Percy Daniels, Superintendent, Perry, Okla., Water & Light Department  
H. J. Darcey, State Sanitary Engineer, Oklahoma City, Okla.  
W. A. Dardon, O. C. & E. Co., Oklahoma City, Okla.  
R. N. Dills, Arkhola Sand & Gravel Co., Fort Smith, Ark.  
E. M. Evans, Superintendent of Utilities, Fairview, Okla.  
John H. Gardiner, District Engineer, U. S. Geological Survey, Fort Smith, Ark.  
C. J. Gilmore, Mayor, Wagoner, Okla.  
W. N. Gladson, Dean, College of Engineering, University of Arkansas, Fayetteville  
O. Goings, Water Superintendent, Nowata, Okla.  
Dr. Chas. N. Gould, Geology Dept., University of Oklahoma, Norman  
W. S. Grimes, Engineer, Broken Arrow, Okla., Water Co.  
Dr. Harrison Hale, Head, Chemistry Department, University of Arkansas, Fayetteville  
E. E. Harnden, Associate Professor of Bacteriology, A & M. College, Stillwater, Okla.  
D. Harris, Superintendent, Prague, Okla., Light & Water Co.  
O. T. Henlett, Bookkeeper, City of Tulsa Water Co.  
W. R. Holway, Consulting Engineer, Tulsa, Okla.  
Leslie A. Jackson, Assistant Superintendent, Arkansas Water Co., Little Rock  
M. W. Johnson, Arkhola Sand & Gravel Co., Fort Smith, Ark.  
A. P. Jones, Louisiana Chemical Co., Fort Worth, Texas  
L. W. Kibler, Field Representative, Oklahoma Municipal League, Oklahoma City  
E. V. Leverett, Superintendent, Conway, Ark., Water Plant  
Ancel Love, Superintendent, City Water Plant, Ardmore, Okla.  
H. P. Matthew, Fayetteville, Ark.  
Alvin Mayhan, Superintendent of Filtration, Arkansas Water Co., Little Rock  
Opal McLemore, Operator, City Water Plant, State Sanitorium, Ark.  
H. S. McQueen, Assistant State Geologist, Rolla, Missouri  
Henry E. Nunn, Superintendent, Water District, Van Buren, Ark.  
Geo. E. Page, Barada & Page, Inc., Kansas City, Mo.  
M. H. Phillips, Superintendent, Water Works, Paragould, Ark.  
Fred Puckhaber, Wallace & Tiernan Co., Inc., Dallas, Texas  
E. M. Ratliff, Superintendent, City Water Plant, Fayetteville, Ark.  
Lloyd M. Rebsamen, Manager, City Water & Light Plant, Jonesboro, Ark.  
James R. Rhyne, Little Rock, Ark.  
H. C. Sandlin, Superintendent, Wagoner, Okla., Water Co.  
E. W. Schouten, District Manager, Wallace & Tiernan Co., Oklahoma City  
L. H. Scott, Filtration Engineer, Oklahoma City  
Egmont S. Smith, Manager, Neptune Meter Co., Dallas, Tex.  
Otto M. Smith, Chemistry Dept., Oklahoma A. & M. College, Stillwater  
W. R. Spencer, College of Engineering, University of Arkansas, Fayetteville  
Edward R. Stapley, Associate Professor of Civil Engineering, Stillwater, Okla.  
Jas. K. Steel, Superintendent, Sewer Department, Tulsa, Okla.  
R. W. Steinman, Superintendent, Water Department, Beggs, Okla.  
V. E. Stockton, Operator, Stillwater, Okla., Water Co.  
Geo. D. Suter, Chief Engineer, Arkansas Fire Prevention Bureau, Little Rock, Ark.  
A. E. Thain, Water Commissioner, City Water Co., Neosho, Mo.  
Fletcher Thompson, Plant Operator, Clarksville, Ark., Light & Water Co.

## Rice Irrigation Survey Proposed

Democrat 10-8-36

L. A. Henry, engineer for the state planning board, returned today from a conference in Vicksburg, Miss., with Gerald H. Matthes, water consultant for the National Resources committee in the Mississippi Valley area, and it was disclosed that consideration is being given to a recommendation which, if approved, will result in an extensive study of irrigation problems in the rice section of the state and the need for a general rehabilitation project for drainage facilities in the Mississippi Valley.

It is expected that Mr. Matthes will submit his recommendations to the national committee within the

next few weeks and the two surveys, if they are approved, will require about a year to complete. Recommendations following the suggested surveys could be incorporated into the six-year planning program of public projects on which the national committee is working.

While in Vicksburg, Mr. Henry inspected the government laboratory where miniature rivers have been constructed to scale for important rivers and harbors to permit a study of conditions which cause floods, and to aid engineers in perfecting plans which will effectively control floods.

## Increase in Rice Acreage Outstanding

Democrat 11-12-36  
Industry Develops Rapidly in Northeastern Counties.

Jonesboro — Wastelands and fertile cut-over areas in the Cache and White river bottoms in northeast Arkansas are being rapidly developed into productive rice fields in a movement which agricultural leaders say may result in a gradual shift of the rice belt from the Stuttgart vicinity to include this section. As evidence of the statement, surveys show that rice acreage in northeast Arkansas has more than doubled in the past two years. The past season saw the greatest increase in rice acreage in this area that has ever been recorded.

The greatest increase in rice acreage is seen in Jackson county, near Newport. Three years ago only small fields of rice were seen in that vicinity. In the year 1934 the acreage began to expand, and in 1935, growers cultivated more than 4,300 acres. This year the acreage practically doubled in the greatest increase shown in any locality of the state. Farmers declare that the soil is ideal for the cultivation of rice and that they are able to realize more income from the new crop than from cotton or any other one crop.

In the Weiner and Otwell areas near Jonesboro, a 20 per cent increase in acreage is seen. Rice cultivation has been carried on extensively in this section for a number of years, but had declined slightly until about two years ago. The sharp increase points to cultivation of new lands, formerly in timber.

A new field of rice production is opening near Cherry Valley and Hickory Ridge. Scrub timber is being cleared away to make way for rice cultivation.

Huge tracts of wastelands near Brinkley are being converted into fertile rice grounds as growers move into new territory. Some of the lands are covered with stumps and scrub timber, but these are being cleared off rapidly. The level lands make it possible for irrigation to be carried on at low cost.

Large purchases of lands are being made throughout the Cache river valley, even extending up into Lawrence county. Since much of this land is cut-over areas, owners are faced with rather difficult tasks in developing the territory into productive rice fields, but the work is progressing. Wastelands and cut-over sections are obtained for sums ranging from \$5 to \$15 per acre with some farms being homesteaded, while others are purchased from the state land office.

The new impetus being given rice production in northeast Arkansas is said to be due to the higher water level here. Well drillers here state that the water level in both the Cache and White river bottoms is only a few feet down, and is considerably higher than in the Stuttgart area. With the level sinking 18 inches each year in southeast Arkansas, growers declare that their irrigation costs have mounted to extremely high figures in the past few years.

Jesse King, veteran Jonesboro

well driller, said more new irrigation wells had been drilled in this season in the area near here than in several years. Other well drillers here and at other points in this section state they have done more work in drilling new wells this year than ever before.

Growers said the intensively hot summer during the past season was ideal for the production of a bumper crop, but heavy yields, comparable to the one this year, are not expected every season. However, the rotation of crops will do much toward producing good yields each year.

Most of the increased acreage in this immediate vicinity is in territory where growers cleared new tracts and placed them into cultivation. As more new land is cleared, the fields will be rotated to keep up the fertility.

### INCORPORATION MATTERS.

The Lost Island Reservoir Company of Stuttgart filed articles of incorporation in the secretary of state's office yesterday, and named Al G. Meehan of Stuttgart as resident agent. The filing showed authorized capital stock of \$50,000 and Paul R. McCoy and R. J. Diekhoff of Stuttgart and Joseph J. McGee and John B. Gage of Kansas City, Mo. as subscribers. 4-2-37



# Water Power Waiting to Go to Work

By  
Tom  
Shiras

White River and Its Tributaries Could Furnish  
533,694 Horsepower, Engineers Have Deter-  
mined. Why This Has Not Been Utilized  
Is a Two-Sided Question.

*Sunday, March 8 - 1936*

Close your eyes and draw a mental picture of 533,694 horses hitched abreast, stretching across the state from Rector, in Clay county on the east, to Rogers, in Benton county, on the west, with a driver sitting on top of Bull mountain, in Marion county, holding the reins. You get some idea of the enormous amount of water power now going to waste in the White river and its tributaries.

If these horses were standing on a treadmill that turned one big shaft, every industry in three states could tie on to it and it would turn their wheels, if the driver would say "Gidap."

Horse power is the yard stick of industrial development. Employed horse power means more manufactured goods, more raw material moved to the factories, more labor, better and larger markets for the farmer and a bigger volume of business in all lines of trade.

If Arkansas could employ all of its idle horse power today, it would be the richest and most active state in the South, and one of the richest in the nation. In its vast amount of raw materials of all kinds it has plenty of work for this horse power to do. All it seems to lack is the word to go, "Gidap."

Idle horse power becomes irritated standing corralled in a stable. About once a year it stampedes. Then, 533,694 horse power goes ripping and roaring out of the mountains, tearing and washing out fields, fences, trees, destroying farms and buildings, killing live stock and sometimes people, winding up with a loss that runs into millions. It seems rather ridiculous to let this uncontrolled horse power trample all over us every 12 months when we could harness it and make it work for us.

What could it do for us if we put the harness on it and snapped the tugs onto the doubletrees? A large part of it we could run down in south Arkansas, and make it turn the wheels on 20 new paper mills, which would bring millions of new revenue into that section of the state. There are 40 or 50 square miles of young, mountain pines reaching from Heber Springs to Leslie, suitable for paper making material, and it could be made to turn the wheels of several mills there.

Little Rock is on the edge of the largest known deposit of bauxite in the United States. This power could supply not only the necessary heat for reduction plants, but could turn the wheels of several enormous chemical plants that use bauxite for raw material. The additional horse power that Little Rock would consume in the manufacture of raw material that lies at its doors would double its population and multiply its wealth many, many times.

Coming east from Little Rock, into White and Jackson counties, it could remove that eternal fear of flood from the hearts of the citizens, and put thousands of acres of idle overflow land into cultivation. It could pump the water for the rice fields, give additional light and power to the rural sections, and turn the wheels of numerous new manufacturing plants that would follow in its wake.

North of Newport, in the upper White river valley, it could be put to work quarrying and finishing marble, quarrying limestone, quarrying and milling glass sand, mining manganese, turning the wheels of chemical plants that use man-

ganese as raw material, mining phosphate rock and making a finished product of it. In the zinc and lead counties it could be put to work mining and milling ore, recovering the metal from the ore, turning the wheels of chemical plants that use these metals as raw material.

In fact, not only in the White river valley, but in all sections of the state it could be put to work turning wheels and every new wheel that turned would mean new dollars.

The first question a person naturally asks is: "Why in the world don't they harness this horse power?" The next one they ask, after more mature reflection, is: "Are you sure this tremendous amount of horse power is there?"

The reason this horse power hasn't been developed is because it will take the neat little sum of approximately \$75,000,000 to get the harness on, and the tugs snapped to the doubletrees on all of it. Among those men in whose hands this development lies are two groups. One group is very conservative and cautious, saying, "We will develop it when we have a market for it and can sell it." The more liberal group says: "Let's develop it. If we haven't got it for sale we can't sell it." That's the answer. What would you do if it was your money that was to be spent?

"Are you sure this tremendous amount of water power that they say is in White river, is there?"

To answer this question one has to use a few more words and run back over the last 30 years.

In the first place, water power is not a new power to the Arkansas Ozarks or the upper White river valley. For half a century it was employed to grind corn and gin cotton with. This power was developed in small units, mostly on the creeks and smaller streams, although there were several plants on the Big Northfork and the two prongs of the Buffalo river.

This power was developed by three kinds of wheels. The overshot wheel, which is a wheel anywhere from 12 to 20 feet in diameter, and from two to four feet wide. Power was developed on this wheel by allowing the water from the millrace to fall on it from above.

The undershot wheel was smaller, with broad blades that set in the race and were turned by the water running against and through them.

Another type, not generally used, was the turbine, a small round wheel with blades, lying flat at the bottom of a spillway, the power being developed from the water rushing down and against it.

Water mills, as they were termed, were very common until 20 years ago. The gaso-



An early water-wheel type of power plant in the Ozarks.

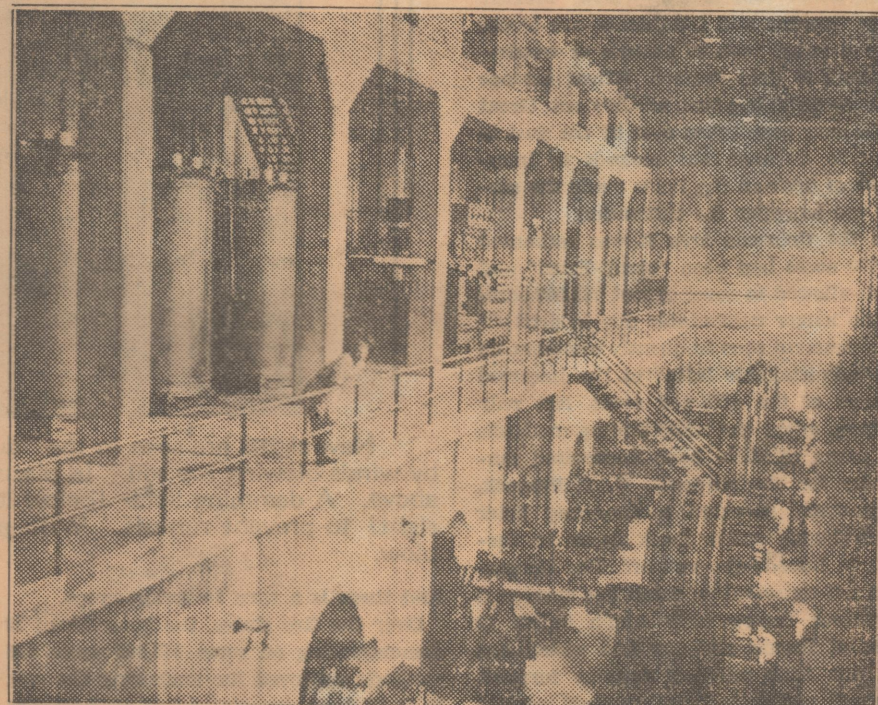
line and oil engines put them out of business.

