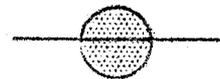


WATER
RESOURCES
DEVELOPMENT

AS PERTAINS TO

THE
RESERVATIONS
OF
ARIZONA



1963

- ARIZONA COMMISSION OF INDIAN AFFAIRS -

FOREWORD

The theme for our fourth joint meeting with the Inter-Tribal Council of Arizona was selected by the Commission's Tribal Leaders Advisory Committee as the most important subject for discussion at this time.

The water rights subject was first introduced at the Law and Order **joint** meeting on May 25 and 26, 1962. Certain important factors then presented stimulated a continuing interest in the possibility of water resources development for the reservations.

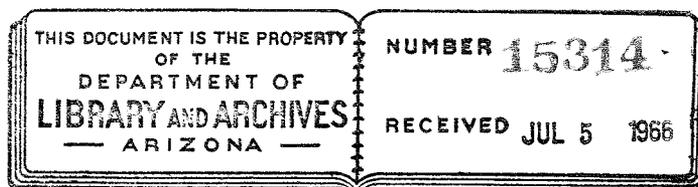
To supply the best possible authority on this program the Commission obtained the generous help and cooperation of the U. S. Bureau of Reclamation of the Department of the Interior.

This report is intended to supply factual resource material to all the reservations and should be of particular interest to the tribal leaders who found it impossible to attend the meeting.

Sincerely,

Paul Jones
PAUL JONES,
Chairman

1-11-63



ARIZONA COMMISSION OF INDIAN AFFAIRS
1623 West Adams - Phoenix 7, Arizona

AGENDA

December 7, 1962 MEETING

Arizona Highway Department
on Jackson St. West of 17th Avenue
Phoenix, Arizona

1:30 P.M.

AFTERNOON SESSION

THEME: WATER RESOURCE DEVELOPMENT

Introduction Paul Jones

Speakers

Mr. J. C. Jorgensen, Chief, Engineering Division, 1-11
Phoenix Development Office, Bureau of Reclamation

Mr. Robert G. Comstock, Civil Engineer, Engineering 12-23
Division, Phoenix Development Office, Bureau of
Reclamation

Question and Answer Period 24-39

3:45 P.M.

Adjournment

Remarks by Jack C. Jorgensen, Chief, Engineering Division,
Phoenix Development Office, Bureau of Reclamation, at
Arizona Commission of Indian Affairs' Meeting - December 7, 1962

Reclamation's Project Development Program in Arizona

The Bureau of Reclamation has been active in water development projects in Arizona since the first Reclamation Law enactment in 1902. The first works undertaken were for what is now the Salt River Project and the Yuma Project. Other structures that have been built are the Hoover, Parker, Davis, and Imperial Dams on the Colorado River. These later structures were built between 1932 and 1950. The Wellton-Mohawk was the last unit of the Gila Project and began operation during 1952.

Project planning studies of the water requirements and water available are made before construction activities are started. The Bureau examined the Central Arizona Project and reported on it in 1947. It failed to obtain Congressional authorization in 1951 because of the difference of opinion between Arizona and California about water rights. With the start of litigation in the water suit, Arizona vs. California, project planning studies in Arizona came to almost a complete halt. This was the situation until April 1960, at which time the United States and the Arizona Interstate Stream Commission signed a contract providing for cooperative investigations. I believe this should be recognized as an historic date in the annals of Arizona water resource development for two reasons: first--the cooperative contract represented Arizona's first aggressive action in

resuming actual physical work on development of the State's water resources after a decade of preoccupation in litigation over Colorado River water rights; and, second--it introduced to Arizona for the first time the new concept of developing the State's water resources on a statewide basis.

The cooperative contract did not, on the face of it, appear to be of great significance. It merely provided that the Bureau would collect and tabulate water resource data throughout the State, but at the same time it stipulated that because of the litigation the Bureau would not use these data to formulate practical plans for use of the water resources. It represented simply the best that could be accomplished during the period that litigation was in progress. It did, nevertheless, set the stage for Arizona to move forward in the development of its water resources on a statewide basis.

The Bureau had been proceeding with the routine work of gathering basic water resource data under the terms of the cooperative contract for about one year when Judge Rifkin transmitted to the Supreme Court his report and recommended decree on the Arizona vs. California water suit. Immediately thereafter, the Arizona Legislature took action by appropriating \$150,000 to be contributed to the Bureau of Reclamation for studies of possible uses of Colorado River water in Arizona. A second contract between the Arizona Interstate Stream Commission and the Bureau of Reclamation was then executed, in which the foresight that went into the cooperative contract became clearly evident. The new contract, which was signed on April 24, 1961, provided that the Bureau would prepare feasibility grade

design and estimates for Bridge Canyon Dam and Powerplant, and would re-analyze and prepare a report to appraise the original Central Arizona Project report. This work was to be completed by January 1962, a period of less than 8 months.

The limited time and funds made available for this work would have made the job impossible had there not been available up-to-date data on the current situation for use in the analysis and appraisal. However, data adequate for these purposes were available, because they had been gathered during the previous year under the cooperative contract. The central Arizona appraisal was completed on schedule in January 1962. On November 20, 1961, 2 months prior to completion of the appraisal report, a third contract was executed between the Bureau and the Stream Commission providing for studies on the transportation and use of Colorado River water in areas outside of central Arizona. These studies are now underway and will be completed by July 1, 1963. As in the case of the Central Arizona Project appraisal, basic data gathered under the cooperative contract are being used to formulate plans for optimum use of water in all areas of the State.

Up to this point, I have attempted to show how the cooperative contract was effective in getting project development work reactivated in Arizona prior to settlement of the Supreme Court case; how the data gathered under this contract made possible the completion of a Central Arizona Project appraisal report in less than 8 months' time; and how these data are currently being used to develop plans in other areas of the State. This tells only a small part of the total story, however, so I would now like to describe briefly how this routine data-gathering work, started

in April 1960, has grown into a dynamic and comprehensive project development program for all of Arizona.

In carrying out the work provided for in the three contracts with Arizona, we have been able to identify localized water problems and needs in every area of the State, including Indian Reservations. It has been somewhat like putting together a jigsaw puzzle; every place you look there are water problems, water shortages, and water needs for the future. But the more opportunity we have had to look at and study the situation, the more we have come to realize that, like a jigsaw puzzle, all of the pieces can be fitted together. There now appears little question but that coordinated statewide water plans can ultimately be formulated which will benefit all areas of the State.

Present studies have also clearly brought to attention the fact that, in Arizona, water resource development does not mean for irrigation use only. It is evident that the population explosion that has taken place during the last decade has changed considerably the present and future needs for water. The need for irrigation water is greater now than it ever was but, on the other hand, new and growing needs for municipal and industrial water have developed which must be satisfied. With the growth of the population, the flood control needs have increased to a degree far beyond previous imagination; the needs for water areas for recreation and fish and wildlife have grown and will continue to grow. In brief, present studies have dramatically brought out the fact that Arizona has grown up and that multiple-purpose concepts must be applied in all areas, and that water for fishing, recreation, municipal and industrial purposes

is as important to the economy of some areas as irrigation water is to other areas.

Perhaps most important of all, it has become clearly evident that water resource investigations in Arizona are not entirely dependent on the outcome of the Supreme Court suit as has heretofore been considered gospel. It is now abundantly clear that, whatever quantity of water may ultimately be allocated to Arizona under a Court decree, that quantity is urgently needed and can be used by economically justifiable and financially feasible projects. It is now clear that, in order to intelligently plan water resource projects that will give the greatest benefit to the State as a whole, comprehensive studies are needed to investigate the physical, financial, and economic conditions that exist in all areas.

Settlement of the Supreme Court case will ultimately tell us how much Colorado River water will be available to Arizona, but it will not tell us anything about the local resources or the relationship between the present and potential needs and capabilities of the various areas of possible use. It will not tell us what are local conditions in each of the possible use areas; what resources do they have available for further development; what are their capabilities for conservation or salvage of present water supplies; how much can potential water users in various areas afford to pay for water; and to what extent will power revenues be needed to help pay the cost for delivering water to where it is most urgently required and where will it do the most good to the State as a whole.

