

legislation for the Trinity River Division (69 Stat. 719) to increase flow releases from Lewiston Dam. Under Section 2 of the Trinity River Act (Pub. L. 84-388) the Secretary is " * * authorized and directed to adopt appropriate measures to insure the preservation and propagation of fish and wildlife, including, but not limited to, the maintenance of the flow of the Trinity River below the diversion point at not less than one hundred and fifty feet per second for the months of July through November * * *"

Eight flow release alternatives are presented in the EIS. They span a range of flows varying from a low of 120,500 acre-feet per year (the minimum release level established by prior agreement between WPRS and the California Department of Fish and Game) to a high of 340,000 acre-feet per year. The proposed course of action is:

340,000 acre-feet annual fishery release in normal years; 220,000 acre-feet fishery release in dry years; 140,000 acre-feet fishery release in critically dry years.

This proposed course of action reflects a recognition that although it would be desirable to sustain environmental values through high releases to the Trinity River in all years, there are compelling needs and uses outside of the basin for water and power which require a reasonable compromise between water export and instream releases—especially in water-short years. It is suspected that the flows to be released in dry and critically dry years may be insufficient to support desirable levels of salmon and steelhead habitat. However, the flows to be allocated for dry and critically dry years will help to allow habitat below Lewiston Dam to be maintained at levels at least comparable to those which would have existed during dry and critically dry years in the absence of the project.

FOR FURTHER INFORMATION CONTACT: Jody Hoffman, U.S. Fish and Wildlife Service, 2800 Cottage Way, Room E-2727, Sacramento, California 95825. (916) 484-4731.

Anyone requiring a copy of the FEIS for review should immediately contact the above individual.

Dated: December 5, 1980

Approved:

James H. Rathlesberger,

Special Assistant to Assistant Secretary of the Interior.

Lynn A. Greenwalt,

Director, U.S. Fish and Wildlife

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Office of the Secretary

Central Arizona Project; Allocations of Project Water to Indian Tribes

AGENCY: Office of the Secretary, Department of the Interior.

ACTION: Notice of water allocations.

SUMMARY: The purpose of this action is to allocate Central Arizona Project (CAP) water to Indian tribes. This notice allocates 309,828 acre-feet of water to Indian reservations, with the stipulation that in times of shortages, the Indian supply will be reduced on a proportional basis with the municipal and industrial (M&I) supply. This proportion will be determined according to the amount of water used by each of two classes in the most recent year in which a full supply was available for both classes. This action adjusts allocations made previously by the Department.

FOR FURTHER INFORMATION CONTACT: Steve Lanich, Office of the Assistant Secretary, Land and Water Resources, Department of the Interior, Washington, D.C. 20240. Telephone: (202) 343-4931.

SUPPLEMENTARY INFORMATION: On August 8, 1980, the Secretary of the Interior gave notice in the *Federal Register* (45 FR 52938) of proposed allocations of water from the Central Arizona Project (CAP) to Indian tribes in Arizona. The notice invited written comments, suggestions or objections from interested persons. Subsequently, the Secretary announced in the *Federal Register* on August 15, 1980, (45 FR 54452) that public hearings would be held in three locations in Arizona on the proposed allocations and that written comments on the proposal would be received and considered until October 7, 1980. In making his decision on allocations of project water to Indian tribes, the Secretary has considered the testimony of the 98 witnesses at the public hearings and the written comments. These decisions are made pursuant to the authority vested in the Secretary of the Interior by the Act of June 17, 1902, as amended, (32 Stat. 388, 43 U.S.C. 391) and the Colorado River Basin Project Act of September 30, 1968 (82 Stat. 885, 43 U.S.C. 1501) and in recognition of the Secretary's trust responsibility to the central Arizona Indian tribes.

Summary of Comments Received on Proposed Allocations

The testimony at the public hearings and the written comments addressed the issues of substitute water, conservation of groundwater and priority of use of project water, suggested revisions to the proposed allocations and presented

options for the eventual completion of the full project. Statements summarizing those comments and testimony are presented below.

A. Substitute water. The notice of proposed allocations included a proposal to provide, through water service contracts with the Indian tribes, for the substitution of non-CAP water for Indian CAP allocations. This was to be accomplished under certain criteria which assured that there would be no diminution of the tribes' total allocation and no additional cost to the tribes. Commentators presented evidence in favor of and in opposition to this proposal, with most comments addressed to the use of treated municipal wastewater as the main source of substitute water. The tribes uniformly opposed the use of this effluent water. Concerns about this source included the effects of effluent water use on human and livestock health, long-term impacts of effluent water application on cropping patterns, soils and groundwater, and the legal and economic questions related to effluent water use. Other commentators urged that substitution be considered not only for sewage effluent but also for local water supplies whose chemical constituents are better suited to agriculture.

B. Conservation of groundwater. In authorizing the Central Arizona Project, Congress recognized the serious overdrafting of groundwater resources in Arizona. Section 304(c) of the Colorado River Basin Project Act (Pub. L. 90-537, 82 Stat. 887, 891) provides that each contract for CAP water service shall require that:

(1) There be in effect measures, adequate in the judgment of the Secretary, to control expansion of irrigation from aquifers affected by irrigation in the contract service area; (2) the canals and distribution systems * * * (for delivery of CAP water have) * * * linings adequate in his judgment to prevent excessive conveyance losses; and (3) (no groundwater pumping may occur within the) * * * service area of a contractor receiving water from the Central Arizona Project for any use outside * * * the service area unless the Secretary and * * * contractor shall agree, or shall have previously agreed that * * * a surplus of groundwater exists and drainage is or was required.