The first survey looking toward the development of water power on an extensive scale was made by Capt. Charles Le Vasseur and George De Bergen, on Buffalo river, near the mouth of Rush creek, early in 1900. It is a very feasible project, but has never been developed. This one project, if developed, would develop the entire North Arkansas zinc and lead field.

The survey that gave the first broad, comprehensive picture of the magnitude of the water power resources of the White and its tributaries, was made by the Geo-

logical Survey of Arkansas, in co-operation with the United States Geological Survey. A. H. Purdue was state geologist at that time. The field work was done by W. N. Gladson, dean of the College of Engineering of the University of Arkansas. Dean Gladson was assisted by students.

This survey covered White river, from the Missouri line to the mouth of the Buffalo river; the Buffalo river from its extreme upper reaches to the mouth, and the Northfork from Smith's ferry to its mouth.



Battery of generators in the hydro-electric plant on the White river near Forsyth, Mo., the only hydro-electric plant on White river.

The average horse power found on the White river was 295,407; on the Buffalo, 209,126, and on the Northfork 29,161. This survey covered only 17 miles of the Northfork river, however, and much more power could be developed above Smith's ferry.

The survey was started in 1909 and completed in 1910. The report was published

in 1911 and addressed to Gov. George Donaghey, John N. Tilman, president of the university, and Fred H. Phillips, commissioner of mines, manufactures and agriculture.

Shortly after the survey was completed, Walker V. Powell, who assisted in the construction of the White River Division of the Missouri Pacific, organized the Dixie Power Company, which proposed to build a hydro-electric plant at Wild Cat shoals, above Cotter, on White river. At that time it was necessary to have a bill passed by Congress giving a company a permit to build a dam in a navigable stream. In

1912 Congress passed a bill giving the Dixie Power Company the right to build the dam, but President Taft vetoed it. That veto was a real blow to the people of the upper White river valley, for they had expected so much from the development. Gifford Pinchot was directly responsible for the veto. He was the leader of the conservation forces at that time, and protested against the government giving away the people's property. The company tried again and again to have another bill passed, but did not succeed.

When the general water power act was passed by Congress in 1919, the Dixie Power Company was given the first license issued by the Water Power Commission. This company then made another survey of that section of the river between the Missouri line and Wild Cat shoals and found that they had a really wonderful project.

The Dixie Power Company was not in position at that time to finance construction of the dam. It gave the North American Company an option on it, which they did not exercise. Later the project was taken over by the White River Power Company, a subsidiary of the Electric Power and Light, which now holds the license. To date they have expended approximately \$1,000,000 in surveys, soundings and in the purchase of the Dixie Power Company's stock.

With the known water power in White river and its tributaries, in the Red river with its several prongs, in the upper Ouachita and in hundreds of creeks in the mountain section, Arkansas has a potential water power that runs close to a million average horse power. No matter who develops this power, it is the state's greatest asset, for it insures its industrial and agricultural development.

## Rice New Industry In Brinkley Area 9/20/1936

Special to the Gazette. *9-20-36*  
Brinkley, Sept. 19.—Rice farming near Brinkley is one of Brinkley's most encouraging industries. Introduced for the first time in the Brinkley territory this season, it has surpassed the expectations. For years rice growing has been the principal crop in nearby counties, including the Grand Prairie counties and St. Francis county. This year A. N. Gibbs and his son, George Gibbs, purchased 160 acres of practically virgin soil about four miles southeast of Brinkley, about a quarter of a mile from Highway No. 70, and planted the entire field in rice. Rice growers and implement dealers report it one of the most bountiful crops they have ever seen. Approximately 100 bushels per acre will be harvested.

**Await Threshing.**  
The early prolific variety has been planted on the Gibbs farm. The rice has been cut and shocked, the brown mounds of rice may be seen drying in the field until time is ripe for threshing. Mr. Gibbs said that more than six pounds of twine were required per acre to tie the rice bundles before it could be shocked. Threshing got under way on the farm this week.

Many features of the soil near Brinkley are conducive to rice farming. The land farmed by the Gibbs's has lain dormant for a number of years and a part of it had to be cleared of timber before the rice was planted. The land is level but drainage is also adequate for rice farming.

**New Soil Aid.**  
Although there is an added expense to farming new soil it has many advantages. After several years of planting rice on one tract of land it becomes necessary to let the land "rest" or plant some legume as a cover crop. This is the only way that a soil conservation program can be carried out as fertilizers are not used in rice growing. Another thing in favor of the soil is that it is free of harmful grasses that grow in some sections of the state.

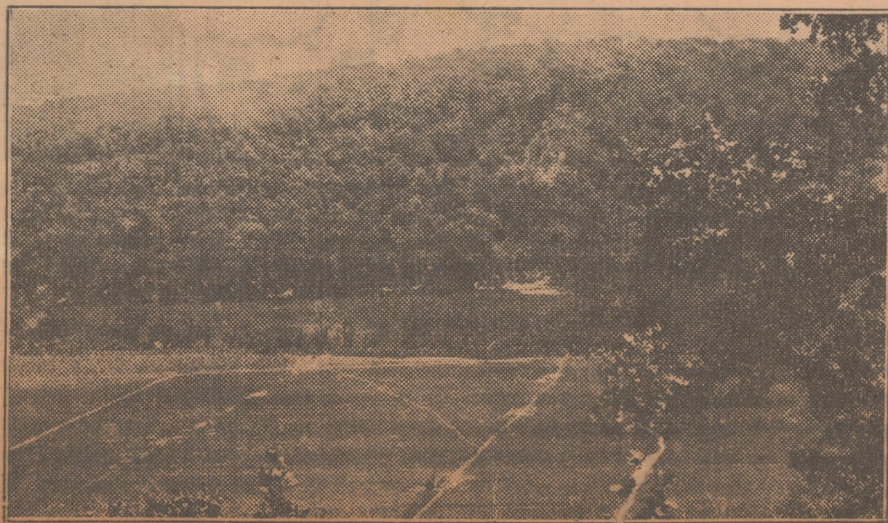
**Water Big Factor.**  
"Water is, of course, one of the biggest factors in the growing of rice," Mr. Gibbs said. "Irrigation plays the major part in the expense of rice production. The water pump on this farm is the regular pump used on the average rice farm. It pumps approximately 1,800 gallons of water a minute. Since it is necessary to keep the fields flooded from the first appearance of the rice plant until the plant is matured, covering a period of several months, many gallons of water are needed. A 45-foot well was dug which has a water lift of 21 feet. This section has an excellent water condition with shallow wells filling the requirements and cutting the expense of pumping to a minimum. The cost of pumping the water on this field averaged about \$3.50 per acre. More water was required this season because of the unusually high temperature. Hot weather does not injure rice but because of the lack of rainfall more moisture had to be furnished through irrigation."

**Only Three Rice Farms.**  
There are only three other rice farms in Monroe county. Harold and William Gibbs have a 165-acre farm about 10 miles south of Brinkley. P. W. Meachan of Monroe planted an 80-acre tract in rice this season and the Grizzle brothers have a farm in the extreme southern part of the county.

More than 1,000 acres have been purchased for rice farming in the Brinkley territory for next year and the work of preparing the soil and surveying for the levees has been started. A. N. Gibbs will double his acreage next year. He has bought the old Hampton farm on the road between Brinkley and Clarendon. The Fuller brothers of Almyra have bought about 400 acres and the Grizzle brothers of Wheatley have purchased about 200 acres in the same section.

**Other Markets Used.**  
Since there is no mill in Brinkley the farmers find a market for their rice in Stuttgart or Memphis. Although the acreage has been increased over last year buyers say there is not an overproduction since the mills show a smaller amount of rice on hand than they have had in several years. This is supposed to be a vacation tour, but every time the king was supposed to be a vacation tour, but every time he visited an "awakening of interest" was produced. Consumers have no trouble in disposing of their rice at a continued fair price during the season.

The Gibbs's have been engaged in rice farming for many years. A. N. Gibbs



Wildcat shoals dam site near Cotter on upper White river



## Power Line to Span Mississippi at Memphis Planned.

Memphis, Dec. 13.—(P)—The Commercial Appeal says a \$250,000 power transmission line across the Mississippi river near Memphis is planned by the Memphis Power and Light Company to hook up with the Arkansas Power and Light Company lines at Wynoka, Ark., as an emergency interchange or feeder line between the two companies.

An application for permission to span the river with a 110,000 volt capacity system consisting of six cables with a minimum clearance above high water of 75 feet has been made by the Memphis company to the United States engineers office here and is subject to the approval of the chief of engineers and the president of the Mississippi River Commission, the paper says.

The proposed line will enable an interchange of power for emergency purposes or during peak load periods between the two states.

## Power Company Building Line To Rice Fields Near Jonesboro.

Special to the Gazette. 2-17-31  
Jonesboro, Feb. 18.—The Arkansas Power and Light Company is building about 25 miles of new high voltage

power line to several rice wells in Craighead county. This line will be built from existing lines in the Weiner rice fields and will start three miles north of Weiner and extend up the new Jonesboro-Weiner highway to Gilkerson, thence west 37 miles.

## To Extend Power Service Into Western Arkansas.

Chicago, Dec. 13.—(P)—James C. Kennedy, president of the Central and Southwest Utilities Company, announced today completion of a 52-mile extension to serve the coal mining section of western Arkansas and eastern Oklahoma. An interconnection will tie in the Weleetka (Okla.) generating station of the Public Service Company of Oklahoma, a central and southwest subsidiary.

To the Editor of the Democrat:

I thought you would do it just as soon as the utilities told you to do so—you know what I am talking about, the stand you are taking against the public schools of the state in favor of the utilities—but I did not think you would stoop so low into the deep dregs of degradation as to sponsor the resolution and pass it through the Press Association condemning the effort to force the utilities to pay their just portion of the taxes to support the public schools. But now I know you, and brother, from here out I am on your hump. Your advantage in the matter of publicity through the columns of your subsidized paper will not stand you in hand for very long.

I think you know that your statements that consumers will have to pay the tax proposed in my initiated bill is pure bunk. Proof that your statements along that line are false—Why are the utilities now sending out to the country weeklies copies of it and offering to pay for its publication? Why would the Arkansas Power and Light Company be so much interested if it would not cost them anything?—Just as they told me before I put section five into the bill. But after I said in section five that they were prohibited from passing it to the consumer, their gangs of lobbyists swarmed into the state house like a swarm of bees around a molasses mill in the fall of the year. Why? Because they knew they were making too much net earnings, according to their own statement with the Arkansas Tax Commission, so that they could not pass the tax to the consumer if it was prohibited. Some of the best tax lawyers in the state know this and so state. Yet you, a daily newspaper, are perfectly willing to bow down into the dust at the feet of your god and master, the utilities, and are perfectly willing for them to crush the future of the state by refusing to help force the utilities, the most powerful influence for evil in the nation today, to pay their just portion of the taxes—a thing they are not now doing—to keep the school house doors open. You say, "But yes, that is alright if what you say is true, but I don't believe it." Look up the records, "ole feller," and see for yourself, if you know how and are so inclined. But I don't think you want to know the truth. If that is so, then just stand idly by and watch the movement grow and see your pets made the major issue in the coming gubernatorial and senatorial races this summer. And when that happens and they are decisively beaten, as they have been in every state where that has been the major issue—For instance Senator Norris of Nebraska, who beat not only the Democratic nominee, but the

Old Guard of his own party because he took the power issue to the people. The same is true of Senators Walsh and Wheeler of Montana, both Democrats, of Governor Pinchot of Pennsylvania, Governor and Senator LaFollette of Wisconsin, Governor Roosevelt of New York and many others. So, Arkansas Democrat, do not get too excited, for the battle is on. If you want to you can enlist on the side of decency and right and help to educate the children of the state that the citizenship of the future will be better fitted for life and the state as a whole will be better for it.

H. B. THORN,  
Representative from  
Poinsett County.

## BROTHER THORN WAXETH WROTH.

Representative H. B. Thorn, of Poinsett county, sponsor of the bill providing for a tax on public utilities to raise money for the schools, believes that the Arkansas Press Association and the Arkansas Democrat have sold out to Mammon lock, stock and barrel. Because the state editors and the Democrat have seen fit to express an honest conviction opposing his measure, he declares we are "willing to bow down into the dust at the feet of your god and master, the utilities."

Furthermore, Brother Thorn says he believes that we "know that the statements that consumers will have to pay the tax proposed in my initiated bill is pure bunk" and he adds this clinching question: "Why are the utilities now sending out to the country weeklies copies of it and offering to pay for its publication?"