To clarify this point, I would like to ask that you imagine what the situation would be if there were no Colorado River, or if Arizona should be allocated no additional water from that river. In other words, what would the job be if Arizona had no outside source to look to for additional water. I think that you would all agree that the State would have to be studied intensively to find the means for conserving, and putting to optimum use, every drop of water that is now available or that can be developed from local sources. Because, as brought out in the Central Arizona Project appraisal, the central Arizona area alone appears to have a water supply deficiency of over 2,000,000 acre-feet per year. Regardless of the outcome of the suit, all of the current demands for water in Arizona cannot be met from the Colorado River. So, with or without a water allocation from the Colorado River, it is essential that Arizona proceed with programs of water conservation; salvage and reuse; programs of canal lining to conserve water in transit to the land; programs of watershed management to produce more runoff, such as are in progress on the Fort Apache and San Carlos Reservations; programs of water salvage in the streambeds; and, last and possibly most important of all, programs for the reuse of sewage effluent and return flow irrigation water to augment the existing supplies. These studies would have to be intensified and carried forward aggressively in all areas of the State, regardless of the amount of water made available from the Colorado River or if no additional water should be allocated. Thus, studies of this nature are certainly not dependent upon the outcome of the suit.

By way of illustrating how we are going about the problem of getting the necessary answers, I would like to describe the Bureau's current program

of investigations in Arizona and the investigations scheduled for future years. All State funds contributed for Bureau studies will be expended by the end of this fiscal year, but Federal funds have been programmed to continue studies in all areas. By the end of this fiscal year, we expect to have completed the water resource inventory of Arizona under the cooperative contract. The Central Arizona Project appraisal report has already been completed this year, and the studies for use of Colorado River water in other areas of the State under the third contract with Arizona will be completed by July 1. In addition to these jobs, which have been carried out primarily with State funds, we also expect to complete by July 1, 1963, a report on water salvage on the Colorado River. This report will provide information on how much water we may expect to salvage through clearing of phreatophytes and other means on the main stream itself. We have started, during this year, reconnaissance investigations of the water resources of the Upper Gila River and the San Pedro River Basin. These are studies which will be of interest to the people of the San Carlos Reservation. We have made a first contact with the resources committee of the San Carlos Tribal Council as part of this study. We are currently in the second year of investigations of the Maxwell Project. We have contacted the Fort McDowell and Salt River groups concerning access to the damsite and borrow material areas. The Maxwell Dam site is the old McDowell Dam site referred to in the original Central Arizona Project report. The Maxwell Project investigation, incidentally, is probably one of the most sophisticated and advanced multiple-purpose studies ever carried out anywhere in the world. It involves studies to coordinate the operation of seven surface reservoirs

and the ground-water reservoir for optimum multiple-purpose use of the available local water supplies. We also expect to complete, by the end of this fiscal year, the feasibility reports on the Marble Canyon Dam and Powerplant development and on the Bridge Canyon Dam and Powerplant development. During our study work on the Bridge Canyon Dam and Powerplant, we have contacted the Havasupai people and examined the canyon from the village down to the Colorado River. We hope to program funds next year for the initiation of studies of the Little Colorado River and the Santa Cruz River Basins. Both of these studies will be carried out as an expansion of the program started with State funds. Studies will be extended to other areas as fast as funds will permit. In connection with our Central Arizona Project and Little Colorado River area studies, we have been to White River and met with the Tribal Council. Working with Mr. Robert Rupkey of the Bureau of Indian Affairs office, we have done geologic mapping for the damsite for the Bear Flat project. All of the projects being studied at the present time are considered as independent developments, but all could be incorporated into the Central Arizona Project or into a statewide water plan at the appropriate time. Interest in the Buttes Dam on the Gila River for the San Carlos Project led to a visit to our office by several of the Pima people from the Gila River.

The fiscal year 1963 budget contains funds to continue studies on the Central Arizona Project. The detailed studies being initiated can be expedited through continued appropriations in future years. It should be remembered that these Central Arizona Project investigations are not

dependent upon the outcome of the Supreme Court suit because they will involve the gathering of information which will be needed to formulate plans for the distribution and use of any quantity of water that may be allocated. The central Arizona investigations will include studies in the Central Service Zone to which direct deliveries of Colorado River water can be made, and in the higher areas to which additional water can be made available for local use through exchange arrangements. As part of these studies, we are making arrangements to start streamflow measurement stations in Kanab Creek, Black Creek, and Chinle Wash. No data exist for the Chinle Wash and Kanab Creek and only a very short record is available on Black Creek. The start of records on Chinle Wash is important to determine the average annual waterflow arising on the Navajo Indian Reservation for future use studies.

And this brings us to what is probably the most critical problem of all-- that of cooperation between the various potential water-using entities of the State. We have heard fears expressed in all areas that someone else may get the water and we'll be left behind because we're higher up or farther away, or don't have the political power. Such fears must appear completely unwarranted if we just keep in mind a few simple facts about Arizona's water situation:

First, whatever quantity of water Arizona may be awarded from the Colorado River by a Court decree will be used first to satisfy the established rights along the Colorado River. All remaining water will be available to the State as a whole.

Second, imported water can be delivered by direct diversion only to the lower elevations of the State, but its benefits can be obtained by the higher elevation areas by permitting increased diversions through exchanges of water with those who can receive import water by direct diversion.

Third, the delivery of imported water to the lower areas of the State is prerequisite to the increased use of water in the higher areas because, without water being brought into central Arizona, there is no water available for exchange anywhere.

Fourth, the imported water will be delivered to the using agencies under the terms of contracts with the Secretary of the Interior. There, accordingly, appears no basis for conflicts of interest between potential water users anywhere. In order for the Secretary to discharge his responsibilities, he must be fully apprised of the potential needs and capabilities of all areas before any plan for equitable distribution of the State's water can be formulated; and as the Secretary of the Interior is responsible for both the Reclamation and the Indian Affairs programs, he is fully cognizant of the needs and the plight of different reservation areas. This is especially true of our present Secretary, Mr. Stewart Udall.

It is, therefore, incumbent upon all water-using entities within the State to survey their water problems and needs and make them known to the State and Federal agencies working on these problems. I would like to assure you that representatives of the Bureau of Reclamation in this area will

be available at any time to discuss water problems with your tribal groups and other representatives from all areas throughout the State.

While this discussion has been concerned solely with the water problems of the State of Arizona, it should be kept in mind at all times that Arizona's water problems are only a part of a much greater problem faced by the Lower Colorado River Basin as a whole. The entire basin is critically short of water and subject to the pressures of population expansion. Arizona's problems are, therefore, just one part of a comprehensive basinwide program of water conservation, salvage, and importation. The programs will be costly, and power revenues from all present and proposed hydroelectric developments on the Colorado River will undoubtedly be needed to help pay the bill in Arizona and elsewhere. So, cooperation is required, not only between the water users in Arizona itself, but also with the other States of the Lower Basin.

The cooperative contract of April 18, 1960, established a new concept for Arizona by providing for water resource development on a statewide basis. This concept recognizes the diverse needs throughout the State, but requires statewide cooperation to make it work. The same concept is going to have to be applied within the entire basin. Arizonans should make sure that this concept is not voided by internal disagreements and fears within the State or by disagreements between the States of the Lower Basin.

Remarks by Robert G. Constock, Civil Engineer,
Central Arizona Project Studies, Phoenix Development
Office, Bureau of Reclamation, at the Arizona Commission
of Indian Affairs' Meeting--December 7, 1962

The Bureau of Reclamation makes several kinds of area studies--they are: (1) the feasibility study for definite projects, (2) the reconnaissance study to determine if a possible project has feasibility, and (3) the inventory. In Arizona, at the present time, we have all three of these being performed by the Phoenix Development Office.

The study of most importance to Arizona at this time is the Central Arizona Project, about which I shall talk first.