The Secretary has regarded this provision as requiring the reform of groundwater management by the State prior to allocation of CAP water for non-Indian use. In response to this view, the State of Arizona enacted on June 12, 1980, a comprehensive groundwater law to manage the future use of most groundwater reserves. As State law, this statute is not applicable to activities on

Indian reservations, some of which lie in areas where acute overdrafting now occurs. Some commentators asked that Indian use of groundwater be controlled similar to non-Indian use. Others argued that Indian groundwater resources were being depleted by non-Indian pumping adjacent to the tribes' lands.

C. Priority of use. The proposed allocations address the problem of shortages of project water which will occur in times of drought and in the later years of the project as the Upper Basin States begin to use their full entitlement to water from the Colorado River. The notice proposed the concept of a shared first priority between Indian and municipal and industrial (M&I) users. In times of shortage, miscellaneous uses would first be reduced pro rata to zero, followed by similar pro-rata reductions for non-Indian agricultural uses. Deliveries to Indian tribes and M&I users would then concurrently be reduced in the same manner, in a proportion based on use of project water in the most recent year when no shortage occurred; that is the last year when the full amount of CAP water specified in water service contracts was delivered to the Indian and M&I allottees of CAP water. Commentators questioned this concept, suggesting that CAP water be committed first to domestic needs, both Indian and non-Indian, before any agricultural uses. Others proposed that all Indian CAP water supplies be of first priority, regardless of shortages.

D. Suggested revisions. Some commentators suggested that substantial reductions—or substantial increases—be made in the Indian allocations. The Secretary's method for computing the individual tribes' shares was questioned, and specific comments were made concerning Congressional action on the quantification of water rights of the Ak-Chin and Papago Reservations.

The notice of proposed allocations also proposed that CAP water be credited against the Indian water rights finally adjudicated under the *Winters* doctrine. Some Indian commentators objected to this. Several commentators proposed that, to achieve the greatest social benefit from the CAP at the least cost to Arizona, all project water be allocated to the tribes. Others proposed increases in project water allocations to non-Indian agriculture, mining and power generation facilities. Several potential M&I contractors presented

requests for new or increased CAP allocations.

E. Completion options. The size and complexity of the CAP have required phased planning and construction stages, in addition to the planning still to be done for local distribution systems. Thus, there were comments on the value and advisability of constructing a dam at the confluence of the Salt and Verde Rivers; on the size, location and route of the aqueduct serving the Tucson area; and on the possible technique of making "block" allocations to large areas within the CAP service area rather than specific and separate allocations to water user organizations. While these issues are all important to the final configuration of the CAP, no decisions can be made at this time on matters other than the Indian allocation. Accordingly, the Department and the Water and Power Resources Service will continue the appropriate studies of these matters so that decisions can be made on the remaining issues in the future.

Analysis and Consideration of the Comments and Testimony Received

The Departmental decision making process included consideration of the administrative record of the 1976 allocations and information collected and up-dated in the period before the present proposed allocation, the collection of testimony at three public hearings in Arizona and the opportunity for public comment called for in the *Federal Register* on August 8, 1980, (45 FR 52938) and August 15, 1980, (45 FR 54452), analysis and consideration of testimony and comments received, evaluation of alternatives, evaluation of possible environmental impacts, and meetings with Indian and non-Indian interests.

A. Substitute water. The notice of proposed allocations included a proposal to provide, through water service contracts with the Indian tribes, for the substitution of non-CAP water for Indian CAP allocations. This was to be accomplished under criteria which assured that the quantity, quality, suitability and delivery facilities of the substitute water would be appropriate for the beneficial uses to which that water was to be put. All additional costs were to be borne by the Central Arizona Water Conservation District or the benefiting subcontractor, and any favorable cost differential was to inure to the benefit of the tribes or the Federal Government. Included in the proposal was a statement that the Secretary has

discretion to require a substitution under specified conditions.

At present, the largest source of substitute water in the project area is effluent water. Among the potential advantages to using effluent water are expanding the flexibility of use of CAP water and reducing the need to pump groundwater. Moreover, it may afford the highest and best use of both CAP and effluent water. Substitute water would not be subject to the shared priority concept in times of shortage, so the Indian allocation could be considerably more reliable with a constant supply of substitute water than with the variable CAP allocation. Similarly, the use of some substitute water by Indian tribes would reduce the impact of shortages on M&I users. During the public comment period, many parties offered comments on the issue of substitute water. These are summarized below.

1. State of Arizona

a. The State believes the substitution of effluent water for CAP water is essential to its ability to meet future water demand from M&I users.

b. It believes that the affected tribes should be required to take effluent as substitute water as soon as the effluent becomes available.

c. It objected to the Department's position that substitutions be required only after the municipality has exhausted all other water resources available (including other CAP water, such as non-Indian agricultural water).

2. Indian Tribes

a. Without exception, the tribes are vigorously opposed to a mandatory substitute water concept, especially involving effluent.

b. They believe that effluent will restrict their choices of crops to be grown on the reservations, and they point out that the long-term effects of effluent use as irrigation water are unknown.

c. The tribes described several situations where the use of effluent water by Indians would be uneconomical (pumping effluent upstream from Tucson to the San Xavier Reservation when downstream users are available) or where requiring exchanges might affect ongoing negotiations for voluntary substitution (Chandler and Scottsdale exchanges with Gila and Salt River communities.)