Even in the face of Mr. Thorn's expletives, adjectives and profanity—which we cut out of his letter—the Arkansas Democrat remains unconvinced that he has proven anything save that he cannot control his temper. His charge that we sponsored the resolution adopted by the press association is too ridiculous to notice. That we are bowing down "into the dust" at the feet of the utilities—Well, that is typical of demagogic arguments arrayed in behalf of his measure.

When Mr. Thorn's measure was before the legislature—which also seemed to have bowed down into the dust, for it voted against him—the Democrat opposed such a tax, declaring its belief that the people and not the utilities would do the paying. We cited the constitutional right of utilities to earn a fair return on their money and reminded proponents of the measure that utilities, as well as individuals, enjoyed the protection of the constitution. But all of these facts are swept aside by "Section Five" of the Poinsett solon's bill, hence, we should ignore them.

Brother Thorn says "some of the best tax lawyers in the state" say the utilities cannot pass the tax along to the consumer, under his bill, and it can as easily be said that "some of the best tax lawyers in the state" believe just the opposite.

Mr. Thorn refers to our "advantage in the matter of publicity." The columns of the Democrat belong to the people. It welcomes discussion of public questions so long as the writers of letters are courteous, but it does believe that logic and not calumny should be the only weapon in debate.

## THORN IN DEFENSE OF UTILITIES TAX

### Charges Power Association Employees Inspired Press Association Action.

Special to the Gazette

Harrisburg, Jan. 29.—Representative Thorn, who is seeking to initiate a bill to tax utilities for the benefit of the schools, today issued a statement concerning the recent action of the Arkansas Press Association in adopting a resolution condemning his proposal. Mr. Thorn contends that the action was inspired by employees of the Arkansas Power and Light Company, which he declares to be guilty of various unfair tactics.

Mr. Thorn's statement follows: "Certainly those who engineered the adoption of a resolution by the Arkansas Press Association, at its recent midwinter meeting, condemning the Thorn bill to tax utilities for the benefit of the public schools, did not have all the facts before them. It is quite evident that they acted solely upon the presentation made by official representatives of the power interests, aided and abetted by certain editors who are, or have been, stockholders in the Arkansas Power and Light Company. These men are powerful in the ranks of Arkansas editors, and on most questions, are fair minded and public spirited. That they are successful is evident by their having surplus funds to invest in power company stock.

"The daily press stressed the action of the Press Association in condemning the Thorn bill, without going into detail as to how a mere handful of the association's membership caused its adoption. No mention of the fact was made that A. G. Whidden, press agent of the Arkansas Power and Light Company, and personal representative of H. C. Couch; J. C. Carter of the Arkansas Industries Association, and Earle W. Hodges, public relations counsel for Cities Service, all were granted the privilege of the floor, and most of their time was consumed in an attack on the Thorn bill. C. E. Palmer, promoter of a newspaper syndicate, also spoke. Other editors attended the meeting for the first time, though they have been for some years members of the association, and were loud in their denunciation of the Thorn bill. So vociferous were they that it might be reasoned why. It would seem that they had been encouraged to attend in a deliberate effort to sway the association. Who could be interested in such action, I leave to conjecture.

Mr. Whidden Criticized.

"Mr. Whidden stressed the taxes already being paid by the Arkansas Light and Power Company, devoted quite a bit of his talk to a personal eulogy of his boss, and insisted that the company had already reduced rates. Mr. Whidden failed to state, when telling of the millions that Harvey C. Couch had caused to be invested in Arkansas, that such action had not been taken from patriotic motives, or that Mr. Couch had received no financial return upon the investment. Arkansas appreciates what Mr. Couch has done for it, and we hope that Mr. Couch also appreciates what Arkansas has done for him. He has not neglected to make the most of the opportunity.

"A lot was said about the Thorn bill being unconstitutional and a confiscation of property. The stock intimation that the federal courts will either pass the tax on to the consumer, or throw the bill out entirely, was much in evidence. Those who presented this claim neglected to state that the ruling of the United States courts which permits utility corporations to make a fair return on their products, requires proof to support the claims of the corporation, and it has set replacement value as the basis for computation. Replacement today does not mean what it did two, three or a dozen years ago. The utilities now will have to show that their incomes are not adequate to pay the stipulated dividend, which will be difficult with rates as high as they have been, and replacement down to about one-half. It is my contention that the state will be able to show that the utilities are receiving quite a generous surplus over the amount necessary to pay the set return, and it is from this surplus the tax can be paid—not from an additional charge to the consumer. It is, anyway, a proposition to be settled on fact, and not on legal conjecture.

No Deviation From Present System.

"One question that ill advisedly came before the meeting, the utilities would just as soon have seen omitted. It was pointed out that the Thorn bill would have quite a following among the rural people, as the cities and towns would pay the tax, and while the country people paid nothing, they would receive a large part of the tax money. Those who made the suggestion advanced the idea that some sort of an educational campaign should be conducted among the rural citizens to keep them from taking advantage of the city residents. All I can say is that it has always been the policy of the strong to protect the weak, and it is the theory of all that every child in the state shall be afforded educational facilities. Nine-tenths of the present school funds are paid by the urban property owners, and the tax implied by the Thorn bill does not deviate from the present and accepted system of taxation. This argument would suggest that the cities would not seriously oppose the Thorn bill if the cities alone received the tax. This is a poor argu-

ment to make in a state that is three-fourths rural.

"But the power representatives state that they are not concerned about the tax, since they can so easily pass it on, yet they exert every possible energy to prevent the Thorn bill receiving a fair consideration. Efforts of the utilities to prevent the Thorn bill being actually submitted to the voters, are frenzied. It is evident they do not care to have their accounts viewed in court, or give the people a chance to see whether or not they are being overcharged for utilities.

"Bo' Carter, of the Arkansas Industries Association, suggested that the farmers of Arkansas should build Arkansas industrially, and thereby increase their return agriculturally. He offers a remote and fantastical hope for relief, to replace a tangible solution of the rural school problem. He cannot take himself seriously, or expect the farmers to see the logic in his suggestion.

"When will the power trust and its satellites cease their efforts to take undue advantage of the masses through such tactics as their brazen effort in the recent press meeting? When will they become constructive and join with the rank and file of Arkansas tax payers, and propose something that will actually finance the schools of Arkansas, instead of stubbornly opposing everything that is offered? They can't hang back always, for such tactics will eventually bring the whole house down."

## ANSWERS CRITIC OF PRESS ASSOCIATION

### H. M. Jackson Explains Opposition to Tax on Utilities Incomes.

Special to the Gazette.

Marianna, Feb. 1.—H. M. Jackson, editor of the Marianna Courier-Index, who at the midwinter meeting of the Arkansas Press Association in Little Rock January 16, introduced a resolution opposing the proposed tax on incomes of public utilities sponsored by Representative Harvey Thorn, today issued a statement replying to Mr. Thorn's recent criticism of the Press Association.

Mr. Jackson's statement follows:

In Saturday's Gazette Hon. Harvey Thorn, representative from Poinsett county in the General Assembly, author of the so-called Thorn bill to levy a special privilege tax of three per cent on the gross income of public utilities in Arkansas, takes the members of the Arkansas Press Association to task for passing a resolution in opposition to the proposed bill at the midwinter meeting of the association, held in Little Rock on Saturday, January 16.

Of course Mr. Thorn has a perfect right to dissent from the action of the newspaper men, but he should not indulge in intemperate criticism unless he is sure of the facts.

For instance, he says the resolution opposing the bill was "engineered," that "it is quite evident they acted solely upon the representations made by official representatives of the power interests, aided and abetted by certain editors who are, or have been, stockholders in the Arkansas Power and Light Company." Again "that they are successful is evident by their having surplus funds to invest in power company stock."

Pursuing the erection of the straw man, whom he later proceeds to demolish in true Don Quixote style, Mr. Thorn says the daily press stressed the action of the Press Association in condemning the Thorn bill without going into details as to how a mere handful of the association's membership caused its adoption. No mention is made of the fact that A. G. Whidden, press agent of the Arkansas Power and Light Company and personal representative of H. C. Couch; J. B. Carter of the Arkansas Industries Association and Earle W. Hodges, public relations director for Cities Service, all were granted the privilege of the floor, and most of their time was consumed in an attack on the Thorn bill.

Answering categorically the above criticisms by Mr. Thorn, may I say with becoming editorial modesty that I was the author of the resolution opposing the Thorn bill, that I fought it vigorously in my newspaper when it was pending in the last General Assembly, that I do not now and never have owned a penny's worth of stock in the Arkansas Power and Light Company, that as mayor of Paragould in 1912 and 1913 I had occasion to fight Mr. Couch in the matter of rates for that city, and that later, in 1917, when I entered the newspaper business in Marianna I took at least a minor part in another contest with him over rates, resulting in the organization of a local company which acquired his utility here.

There was no studied move to discuss the Thorn bill. It came up incidentally in the press meeting in the general discussion of the tax burden the people are bearing, and in the general attitude of the editors toward additional taxes. One or two men—not representatives of the utilities—mentioned the Thorn bill. At the conclusion of their remarks the resolution was offered and unanimously adopted. In the meantime Mr. Whidden and Mr. Carter amplified some of the arguments that had already been presented, insisting that it was more important to encourage industry than to lay an additional burden on the bent backs of the taxpayers. Mr. Hodges, for many

years an honored citizen of Arkansas, was not even present during the discussion. He appeared later and made an inspirational talk in which he did not mention the Thorn bill.

The chief arguments presented by the editors against the measure were that it is merely a subterfuge to levy an additional tax on the patrons of public utilities and that it will be paid largely by people residing in the towns and cities, whereas the funds created will be distributed to rural as well as to urban school districts.

This is a statement of the actual facts in connection with the option of the resolution by the Press Association in opposition to the Thorn bill. I feel quite sure the editors affiliated with the association will reënt the imputation that they are either so stupid or selfish they would permit themselves to be made the tools of the utility interests.

## MUCH INTEREST IN BIG POWER PROJECT

### Two Proposals for Financing Table Rock Dam Suggested at Mass Meeting.

Special to the Gazette.

Harrison, April 27.—Two proposals for financing and constructing a flood control and power dam at Table Rock on White River in Taney county, Missouri, were contained in a resolution adopted at a meeting here this afternoon of 143 Arkansians and Missourians, representing more than 15 counties in two states.

The meeting was attended by Alexander Allaire and Hugh Miller, PWA engineers for Arkansas and Missouri, respectively; former Governor George W. Donaghey and R. W. Selvidge, chairman of the Arkansas and Missouri Planning boards; several county judges of Missouri and Arkansas; George C. Branner and W. A. Beuhler, state geologists of Arkansas and Missouri; representatives of civic and commercial groups in a score of cities and towns, including Springfield, Mo.; and business men of the two states generally.

#### Two Proposals Offered

The first proposal is that the Reconstruction Finance Corporation lend sufficient money to the Empire District Electric Company, a Doherty subsidiary, to permit completion of the dam. This company has spent a huge sum in preliminary surveys and in acquiring 10,000 acres.

The alternative recommendation is that the government take over the project. Power charges would be regulated by the government.

#### Many Addresses Made

A. C. Christeson, president of the Harrison Chamber of Commerce and secretary of the meeting, welcomed the visitors to Harrison, and John T. Woodruff, president of the Springfield Chamber of Commerce, told of the successful efforts of the Springfield organization in having a permit issued for construction of the dam three years ago, after 10 or 11 years delay. He declared the power possibilities of White river perhaps are unequaled.

The PWA engineers of the two states gave assurance of their willingness to co-operate in bringing the project to a successful conclusion.

Mr. Beuhler listed the many liberal resources of Southwest Missouri and Northeast Arkansas which could be developed with sufficient power as justification for the project.

Mr. Branner asked what would be the attitude the Arkansas Power and Light Co. on the proposed Table Rock dam, in view of its plans for developing White river near Cotter and other northwest Arkansas streams. Mr. Woodruff said that the Table Rock project would aid in the Arkansas concern's White river project, in that it would insure a uniform flow of water below Table Rock.

Other speakers were former Governor Donaghey, Dr. Selvidge, H. G. McCall, representing Governor Fittrell; Walter Pettit, Springfield banker; Rex Allaman, Forsythe, Mo., former president of the White River Booster League; County Judge R. L. Berry, Yellville; County Judge O. D. Peters, Stone county, Mo.; County Judge M. O. Penix, Harrison; Tom Shiras, Mountain Home; County Judge R. M. Ruthven, Cotter, and State Senator Roy W. Milum, Harrison.



# BIG DEVELOPMENT OF OZARKS REGION CLAIMED TO HINGE ON PROPOSED DAM

State Engineers of Missouri  
And Arkansas Hear Argu-  
ments in Support of Great  
Table Rock Project

## 'HOOKUP' IS SUGGESTED FOR WHITE, ST. FRANCIS

Linking of Two Systems Might  
Enhance Chances for Fed-  
eral Approval, Colonel Miller  
Says at Parley

PAVING the way for immediate and serious consideration by federal authorities of Table Rock dam on White river as a government project, Ozarks boosters from several parts of southern Missouri and northern Arkansas presented a wealth of interesting information to Col. Hugh Miller and Alexander Allaire, PWA engineers for Missouri and Arkansas, respectively, in a conference yesterday afternoon.

The session was held in the Kentwood Arms hotel, with Louis Reps presiding in the absence of John T. Woodruff, president of the Chamber of Commerce. Although too ill to attend, Mr. Woodruff conferred with Colonel Miller regarding the project.

Colonel Miller suggested creation of an organization similar to the Tennessee valley authority to embrace the White and St. Francis river valleys as a vehicle to carry forward the dam proposal. He declared the Mississippi valley flood control committee is earnestly interested now in Table Rock and is seeking all information available concerning its potentialities.