The Central Arizona Project includes Bridge Canyon Dam, the Granite Reef Aqueduct and Pumping Plants, Salt-Gila Aqueduct, Tucson Aqueduct, Hooker Dam, Charleston Dam, Buttes Dam, and Maxwell Dam.

Bridge Canyon Dam and Powerplant on the Colorado will be the energy source for the Central Arizona Project--the dam about 680 feet high, containing about $2\frac{1}{2}$ million yards of concrete, will have a powerplant with 1,500,000 kilowatts of installed capacity. The reservoir for this dam will be 3,710,000 acre-feet and will extend upstream to beyond the mouth of Havasu Canyon. The construction period for this dam and powerplant will take about 7 years. A construction camp will need to be built near the damsite, and it will be about the same size as the town of Page up at Glen Canyon. The completion of this reservoir will create opportunities for

recreation and boating to come the full length of the reservoir from the dam and the access at that point, up to the mouth of Havasu Canyon. It can be seen that this new reservoir will provide recreational opportunities and attraction of tourists to both the Hualapai and the Havasupai Reservations. The energy produced at the Bridge Canyon Powerplant will be transmitted to the load center at Phoenix and also to the pumps near Parker Dam for the Granite Reef Aqueduct.

The Granite Reef Aqueduct, starting from Lake Havasu above Parker Dam, would come across the Osborne Wash, Cunningham Wash, and through the Harquahala Valley over to the Hassayampa River. At the Hassayampa, instead of going around the White Tanks to the south as originally planned, the aqueduct will go to the north, through a tunnel under the ridge. From there, it will go northeast toward the Agua Fria River and then toward the Maxwell, or McDowell, Dam site on the Salt River. As presently planned, the Granite Reef Aqueduct will carry 1,200,000 acre-feet of water a year. This water would be made available within what we refer to as the Central Service Zone of the Central Arizona Project. This Central Service Zone extends from western Maricopa County down to the city of Tucson. From Granite Reef, an extension of the aqueduct would go toward Florence and Picacho, where a pipeline would take off with an additional pump lift for the city of Tucson.

This aqueduct, while starting with 1,200,000 acre-feet, would, after canal losses enroute, wind up with about 1,050,000 acre-feet of water for delivery to the service areas. Two hundred thousand acre-feet are contemplated for delivery to the city of Phoenix for municipal and industrial uses in the

desert area to the north and outside the Salt River Project area. One hundred thousand acre-feet would be delivered to the city of Tucson. During the next 4 years, we will be making detailed studies to determine the quantities and locations to which these water deliveries should be made. The criteria or basis of delivery to any particular area or water district have not been fixed.

All reservations within the Gila River Basin may be affected to a greater or lesser extent either by direct delivery of water in the Central Service Zone or by application of the water exchange principle. Direct delivery of water will be through contracts for water service. These contracts will be the responsibility of the Secretary of the Interior, with the Bureau of Reclamation making the studies upon which the contracts are based. The delivery of supplemental water to the Salt River and the Gila River Reservations presents no extra engineering problems, as can be readily seen. From the surface distribution system which will be essential for water deliveries in Pinal County, no problem is foreseen for the supplying of water to the Ak-Chin and Chuichu projects.

As further urbanization of the Phoenix metropolitan area expands, the problem will become more urgent as to what to do with the waste effluent flows which will become increasingly available to the west of Phoenix. It has been estimated that this may approach a quantity in the magnitude of 500,000 acre-feet a year. This would be equal to about half of the quantity of water which would be brought in through the aqueduct. Studies have been started to determine the best way to handle this quantity of water and the location to which it might best be taken. As can be seen from this

point, water could be taken downriver, or it could be transferred to the south, up the Gila River toward Maricopa, Stanfield, and Casa Grande. This water will be of a quality excellent for irrigation and, if allowed to go uncontrolled down the Gila toward Buckeye, it will create a further drainage problem.

Coordinated with the Granite Reef Aqueduct, for reregulation and flood control, will be the Maxwell Dam at this location. Connected to the Granite Reef Aqueduct through a pumping plant, Maxwell Reservoir will provide regulation of water which cannot be used for irrigation directly, and will reregulate releases from the Salt and Verde River Reservoirs for power and other purposes. The lake formed would be available for recreation and for fishing. The recent emphasis on fishing and recreation and its association with lakes and water is probably well known to all of you.

The Buttes Reservoir on the Gila is also possible to coordinate completely with the Central Arizona Project. This would be an aid to the San Carlos Project. To further conserve the water brought into the Central Arizona Project, it is believed that all systems taking delivery of project water should be imperviously lined--canals or pipe systems--to insure that as little waste as possible is realized.

A specific example of this would be the lining of the canals of the San Carlos Project, including the canal from Coolidge to Sacaton. With the decision of the Supreme Court expected to be handed down within this next year, our studies are going forward as full feasibility studies on the Central Arizona Project. During the next 4 years, we plan to finish

our feasibility design studies to the point where we know the size to which the Granite Reef Aqueduct should be built, and to where we are able to determine the areas for delivery of water. In the determining of the areas for direct delivery of water within the Central Arizona Project, there will also be the determination of the amount of water to be considered as exchange water to allow further upstream uses. In this connection then, with these further upstream use studies, we will be making further examination of these identified areas above the Mogollon Rim, and below the Mogollon Rim in what we refer to as the Upper Tributaries Zone. These studies in the Upper Tributaries Zone include the White Mountain Reservation and take into account recreation, summer home development, fish and wildlife conservation, agricultural development, and also, industrial potential. Mineral resources of these upstream areas are, to some extent, unknown, but the ones that we do know about, such as the Colorado Fuel and Iron's work on the deposit in the Chediski area, indicate that Pleasant Valley and the northwest corner of the White Mountain Reservation is going to be one area which will be in need of additional water supplies. Consideration has been given to a steel mill in the Verde River Valley. Development of an additional industrial complex here would, of course, influence the whole valley.

The water exchange principle has been in use for some time. At Lake Showlow, water is being diverted into Forestdale Creek, which reaches the Salt River in exchange for water from the Black, which is being pumped out near Point of Pines. Rapid growth has occurred in the White Mountain area. From Snowflake, down into the Apache Reservation, recreation and

industrial growth occurring in and from the forest area bring up the problem of coordination of the two watersheds. One of the first indications is that sizeable storage on the North Fork of the White River above Whiteriver and above Fort Apache on the East Fork, would be essential to any plan to make a comprehensive development and use project in this area. The initial start in a comprehensive plan is being developed by the Bureau of Indian Affairs for the diversion from Whiteriver over to Bear Flat. With this as a start, additions in the future could be made through the provisions of larger storage east of McNary and on the East Fork.

The Upper Gila River Basin is included within the broad scope of the Central Arizona Project. We are making a reconnaissance study in the Upper Gila to determine the needs in addition to those that could be supplied from the Hooker Dam. Our studies in the Upper Gila cover both Arizona and New Mexico portions of the Gila River Basin. We have defined our study area as that part of the Gila River Basin upstream from the San Carlos Reservoir. Our studies to date indicate that, upstream from San Carlos Reservoir, there appears to be sufficient water occurring to satisfy all the needs that will occur above the San Carlos Reservoir. The problem that arises is that water of the Upper Gila here is considered to be used and assigned to the people of the San Carlos Project--the area of Florence, Casa Grande, Coolidge, and Sacaton. The purpose of our reconnaissance study is to identify those features and the costs of the features that would be included in any plan with the benefits which could be obtained by using this water for irrigation, mining, and domestic use in the towns within the basin. These additional uses which would be allowed or established in developing the Upper Gila