3. Cities

a. Most of the cities recognize the value of their effluent as a water resource. They also believe that effluent will be a reliable source of water available in the future, and that planning for exchanges now makes good resource management sense.

b. The cities are generally supportive of the State's proposal that the tribes be required to accept effluent as soon as it becomes available.

c. The cities prefer that contractual terms for exchange agreements not be limited to effluent. Non-potable groundwater suitable for agricultural or industrial use could also be exchanged for CAP water. The cities also contend that any exchanges must be on an acre-foot for acre-foot basis. In addition, they note that exchanges solely between non-Indians should also be allowed.

There are potential constraints on the use of effluent water as the primary component of any large substitution of non-CAP water for CAP supplies. Many of these are technical in nature, relating to the long-term impact of effluent water on human and livestock health and cropping patterns and the absorptive capacity of soils and groundwater quality. Concern about these effects has led to a series of requirements by State and Federal authorities which restrict the use of effluent water to purposes which do not directly impinge on public health. An expanding body of research, however, and improved treatment techniques may lead to wider use of effluent water and general recognition of it as an important water resource. Many commentators who addressed this subject submitted technical information on these issues. After studying this, it has been determined that the use of effluent water for limited agricultural and industrial purposes is worth pursuing as a substitute for some CAP water. Given Central Arizona's arid climate, and its pressing need to manage all of its water resources wisely, some substitution of effluent water and other local water unfit for municipal uses, for CAP water, where appropriate, may be required of all contractors.

To allow for the possibility of water substitution the CAP allocations to Central Arizona Indians contain a provision for substitution and a similar provision will be included in their respective water service contracts.

The Department has developed, in consultation with all affected interests, contract language which provides that Indian tribes may be required to enter into substitute water agreements with nearby cities, but only after a series of stringent conditions have been met. The

conditions are designed to protect the tribes' interests by assuring that the water will be of a suitable quality and available at the time and place most beneficial to the tribes. Additionally, the conditions provide that the costs of the substitution (including treatment plant costs) will be borne by the beneficiaries of the exchange; i.e., the CAWCD or the M&I subcontractor needing the CAP water.

Representatives of some Phoenix area municipalities stated that twenty to thirty percent of their ground water supplies are unfit for municipal uses. They urged that substitution not be confined to sewage effluent but include these other sources as well. This suggestion underscores the need to assure that all water resources in Central Arizona be applied to compatible needs. Thus the substitute water concept appears appropriate not only to these Indian allocations but also to the non-Indian allocations which will be made in the near future.

B. Conservation of groundwater. In authorizing the Central Arizona Project in 1968, Congress recognized the serious problems associated with overdrafting of groundwater resources in Arizona. Currently, water demands in Arizona are such that the State relies on groundwater resources for more than sixty percent of its water supply, and water needs are met at the expense of overdrafting or "mining" groundwater. In some areas, there are reports that groundwater levels have fallen 4-8 feet in a single year. Land subsidence has occurred, and intensive use of surface water has reduced natural recharge of aquifers. Falling water tables have also resulted in significantly higher energy costs for pumping, with pump lifts exceeding 400 feet in parts of the project area. Given the limited rainfall and snowpack in Arizona and the present full utilization of surface waters, groundwater remains the State's only available water reserve. Its management, both in terms of quality and quantity, is a major purpose of the Central Arizona Project.

In response to this problem, the State of Arizona enacted on June 12, 1980, a comprehensive ground water management law. Use of groundwater are sharply curtailed under the statute, and existing wells will be monitored to control pumping. The goal for most of Central Arizona is to reach a balance of pumping and natural recharge by the year 2025.

Many commentators proposed that the concepts in the State's groundwater law be applied to Indian groundwater pumping in order to ensure the eventual balance of pumping and natural

recharge. Most of the Indian commentators, however, charged that Indian lands have systematically been depleted of groundwater by the pumping activities of adjacent non-Indian owners, both public and private. They argue that they have not been able to fully develop their groundwater resources and the aquifers under their reservations have been depleted by non-Indian users. Groundwater pumping on tribal lands is arguable less, proportionately, than pumping throughout the region as a whole for two reasons: the reservations do not have dense urban settlements, and they have less irrigated land. The tribes also have been severely restricted in their ability to tap underground water by their lack of financial resources and access to capital. Nonetheless, much of Central Arizona Indian agriculture depends on groundwater.

In response to these concerns, the Secretary has determined subsequent to the comment period and public hearings that Indian water service contracts shall contain provisions requiring the integrated management and control of surface and groundwater on Indian reservations receiving CAP water to the end that groundwater withdrawals are managed on a responsible basis.

C. Priority of use. The proposed allocations address the problem of shortages of project water which will occur in times of drought and in the later years of the project as the Upper Basin States begin to use their full entitlement to water from the Colorado River. The Central Arizona Project will alleviate only the most urgent water supply problems of the area, and shortages will be increasingly more frequent in the future. Under the best of circumstances, CAP could initially deliver as much as 2.1 million acre-feet, but the average yield is expected to be about 1.2 million acre-feet over the life of the project. More important, the assured yield will total only one-third to one-half of the average yield. Given the variable conditions affecting supply and the growing needs of Central Arizona, the Secretary has decided that Indian users and M&I users will share a first priority in project water deliveries during times of shortage, with the limitation that the Indians' participation in the shared priority will first be reduced by ten percent of the water allocated for Indian agricultural uses.

This revised priority is made because the 1976 decision was unfair, in part, to the Indians who received allocations. Moreover, the decision omitted several Indian reservations which were able to receive, and in need of, project water.