### GLASS SAND RESOURCE

"In Izzard and Stone county, Arkansas, alone," declared Tom Shiras of Mountain Home in listing resources, "there is enough glass sand to make every window used in the world for a million years. Lack of low priced electrical power is all that prevents commercial development of it."

After calling the meeting to order and telling its purpose in a general way, Mr. Reps gave way to Colonel Miller.

"Major Carey M. Brown, secretary of the Mississippi valley committee," said Miller, "has expressed his approval of this conference and has twice, by letter, asked me to make a report on this project."

"Apparently the committee is not thoroughly familiar with the possibilities of power, flood control, agricultural and industrial development on the White river in Missouri and Arkansas. For this reason, it is my desire that this conference develop a means of placing in my hands and in those of Mr. Allaire information bearing on this project as it relates to Missouri and Arkansas."

### SYSTEMS LINKED

A similar project in some respects, he said, although involving primarily flood control, is one on the St. Francis river which rises in Missouri and flows most of its length in Arkansas. The two projects, it was pointed out, would represent a total immediate expenditure of \$29,000,000. Colonel Miller expressed the belief that both might have a better chance for early federal approval if they were grouped together in the Missouri-Arkansas survey.

"Although the Arkansas river does not flow within the borders of the state of Missouri," he said, "it is so closely allied to the White river as to be for all practical purposes a part of the same drainage system

Therefore, it is thought that the Arkansas river valley also should be considered in connection with the White river and the St. Francis. In this connection it is worth recommending to the Mississippi valley committee, the two state planning boards and the national planning board that an authority be set up similar to the Tennessee valley authority embracing the valleys of these three rivers."

Attention of Mr. Miller was called by Rex Allaman of the White River Booster league to the fact that suspension of the CWA will leave 6000 men unemployed in three south Missouri and three north Arkansas counties nearest the Table Rock dam site. A start of construction on the dam would remedy this condition in large measure, he said.

"Fifty thousand bales of midland cotton are produced annually along the White river, between Newport and Branson," declared Mr. Shiras who is editor of the Baxter County Bulletin and the leading authority on natural resources in a wide area of the Ozarks. "If we had cheap electric power this crop could be manufactured into cloth nearby."

He also gave the location of virtually unlimited deposits of manganese, high grade limestone, cement shale, phosphate rock, all kinds of marble and the highest grade zinc ore in the United States, which he said are left untouched because of lack of power.

Dr. E. E. Corlis, agricultural agent for the Missouri Pacific railway, reported that the 1927 flood caused a damage of \$11,000,000 in the White river valley and that the next year another flood brought a loss of \$7,000,000. His statement was supported by J. W. Daniels, general agent of the Missouri Pacific here and former superintendent of the White river division.

### SURVEYS COMPLETED

For the benefit of Mr. Allaire, who showed by a short talk that he had little previous knowledge of the proposed development, Will W. Johnson, chairman of the Chamber of Commerce roads and tourists bureau, traced the history of the Table Rock project from its inception more than 10 years ago.

Mr. Johnson explained that all preliminary surveys and engineering work had been completed five years ago by the Empire District Electric company and filed with the federal power commission at Washington. If the money to build the dam were available, work could be started in 10 days, he said.

Assurances already have been given by officials of Henry L. Doherty and Company, which controls the Empire firm, that it has sufficient outlets to use all the power that the hydro-electric project could generate if provision can only be made for construction of the plant, Colonel Miller said.

### BIG POPULATION GAIN

He held, however, that there also should be large possibilities for industrial development in the region where the plant was located if the utmost in benefits are to be gained. He said Springfield should double its population in 10 years while great industrial and agricultural benefits would accrue to a large territory after construction of the dam.

Edgar C. M. Burkhart, PWA engineer examiner under Colonel Miller, gave an interesting report showing that in 1932 the Empire District Electric company carried more than half of its power load with current from Powersite dam, although this plant constitutes less than one-fourth of its total generating capacity.

An exhaustive questionnaire, received by Mr. Woodruff shortly before the conference from the Mississippi Valley committee, was read by Mr. Reps. Among points upon which detailed information was asked were: Name and description of organization sponsoring the dam, general description of the project, endorsement by engineers, estimates of cost, costs of labor and materials, how soon construction could start, number of men employed, effects on flood conditions and soil erosion and benefits to individual communities.

### OTHER LEADERS TALK

Short talks also were made by Jenken Lloyd-Jones, representing the Tulsa Tribune and Tulsa chamber of commerce; Judge R. M. Ruthven of Cotter, Ark.; Judge O. D. Peters of Crane, and Prof. L. E. Meador, Arthur M. Curtis, Walter C. McCause, W. P. Keltner, W. T. Kennedy and Mayor Harry D. Durst of Springfield.

Others attending were Frank Bush of Reeds Spring, Mo.; A. C. Janicke, C. W. Moore and A. F. James of Hollister; W. W. Mitchell, Little Rock, Ark., engineer examiner for Arkansas PWA; A. J. Irwin, Tulsa Tribune; E. O. Turner, Crane, Mo.; H. H. Baker, Forsyth, Mo., and John M. Hawkins, Dave N. McGregor, Jack Cooper, Ben McDonald, O. K. Armstrong, G. R. Bush, J. W. Miller, R. P. McMillan, Walter Bussell and E. L. Williams of Springfield.

Colonel Miller and Mr. Burkhart planned to leave early this morning on their return trip to St. Louis.

## Power Line Will Be Built Across River

Pine Bluff, June 20.—(Special.)—Work will be started within a short time by the Arkansas Power and Light Company on a \$25,000 transmission line, crossing the Mississippi river near Greenville, Miss., made necessary by the river recently changing its course.

The river crossing will be something new. It will be a 3,500-foot span, suspended between two steel towers that will be 270 feet high, and will be connected to a cluster of eight 12- and 14-inch piles, which will be driven down nearly 60 feet into the earth as a foundation.

The work will be under the direction of C. S. Lynch, Pine Bluff, chief engineer for the power company, with Jimmie McCammon, directly supervising the work.

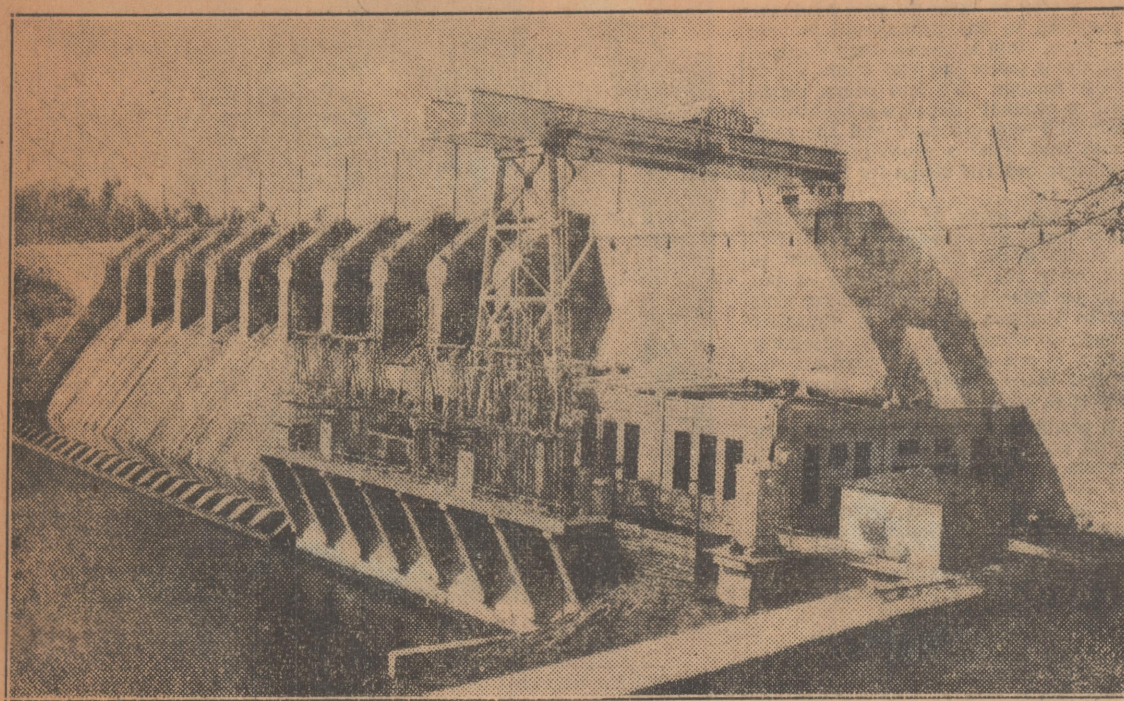
Before the river changed its course the power company's lines were carried down a peninsula made by a bend in the Mississippi and across the river at Greenville.







## Carpenter Hydroelectric Station on Ouachita River One Of Two Constructed by Arkansas Power and Light Company



This is a view of the Arkansas Power and Light Company's Carpenter hydroelectric plant on the Ouachita river, which, with Rammel dam, is tied in with steam electric generating stations at Little Rock, Pine Bluff and El Dorado, and is part of the interconnected system which extends to other states.

## BENEFITS SEEN IN POWER EXTENSION

Feb 10, 1923

### Harvey C. Couch Predicts General Improvement Through Program.

More of Arkansas's products will be manufactured into finished articles at home; more Arkansas money kept in the state, and the general welfare of the farming areas and communities, as well as the larger marketing and industrial centers benefited as the result of extension of electric service to the country in the opinion of Harvey C. Couch, president of the Arkansas Power and Light Company.

Mr. Couch spent several days last week traveling through sections desiring to obtain electric service. He was accompanied by Frank M. Wilkes, general manager of the company, who is directing the farm electrification program announced by Mr. Couch several weeks ago.

Substations, extensions and distribution systems to give service to Prattsville, one of the oldest and best farming communities in south central Arkansas, and Magnet Cove, noted for its minerals as well as diversified farming, will be completed within a fortnight, Mr. Couch said while here Thursday. It is planned to turn on the "juice" on Washington's birthday, and the people of the two communities are preparing for a celebration that is expected to attract nationwide attention.

Citizens of the several communities and areas seeking to have electric service extended by the Arkansas Power and Light Company foresee a new day with the advantage of electricity. They believe not only that more city and town people will return to the farm and small communities, but that numerous small industries will develop as the result of this advantage and of changing conditions in the industrial situation. The power company head has the same opinion.

#### Begun Two Decades Ago.

Arkansas has abundant convincing evidence of the benefits that follow the pioneering of Mr. Couch and his associates. Just a little more than 20 years ago, Mr. Couch's company began building the interconnected system that today traverses 55 counties of the state, and makes immense quantities of power available in any of the communities served.

This was something new at that time, and thousands stood aghast and said "it wouldn't work." But it did, and the results are visible in investments of millions in power plants and lines by the power company itself, and additional millions in factories and industrial facilities, additional pay rolls and taxable wealth, increased values and great reductions in rates for electricity.

At the time Mr. Couch began the de-

velopment all towns were served by isolated plants. Many of these were very small capacity, and some operated only a few hours a day. Not an industry was operated with power from a public plant. Volume of output was small, comparatively, and the rates in the state averaged 17 cents per kilowatt hour.

With the growth of industry by the establishment of plants such as that of the Southern Craft Corporation's paper mill at Camden, International Shoe Company's plant at Malvern and others, volume increased, and additional power plants were constructed. These included Rammel and Carpenter Hydro-electric stations on the Ouachita river, between Malvern and Hot Springs, and the 134,000 horsepower steam-electric station on the Ouachita river, near Bastrop, La. Interconnection of the Arkansas company's system with the systems of companies operating in Louisiana, Tennessee, Mississippi and Oklahoma provides facilities for the exchange of power as needs of the different sections require and permits operation of the power plants at highest efficiency.

In effect, Arkansas has had for years all the benefits of the "power pool" plant, recently recommended in the Mississippi Valley Committee report. The Arkansas company has invested more than \$1,000,000 in surveys and tests for foundations at sites on the White river, where it has power development rights, and on upper Ouachita, where a third dam is to be constructed as demand for additional power develops.

#### Steam Plants More Economical.

Electricity can be generated in high efficiency steam plants, such as the plants at Sterlington, Little Rock and others in the system, more cheaply per unit than at hydro plants in this section, company officials say. The explanation is that steam plants can be operated at capacity 24 hours a day all the time, while, because of lack of water, hydro-plants—excepting on the Niagara river and at some points in the West—can be operated only part of the time.

Because of the drouth last year, the Rammel and Carpenter plants produced comparatively little power, and in no year can these water power plants be operated more than the equivalent of three or four months in the year. The advantage of the hydro plants in this section is that they can be started immediately to provide power and take care of quick swings as industries and other customers "thrown on the switches" at different times of the day and different seasons.

Decentralization of industry is expected to bring about the establishment of many additional factories in Arkansas, for the manufacture here of this state's great variety of resources—particularly mineral and forest products. It is freely predicted that this state will become a paper making section. The great mill at Camden, employing more than 1,000 people, and giving employment to thousands of others who cut and supply timber for the mill, is outstanding evidence of the benefits to accrue from this development.

The Camden mill and other paper plants require immense quantity of electric power. The Camden mill is supplied with power by the Arkansas Power

and Light Company, and some idea of its requirements may be gathered from a recent statement by Mr. Couch that this mill alone uses more power than is required to supply the normal demands of a city of 100,000 people.

#### Provides Many With Jobs.

These denote some of the benefits accruing from the pioneering and developments of Mr. Couch's company. Others of importance are the number of people employed, the Arkansas company alone employing more than 1,200 people, with a pay roll of more than \$1,000,000 a year. The company is the second largest taxpayer in the state, the tax bill taking all the revenue from more than half of the residential customers using the average amount of service, representatives of the company said.