could be made possible by the importation of water through the Central Arizona Project facilities and exchanging water in the San Carlos area to allow increased uses in the Upper Gila Basin. Considered as part of the Central Arizona Project, the Hooker Dam site on the Gila River in New Mexico, above the Cliff-Gila Valley, provides potential flood protection to this valley, as well as a regulated irrigation supply for the valley and downstream land, and a water supply for future municipal and industrial uses around Silver City and Tyrone. Our planning for the Upper Gila Basin also includes a development on the San Francisco River near Reserve. Lower on the Gila River, the Corps of Engineers has proposed and has authorized a dam at the Camelsback site. At the present time, there are no plans for gates on this structure. The inclusion of gates on this structure would make it possible to reregulate the flows that occur from San Francisco and the Gila and make them available for controlled uses in the length of the Safford and the Gila Valleys, down to San Carlos Reservoir. The Corps' project also includes the channelization of the Gila River to remove mesquite and cottonwood growth that is using water but not producing a benefit to anybody. With the coordination of storage at the Camelsback Dam, a canal running the length of the valley, coming on down beyond Safford and Geronimo-Bylas, could develop or provide additional supplies to the lower end of the valley. Consideration is also being given in this study to the possibility of storage on the San Carlos River below Natural Corral Creek for use in the area to the west. To date this year, during our studies, we have done mapping of damsites and reservoir areas in the Upper San Francisco River. Shortly, it will be possible for us to get down to the San Carlos to do mapping at that location. An important

way to conserve water in this Upper Gila River area is the lining of canals. If the canal systems in the Safford Valley can be consolidated and put into a lined system, there is the possibility that a main canal coming from the head of the Safford Valley, on down onto the reservation, could ultimately lead to a lined channel which would take flows in excess of the upper valley requirements down to Coolidge Dam for release through the power drop there. This Upper Gila reconnaissance study has another year and a half to go before our report will be out.

A second reconnaissance investigation we have going is that of the San Pedro Basin, which includes the area of San Pedro drainage from Coolidge Dam down to the Buttes Dam site. Included in the past as part of the Central Arizona Project, the Charleston Dam has been considered as a supply for municipal water to the Tucson area. A reexamination of this basin on that assumption is indicated with the recent increase of growth of Fort Huachuca as a missile center, the area around Benson as an industrial site, along with the growth in the Vale-Pantano area halfway between Benson and Tucson. Developments farther downstream at San Manuel and increased activity around Ray and Kearney make some additional water uses almost a necessity. A recent action of the city of Tucson in acquiring bottom lands near Redington as a ground-water basin from which to supply the city of Tucson with pumped water, also must be considered in any plans that we adopt for this area. Water savings in the San Pedro Basin can also be made by channelization and phreatophyte control. This San Pedro River study is a 3-year study and, seeing that we have just started this year, indications are not available at this time as to the direction in which we will finally wind up.

The inventory study covers the whole State, as mentioned by Mr. Jorgensen, and is being made in cooperation with the State of Arizona, with the State financing the investigation costs. This inventory is to examine the water resources of the State, the water uses, and potential problem areas. During the course of the Arizona inventory study, which we are now making, we have found that there is, in certain areas of the State, very good information as to water occurrence and use. In other portions of the State, we find an almost complete lack of information as to water occurrence or streamflow. A specific instance of this is on the Navajo Reservation on the Chinle Wash. The Chinle Wash area, draining a good portion of northeastern Arizona, is hydrologically a complete blank as far as our knowledge is concerned. We have started to remedy this situation during the past month by initiating a stream-gaging program. The actual work on this program would be done by the Geological Survey--another of the Interior agencies. Last week, the District Engineer for the Geological Survey and two of our men were touring the State, including the Chinle area, to locate the best sites for stations to obtain additional streamflow information. Other locations that were visited with a view to establishing stations were Kanab Creek near Fredonia, Cherry Creek near Young, Black Creek near Houck, and Verde River near Paulden. The importance of the Chinle station is that it will give us quantitative information on the water supply which is available in Chinle Wash in relation to the 50,000 acre-feet of water allotted to Arizona from the Upper Basin Compact. The Kanab Creek station will give us information on the amount of water in Kanab Creek near Fredonia and also will provide us information on the sediment inflow into the Bridge Canyon Dam.

A station being restarted will be the one at Black Creek near Houck. There was a station at this location years ago, but it was only for a period of about 16 months. This does not give us a long enough record to be of value in determining long-term runoff for the type of project that could be planned or constructed, and the water availability in that area. Also, in connection with recent developments on the Black Creek watershed on the reservation, the increased uses on the reservation, or future uses on the reservation, may change completely any conclusions that were indicated during earlier studies which the Bureau made up to about 1945.

A companion investigation to the inventory that we are making for the State is the one called "Colorado River Diversions Project." This study is based on the idea that areas within Arizona should be identified for further study and investigation where, either by direct use of Colorado River water or by exchange agreements, additional water may be available for use. This is the primary purpose of an inventory for basinwide studies of this nature--to identify those areas where water exists and a need exists that could be supplied by that water. On a statewide basis, then, we have identified these problem areas which warrant further study of the water supply and needs of the State--these are: the Fredonia area, Chinle Wash, Many Farms area, Black Creek-Fort Defiance-Houck, St. Johns, Springerville, Show Low, Snowflake, Holbrook, Winslow, on down toward Leupp, Flagstaff, Williams, Ashfork, and Kingman; dropping below the Mogollon Rim, we find areas on the Fort Apache at Whiteriver and Bear Flat; on the San Carlos Reservation; and moving to the west, there are indications that eventually there will be water problems around Young, Payson, and Pine, in the Verde Valley, Camp Verde, and Clarkdale, and over in the Chino Valley and Prescott.

In the Upper Gila River area, there are industrial and copper mining demands which will continue to grow in the Clifton-Morenci area and near Safford. There is additional agricultural land in the Safford Valley and on down along the Gila River onto the San Carlos Reservation. On the San Carlos, there is also the Point of Pines area that could be developed recreationally; and agricultural land near San Carlos Agency, and in the Sycamore Creek area. Other State areas identified as having future water problems are: Wickenburg, Sonoita, Nogales, and the upper Santa Cruz River; the upper San Pedro and the lower San Pedro.

Studies which are to start within the next year or two are: comprehensive basin studies on the Little Colorado River drainage, the Santa Cruz River drainage below Tucson, and a study of the Kanab-Fredonia area. The Kanab-Fredonia, or Kanab-Johnson Creek, study may be performed by the planning office in Boulder City instead of in the Phoenix office.

Briefly, then, our studies include the Central Arizona Project which also embraces, in concept, additional studies on upstream watersheds. Participation in water service is possible either by direct service or through the exchange principle where it is applicable. What then needs to be done to obtain water? The Bureau of Reclamation does not itself seek authorization for projects. It is the responsibility of the people who will be benefited by the project to arouse the necessary interest and support in their behalf to seek and obtain authorization. The Bureau does provide the engineering and economic studies in response to the stated needs and demands of the interested and concerned people of an area.

A recent example of project authorization is the combined Navajo-San Juan Chama. This combination had sufficient support to overcome opposition to individual segments of the project.

In order to obtain Colorado River water for Arizona, following the Supreme Court decision, a unified State approach will be essential. In getting this unified action, all parts of the State will have to work together for the Central Arizona Project import which is the base upon which any additional direct deliveries are possible and water exchanges may be arranged.

AFTERNOON SESSION
QUESTION and ANSWER PERIOD

Mr. Jorgensen:

I would like to make a few remarks before we get started. It has been rather a long technical discussion and some of you may not fully comprehend what we are trying to tell you but I am sure that with a little more study of the text and devoting a little time to it, you can probably come close to being up with it pretty quickly. What we have been trying to emphasize is that because of this state suit that has been going on now for 10 years, the whole aspect of water-supply planning for the State of Arizona has almost stopped and hasn't been worked on for a long period of time. It is only in the last two years that we have gotten back into the water-supply planning picture again.