Under the 1976 allocation, Indian irrigation water would have been reduced drastically after the year 2005. From 257,000 acre-feet per year in the first 20 years of the project, Indian supplies would be decreased in the later years of the project to either 10 percent of the project supply or 20 percent of the agricultural supply, whichever was to the tribes' advantage. This abrupt reduction would have effectively worked against permanent investments in irrigation facilities and placed an inequitable burden on the Indians in order to make up for deficits in overall water supplies of Central Arizona. Under the post-2005 priority system used in the 1976 allocations, the water available to the tribes would not have been nearly enough to irrigate the lands previously subjugated. In other words, any economic growth stimulated in the early years of the project would have been only temporary, and achievement of a permanent tribal homeland would have been only illusory.

The shared priority system intends to redress this inequity. Instead of the first, but temporary priority for the tribes proposed in the 1976 notice, the Indians will share a first priority with the non-Indian M&I allottees of CAP water for the life of the project. In times of shortage, the Indian allocation will be a percentage to the total supply that is based on the relation of the Indian allocation to the non-Indian M&I allocation.

For the limited purpose of establishing the relative Indian and non-Indian M&I percentages of the shared priority, non-Indian M&I allocations beyond 510,000 acre-feet, including conversions from agriculture to M&I, will not be permitted to be included in the calculations of the non-Indian portion of the shared priority. (This is not to say that future Secretarial allocations for M&I use, or agricultural conversions to M&I use might not take the total non-Indian allocations to a figure greater than 510,000 acre-feet is an absolute limit when calculating the shared priority between Indian and M&I use in times of shortage).

As discussed above, ten percent of the Indian agricultural allocation will be eliminated from the shared priority in times of shortage. That represents approximately 28,000 acre-feet of the Indian allocation. Thus, assuming that full use of both the Indian and non-Indian M&I allocations occurred in a year when water was available, the Indian percentage of the shared priority in a subsequent year of short supply would be approximately thirty-six (36%) percent of the available supply. Such

limits on non-Indian and Indian participation in the shared priority provide for relative stability and predictability for all allottees over the life of the project, a feature which was missing from the 1976 allocations.

In addition to the need to redress the inequity in the priority system of the 1976 allocation, the Federal Government has since that decision developed two policies which mandated reconsideration of the earlier allocation. First, the President's Water Policy Message to Congress on June 8, 1978, recognized the need to develop water resources on or near Indian reservations to serve as an important component in the development of permanent tribal homelands. It is clear that in an arid area like Central Arizona a relatively dependable, long-term supply of water for domestic and economic development activities is critical if these homelands are to exist. Second, the President also announced at that time his intent to settle Indian water claims through negotiation whenever possible. Pursuant to this policy, the Secretary has used CAP allocations to assist in the settlement of Indian claims to local water supplies.

D. *Suggested Revisions.* During the public review period, many comments were received which questioned the accuracy and/or equities of the proposed adjustments in comparison to the 1976 tribal allocations. These comments are summarized as follows:

1. *Gila River Pima-Maricopa Indian Reservation:* The Gila River Indian Community has requested that its proposed allocation of 173,100 acre-feet per year be increased by an additional 103,476 acre-feet per year, bringing the total requested annual allocation to 276,576 acre-feet. The Community asserts that the Secretary erred in calculating presently developed acreage (by underestimating), available surface water supplies (by overestimating), and available groundwater (by overestimating).

a. *Lands presently developed for irrigation:* The Community stated that more reservation lands are presently developed for irrigation than were included in the 1976 allocation. The Community also alleges that all Indian land in the San Carlos Irrigation Project, whether or not actually developed, should be included in the total of presently developed acreage.

b. *Surface Water:* The Community maintains that the surface water supply available to the reservation was overestimated by at least 9,300 acre-feet (3,400 acre-feet of water at Gila Crossing and 5,900 acre-feet of water at Maricopa Colony).

c. *Groundwater:* The Community states that the Department's estimate of effective groundwater yields on the reservation should be reduced by approximately 10,000 acre-feet annually because of salinity problems.

2. *Salt River Pima-Maricopa Indian Reservation:* The Salt River Indian Community claimed that the presently developed acreage on the reservation is 14,858 acres and not 13,061 acres as reported in the 1976 allocation.

3. *Fort McDowell Mohave Apache Indian Community:* Concern was expressed that the allocation to Fort McDowell was conditioned on the construction of Orme Dam and relocation of part of the reservation.

4. *Ak-Chin Indian Community:* The Community supported the proposed allocation but expressed concern that the shared priority concept would jeopardize the Secretary's ability to fulfill his responsibility to deliver water to the reservation as required in the Ak-Chin Water Rights Settlement Act (Pub. L. 95-328). The State of Arizona has objected to the proposed Ak-Chin allocation, claiming that most of the tribe's needs set forth in the Settlement Act should be met by sources other than the CAP, leaving the proposed 58,300 acre-feet for allocation to non-Indian users.

5. *Papago:* The tribe claimed that the 1976 allocation of 8,000 acre-feet to Chuichu is mistaken because it is insufficient to sustain an economic farm unit. The tribe also requested that any water that would have been allocated to the Gila Bend portion of the Papago Reservation be used to augment the allocations to San Xavier or Chuichu, if economically feasible.

6. *Camp Verde:* The tribe has requested that their allocation be increased from 1,200 to 1,800 acre-feet per year. It has also been requested that the allocation be based on the permanent tribal homeland concept.

7. *San Carlos Apache Tribe:* The Tribe requested more water but did not allege any error in the proposed allocation.

8. *Pascua Yaqui:* The Tribe has requested an additional allocation of 400 acre-feet per year, for maintenance of a permanent tribal homeland.