In the rural electrification program recently launched by Mr. Couch's company, large sums will be expended for poles and other materials, and it is estimated that before the program is completed in the equivalent of 3,000 or more men for six months will be provided. Wherever possible, cedar poles are being purchased locally for the farm distribution systems and preference given to men of the community in building the lines.

It is conservatively estimated that more than \$100,000,000 has been put into Arkansas and thousands provided with employment by the development of the Arkansas Power and Light Company's system and the industrial expansion that has followed since power in abundance became available—counting small industries as well as the large plants.

With electrification of many rural communities and sections, additional manufacturing and additional earning

power of the people are confidently expected.

### Carpenter and Rammel Dams Will Be Connected.

Special to the Gazette, April 28, 1923

Hot Springs, April 27.—What is believed to be a further step in rural electrification by Harvey C. Couch, president of the Arkansas Power and Light Company, is seen in condemnation proceedings filed in Circuit Court against property owners living between the Carpenter and Rammel dams, through which would run a new and heavier power line the company expects to build.

Suits for right of eminent domain were filed by the Arkansas Power and Light Company, operators of the two dams against Mr. and Mrs. J. T. Lauson, J. C. Rush and the Storthz Bros. Investment Company. All are owners of property in Garland county.

Construction of the new power line would connect Rammel dam, in Hot Spring county, with Carpenter dam, in Garland county, and enable the operators to provide power through either source.

# Planning Power Plants

By TOM  
SHIRAS

Since He Came to Arkansas Over 30 Years Ago  
Capt. Charles La Vasseur Has Been Working  
Toward Development of the Hydro-Electric  
Possibilities of the Ozarks.

The pages of early Arkansas history are filled with the exploits of many adventurous Frenchmen, and this nationality will be bound to Arkansas with an unbroken tie for all time to come.

It was the French who settled Arkansas Post, and Davidsonville, the first post-office in Arkansas. It was the French priests who gave Arkansas aborigines their first knowledge of the Christian religion, and French traders first brought commerce and industry up our rivers and into adjacent territory.

In later years, it was a Frenchman, Capt. Charles La Vasseur, who first saw the value of the undeveloped water power on the upper White river and its tributaries, and deplored the fact that this valuable force was wasted in its descent from the green clad Ozarks to the sea. He also saw the immense deposits of zinc, lead, manganese, marble, phosphate and other valuable commercial stones and minerals.

He saw the possibility of this vast waterpower being controlled, and its force expended on the abundance of raw material at hand. This picture became alive in his mind. For the last 30 years all his efforts have been turned to paint this picture with an engineer's brush, and he has made a splendid start with a few bold strokes of his hand.

He was well qualified to do the work which he undertook. He was born in Paris, in 1860, and was educated in the best schools, attending Lycee Louis Le Grand, the Sorbonne and Ecole Polytechnique Academie. He received his military education in the latter. He earned his commission as captain in the French army as an engineer, and in this capacity helped lay down the fortifications at Verdun. During the attack on Verdun by the Germans, which lasted several weeks, he said a dozen times a day, "Verdun will never fall. I know Verdun." And it didn't.

Captain La Vasseur had a partner, and still has her, in whose blood the spirit of romantic adventure was as strong as it was in him. This partner was Josephine Leclercq, a Belgian girl, born in Cherleroi. They married and came to the United States in 1889. His first work was for the government, on river control on the Mississippi. He made his first foray into the Arkansas Ozarks in 1902.



Drilling a foundation test hole in the middle of Buffalo on the first water-power project to be surveyed in North Arkansas.

After he had seen the Buffalo river, which comes rushing out of the Boston mountains, in Newton county, with a fall of several feet to the mile, with its thousands upon thousands of wasted horsepower, and the immense deposits of undeveloped zinc ore along its course and along the many creeks which flow into it, river improvement work lost any charm that it might have held for him. His fancy was caught in the strong grip of the glamour of the mountains, and the opportunities they offered.

In 1904 he assembled his notebooks, transit, level, rods and drafting board, tools of his profession, and started for the Arkansas Ozarks, selecting Marion county as the field for his operations. In company with his wife, and George de Bergen, a Belgian engineer, he located on Rush creek, at the old McIntosh mine, which was the center of his operations for a number of years.

Rush is the principal zinc mining camp in north Arkansas, and during the World war millions of pounds of zinc ore were mined and shipped from that camp. Rush creek, on which the camp is located, comes dashing down a winding gorge from out of the mountains, and empties into the Buffalo river, at the lower end of the camp. The little shoestring valley along its course is about 500 feet below the tops of the surrounding mountains, and very crooked. The only direction in which you can look and see more than 100 yards is straight up. Exposed ledges and ore out-

croppings on the sides of these mountains are particularly interesting to the geologist.

During his stay on Rush creek, Captain La Vasseur and his associate, de Bergen, made the first waterpower survey ever made in north Arkansas, on Buffalo river, above the mouth of Rush creek. For this particular hydroelectric development, Captain La Vasseur conceived the idea of a dam and tunnel project.

The river at this point flows around an immense bend, 15 or 20 miles long. The neck of the bend is about 1,100 feet wide. His plan called for a dam at the upper part of the neck, and a tunnel through

the mountain just above the dam, with the power wheels set in the tunnel, the water passing through the wheels and discharging out of the mouth of the tunnel at the lower end of the neck. They spent two very hard years of very pretty engineering on this work.

Later the project was taken over by the Dixie Power Company, the pioneer water power company in north Arkansas, and the survey was accepted by some of the best engineers in the East. After this, Captain La Vasseur was retained as engineer by the Dixie company and made power surveys covering White river from Cotter to the Missouri line, the Northfork river and the lower Buffalo river.

When the North American Company took an option on the Dixie Power Company's projects and Hugh L. Cooper, one of the leading water power engineers of the country, was sent to investigate them, Captain La Vasseur was retained on the staff. When the projects were taken over by the White River Power Company, which now owns them, Captain La Vasseur went with them as an engineer.

When Captain La Vasseur was not engaged in water power engineering work he devoted his time to zinc mining. His biggest adventure into the mining jungle was in 1908, when, in company with Martin Littleton, the well known New York lawyer, and his brother-in-law, George de Bergen, he opened and operated the Red Cloud mine on Buffalo river, which up to that time was the largest mining





CAPT. AND MRS. CHARLES LA VASSEUR.

operation in north Arkansas. The development of this mine did much to show the outside world that north Arkansas had zinc deposits of commercial magnitude. During the World war, when zinc flew high on golden wings, and the sound of the big concentrating plants on Rush creek rang in one's ears 24 hours a day, Captain La Vasseur acted in the capacity of consulting engineer for many of the largest operating companies in the field, and did most of the underground surveying and mapping.

The hobby of this adventurous French engineer and his gifted wife is collie dogs, and for several years they maintained a kennel of fine, thoroughbred animals on Rush creek. Descendants of these thoroughbred animals are now well scattered over Marion and adjoining counties.

The captain is now 74 and is a member of the Metallurgical Engineers, New York city; International Society of Mining and Metallurgical Engineers; Society des Ingenieurs Civils, Paris, France. He has many engineering projects to his credit. He has constructed so many hydroelectric plants on paper on the upper White and its tributaries, and has been over the figures so many times that he knows them by heart. His greatest desire at this time is to see one of the gigantic plants that he has helped plan built and in operation before he dies.





This picture was taken on September 12, 1916, on the site of the proposed nitrate plant reservoir on the Ouachita river. Among those who can be distinguished are: 1—Hamp Williams, Hot Springs; 2—J. A. Rowland, Malvern; 3—Ex. Gov. Thomas C. McRae; 4—C. C. Kavanaugh, Little Rock; 5—John H. Page, Little Rock; 6—Judge Calloway, Hot Springs; 7—Harvey C. Couch; 8—Ex-

Congressman Thompson of Arkadelphia; 9—George A. Callahan, Hot Springs; 10—Sam Carpenter, Arkadelphia; 11—W. F. McKnight, Little Rock; 12—Maj. Harold C. Fiske, United States engineer then at Vicksburg, Miss.; 13—Ex-Representative Belote of Malvern; 14—Mayor Holey, Malvern; 15—Adolph Felsenthal. On the extreme left is Walter Ebel, veteran Hot Springs newspaper man.

*Gazette-Sunday Nov. 1, 1936*

## Ouachita Dams

*Mr. Felsenthal Recalls the Earliest Efforts to Harness This Stream's Power and Advocates Further Development.*

By ADOLPH FELSENTHAL

It may be of interest to readers of the Gazette to recount some of the events that led to the present hydro-electric developments on the Ouachita river, which might inform them more fully of the possibilities that are still ahead if the proper interest is aroused. I refer to the possibilities of a third and greater dam in the upper Ouachita, to be constructed a few miles above Hot Springs, far outstripping the present Remmel and Carpenter dams already in operation below that city.

Remmel and Carpenter dams, and a third and larger dam, not yet authorized, but which it is hoped will eventually be built, was the direct outgrowth of, but far outstripping, a plan conceived by the late Capt. Flave J. Carpenter, a lifelong and influential resident of Arkadelphia. Remmel dam, the first one constructed, was dedicated in 1925, just a few months after completion of the locks and dams on the Ouachita river and the coming of the first steamboat, Captain Cooley's America, in which I owned a half-interest. In his early manhood, Captain Carpenter plied along the Ouachita between the busy ports of Camden and Arkadelphia, about 100 miles apart by river. On one of the last trips made en route to the latter port, one of the boats ran upon a sandbar and ordinarily would have been forced to remain there until a shower furnished the sufficient few inches of rise needed to float her. This situation brought to Captain Carpenter the idea for a noval experiment. From the banks of the narrow river, the deck hands, under his direction, cut down a number of trees. These were laid across the channel and formed a dam which, though crude and temporary, soon provided enough water to refloat the stranded boat.

About 10 years later, during the Cleveland administration, Captain Carpenter was a deputy United States marshal whose duties in hunting moonshiners and other criminals who made their haunts in the mountainous region around Hot Springs, made him thoroughly familiar with the topography of that section along the upper Ouachita. In his mind there had remained the possibility of creating a great reservoir in that section in which the flood waters of the fall and winter seasons could be stored up and in the following low water season fed through the channel in a sufficient daily quantity to bring boats up to Arkadelphia from Camden.

But before that came a different plan, originated by me in 1893, which was designed to make the Ouachita navigable the year round to Camden. It had no connection with or knowledge of Captain Carpenter's theories, which had then never been definitely formed and discussed. In fact, it was at least 15 years after the Camden project had been urged before Congress when Captain Carpenter first came to Camden and described to me the plan he hoped would result in the extension of navigation above Camden to Ar-

kadelphia. At that time there was no dream of the vast possibilities of hydro-electrical development that have followed to the immense benefit of Arkansas. Steamboat service to Arkadelphia and prevention of overflows along the Ouachita—these were the benefit he said would come if the dam could be built and the reservoir created. Through his political energy and influence, he persuaded our congressional delegation to have appropriated \$10,000 for a survey to demonstrate the feasibility of his idea. This survey was made about 1910 or 1911 by Capt. Horace M. Marshall, assistant United States engineer at Vicksburg, Miss. He had previously visited the river, and drawn up the plans for all the locks and dams on the Ouachita. He was sincerely interested in the development of the districts under his charge. An intimate friend, he made a short stay with me in Camden after completing the survey and spoke of his own faith in the Carpenter project and drew attention to the electric water power that could be derived. His report detailing the project from all angles and its extent and cost of construction, was printed for Congress but was not then acted upon.

Captain Marshall's plan was to build a dam across the upper Ouachita between two great mountains, about 10 or 12 miles above Hot Springs, at or near Cedar Glades. This dam would have been about 300 feet high and would have been, at that

time, one of the highest in this section. It was designed to create a lake 35 miles or more in length and, in places, several miles wide, from which he reported, electrical power could have been developed.