It appears now with the Supreme Court settlement due shortly after the first of the year--January, we hope--that this question of water supply development is going to become more than just a dream, it is going to become something that will be translated into a highly-important and essential construction project. This will mean, though, that it will not be an easy task to distribute this quantity of water within the State. There is going to be a demand for water that will far-exceed the supply from the Colorado River. This means that within the State everyone--all water-using agencies--should be taking a real good second look at what their future projected water requirements might be. This is essentially the story we are telling all the water users within the State, Irrigation District, Water District, Electric District, and groups like yourself. If these groups do not make their wants and wishes known and provide some support for the quantity of their potential water need, it could be that these groups would be left on the outside and have no future additional water supply available to them.

Your Indian Tribal groups are just as much a part of the State as any other portion of the State's economy and, as water-using entities, you should be looking toward developing a plan for water use and making your wants and wishes known. The Secretary of the Interior is charged with writing contracts for the distribution of this water and it is essential that you make your wants in terms of water known and then realize that this is an important factor to the future growth and economy of the State and that you, as a part of the State, should also be vitally interested in it and assist in obtaining project authorization. The San Juan-Chama is one of the first large projects that the Bureau has been able to manage to get approved by Congress in recent years, and it was only through the joint efforts of the Indian Tribal Councils and the white groups that this project was authorized. It is a very worthwhile project and many people are going to benefit from it. The Central Arizona Project has characteristics similar to the San Juan-Chama. There is something in the project for everyone in the State, and therefore all of us need to get behind it and see that it is authorized. I am sure that the construction and the features of the project will insure the future economy of the whole State.

We welcome your questions. I certainly would encourage you to ask questions because this is a period of time when you're able to learn what it's about, let us know what your ideas are, and to get specific information to take back with you.

Mr. Gritzner:

Before any questions are asked, will those who ask questions please clearly state their names and then talk into the microphone so that we can have a record of it, because this will be going back to the reservations and we want to be certain that your questions are clearly recorded so the other reservations that are not here today will be able to know what transpired at this meeting; we will be very grateful if you will do this.

Chairman Jones:

Do you have any questions, please? I would like to ask a question of Mr. Jorgensen, relative to the Marble Canyon Dam that is proposed. We have been opposing it and I just want to know how far it has gone. It was anticipated that it would be built by the Arizona Power Authority--or is the Federal Government going to build that dam? How far has it gone at the present time?

Mr. Jorgensen:

The Marble Canyon Development has been under study by the Bureau for many years. For a number of reasons, the project studies have moved rather slowly. The Bureau of Reclamation intensified its study about 2 years ago. It also became involved in an intra-state and interstate struggle between the Arizona Power Authority and others as to whether it should be a state project or not. The Arizona Power Authority developed and requested a license from the Federal Power Commission to construct and operate this structure. The Commission in Washington, or at least the staff representative, issued a report within the last few months which recommended that the Federal Power Commission grant the license to the Arizona Power Authority. Since that time, Secretary Udall (in fact, just last Friday) has filed an objection to granting this license to the Arizona Power Authority. In his objection, he develops the point that all of the hydroelectric development possible along the Colorado is a vital and necessary thing to provide a revenue-producer to help finance water supply development in the lower basin. This is the basic premise in his objection. His objection suggests that the Federal Power Commission deny the license to the Arizona Power Authority and that it be a federal development providing the lower basin with funds to help finance water supply development, with the State of Arizona a principal constituent.

Mr. Jones:

We have been working with our legal department to delay this and I heard that the delay had been granted, or rather, had been made by the Secretary.

Mr. Jorgensen:

The delay was granted by the Federal Power Commission and the purpose of the delay was to permit the Secretary to file these exceptions and those exceptions were filed last Friday. The report arrived in our

office this morning. The next action by the Federal Power Commission will be to look over these exceptions of the Secretary, and others, and then judge whether these exceptions are of sufficient magnitude to deny the license or to order another hearing before the Commission, prior to final action on the license.

Mr. Jones:

I just brought that out because we have made quite a big mistake in permitting the government to put in Glen Canyon Dam (Page) without stating how it would be developed and what it would mean to our reservation bordering that area. They asked us for land and we granted it, and today we are still waiting for an exchange. We need that land so badly. It was only last week the Reclamation people in Salt Lake City finally said they had the acreage that we're asking them to return to us. Only a small amount of land is to be returned compared to the size we granted to build Page on--and there were a lot of things we were supposed to have forthcoming. We think that it hasn't been handled the right way and we don't want to make the same mistake in granting the Marble Canyon right-of-way. We would like to get that exchange land accepted and build a town something like--but not as big as Page--on the Navajo Reservation. So when the Marble Canyon Dam is built we will have to get that land first before we grant the go-ahead sign. We made a mistake in giving you the land at Glen Canyon without knowing where the exchange land was going to come from. That is one reason I asked the question--and also, they didn't recognize the Navajo Reservation to be the first customer from that project. They have changed that in making certain concessions but not all that we wanted.

The original state's water gravitational water right in Arizona we have opposed on the strength that they wouldn't permit us to include our attorneys in the discussion of the litigation between Arizona and California. I fear that Arizona has the full power, and in a lot of cases us poor Indians would get very little. That is the nature of the city of Phoenix, where the river that comes down here was used by the Indians before. Since then, the white people have dammed and channeled it and they didn't build any canals to Indian farming areas, and I don't think they have changed and become big-hearted since. That is the reason for my objection, too.

We did oppose Arizona's allocating these waters.

Mr. Jorgensen:

I might make one remark on your question now; in connection with this last one, I wanted to emphasize that the Secretary of the Interior has by contract been charged with the responsibility for distribution for whatever water supply is allocated to Arizona from the Colorado River. Now this takes the matter of the state directly out of the picture; it is the Secretary of the Interior who is going to be the one who writes and signs the contracts for water distribution from the Colorado. This

I think, is a good point; at least it puts any local prejudice out of the picture and brings into being what I feel will be more favorable water contract possibilities for people such as yourself. In connection with the dam sites and the promises of land and so forth, I am not directly involved with that. Of course I wasn't involved with that project, but on your point of land exchange or water contracts these are items that your attorneys and you people should be right on top of, as legislation is introduced for project authorization. If, during this authorization procedure and preparation of this bill, you people have specific requests that you wish to have honored and respected, it would be highly advisable that you see to it that the legislation is written in such a manner that your exact wishes and desires are specifically expressed.

Mr. Jones:

That is all very good excepting of course now you mentioned the San Juan-Chama project also in which we were somewhat disappointed. While they are trying to make amends nevertheless we agreed to the packaged deal so that the Chama project could be included with the agricultural project of the Navajo people and what had happened you all know that they assigned over a million dollars to work the Chama project and the Navajos didn't get anything until after Congress approved. We made a big squawk about it and they transferred \$300,000 from another project to quiet us down; at least we got that much money, but still disappointed and that is why we are still hammering away with our legal department to be recognized, and I hope that something comes of it--and, as you say--that we should turn in our recommendations well, we have done this. We specifically hired a water lawyer recently; he has just been on the job 3 months and we hoped that he could do something.

Mr. Royal Marks, Attorney at Law:

I would just like to point out, Mr. Jones, that there are tribes other than just the Navajos that are interested in the development of the Colorado River, and one of the main tribes is the Hualapais, as you know them, and what is now known and should be known as the Hualapai Dam--not Bridge Canyon Dam--which should remain the Hualapai Dam if they have anything to say about it; in fact, it is in contract now in that respect. I would like to point out that one of the things that the Indians in Arizona should think about is that they are residents of the State of Arizona primarily and not play into the hands of California in some of the actions that are being taken. I say this very guardedly, but I think the Indians of Arizona should think twice before they go along with some of these proposed delays and so forth, because they are just playing into the hands of California when they do that. I have been in this very strenuously and strongly. I feel quite the same way you did, Mr. Jones. At first we were quite concerned and tried to intervene on behalf of the Indian tribes that we represented, as your council did in the Arizona-California suit, but I feel now that the case has been heard and that the interests of the Indians were pretty well represented by the Federal government. I think they were very well represented and that the case was pretty well presented. I do feel very keenly, and I want to explain this to the