9. *Tonto Apache:* The Tribe has requested an additional allocation of 130 acre-feet per year, for maintenance of a permanent tribal homeland. In addition, a study by the Salt River Project indicates that the Tribe requires 18 acre-feet per year more than proposed in the August 8 Notice.

10. *Yavapai Prescott:* The Tribe has requested an additional allocation of 500 acre-feet per year, for maintenance of a permanent tribal homeland.

The tribes' comments would require allocation of approximately 117,000 acre-feet annually in addition to the 309,810 acre-feet in the proposed allocation. Most of that increment is attributable to alleged technical errors in the assessment of available water supplies and presently developed acreage on the five reservations which were allocated water in 1976. In addition, a proposed revision in the definition of lands described as "presently developed for irrigation" accounts for some of the claimed water. The remainder of the increase is requested by some tribes for more extensive development of their reservations as permanent tribal homelands. This latter portion of the requested increase is for reservations which were not included in the 1976 allocations.

The August 8 Notice proposed no adjustment in the quantity of CAP water allocated to the five tribes in 1976. The only objectives of the August 8 adjustment were: to provide project water to additional Central Arizona Indian reservations which have need of water and which can reasonably benefit from a CAP allocation; and to establish an equitable priority for Indian use of CAP water.

Because of the limited objectives in adjusting the allocation, and because Indian tribes are but one of an intended group of CAP beneficiaries, the Secretary has decided to make only a single numerical adjustment to the August 8 proposed allocations. Therefore, the final notice allocates an additional 18 acre-feet per year to the Tonto Apache, bringing their total allocation to 128 acre-feet per year.

The 1976 allocation did not take into account the ability to serve some of the Indian reservations located beyond the physical reach of CAP facilities by means of the exchange provisions in section 304 of the Act. (See Cong. Rec. H3819, May 15, 1968). In addition, some reservations able to receive a direct allocation of CAP water were not included in the 1976 allocation. The August 8 Notice proposed allocations to these reservations (Camp Verde, Tonto Apache, Yavapai Prescott, Pascua Yaqui, San Carlos, Shuk Toak, and San Xavier) primarily for the purpose of maintaining permanent tribal homelands. These allocations represent an increase of 52,810 acre-feet per year over the amount allocated in 1976. Water is allocated to these reservations in quantities sufficient to provide a minimum water resource for development and growth of municipal

needs, as well as other uses necessary to sustain a permanent tribal homeland.

The final allocations to these tribes remain essentially the same as those proposed in the August Notice with two corrections. As mentioned above, the Tonto Apache will receive an additional 18 acre-feet per year, and the Camp Verde allocation is designated in the final notice as water supplied for the purpose of contributing to the maintenance of a permanent tribal homeland.

The proposed allocation to the Fort McDowell Reservation appeared to some commentators to be contingent on the construction of Orme Dam and the relocation of part of the reservation. This is not the case. The allocation to Fort McDowell is intended to contribute to the maintenance of the reservation as a permanent tribal homeland. Water for this purpose is needed whether or not Orme Dam is built.

The allocation to the Ak-Chin Community in 1976 was 58,300 acre-feet. The quantity of that allocation was not proposed to be increased although the Ak-Chin Water Rights Settlement Act requires the Secretary to deliver to the reservation an interim water supply of 58,300 acre-feet and a permanent water supply of 85,000 acre-feet beginning in 2003. The permanent supply to Ak-Chin probably will be comprised of groundwater underlying the public lands, the CAP allocation, and remaining groundwater under the reservation and such additional water from other sources as may be necessary.

It is clear that the CAP is intended to contribute to the permanent water supply to which Ak-Chin is entitled to under Pub. L. 96-328. To insure that the variable CAP supply or lack of reservation groundwater will not prevent full deliveries to Ak-Chin, the water delivery system from the well field will be designed to transport 85,000 acre-feet of water annually to the reservation from nearby Federal lands.

The State of Arizona has strongly objected to including Ak-Chin in the proposed adjustment to the 1976 allocation which creates the shared priority with non-Indian M&I users. The State believes that Ak-Chin should rely upon the development of well fields underlying Federal lands near the reservation, leaving the Ak-Chin CAP supply after the year 2005 available to non-Indians. After consideration of the alternatives, the Secretary has decided to affirm the August 8 allocation of 58,300 acre-feet of CAP water to Ak-Chin. Complete reliance on the proposed well fields would have several serious consequences, all of them detrimental to future water use. Preliminary analysis

shows that underground water reserves capable of being tapped for Ak-Chin probably are not sufficient to support the pumping of such large quantities of water for a sustained period beyond 25 years. Moreover, conservation of groundwater, and not its depletion, is a primary purpose of the CAP. Finally, financial estimates of the relative cost of using the well field versus the use of CAP water argue for employing both sources to achieve the greatest cost-effectiveness.

The decision to make only limited adjustments in the Indian allocation is not intended to suggest that the Central Arizona Indian tribes may not need additional water. To the extent that the Indians have outstanding water rights or needs which need to be fulfilled, the Department will look to remedies other than the CAP to fulfill them.

E. *Other Issues.* The Notice of proposed allocations to Indian tribes dated August 8, 1980, contained proposals on several associated issues. These were credits against *Winters Rights*, possible additional water for the tribes, and non-Indian water use.

1. *Credits Against Winters Rights:* These proposed allocations to the tribes will be credited against the reservations' *Winters* rights as and when finally adjudicated, or as finally determined by Congressional action. This stipulation will be included in the contracts with the tribes for these allocated supplies.

To the extent that a CAP allocation is credited against *Winters* rights, the reservation being so credited will be able to use such water in any manner and for any uses permitted under its *Winters* rights.