Congress did not act favorably and nothing further came of the report at that time. Captain Carpenter felt that nothing more could be done about it, that his duty had been finished when it had been proposed by him and examined and approved by competent engineers. So the plan lay unused, unacted upon, and apparently forgotten. But in 1916, the World war was in progress. President Wilson and Congress saw the possibilities of this government being drawn into the war, and felt the need of preparing for this if it had to come. In that year Congress authorized an appropriation of \$20,000,000 for the president to build, at some point selected by him, a great nitrate plant which, through hydro-electric energy, would manufacture nitrates for explosive uses in war and for agricultural purposes in peace time. I was a delegate to the Democratic state convention at Little Rock that year. During its last hours, the late Dr. Charles H. Brough, our nominee for governor, offered a resolution which was adopted, urging President Wilson to locate the proposed nitrate manufactory in Arkansas. This reminded me of the Carpenter project and of Captain Marshall's statements of its great possibilities. I wrote

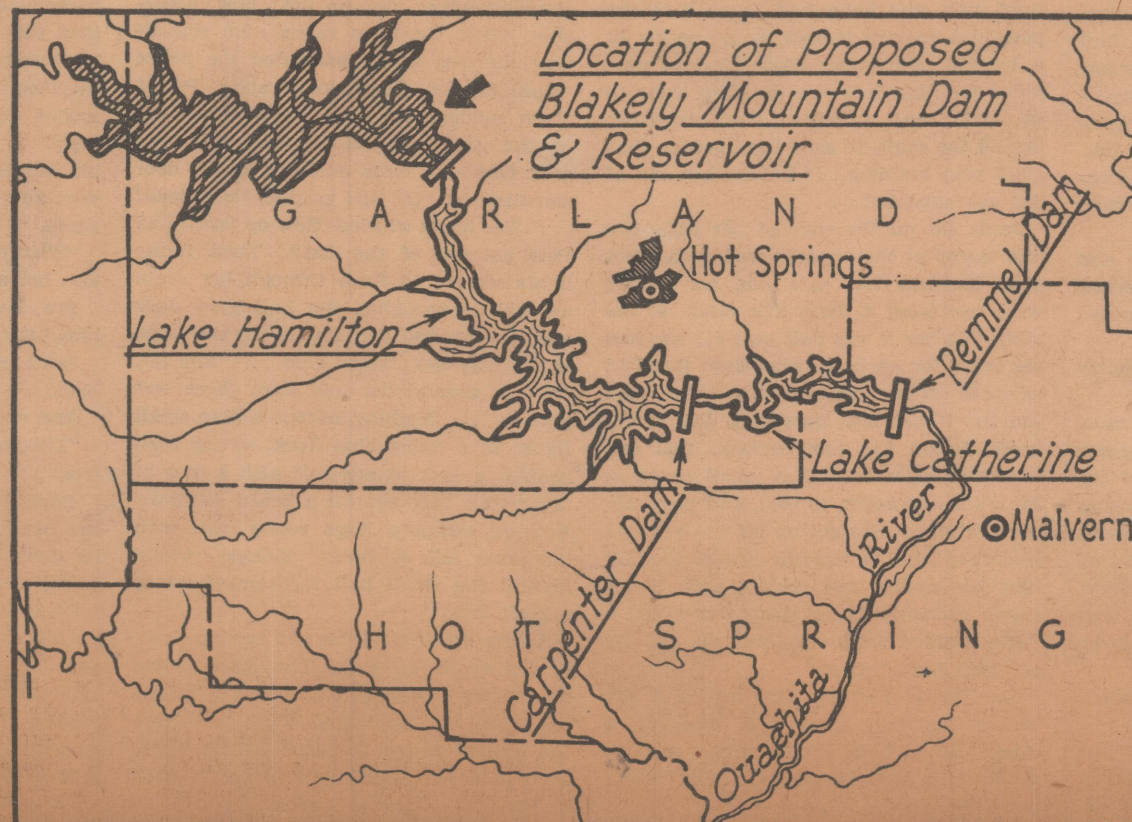
to the Business Men's League of Hot Springs, calling attention to the matter and urging it to attempt to obtain this government project, explaining in detail what could follow from success.

My letters awakened their interest and that of the daily newspaper there and steps were taken to bring action. The results have proven by prediction at that time that this project would give Hot Springs permanent and abiding industries and prosperity.

George R. Belding, the late Frank McKnight, state railroad commissioner from this district, and I were named as the delegation to visit Vicksburg to obtain the co-operation of the United States Engineer, Maj. Harold C. Fiske. We received his promise to visit that section of the river and study the project. Upon our return I discussed a plan of procedure by which we might have a chance to win, and suggested to Mr. Belding that a public meeting of county delegates be called at Arkadelphia. It could be shown that benefits would be far more extended than to Hot Springs. The meeting was to organize a permanent representative body to impress President Wilson and Congress with the worthiness of this development. If we failed in our primary effort, we could continue our work in Washington until the government did adopt the survey plan and build the dam; thereby navigation would be extended as far up, surely, as Arkadelphia and perhaps above that to near Malvern; to prevent or at least reduce overflows along the river, and to create water power development. This meeting was held at the Elks hall in Arkadelphia in the fall of 1916, and here one could call attention to what might be considered an act of Fate, for Arkadelphia happened to be the home of Harvey C. Couch, at that time interested in the light and water plants of Arkadelphia, Camden, Malvern and Magnolia.

So far as I know there was no evidence that he had any previous knowledge of or interest in such uses of the Ouachita river,

and if that is true, then this chance selection by me of this meeting place was a most fateful step for him and his companies and for the people of our state, for here began the first real growth that followed for the Arkansas Power and Light Company. The Ouachita Valley Improvement Association was formed at the meeting and Mr. Couch was named president, Judge Andrew J. Roland of Malvern and myself, vice presidents. and Mr. Belding, secretary-treasurer. A later meeting was held at Hot Springs. Together, with Major Fiske, we visited the proposed site of the dam near Cedar Glades. A few weeks later Major Fiske said that, in his opinion, sufficient power could not be developed to equal that which could be obtained at Muscle Shoals, Tenn. This verdict blocked our further efforts to secure the nitrate plant. The energetic work and powerful influence



of the late Senator Oscar Underwood of Alabama brought about the selection of the Muscle Shoals site.

Although this placed a damper on the hopes of the newly formed association, it did not stop Mr. Couch's interest in the project. We did not succeed in creating any apparent interest in our congressional delegation in Washington at that time. I spent a lot of time in the spring of 1918 in Washington, working to obtain the completion of the locks and dams to provide year-round navigation on the Ouachita to Camden. During that time I took up the matter of the Hot Springs reservoir and dam with the congressman from that district, but he was not interested, declaring that he was thoroughly familiar with the subject and that it had no possibilities or hydro-electric power or navigation or overflow prevention. The later developments from Remmel and Carpenter dams proved how far wrong his judgment was. Later, Judge Sawyer of Hot Springs ran for Congress in that district, stressing, after a conference with me in Camden, among other things, his intention to obtain the completion of this project. He was easily elected, but died before he could take his seat. Then, in connection with Mr. Couch, and through his initiative, we worked for the adoption of plans to interest the state and the residents of the sections that would be benefited, to provide finances for construction of the dam, but these efforts failed of success. It is surprising that the creation of this immense reservoir has not been urged more strongly in the recent moves for flood control. The Ouachita is one of the great factors in the increase of flood dangers. The creation of a great reservoir, in its upper reaches would add to the benefits that will be assured when the provisions of the flood control bills are fully completed. The Ouachita river should not be left out of this program. It should come in for prompt and favorable action at the next session. Many thousands of acres of fertile land would be added to cultivation, forever freed from the uncertainties and dangers and costly overflows.

Thus would be realized one of the objectives hoped for by Captain Carpenter. Another would be the increased miles of navigation in the upper Ouachita from Camden, its present head, to Arkadelphia and perhaps to near Malvern.

In that case it would place Hot Springs within less than 35 miles of this immensely valuable commercial freight and tourist factor and Little Rock with its far more important commerce within but a

few miles longer distance. Add to this the immediate advantage of paved highways already constructed upon which are located many other smaller towns that could be served. Permanent navigation to Camden, however, already demonstrates its value in a great reduction by water competition over former railroad rates, and the addition of such new territory to its present area of service would greatly increase its benefits for the people. But, in addition, should be stressed the fact that this dam and reservoir would provide hydro-electric power for a far cheaper and more widespread use than perhaps so far made possible by other means or products.

The Tennessee Valley activities have shown how greatly are available and how cheaply can be altered such service, not alone for towns and cities in its radius, but even for every rural settlement or home therein. If this work follows for the Ouachita river in the project outlined, the whole of Arkansas would benefit perhaps as much as will the territory to be served by the TVA. The people should be acquainted with and aroused to the possibilities that can be brought to them by public insistence and widespread interest that this improvement must be given to us by the government.

Imagine, if you can, the enormous bulk and the towering height of the great dam as conceived by Captain Marshall, 300 feet or higher, and the immensity of the great lake of deep water impounded behind its walls. To this added attraction for Hot Springs would come tourists from everywhere to view it. The fishing, hunting and boating brought into being by this huge new lake would make this a genuine sportsman's joy. Its electrical power would afford newer and greater manufacturing possibilities, not only to Hot Springs, its nearest city, but to every village, town and farm community.



A dam of lesser size would rob our people, not only in the reduction of immense water power eventually to be needed by us, but of the chance of freeing the entire Ouachita valley from further great floods and would prevent the extension of navigation still further north and closer to our larger cities. If it is impossible to secure immediately public ownership of this project, and if for the present these benefits must be used for profit for private enterprise, let us at least insist that it be built to the utmost of its possibilities, without depreciation in height and strength. Then, in the course of time, it can and ought to revert into the hands of the people for the unending benefit of the generations that follow after us. Their rights should be protected to the fullest.

## As Result of Tryouts, Large Barren Territory Promises To Be Productive Rice Area

Democrat 11-8-36

Brinkley—A vast territory lying to the south and west of Brinkley, which has long been unused for the greater part of the time, with a small cotton crop here and there, promises, due to recent developments, to become an important rice territory.

Last fall, A. N. Gibbs and his son, George Gibbs, rice farmers in eastern Arkansas and Louisiana, bought a tract of 150 acres near the heart of this territory, believing that the land, although never known to produce other crops in abundance, was well suited to rice growing.

Some of the land in this tract was timber land, but with a "stump saw," which cuts the trees at the ground level, the land was put in rice last spring. A well for irrigation was put down, which Mr. Gibbs estimated cost him about \$1,500, and terraces were thrown up with tractors.

The rice was planted in April, and at harvest time the land averaged a little more than 100 bushels of rice per acre. All of this rice which the Gibbs cared to sell they sold at the opening of the season for 95c per bushel. The remainder they plan to hold to sell for seed. Since the rice was produced on new land it is almost clear of grass seed and will bring a good price for seeding.

### Confident of Success.

Since Mr. Gibbs and his son are confident that the territory is ideal for the growing of rice, Mr. Gibbs senior has bought another 150-acre tract and his son has purchased 100 acres more, and several other rice men have purchased tracts including one 400-acre tract bought by Clarence Grizzle, also a rice farmer of many years standing, bringing the total acreage in that immediate vicinity to more than 1,500, all of which will be planted in rice by next spring.

Mr. Gibbs senior, who has had more than 30 years experience in rice growing, summed up the points favorable to this territory as follows:

Since the only cultivation that rice receives is the irrigation, the most important point is the water supply. The well on this first plot is only 100 feet deep but it delivers from 1,500 to 2,000 gallons of water per minute and the water lift is only

21 feet, whereas in most rice territories a much deeper well, sometimes as much as 300 feet has to be drilled, the number of gallons per minute is not nearly as large and the water lift is often 85 to 100 feet, which makes the expense of irrigation much greater.

The original cost of the land ranges from \$10 to \$15 per acre due to owners' inability to grow productive crops on it, and much of the land has gone back to the state for taxes and can be bought for \$1.10 per acre. The cost of putting the timbered portions of the land into cultivation is from \$8 to \$15 more per acre but the amount of rice produced on this timbered land is enough to make up for this expense.

All of the land in the vicinity is flat land underlain by a "hardpan subsoil" which is especially good in holding the irrigation water. It lies along Highway No. 17, a good gravelled highway, and near Highway No. 70, a paved road which leads into Brinkley, a distance of four miles, where the grain can be shipped.

### Plans on Rotation.

Mr. Gibbs related that last year was an excellent rice year, due to the hot summer, and that he did not hope for such a bumper crop each year, but even a much smaller average yield per acre would still be considered good, and much more than expenses could be made.

He said that experiments have shown rice can be grown indefinitely on soil, provided the land is built up by rotating crops, and that this land will produce fine oats and feed crops and will also produce good cotton, provided "kanit," a form of commercial fertilizer, is used and the cotton is irrigated from the rice wells.

Mr. Gibbs junior believes in the territory as a rice district to the extent that he is building a home on his first plot.

Another item which will eventually be helpful is the building of a rural electric line through this section. Rice pumps could then be run electrically, and homes could be more modernly equipped.

To the business men in the Brinkley section the opening of this tract for productive farming is a great boon as it has long been a barren territory.

## Third Power Plant Begun On Ouachita

Democrat 11-24-36

### A. P. & L. Announces Work Started on \$4,000,000 Project.

Pine Bluff—Harvey C. Couch, president of the Arkansas Power & Light Company, announced this morning the beginning of construction on the third large hydro-electric project of the company on the Ouachita river at the Blakely site, 15 miles northwest of Hot Springs, and 25 miles above the Carpenter dam and power plant. Preliminary work is to continue all winter and the new plant, according to present plans, will represent an additional investment by the company, of about \$4,000,000, he said.

Mr. Couch said the Blakely plant was expected to develop 31,700 horsepower and eventually will tie in with the two other hydro-electric plants on the Ouachita, the Carpenter and Remmel, now serving 250 cities and towns and thousands of farms in Arkansas. Carpenter dam is 12 miles above the Remmel dam, the first constructed. All are in the vicinity of Hot Springs.

Work to be undertaken now and prosecuted throughout the winter will consist largely of clearing away timber along the dam site, grading, building of a railroad spur, changing the location of a highway, and excavating.

Mr. Couch said: "We have started construction on our third hydro-electric plant on the Ouachita river in conformance with the provisions of a license granted the company by the Federal Power Commission. We can clear the right-of-way, do grading for the railroad spur which will haul the material, clear the dam site of timber and do other necessary work this winter. Construction will be in charge of C. S. Lynch, chief engineer for the Arkansas Power & Light Company, who had charge of construction of Carpenter dam."

It is understood that the company's plans are not fixed as to the size of the new dam nor the size of the lake that will result from damming up the waters of the Ouachita. This is to be worked out later. Mr. Couch made no statement as to how the new project would compare in size with the generating plants at Carpenter and Remmel.

The site for the new dam is at what is known as Blakely's Point, on the Ouachita.

## Third Ouachita River Power Plant Planned

Gazette 11-25-36

Special to the Gazette.

Pine Bluff, Nov. 24.—The Arkansas Power and Light Company started work today on construction of the company's third hydro-electric project on the Ouachita river, it was announced at the company's general offices here. The dam will be at the Blakely site, 15 miles northwest of Hot Springs, and about 25 miles above the Carpenter hydro-electric plant.