Indians of the tribes represented here that they should consider the matter that they are residents of Arizona and the possibility of these dams being built by the Arizona Power Authority--not by the Federal Government--because we are going to be fighting the large State of California (maybe not through the Senate, but we are going to have a lot of trouble getting it through the House of Representatives), which has 43 representatives in the House to our 3, so you have to consider those aspects of the thing. I very keenly feel that a lot of people talk out of both sides of their mouths and say we don't want the federal government interfering with our business, but yet when it comes to something like this they want the federal government to do it. Here is an opportunity for dams to be built under a bond issue by the Arizona Power Authority and it has already been worked out. They have these applications sent in before the Federal Power Commission and I think that those dams could be built and then converted into as well as for power--as well as for irrigation--especially Bridge Canyon or Walnut Dam. I think those are in the making, whether it be a higher or lower level dam and I think that we should consider these things and the Arizona Commission of Indian Affairs and an Arizona group that was considering it; that is, for what is the best interest of all tribes in Arizona and I know this that the Salt River Tribe, the Colorado Tribe, the Gila River Tribe and all of them that are here today are very interested in the results of the Colorado River now, and as soon as this decision is arrived at you are going to see the darndest fight you ever saw in the State of Arizona about these water rights. As our speaker said, they have worked hard on this and I think the Bureau of Reclamation has, but I do know that there is going to be an awful big battle here in the State of Arizona over these water rights when you come right down to it and we representing Indians are going to be right in there fighting for their rights. I think you should consider seriously the plans that are now being made and thrown right into the hands of the federal government.

Mr. R. H. Rupkey, Supervisory General Engineer of the B.I.A.:

And I really want to add to what Mr. Marks has said; that we shouldn't let this go by the board by not doing anything about it. The Indians should become foreceful in it to get what they want; if they let it go by the board, as Mr. Jorgensen said, they are liable to lose a lot of opportunities that they are going to be able to gain through this study that the Bureau of Reclamation is making now. I think the Indians are fortunate, and of course the people of Arizona are very fortunate that the Bureau of Reclamation is getting in and making these extensive studies, and if the Indians are going to benefit they should get at the present time while these studies are being made and get their requests and their ideas in.

The San Carlos Reservation has already submitted a list of projects that they would like to have considered.

Some reservations are facing eventual loss of their water supply. At Ak-Chin, Chiu Chu and the Gila River Reservation continued pumping is going on, but some day they are not going to have water there unless

they are connected up with the Central Arizona Project. Without this larger Arizona project they might find themselves without water. So I urge all reservations to take an active interest in it. I agree with Mr. Marks relative to the Bridge Canyon thing. I believe that if the Arizona Power Authority hadn't gotten in when it did it might have been a California instead of an Arizona project.

Mr. Jorgensen:

I think this is doubly true with any development on the river now. It has to be a full development and we want to maximize its benefits, not only to California and Arizona but to produce the best project that will accommodate everybody.

Mr. Pete Homer, Chairman of Colorado River Tribes:

At the bottom of page 9 on your remarks, Mr. Jorgensen, it says that "First, whatever quantity of water may be awarded from the Colorado River by court decree will be used first to satisfy the established rights along the Colorado River. All remaining water will be available to the State as a whole." What people do these established rights effect?

Mr. Jorgensen:

Under the recommended decree Arizona would be awarded (2,800,000) two million eight hundred thousand acre-feet per year on that formula. The rights along the river are those established legally by the present water users. The present perfected rights along the Colorado River include the Indian groups now using water.

It would appear that the present users along the river have approximately (1,600,000) one million six hundred thousand acre-feet of water with the developed land along the river on the Arizona side and approximately (1,200,000) one million two hundred thousand acre-feet would be available for diversion elsewhere in the State.

Mr. Homer:

Suppose the Colorado River Reservation still has quite a bit of land that is not under cultivation. What would be the status of those lands?

Mr. Jorgensen:

A final determination of just how much this balance is has not been made. I don't believe that any person can at this time say that you have so many acre-feet of water entitlement. Once it is determined how the water is allotted by the Court a determination of the rights along the river will be made. After the rights along the river have been satisfied, the balance will be available for distribution elsewhere. These rights along the river have to be met first; there is no question of that. How extensive these rights may be, I wouldn't know.

Mr. Homer:

We are very satisfied with the recommended allocation by Mr. Rifkind, which still has to be confirmed by the Supreme Court yet, but now recently there is rehearing between Arizona and California; when is that going to be determined or how is the settlement going to be?

Mr. Jorgensen:

This rehearing was held about the middle of November and there were several reasons for it. The primary one was that there had been a number of changes in the Supreme Court in the last year, and when the court closed its session in June there were about three people who had not participated extensively, or practically not at all, in the litigation and hearing as it progressed over so many years. To assist these new additions to the court to become familiar with the proceedings, a special hearing of 6 hours' oral testimony was set for November. The general procedure, following conclusion of the arguments and hearings, will be the anticipated court ruling which we hope will be during the next 6 months—any time after the first of January.

Mr. Homer:

I agree with Mr. Royal Mark's remark about the Indians getting ready now and make their plans because if the Supreme Court confirms the allocation of California you are still going to see the biggest dog-fight you ever saw around here.

Mr. Jorgensen:

I tried to point that out when you consider the present uses or the potential water uses being overdrafted in this area to the tune of about 2 million acre-feet per year and when we look at the other side of the picture, the quantity of water is available from the Colorado to satisfy this use, you see only 1 million acre-feet or only half enough water to take care of the present over use of water. This means that it's going to be a difficult situation to try and distribute this half-enough water supply equitably among all the water users within the State.

Mr. Homer:

In conclusion, I would like to tell the Indians to get busy and make your plans.

Chairman Jones:

Does anyone else have any questions relative to this water? Of course, we are all interested in our own portion of it and we should stick together for all of it on the general principles.

Mr. Ray Narcho, Vice Chairman Papago Reservation:

I would just like to ask about the feasibility of this water as far as the Papagos are concerned. You can go down to Tucson, Nogales and

Chiu Chu and we are right down there on the border to the south and to the west there, and I guess we had a runoff for the next 250 years about two months ago and there is no water down there. I wonder if there is any kind of a survey proposal for the feasibility of getting the water down there. I am just asking.

Mr. Jorgensen:

Well, yes, this is part of the many studies that we mentioned that are in progress right now and this distribution of water to areas such as yours and the determination of what the needs and the potential of the areas are will be made in the next few years. As far as you and your group are concerned, I think you will want to look very critically at the legislation proposed for project authorization. You should see that your area is included and to do so you should make your needs known in terms of water quantities, how you are going to use it and do some preliminary planning prior to the actual settlement of the case.

Chairman Jones:

Any other questions?

Nick Lee, Assistant Professor Indian Education - Tempe:

I would like to know who is going to pay for all the lining of the ditches and aqueducts?

Mr. Jorgensen:

This is why I mentioned that we want to put together this revenue-producing package consisting of the series of dams and hydroelectric plants on the Colorado, including Marble Canyon, Bridge Canyon and Hoover Dam, Parker Dam and Davis Dam; all of them working together grinding out electrical energy to be sold to communities such as Los Angeles and Phoenix. The sale of electrical energy will eventually bring back revenues into the bank that we can draw on to aid in building water supply projects. This could include lining ditches and all kinds of irrigation works, such as dams, reservoirs, and irrigation distribution systems. The extent to which each individual unit might draw on that account would probably be dependent on the variable needs in the specific areas that are to be served. For instance, if one area is a particularly depressed area and couldn't afford to pay an extensive amount for irrigation supply, this area might be allowed to draw more heavily on it than another area that is in a better financial status and can afford to pay a little more for its water.

Mr. Lee:

Will any individual area be asked to contribute funds, or will this strictly be from the bank?

Mr. Jorgensen:

It is proposed to make water sales on a canalside water delivery basis with a charge for an acre-foot of water delivered. The charge for that service does not necessarily represent what it costs to get it here. If you were to look at it from a cost basis, it may cost \$50 an acre-foot to actually deliver that acre-foot of water to the canalside point but the availability of a revenue source makes it possible to subsidize a portion of the water cost and make the actual water rate to you something reasonable for use in agriculture. \$10 an acre-foot, or less, may be charged, depending on your individual economic situation.