In this context it should be added that the allocation of CAP water to the tribes will not constitute a taking, either directly or by implication, of any water rights of the tribes; no will it constitute the Department's opinion as to the legal rights of these tribes.

2. *Possible Additional Water For the Tribes:* Except as specifically provided in the allocations, the tribal allocations are limited to irrigation uses on the reservations. The tribes, however, are not precluded from contracting for project M&I water just as any other entity in central Arizona may so contract. As long as such water has not been contracted to other uses, such contracts may be made through the Secretary of the Interior. If the tribes do decide to contract for this M&I water, they should be prepared to execute a contract with the Secretary at the same time as other M&I users contract with the CAWCD and the Secretary.

3. *Non-Indian Water Use:* In 1976, the Arizona Water Commission, now the

Department of Water Resources, recommended water allocations for non-Indian M&I and agricultural users. In the four years since the recommendations various conditions have changed, including the proposed increased tribal allocation contained herein, and increased estimates of the potential cost of CAP water.

In light of these changed circumstances, I have asked the DWR to revise its original recommendations for both M&I and agricultural use. I have been advised by Governor Babbitt that the State's revised recommendations for the allocation of CAP non-Indian water supplies will be submitted promptly following the publication of this notice.

F. Evaluation of Environmental Impacts. The requirements of the National Environmental Policy Act have been integrated into all phases of the Central Arizona Project. A programmatic Environmental Impact Statement was completed in 1972 and site-specific statements have been or are in the process of being done on particular phases of the project. The Bureau of Reclamation (now the Water and Power Resources Service) prepared an environmental assessment of the Indian allocations of CAP water as proposed on April 18, 1975—(40 FR 17927). Based on the assessment, the Bureau concluded in a "Negative Determination of Environmental Impact," dated June 4, 1976, that the proposed allocations did not significantly affect the quality of the human environment. The Solicitor's office reviewed and approved the assessment and negative finding.

Since the preparation of those documents, several other reports evaluating the potential environmental effects of possible CAP allocations have been written. These include:

An environmental evaluation of the AWC recommended M&I allocations (March 1979);

A two-part conceptual and technical assumptions review of the AWC recommendations (November 9, 1979 and December 31, 1979);

A supplemental environmental evaluation analyzing the potential M&I users rejected by the AWC (December 1979);

A report on potential water use by non-Indian agriculture as recommended by the AWC (December 1979).

Finally, the Water and Power Resources Service has completed an environmental assessment on the Indian allocations as proposed in the August 8 Notice. Water and Power has concluded in a Finding of No Significant Impact (FONSI) dated October 15, 1980, that these allocations do not significantly affect the quality of the human environment and therefore preparation

of an Environmental Impact Statement is not required. Copies of that assessment and subsequent FONSI are available to the public upon request.

Authority and Purpose for Allocations

I take this action in recognition of my trust responsibilities to the Indians, and pursuant to the authority vested in the Secretary of the Interior by the Act of June 17, 1902, as amended, (32 Stat. 388, 43 U.S.C. 391) and the Colorado River Basin Project Act of September 30, 1968 (82 Stat. 885, 43 U.S.C. 1501). In making these decisions, I have carefully considered many interrelated factors, the testimony given at the public hearings and comments received during the public comment period. I have met on many occasions with representatives of the central Arizona tribes, with other potential users of CAP water, and with Governor Bruce Babbitt and members of the Arizona Congressional delegation. Also, I have reviewed at length the voluminous data which this Department has compiled over many years in regard to the CAP.

In these decisions, I have adjusted the water-use priorities and allocation of water to Indians announced by Acting Secretary of the Interior, Kent Frizzell, on October 12, 1976, 40 FR 45883. I am making these adjustments to correct certain omissions in the 1976 notice and to accommodate certain supervening conditions.

Among the factors which have prompted me to make these adjustments are the following:

(1) Under the 1976 allocation, Indian irrigation water would have been reduced drastically after the year 2005. From 257,000 acre feet per year in the first 20 years of the project, it would be decreased in the later years of the project to either 10 percent of the project supply or 20 percent of the agricultural supply, whichever was to the tribes' advantage. It is my opinion that this abrupt reduction in Indian supply is unfair to the Indians. Under the post-2005 formula used in the 1976 allocations, the economic growth permitted on the reservations in the early years of CAP operation would be only temporary, and both the Government and the tribes would be faced with the costs of a return to depressed economic conditions. Therefore, I have tried to assure the tribes of a more dependable supply of water throughout the life of the project.

(2) The 1976 allocations did not provide project water to all the Indian tribes which could reasonably benefit from the project. For example, the San Carlos Apache Tribe, which was mentioned specifically in the legislative

history of the project as an intended recipient of project water, did not receive an allocation.

Besides the factors listed above, there are other reasons for my adjustment of the 1976 allocations:

(1) Subsequent to the 1976 decision, Congress committed the United States Government to provide the Ak-Chin lands with a permanent water supply. Additionally, the Honorable Morris K. Udall has introduced a bill, H.R. 7640, which would similarly provide permanent water for lands of the Papago Tribe.

(2) President Carter, in his Water Policy Message to Congress of June 6, 1978, recognized that Indian reservations are intended to be maintained as permanent tribal homelands. In an arid region such as central Arizona, a relatively dependable long-term water supply is critical if these homelands are to exist.

(3) Also in his June 6, 1978 message, the President announced his Administration's intent to settle Indian water claims through negotiation, wherever possible. Several water claims are now being litigated in Arizona and others are likely to be filed. On several occasions, I have stated that, pursuant to the President's policy, CAP water will be used in the settlement of outstanding claims, where possible.