It is planned to build a dam and power plant with an initial capacity of approximately 31,700 horsepower. It would be tied in with the system now serving about 250 cities and towns and thousands of farms in Arkansas.

Work started today will consist largely of clearing and grading for a railroad spur, changing location of a highway, and clearing timber from the dam site.

## Hot Springs Happy at Hope Of Third Dam

Gaz. 11-26-36

Special to the Gazette.

Hot Springs, Nov. 25.—Although tourist patronage the past three months has shown a decided increase over the same period last year, and preparations have been begun for one of the best winter seasons in history, announcement from Harvey C. Couch, president of the Arkansas Power and Light Company, that work was under way for the construction of the third hydro-electric dam on the Ouachita river, to be located at the headwaters of Lake Hamilton, was accepted as Hot Springs' Christmas present.

Since the Carpenter dam was completed, it has visualized the third project, which would complete the chain that it was known Couch had in mind when he built the Remmel dam and offered it as a Christmas gift in 1924.

A. G. Whidden, publicity man for Couch, said that plans are subject to change. It is certain that a lake as large or larger than Lake Hamilton, created by Carpenter dam, and Lake Catherine, created by the Remmel dam, will be formed. The new dam will be located about 15 miles northwest of Hot Springs. Present estimated cost is \$4,000,000.

Construction of the dam will necessitate the cutting of a new road to Cedar Glades, Buckville and other communities north of here. The present road, which runs alongside the river for several miles, will be inundated.

Tentative plans announced nearly a year ago indicated that the lake to be created from the third dam would be 35 miles long and almost 15 miles wide in one place. A new lake of this size would give the Ouachita three lakes measuring about 70 miles in length. Lake Catherine is 10 miles long while Lake Hamilton is 24.

### TO GO TO FORT SMITH.

Dr. George C. Branner, state geologist, and M. Z. Bair, state sanitary engineer, will go to Fort Smith next week to attend the 25th annual meeting of the Southwest Section of the American Waterworks Association. Both officials will appear on the program.

Mr. Bair will speak on "What Waterworks and Sewer Improvement Projects Have Meant to Arkansas," and Dr. Branner will speak on "Ground Water in the Southwest."

### White River Projects to Be Studied Further.

Washington, Dec. 7 (AP).—The War Department today allotted \$34,000 for supplementary investigations in connection with potential hydro-electric projects on the Grand river in Oklahoma and the White river in Missouri and Arkansas.

An order by Secretary of War Woodring said supplementary investigations were made advisable by changes which have occurred since submission of the last reports on the Grand and White rivers.

Hydro-electric developments on the White river, particularly at Table Rock, Mo., long have been advocated. Efforts have failed in the last two sessions of Congress to obtain federal funds for the Table Rock project.

### Plans for Proposed City Water Dam at Paris Submitted.

Gaz. 12-17-36

Special to the Gazette.

Paris, Dec. 16.—V. L. Carter, representative of the Carter Engineering Company of Little Rock, has submitted plans for the proposed city water dam for Short Mountain creek. The survey was discussed by the City Council, with W. M. Johns, mayor, presiding.

The proposed dam would cost about \$200,000, and will be sought through a Public Works Administration loan. The proposal has been submitted to PWA officials at Little Rock.

Carter's survey shows that a dam is possible at any of three locations. It would be 780 feet long, with a maximum height of 50 feet, and would form a lake of 150 acres. The dam would have a capacity of 700,000,000 gallons of water. The present supply is 17,000,000 gallons.

## White River Dam Project Gets Approval

### Many Conditions Imposed on Company by Power Commission.

By B. N. TIMMONS.

(Democrat Correspondent.)

Washington—The task of meeting a score of conditions imposed by the Federal Power Commission today faced the White River Power Company, subsidiary of the Arkansas Power and Light Company, before it can start construction of the proposed power dam and reservoir at Wild Cat Bend on White river.

The commission Wednesday approved the application of the company to construct the Wild Cat Bend Dam, if and when the company meets the specified conditions, but at the same time refused to grant permission to construct two other dams on the river, one at Bull Shoals and the other at Hog Thief Bend.

The three dams, as proposed by the company, would have cost approximately \$20,000,000, Harvey C. Couch, its president, testified during a hearing held on the applications last spring.

In turning down the applications for the other two dams, the commission held that the company had "failed to present evidence of engineering or economic feasibility of the developments."



**Must Re-Design Plans.**  
Major condition imposed by the commission is the re-designing of plans for the Wild Cat Bend dam to meet the approval of the chief of army engineers and secretary of war. The new plans must be filed with the commission by June 1, 1937. They are to be drawn in accordance with the report of the chief of engineers made to the power commission September, 1935.

The dam will eventually have a total horsepower capacity of 102,000 with three generating units. The commission, however, only granted a license for the construction now of two generating units with a capacity of 38,000 horsepower.

The dam, to have a spillway crest of 484 feet, mean sea level, must be completed within four and one-half years. Installation of the third unit will be directed by the commission later.

**Conditions Imposed.**  
Among the special conditions imposed are that the licensee shall construct, maintain and operate at its own expense means and appliances for passing rafts and floating commodities over the dam free of charge and shall reassemble the rafts passed over the dam without expense to the owners; that the licensee shall construct, maintain and operate at its own expense means and appliances (other than locks) for passing, in both directions boats of the sizes suitable for use on the river when, in the opinion of the secretary of war, the public right of navigation of the White river requires the installation of such facilities.

That the licensee shall so operate its project, unless otherwise directed by the secretary of war, that the discharge in the river immediately below the dam shall be not less than 800 acre-feet of water in each 24-hour period except when the flow available at the dam is less than that amount; shall cut, remove or destroy to the satisfaction of representatives of the commission all brush and trees in the zone within and adjacent to the area to be submerged, as well as all floatable refuse or other material, no part of the brush or trees to project above 474 feet elevation, mean sea level; shall permit free use of the reservoir by the public for navigation or recreational purposes and allow the construction of wharves and landings not inconsistent with the operation of the project; shall construct, maintain and operate such fishways as may be prescribed by the secretary of commerce or, if he shall not prescribe such fishways, the licensee shall construct, operate and maintain such fish hatcheries as may be required by the duly constituted agencies of the state of Arkansas; and shall control mosquito propagation in shallow reaches of the reservoir in such matter as may be directed by the commission or the state board of health of Arkansas.

Several years probably will elapse before work is started on the hydro-electric project and dam at Wildcat Shoals on White river, the fourth of a series of projects by the Arkansas Power and Light Company and affiliated organizations. The company now has two plants in operation on the Ouachita river and is working plans for another at Blakely mountain, 15 miles northwest of Hot Springs.

The Wildcat Shoals project will cost about \$10,000,000, according to G. S. Lynch, chief engineer of the company. It will be located about five miles west of Cotter, where the dividing line between Marion and Baxter counties. The dam site is between two high bluffs. The present project on Ouachita river will be completed before work is started at Wildcat Shoals.

Power developed there will be distributed throughout north Arkansas and part of southern Missouri, the project being one of the major developments for that section.

## APPROVAL GIVEN FOR POWER DAM ON WHITE RIVER Gazette 12-17-36 To Revise Plans For Wildcat Project.

Washington, Dec. 16 (AP).—The Federal Power Commission announced today conditional approval of a 102,000-horsepower hydroelectric project at Wildcat Bend [Wildcat Shoals] on the White river in Baxter and Marion counties, Arkansas.

The commission specified that before the White River Power Company will be licensed to start construction, plans for the dam must be re-designed to meet requirements of War Department engineers.

**Two Other Permits Refused.**  
Applications from the same company for authority to construct two other power developments on the White river, at Bull Shoals and Hog Thief Bend, both upstream from Wildcat Bend, were denied. The commission said the power company had failed to present evidence "of engineering or economic feasibility" of the two projects.

**Two Phases to Project.**  
The Wildcat Bend development, the commission announced, includes construction of a dam, reservoir, power plant "and appurtenant works" to be constructed in two steps. The first step, to be completed within 4 1-2 years after the license is issued, will consist of a dam "having its spillway crest at 484 feet, mean sea level, and two generating units having an installed capacity of 38,000 horsepower."

The second step will consist of spillways, piers, gates 26 feet deep and a third generating unit, "making the total installed capacity 102,000 horsepower."

Redesigned plans for the dam must be submitted to the commission "on or before June 1, 1937."

**Special Conditions.**  
Among special conditions applying to the project, the commission said, the company "shall construct, maintain and operate at its own expense means and appliances for passing rafts and floatable commodities over the dam free of charge."

The company must construct boat passages other than locks "when in the opinion of the secretary of war, the public right of navigation of the White river" requires them.

As further conditions the company must permit "free use of the reservoir by the public for navigation or recreation purposes and allow construction of wharves and landings not inconsistent with the operation of the project," and must operate fishways or fish hatcheries under the direction of the state.

## WildcatShoals Project Estimated To Cost \$10,000,000.

The Wildcat Shoals hydroelectric dam is the fourth planned for the Arkansas Power and Light Company's interconnected power system. Carpenter and Rammel dams on the Ouachita river were completed several years ago and preliminary work was started last month on a third Ouachita dam 15 miles north of Hot Springs at Blakely mountain.

C. S. Lynch, chief engineer for the Arkansas Power and Light Company, said last night the Wildcat Shoals dam cost estimate is about \$10,000,000. What the final investment will be after revisions ordered by the Power Commission are complied with will have to be determined later.

The White river dam, he said, will be about three miles from Flippin. The river at that point is the boundary line between Baxter and Marion counties. The dam site is between two steep and high bluffs where the river makes a bend.

When construction on the project will begin is hard to determine, he said. The power company first must make its revised plans and have them approved, and several years are allowed after final approval for work to start, he said.

It is planned to complete the Blakely mountain dam before starting on the fourth project. The Blakely mountain project is estimated to cost \$4,000,000.

C. Hamilton Moses, attorney for the power company, said last night the Wildcat Shoals dam will furnish power for most of north Arkansas and part of south Missouri, from Batesville north. He described it as a major development for that section.

## Mississippi River Not Filling Up In Memphis Sector.

Memphis, Tenn., Dec. 31 (AP).—H. G. Thomasson Jr., United States Geological Survey engineer, measured the depth of the Mississippi river here today and reported no indications it was filling up.

Recent measurements at Hickman, Ky., indicated the river was filling at the rate of several inches a year from silt.

Under Harahan bridge, connecting Tennessee and Arkansas, Thomasson found a depth of 84 feet, and a width of 1,950 feet.

## Felsenthal Canal Plan Gazette 1-13-37 Approved

Washington, Jan. 12 (AP).—The War Department advised Senator Joe T. Robinson of Arkansas today that it had approved plans to build a new canal and terminal off the Ouachita river at Felsenthal, Ark.

Maj. Gen. E. M. Markham, chief of army engineers, has transmitted the department's recommendation to the Senate Commerce Committee. If approved by Congress, the development would give Felsenthal the only usable river terminal between Monroe, La., and Calion, Ark., a distance of 124 miles by water.

Plans call for construction of a canal seven feet deep, 70 feet wide and 3,600 feet long from Lake St. Mary to the hill line near Felsenthal. The cost was estimated at \$36,000 for construction, and \$2,000 annually for maintenance.

The War Department recommended that this project be made a part of the general plans for the Ouachita and Black rivers, which have been improved at a total cost to date of around \$9,300,000. The general project also would be changed to include dredging of a seven-foot channel from the present improved channel above dam No. 6 to the vicinity of the railway bridge over Lake St. Mary.

Local interests would be required to furnish the necessary rights-of-way and suitable disposal areas for the new work.

## Felsenthal On National Rivers Board Gazette 2-8-37

**Special to the Gazette.**  
Camden, Feb. 7.—Adolph Felsenthal, "father of navigation" on the Ouachita and Tax Assessor of Ouachita county, was notified today of his appointment as a member of the Advisory Committee of the National Rivers and Harbors Congress, Washington, D. C.

This congress is the largest organization of its kind that sponsors improvement of rivers and harbors in the United States. Its annual meeting will be held April 26 and 27 in Washington. Frank R. Reed is national president.

Mr. Felsenthal has devoted his life to the development of the Ouachita river. Recently, one of his "dreams," a canal to Felsenthal from the Ouachita river, has been approved by the War Department and construction is expected to start within the year.

Mr. Felsenthal's activity resulted in deepening of the Ouachita river, providing for a six-foot channel. He spent many years at work on this project and spent much of his personal funds in visits to Washington where he remained for several months until Congress approved the expenditure of \$4,000,000 for lock and dams on the Ouachita below Camden. These were completed in 1924. He is interested also in power development and is active in the plan for the construction of dams on the Ouachita above Camden.

## Seven Basin 'Authorities' Proposed Gazette 2-11-37

Washington, Feb. 10 (AP).—Senators Barkley (Dem., Ky.) and Bulkley (Dem., Ohio) introduced today a bill to create seven federal "authorities" which with the Tennessee Valley Authority would cover the entire United States. Bulkley declared electric power development however, would be incidental to flood control.

Territorial jurisdiction for the proposed authorities:

Great Lakes—Ohio Valley Authority—The area containing the rivers flowing into the Great Lakes, and the Ohio river and its tributaries, except the Tennessee river system.

Atlantic Seaboard Authority—Navigable rivers along the seaboard from Maine to Florida.

Missouri Valley Authority—Missouri river and its tributaries.

Arkansas Valley Authority—Arkansas river system and all other rivers south of the Missouri river flowing into the Mississippi river and the Gulf of Mexico.

Mississippi Valley Authority—Mississippi river and its tributaries, except those within jurisdiction of other authorities.