Mr. Lee:

It is kind of expensive to put something like that through.

Mr. Jorgensen:

Yes, it is an expensive project and it should be considered in the nature of a supplemental supply where you would utilize it in conjunction with present local sources of supply.

Mr. Edmond Jackson, Jr., Yuma Reservation:

We have lands that lie in California and Arizona, I presume, if we win our case. No offense to Mr. Jones, Chairman of the Navajo tribe, they are up there trying to control the source of this river and we are down at the stream end of the river and we are a little concerned about our water down there too. Right now there is practically just a stream down there--what used to be once the Colorado River, you can walk across it. The bureau built the first dam down there without the consent of the tribe and they never got paid for it. That is the deal they passed on to us. What I am concerned about is the allocation of this water from the Colorado River. How are these tribes not bordering on or having Colorado River rights going to come in on this allocation? Would they come under the Indian rights as original ownership? Some questions on this will arise, and I would like to have it cleared up.

Mr. Jorgensen:

This is pretty much a technical legal problem. After the decision is handed down by the Supreme Court there will be a period of interpretation. This is one of the questions I think will have to be cleared up after the decision is handed down. I don't know the answer to this.

Mr. Jackson, Jr.:

Well, I would like it for the record so it can be straightened up. Another thing on the new development of lands; how would it affect this development of new lands--irrigation of new lands that might be considered?

Mr. Jorgensen:

You are now talking about Indian areas?

Mr. Jackson, Jr.:

Well, any area--even the non-Indian areas.

Mr. Jorgensen:

It is pretty difficult to conceive of any extensive new development taking place as a result of this water supply because, as I pointed out, we're only bringing in what water is available from the Colorado River, which will be only about half enough to take care of the overdraft resulting from present uses, so the water brought in will probably have to be devoted to relieving the overdraft from the underground basins presently occurring in the valley. It will have to go toward helping that situation first.

Mr. Jackson, Jr.:

Another thing I would like to clear up. Have these tribes along the Colorado River been given their water rights? Have they been allocated their water rights at the present date?

Mr. Jorgensen:

Well, I am sure they haven't because it is subject to----

Mr. Jackson, Jr.:

There has been some controversy on that; for one reason, the Navajos have never been known as a farming or agriculture people. I was wondering if they had been allocated a certain amount of water.

Mr. Jorgensen:

Not that I know of as far as the lower basin is concerned, since any distribution will be subject to the Supreme Court decree.

Mr. Jackson, Jr.:

I think our present allocation is 5 to 7 acre-feet per acre and I was wondering if the Navajos or any other tribes have that. I think the present water allocation these tribes have should be looked into and then it could be prorated.

Mr. Jorgensen:

That is one of the provisions that Mr. Rupkey mentioned. The proposed decree allows a period of two years in which each state and each group is permitted to establish and determine just exactly what their projected right is. During this period each state group claiming original

water rights must document their Colorado River rights. When the 2-year period is over the Supreme Court will determine the validity of these rights, which will then make it possible to distribute the remaining water supply between lower basin water users.

Mr. Jackson, Jr.:

That will be something for every tribe in the Southwest to look into and study. The whole program, as I see it right here, is mostly conserving water in the future; is that right?

Mr. Jorgensen:

Yes, sir.

Mr. Nelson Jose, Governor, Gila River Pima-Maricopa:

One foolish question. How long, in your estimation, will it be before water will reach the Pima Indians?

Mr. Jorgensen:

Of course, this depends on how fast the Supreme Court's suit is settled. It is presently contemplated by the congressional delegation to submit an authorization bill to Congress as soon as the Supreme Court announces its decision. We hope this can be done within the next 6 months. Unified action within the State would enhance the possibility of early authorization. Some people are really quite optimistic on that point. If we were able to authorize the project in, say, the next 6 months, it would probably take a construction period of 3 or 4 years before water could be delivered into this area. So it is probably a minimum of 3 years and a maximum of, say, 6 years.

Mr. Jose:

Well, that sounds better, because we have been without water so long that even 6 years would sound like it is too good to be true.

Mr. Robert Murlless, Assistant Attorney General:

In connection with Mr. Jose's question, a misunderstanding is likely to occur in connection with the statement that in some areas this new development is going to replace overcharge that has already been experienced. Isn't it a little bit more correct to say, Mr. Jose, that the concern principally is originally with people that have those Indian rights that are already established in that area, and that the new water that is brought in will very probably (and maybe in considerable part) be in secret to water rights that are already established. Isn't that a fair summation, Mr. Jorgensen? In connection with the statement that an overcharge exists now and that this new water that is brought in is going to be in some measure at least only to allay a shortage that has been going on for years. It is better to say, Mr. Jose, that the Indian rights that are already established are the rights that are principally going to be aided by any water that is given and that is the general for all the tribes, as I understand water

law which is not very deep; and I understand that Mr. Marks is qualified, among other people. Well, it is going to be an enhancement of water rights that are established now; it is not quite right to suggest that lots of new acreage is coming in, as it isn't the picture as I understand it.

Mr. Jorgensen:

That is correct; yes, that's right. Where the condition exists now that you must deepen your wells, and you still get lower water yields, this is a case where an allotted import supply available to you every year would serve to reduce the deepening of wells and the increased cost of pumping and, in addition, receive a better-regulated water supply.

Mr. Jose:

Yes, I have that question too; this is my third time I have heard about this. We had a meeting with Mr. Pugh's office in Phoenix several months ago and then at Coolidge. The contention then was that they were going to the Casa Grande Valley and would take off at Fort McDowell. Is that still the plan?

Mr. Jorgensen:

The water that the canal takes to the south will take off at a point just downstream from Granite Reef Dam and flow south by canal past Coolidge and Florence to the vicinity of Picacho Reservoir.

Mr. Jose:

That Picacho Reservoir is kind of a tricky thing, but we get no water out of that and yet we are charged with so much water in there. Because water cannot flow uphill.

Mr. Jorgensen:

This Picacho Reservoir is merely a geographic landmark, in our estimation.

Mr. Jose:

Yes, I know what it is.

Mr. Jorgensen:

We may not use it as such for a reservoir or anything like that; it would just be a point along the canal.

Mr. Jose:

No, we can't use any water out of that. But I think it is a well-known fact all over the southwest that the Pima's water rights were somewhat hurt some years ago by the Gila River decree; it is now in litigation, and I don't know how long it will be in litigation. All this time, as you have already mentioned, our wells--our water level--

is getting out of reach. We have rehabilitated our wells and it's costly, and we don't have the money for it, and consequently we owe the Government plenty for our whole operation maintenance. We are so far back we don't know how much it is. We would sure be willing to do anything we can to see that this water development is put through in the least time possible, and I shall read this material to the council at our next council meeting and we will have a fuller understanding and we are all interested in this project. I thank you.

Chairman Jones:

Mrs. Northrup, do you have any questions for your Hopis; your branch of the Little Colorado people?

Mrs. Northrup:

I don't have any.

Mr. Daniel Eddy:

I have a question. It's not a question that has anything to do with when it is going to be completed, but it is a problem that exists in Parker. The city of Parker has had a water survey made, and the survey was made not too long ago and projected over a period running into 1975 when they thought that the township of Parker would be to its maximum development--it's a mile square, or something like that. I think the population--the maximum population--is a little better than 10,000 people and they want to get more water, naturally, and I asked the question of the city mayor. They had requested an allocation or made an allocation for additional water to satisfy this program that they are working on, and they told me that it wasn't necessary--that they were told by somebody that it wasn't necessary--and I disagreed with them. Maybe I was wrong. We know what our Rifkind recommendation for the area (is) and this water, since the city of Parker is situated within the reservation, I thought it had to come from the allocation given to the reservation. Maybe I am wrong, but the main question that I wanted to know was, is it necessary for any municipality that wants to develop its water resources to make a request for allocation?