Projected Water Supply

Before describing the procedures used to determine the allocations set forth below, I will point out certain hydrologically related aspects of the CAP. This is arid country with a limited supply of surface and groundwater, and many agricultural and M&I water users rely exclusively on groundwater. This dependence has been so great that the groundwater table has been dropping at an alarming rate. The Arizona Water Commission has estimated that the annual overdraft in the counties of Maricopa, Pinal and Pima is 1.9 million acre-feet.

In response to this problem, the Arizona State Legislature, on June 11, 1980, enacted the Ground Water Management Act of 1980. This law is far-reaching and should help alleviate this serious drawdown of groundwater reserves. I commend the Governor, the Legislature, and the Arizona Groundwater Management Study Commission for their serious and sustained efforts to improve the management of Arizona's limited water resources.

Despite the virtues of this new law, however, no one expects it to "solve" Arizona's water problems; nor should any one expect the CAP to work

miracles. What the CAP will do is this: It will alleviate to some extent the agricultural drain on the groundwater supply in the early years of the project, and it will provide a supply of municipal and industrial water on a permanent basis.

In making my allocations, I have studied data prepared by the Arizona Water Commission (AWC) and by the Water and Power Resources Service. Both reports estimate the total CAP supply based on assumptions relating to the hydrology of the Colorado River Basin, local runoff, the way in which the mainstem Colorado River reservoirs are operated, the rate at which the Upper Basin States develop their supplies, and a variety of other factors. But while they are in general agreement as to the various factors involved in these calculations, the two reports make different predictions.

Based on its assumptions, the Water and Power Resources Service (WPRS) has assumed that the minimum amount of Colorado River water available for diversion into the CAP during the most critical drought years will be 400,000 acre-feet. Due to losses, less than that, perhaps as little as 300,000 acre-feet, would be delivered to users during drought years, according to WPRS.

However, the Executive Director of the Arizona Water Commission (now the Department of Water Resources) has referred to his agency's CAP projection of 550,000 acre-feet of supply for diversion in drought years and 500,000 acre-feet for actual delivery as "quite conservative." The AWC conclusion relies on the assumption that the rate of development in the Upper Colorado River Basin will be slower than that predicted by WPRS, and on different assumptions regarding the operation of Hoover Dam.

From these numbers, the disagreement between the two agencies is obvious. For the purpose of this decision, however, I am accepting neither of these projections as definitive. My allocations do not reduce the tribal amounts after 2005 as did the 1976 allocations. Instead, my allocations rely on the concept of a "shared priority" between Indian users and municipal and industrial users throughout the life of the project. This concept, which is discussed in more detail below, provides that these two classes of users will suffer together and proportionally in shortage years.

Although it is important to all parties involved to have accurate forecasts of Colorado River water supplies, these projections are not as important to my allocations—because of the shared priority concept—as they were to Acting Secretary Frizzell's. At this point, since

only time will tell which agency made better predictions about the future, I have found it useful to consider both reports in calculating the possible long-term ramifications of various allocation scenarios.

Indian Allocations

I considered 14 reservations for allocations of CAP water. (I should explain and emphasize what I mean by an "allocation." It is an offer to contract for CAP water. By no means does the allocation, by itself, commit the Department to deliver water to the various potential users to whom water is allocated. In all cases, contracts or subcontracts must be made and executed with the Secretary of the Interior as a party to them. It is only through the contracting process that water is firmly committed to the users.) I have tried to consider the particular circumstances of each tribe in making my decisions. I have found that there is no single formula to be used in determining the allocations of all the tribes.

I first considered the five reservations allocated water in 1976. These reservations are the Ak-Chin, Gila River, Salt River, Papago (Chuichu) and Fort McDowell. The rationale used in making those allocations is explained in detail in the 1976 Federal Register notice.

Based on a review of the comments on the August 8 proposals and the record of the allocation, I have decided not to adjust the quantity of the original 257,000 acre-feet allocated to the five tribes:

	Acres-foot
Ak-Chin	58,300
Gila River	173,000
Salt River	13,300
Papago Chuichu	8,000
Fort McDowell	4,300

These allocations will, however, be subject to a revised priority system described below.

The August 8 proposals included allocations to seven tribes which were not allocated water in 1976. (Camp Verde, Tonto Apache, Yavapai Prescott, Pascua Yaqui, San Carlos, Shuk Toak, and San Xavier). The addition of these allocations represents an increase of 52,810 acre-feet in the total Indian share of CAP water. In general, the allocations were expected to contribute to the maintenance of permanent tribal homelands for these tribes; that is, they represent enough water to provide a minimum water resource for development and growth of reservation economies.

The proposed allocations are hereby affirmed, with two changes. The Tonto

Apache allocation is increased by 18 acre-feet per year to a total of 128 acre-feet, and the Camp Verde allocation is designated as a water supply for the purpose of contributing to the maintenance of a permanent tribal homeland. Those allocations are displayed in the following table:

	Portion solely for irrigation (acre-feet)	Portion for tribal homeland (acre-feet)
Camp Verde		2,210
Tonto Apache		118
Yavapai Prescott		510
Pascua Yaqui		510
San Carlos	2,700	10,010
Shuk Toak		10,810
San Xavier		27,010

As in the 1976 decisions, the allocations to Ak-Chin, Gila River, Salt River, Fort McDowell, Chuichu, and 2,700 acre-feet of the San Carlos allocation are limited to irrigation uses on the reservation, except to the extent modified by the *Winters* rights credit discussed below.