Colorado Valley Authority—Colorado river system and all other rivers flowing into the Pacific ocean south of the Columbia river.

Columbia Valley Authority—Columbia river system.

## North Arkansas Hopeful of New Industries Through Construction of Planned White

By TOM SHIRAS.

Cotter, Jan. 11.—The conditional approval given recently to the White River Power Company by the Federal Power Commission, to construct a power dam at Wildcat Shoals, in the White river, a few miles above here, and three miles from Flippin, in Marion county, gives the people of north Arkansas a new hope for an industrial empire in north Arkansas.

A few days before the Power Commission gave its approval to the Wildcat Shoals project, the War Department made an allotment for supplementary investigations in connection with a combined flood control and hydro-electric dam at Table Rock, on White river, in Taney county, Missouri.

**Old License Revoked.**  
For many years the Empire Electric Company held a license on the Table Rock site, but after strong protests by the citizens in south Missouri, the Federal Power Commission refused a further continuance of the license, and for several years efforts have been made to have the government construct the dam along TVA lines. The allotment for supplementary investigation of the project, is taken as promising evidence that it may be included in the government's public works program for the coming year.

Both of these metals were smelted with heat, coke being the favorite agent. Today the metal in these two ores is separated from the other foreign matter by a process known as the electrolytic process. This process has been used in the reduction of zinc, for several years. Only recently has the Bureau of Mines worked out a electrolytic process for manganese.

By the electrolytic process the crude ore is placed in chemical filled vats, the chemical releasing the metallic values from the foreign matter, throwing it into solution. The metal is then picked up by large electrodes, treated and pigged and is ready for market.

There are literally millions of tons of low grade manganese ore in the Batesville-Cushman manganese field that probably could be adapted to this treatment, if power was available in sufficient volume and could be sold at a price that it could be used economically.

Both of these ores are also adapted to chemical uses and no doubt with plenty of cheap electricity chemical plants which use them would locate here.

**Fuel Big Factor.**  
Because there is no coal field adjacent to the White river country, fuel has been a big factor in the development of manufacturing. Many plants have burned wood under their boilers, but this is not only expensive but not satisfactory.

With an abundance of cheap power, mines, quarries and all manufacturing plants could use motors.

The flood control features of these two dams are important to the White river valley. Since 1915, the valley has suffered a tremendous loss from overflows, and they probably will become worse if something is not done to control them. In the earlier days, before the railroads entered the territory and agricultural development got under headway, floods were few and far between. New settlers mean new clearings and an immense acreage of hill land has been cleared during the last 25 years, giving the rainfall a much quicker run off. In recent years the highways and improved county roads have accentuated this condition. The old mountain trails had no ditch lines, but today, even the poorest county roads are drained, and the water dashes into the streams immediately during every downpour. In the old days it was checked and held back by the timber and other natural obstacles, and must of it went into the ground.

**Would Curb Floods.**  
To anyone who is acquainted with both the upper and lower reaches of the White river, it is obvious that some method of flood control has to be employed on the Upper White river, or the people of the lower valley will live in fear of disastrous floods most of the time, with increasing losses each year.

The construction of these two dams would mean not only the beginning of the development of over 500,000 average horsepower on the White, but of a flood control plan that would eventually relieve the flood situation over most of

the stream. They would tend to hold back the flood waters of the upper reaches of the river, during extreme wet periods, until the water below had run off.

**Would Create Lakes.**

Besides the flood control and industrial development these two dams would bring, the two immense lakes they would create would make the hill section of Arkansas a splendid resort section. The lake that would be created by the Wildcat Shoals dam near Cotter would be about 100 miles long, reaching from the dam to the foot of the Taney county dam, near Forsyth, Mo., which is now operated by the Empire Electric Company. In some places, where creeks ran in from both sides of the river, it would be several miles wide.

The lake that would be created by the dam at Table Rock, in Taney county, Missouri, probably would be not as long, but it would reach well up into Carroll county, Arkansas, in the neighborhood of Eureka Springs; up Long creek nearly to Alpena Pass in Boone county, and up the James river for many miles into Stone county, Missouri.

**Development Possible.**

The lake created by the construction of the Forsyth dam, about 25 years ago, is 27 miles long, and a magnificent body of water. With the creation of the two other lakes by the construction of the Table Rock and Wildcat Shoals projects there would be a chain of three lakes in White river, with a combined length of approximately 200 miles. The two big lakes would be among the two largest artificial lakes in the United States, and would attract a lot of tourist business, as well as a lot of more permanent business. The territory is adjacent to Kansas City, St. Louis, Springfield and Joplin, Mo., and many of the residents of these cities would have summer homes along their shores. The value of the lakes would be increased by the proximity of the Ozark National Forest and other recreational centers in the territory.

The construction of these two proposed dams is probably the most important and constructive improvement ever planned for north Arkansas. Their ultimate completion seems to be the key that will unlock the door to the future industrial development and prosperity of this section of the state.



## Camden C. of C. For Ouachita Valley Authority.

Special to the Gazette.

Camden, Feb. 6.—Approval of the proposed Ouachita Valley Authority was voted unanimously by the Chamber of Commerce last night following the report of the Rail and Transportation Committee. George Holland read the report showing possibilities of river navigation. A combined rail and water rate for this section is sought by the association.

An organization meeting will be held here soon. Co-operation of all other towns in Arkansas will be sought.

A saving of from 20 to 25 per cent on freight rates with a combined river and rail rate will be possible. The Ouachita river has a six-foot channel at Camden which is at the head of navigation for this stream.

A nine-foot channel will be sought and aid from the government in the formation of the Ouachita Valley Authority will be asked in Congressman Miller's proposed bill for the White River Valley Authority.

# Develop Proposal fo merce

## What Barges Would Mean in Saving to Shippers Shown In Statistics on Rates

Dem. 2-28-37  
By WILLIAM JOHNSON.

Where is Arkansas located? "A simple question", you may say, but don't be too sure. The state appears to snuggle up against the west bank of the Mississippi river, between the states of Louisiana and Missouri. That's where it is, too, as far as the facts of geography go. Suppose, though, that you're paying freight bills, and measuring the position of Arkansas on the nation's economic map in that important way. You then discover that Arkansas isn't where geography shows it to be at all. On the basis of our freight rates on many commodities, compared with the rates of other states around us, Arkansas is hundreds of miles west of the Mississippi. It is in the neighborhood of Kansas, Nebraska and the Dakotas. And this is a vital view of the matter. For you pay freight bills, regardless of what your occupation is. They subtract from the returns for everything the state ships to outside markets. They are added to the prices of every shipped-in article we buy, from sewer pipes to Jew's harps. Hence, one of the big jobs Arkansas faces is to get the state moved back, as regards freight rates, to where it was placed by nature.

The niftiest way to put that task over would be to have boat traffic restored to our larger rivers. Unfortunately, our main stream, the Arkansas, doesn't seem to have any immediate place in Uncle Sam's picture of water highways. It may, in the future, become again a carrier of commerce, as food control is developed and the old river's fickle flow is more controlled and certain. That is the belief of a good many Arkansas folks who are in the habit of thinking straight.

Meanwhile, however, we have another and rosier prospect of water transportation on the White river. That project is now simmering in Washington. It came to a head last December, when a gathering of business men and rice growers in Stuttgart, presented the matter to Major General T. Q. Ashburn, president of the Inland Waterways Corporation, which operates Uncle Sam's barge lines. Major General Ashburn told the meeting that if navigation of the White river proved feasible, he would use his influence to get a barge line on it.

Senator Joe T. Robinson, who was at the Stuttgart gathering, is said to favor the plan if the government finds it practicable. Both he and Major General Ashburn showed evidence of being impressed by an argument for a barge line on the White river, presented by J. C. Murray, traffic manager of the Little Rock chamber of commerce.

Mr. Murray brought out facts about the depth of the White river that seem to indicate it has enough of a flow for boat traffic. He cited the latest reports of U. S. Army engineers showing that from the mouth of the stream to De Valls Bluff, there was four and one-half feet or more of navigable water all the year. From De Valls Bluff to Newport, the same authorities recorded a four and one-half foot depth or greater for six and one-half months of the year, and two and one-half feet or better the remaining months. From Newport to Batesville, the army engineers found the navigable water to be at least three feet deep for six and one-half months of the 12, with less the rest of the year.

### White River Traffic.

Then Mr. Murray pointed to traffic records made with similar depths of water on the Ouachita river. He gave figures revealing that in one year the Ouachita was navigated by 23 steamers requiring four feet of water and 11 barges taking the same depth. In that year, too, there were on the Ouachita 123 steamers with a draft of only two feet and 14 barges of but two feet draft. Thus it would appear that the White river has water enough for boat traffic on regular schedules from the mouth to De Valls Bluff, Mr. Murray said. And he added:

"It may be possible to operate as far as Newport. At least this would be possible for portions of the year." In that case, however, the traffic manager said it might be necessary to transfer tonnage to light-draft barges, at or near the mouth of the river, since its flow is shallower above De Valls Bluff.

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### SPEAKING OF QUALIFICATIONS.

One or two members of the State Hospital Board seem quite irate because the Democrat has questioned the wisdom

#### That "Hump" in Rates.

The state is well-nigh surrounded by regions which have lower freight rates than our own. A "hump" in railroad rates, a sudden rise, has been established at the Mississippi river by the Interstate Commerce Commission. This hump is toned down, made to rise gradually, for states north of us and west of the Mississippi. Then, to the east of us, to the north and the south, many sections have rates further cheapened by water hauling on the Mississippi, the Ohio, the Missouri and other rivers, and southward, by combinations of river and ocean rates. As one illustration of the effect of that arrangement, Mr. Murray said that imported bauxite can be shipped from New Orleans to St. Louis for \$3.47 a ton, compared with \$3.65 a ton from Little Rock to St. Louis.

On certain rates in and out of Arkansas, adjustments have been made. Outbound manufacturers are usually given a rate allowing them to compete with those of adjoining states. A reduction on cotton has been obtained, too. The whole picture is one of some rates which put Arkansas at little or no disadvantage, but of many others that operate to lift our living costs and handicap us in developing business. Mr. Murray summed the matter up in these words:

"Arkansas is located within a territory to and from which the highest scale of freight rates in the United States, mile for mile, is effective, except the extreme thinly populated western portion of Texas. The prescribed rates, except where they have been changed to meet competition, particularly via truck, are approximately 150 per cent of the rates in northern territory east of the Mississippi and north of the Ohio rivers.

"There is another exception, in that the Southwestern lines have endeavored to establish commodity rates on articles moving in carloads from the Southwest to the North and East lower than the prescribed scale, to permit certain manufactured articles to compete with similar articles produced elsewhere."

#### Development Retarded.

Our rates are 107 per cent of those in the territory across the Mississippi and south of the Ohio, and from 107 to 120 per cent of the rates in the territory to the north of us, but west of the Mississippi, as we are. The whole situation, as Mr. Murray sees it, taking into account the adjustments he mentions—and for which, by the way, he deserves much credit, since they were made largely as a result of the unflagging efforts he has led—is still a highly unsatisfactory one. Even where our rates on manufactured products to the North and East have been reduced, he declared, "they have not been made sufficiently low to maintain any degree of normal development of the state." And, he added, the water-cheapened rates south, east and north of us, "have fostered the development of regions on those waters to the detriment of interior Arkansas, even though we have some freight rates which reflect, in part, that lower-cost transportation."

So, as regards freight rates, Arkansas, located on the Mississippi, threaded with water courses, is generally speaking, in the locality of Kansas, Nebraska and the Dakotas. One unfairness in that situation, Mr. Murray cited, is that rates are made partly on the basis of population. Yet, he pointed out, Arkansas has a population of more than 35 to the square mile, while Kansas has 23, Nebraska not quite 18, South Dakota only nine, and North Dakota less than 10.

#### Water Transportation.

Water transportation, which has done so much for other sections, is clearly an effective remedy for Arkansas as far as we can get it. The White river project seems promis-

ing. One of the big gainers by it, Mr. Murray believes, would be the Arkansas rice grower. Under present rate conditions, he said, Arkansas rice must pay 41 cents a hundred pounds to get into the country's best rice market in the Southeastern states, while Louisiana pays 36 cents. Arkansas rice moving through New Orleans into export or the coastwise trade, is at a disadvantage of from a few cents up to 14 cents a hundred pounds, compared with Louisiana rice, he added.

A project under discussion, in case a barge line is put on the White river, is building a motor trucking highway from Little Rock to DeValls Bluff. As one man explained it, such a highway might cost \$1,250,000—much less than the canal from Little Rock to the White river which was previously considered. He thought a motor truck highway would carry a good deal of freight as efficiently.

## The NEWS

They're off!

Who—the horses? Yes, but they're not all. So are a lot of folks hereabouts.

How? Two guesses. First: To the races; second; in the head. Tck! Tck! That's not fair. Aren't we all?

The p'int of it is: These particular folks we're talking about are just

Mr. Murray summed up the White river plan as follows:

"We are hopeful it will be approached from three points of view: First, the feasibility of operating barges on the White; second, prospects of success in the light of available tonnage, as well as the important factor of more tonnage being created by the service third, and a most vital consideration, the value of a barge line on the White as a feeder to the present service on the Mississippi.

"It occurs to me that for the first few years, operation of regular service on the White would pay its costs, or even slightly less, the additional revenue which would accrue to the Federal Barge Lines operating on the Mississippi would warrant the establishment of this feeder."

### The Neutrality

Evil

There are several great importance behind the judiciary, is, of course, no being carefully Congress or anywhere constitutional crisis. Most of these weeks or even a few is no emergency with immediate action on desirable reforms farm tenancy, Se long-term agricultural administrative