Mr. Jorgensen:

Well, I am no lawyer but I will try to give you an engineer's viewpoint on this--and I don't know the situation exactly--but in Arizona Water Law (now this is my interpretation), you must have allocation for surface diversion from running streams but if you were developing a ground-water resource you would require no approval or water right as such. Is that not right, Mr. Marks?

Mr. Marks:

I'm sorry, but I wasn't listening.

Mr. Eddy:

Well, I raised that question too—not in connection with this—but the interpretation that was given to me by a lawyer then was it didn't matter whether it came out of a well or if it came out of the river; it was still water that was being taken out of this flow from the lower Colorado River Basin.

Mr. Jorgensen:

I think it is a fine point whether a particular well that they draw from is part of a stream or not. In the case of the Colorado River it could be argued that the ground water may be almost the same as the river water, in that instance, but there are probably many technicalities in the law that would permit them to extract ground water without a permit. If surface-water diversions are involved, a municipality has its first and highest order of use in Arizona and can actually acquire priority ahead of an agricultural use.

Mr. Walter Dickson, Ft. McDowell Reservation:

I have a question for the Fort McDowell people. My question is about having the power and the authority. Do they have the authority on an Indian reservation to develop all of these projects? That is the question that I want to ask, because there are too many people that are getting things out of our reservation without our consent. As a whole, just a very few have given their approval and it is causing a great deal of trouble on our reservation, and I have been looking into it for the last few months and I am glad that they have this meeting here. That is the reason I came down—and I asked Mr. Johnson because he was sick and I took his place to come down here and that's the question that I want to ask. Do they have the authority to do this without the consent of the people?

Mr. Jorgensen:

I am not too sure I understand your question, but may I tell you what the Bureau of Reclamation has done. The Bureau of Reclamation has been doing some investigation work on the Fort McDowell Reservation area in connection with the proposed Maxwell Dam site and in that particular instance, we met with the tribal council and requested and received permission to enter the tribal lands and do this exploration and survey work. As far as anyone else doing the same thing or similar things, I wouldn't have any information on it. I think that no one would have the authority to do what you would not give them permission to do.

Mr. Dickson:

Another thing, see, we have our law and order. We have a charter and everything. According to the statement made in 1936 to me was that the reservation has the jurisdiction; that no other organization can do anything within the reservation without consent of the tribe. That is the way I was told; that is the reason I wanted to make sure of it so when a thing comes up we will know where we are at. Because there has been quite a fight going on about this water deal, just like the

lawyer just said. Right now I am in it; I am still fighting as water committee for the tribe down there on the waterline, and I would like to know all kinds of questions because I don't want to take up too much time. So that is about all I wanted to ask and make sure that there is a real understanding between those things, because we had a meeting here in Tempe about two years ago with the same party and they were planning to put the project over to the Granite Reef Dam instead of the fork of the Verde and Salt, and now I find out that they are trying to build a dam over at the Verde--the fork of the Verde and the Salt River.

Mr. Jorgensen:

The proposed dam site is at the junction of the Salt and Verde River.

Mr. Dickson:

Yes, that is why the people are fighting right now. My understanding was that the Granite Reef Dam would covert all those waters back on the flats to the south there like Mr. Jose just mentioned a little while ago.

I understood that because I was with them too at that time. I am trying to get a clearer understanding of this to take back and explain to my people. Thank you.

Chairman Jones:

The white man has a law that they employ, and if they can get you they will get you, and if they can't get something on the reservations they will condemn it and get it anyway through condemnation; so that is a law that they have and have it over us.

Mr. Fred Banashley, Vice Chairman Fort Apache Reservation:

I have no problems now. I just came down to listen, and pinch-hitting for our chairman. You know, today, Arizona Indians have all kinds of troubles over their lands and water, but there are a lot of registered voters today and I think it stands out pretty good; because we stand behind some of these big people that hold the offices now. The Indians today need lots of help; I am sure of that. There isn't much I can say but that I would like to say something about the Salt River Indians here. This man took his son to this big mountain one time and he said, "Son, this used to be our land once upon a time, and some day we will get it back 'cause these white people will all be living up on the moon later on!". And I hope something will work out like that.

Mr. Marks:

Mr. Chairman, is it not true that they cannot condemn tribal lands without Federal action?

Chairman Jones:

Yes.

Are there any other questions? I have one more. There was a program on the Navajo Reservation relative to the Coconino Dam on the Little Colorado. Whatever happened to that? Was that thrown out?

Mr. Jorgensen:

This was a dam a little below Cameron (actually on the Little Colorado) Coconino, it was called. As a result of the added reservoirs upstream, which were not in the picture when we previously planned this project, the dam at Coconino is now considered an unnecessary thing. The large structure at Glen Canyon will, in fact, trap sufficient quantity of silt and mud at that point so that the amount that comes in on the Little Colorado side will not be significant to the design and operation of the structure at Bridge Canyon.

Chairman Jones:

I say 'good', because we objected to that because it would have taken a good portion of Navajo grazing land away to the north around the Luepp country--so that is out.

Salt River people, do you have any questions?

Aside from the water question, does anybody have any other questions or problems that you would like to bring before the Commission?

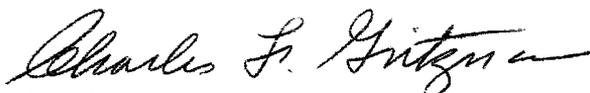
There will be an Inter-Tribal meeting here tomorrow.

There being no further questions, we will adjourn. (3:45 p.m.)

NOTE

The report has been edited from tapes except for the speeches supplied in manuscript form for reference at the meeting. Everything possible has been included to help those who were unable to attend to better understand the Water Resource Development Program as it may affect the reservations of Arizona.

Respectfully Submitted,


Charles F. Gritzner
Executive Secretary

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ATTENDANCE LIST

	(Reservation)
Mr. Edward Davenport	Sac & Fox of Iowa
Mr. Alvin Chaca	Hopi
Mrs. Eva Northrup	Hopi
Mr. Bill Morago	Ajo, Arizona
Mr. Andy Jones	Ajo, Arizona
Mr. Edmond Jackson, Jr.	Yuma
Mr. Vernon Smith, Chairman	Salt River
Mr. George Cassady, Ex. Assistant	Salt River
Mr. Dayton Andrews, Vice Chairman	Salt River
Mr. Paul Jones, Chairman	Navajo
Ronny Jones	Navajo
Mr. Daniel Eddy	Colorado River
Mr. Pete Homer, Chairman	Colorado River
Mr. Arselmo Volende	Ft. Apache
Mr. Fred Banashley, Vice Chairman	Ft. Apache
Mrs. Fred Banashley	Ft. Apache
Mr. Walter Dickson	Ft. McDowell
Mr. Ray Narcho, Vice Chairman	Papago
Mr. Nelson Jose, Governor	Gila River
Mr. Ambrose B. Jackson, Lt. Governor	Gila River
Mr. Justin L. Chiago	Phoenix
Mr. Robert Webb, Reporter - Arizona Journal, Phoenix	
Dr. Lloyd Farner, Ex-Officio Member, Phoenix	
Mr. Paul Weinzer - Arizona State Employment Service, Phoenix	
Mr. Ross Anderson - Assistant Attorney General, Phoenix	
Mr. Robert Murlless - Assistant Attorney General, Phoenix	

Mr. Royal Marks, Attorney at Law, Phoenix

Mr. Jack C. Jorgensen, Bureau of Reclamation, Phoenix

Mr. Robert G. Comstock, Bureau of Reclamation, Phoenix

Mr. Eugene King, L. A., California

Mr. R. H. Rupkey, Bureau of Indian Affairs, Phoenix

Mr. Will Gilbert, State Health Department, Phoenix

Assistant Professor Nick Lee, Indian Education, Tempe

Mr. Tom Fitzwater, Phoenix

Mrs. Diane Dankerl, Office Secretary Commission of Indian Affairs

Mr. Charles F. Gritzner, Executive Secretary Commission of Indian
Affairs

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