The full allocation to San Xavier, Shuk Toak, Pascua Yaqui, Tonto Apache, Camp Verde, and Yavapai and 10,000 acre-feet of the San Carlos allocation may be used for domestic, irrigation and M&I purposes, consistent with the purpose of maintaining tribal homelands. All of these allocations are also limited to uses on the reservations, except to the extent modified below.

Priority of Use in Times of Shortage

While the non-Indian agricultural supply of water will vary from year to year, even under pessimistic projections of water supply, Indian agricultural users and M&I users will receive their full allocations of water in most years. However, it is likely that there will be some years, probably after the turn of the century, in which there will not be enough water to satisfy Indian and M&I users completely.

In these shortage years, Indian users and M&I users will share a first priority on water, with the limitation that the Indians' participation in the shared priority will first be reduced by ten percent of the water allocated for Indian agricultural uses.

Under this concept, the scheme for reducing water deliveries in times of shortage will work this way: First, miscellaneous uses will be reduced pro rata until exhausted; next, non-Indian agricultural uses will be reduced in the same way until exhausted. Then, ten percent of Indian agricultural uses will

be reduced. Thereafter, water for Indian and M&I uses will be reduced on a proportional basis, and within each class on a pro rata basis. The proportional basis between these two classes will be fixed as a ratio of the amount of water used by each class in the most recent year in which a full supply was available for both classes. (A year of "full supply" is one in which the total amounts of water specified in the M&I subcontracts and the Indian contracts are delivered, while the pro rata diminution within each class will be based on the actual use of water in the most recent year in which a full supply was available to the class).

For the limited purpose of establishing the relative Indian and non-Indian M&I percentages of the shared priority, non-Indian M&I allocations beyond 510,000 acre-feet, including conversions from agriculture to M&I, will not be permitted to be included in the calculations of the non-Indian portion of the shared priority. (This is not to say that future Secretarial allocations for M&I use, or

agricultural conversions to M&I use might not take the total non-Indian allocations to a figure greater than 510,000, but that 510,000 acre-feet is an absolute limit when calculating the shared priority between Indian and M&I use in times of shortage).

As discussed above, the percent of the Indian agricultural allocation will be eliminated from the shared priority in times of shortage. That represents approximately 26,000 acre-feet of the Indian allocation. Thus, assuming that full use of both the Indian and non-Indian M&I allocations occurred in a year when water was available, the Indian percentage of the shared priority in a subsequent year of short supply would be approximately thirty-six (36%) percent of the available supply. Such limits on non-Indian and Indian participation in the shared priority provide for relative stability and predictability for all allottees over the life of the project, a feature which was missing from the 1976 allocations.

subcontractor securing the benefit of CAP water by substitution (however, this requirement will not preclude the use of Environmental Protection Agency grants, or non-federal financial assistance, to deliver effluent water to the reservations);

(3) Prior to December 31, 2005, exchanges may not exceed twenty percent of an individual tribe's CAP allocation and will be on the basis of delivery of not less than two acre-feet of substitute water for each acre-foot of project water exchanged. Thereafter, exchanges will be limited to fifty percent of each tribe's allocation, will be on not less than an acre-foot for acre-foot basis, and the party proposing substitution must establish to the satisfaction of the Secretary that there is no reasonable or prudent alternative to the proposed substitution available to that party for current or reasonably anticipated M&I use.

(4) Negotiations for the proposed substitution of supply will be between the tribe and the party offering water. Under procedures to be developed by the Department, the Secretary will reserve the authority to approve a substitution if it is determined that tribal agreement is being withheld unreasonably.

No doubt, there are substantial legal, technical, and environmental aspects of this concept to be worked out. But there is also no doubt that if appropriate use is made of the effluent, shortages will fall less severely on all users served by the Central Arizona Project.

Also, in an effort to identify more water which could be made available to mitigate the adverse effects of shortage years, the August 8 Notice directed the Assistant Secretary for Land and Water Resources to review whether operating criteria for Lower Basin Colorado River reservoirs permit, or could be modified to permit, the use of additional water for CAP purposes. The State of Arizona's CAP water availability projections differ from those of the Water and Power Resources Service. One purpose of this review was to determine if these differences are significant, and if so, whether or not they can be resolved, thus making some additional water available to the project. This review has been completed and based on its findings, I have concluded that the facts do not presently justify any modification in the operating criteria for the reservoirs.

Conservation of Groundwater

This subject was not addressed in the August 8 Notice. However, many comments were received from the non-Indian community which suggested that

Summary of Allocations and Priorities to Indian Tribes
(Acre-feet per year)

Tribe	(C) (B)	(A)	(B)	
	Portion for 10 pct maximum	Allocation	Portion safety for irrigation	
	tribal homeland irrigation base in shortage year			
Al-Chin	56,300	56,300		52,470
Gila River	173,100	173,000		155,790
Salt River	13,300	12,300		11,970
Chucchu	8,000	8,000		7,290
Fort McDowell	4,300		4,700	
Camp Verde	1,200		1,700	
San Carlos	12,700	7,700	10,000	2,470
San Xavier	27,000		27,000	
Schuk Toak	10,800		10,800	
Pascua Yaqui	500		500	
Tonto Apache	128		128	
Yavapai	500		500	
Total	309,828	271,400	54,428	229,800

Possible Substitution of Non-Cap Water

By improving the Indian supply in the later project years, it is apparent that the position of the M&I users will be less favorable than under the 1976 notice. In an effort to make the M&I supply as dependable as possible, these allocations permit the substitution of non-CAP water for Indian CAP water, and provisions addressing such substitutions will be included in the Indian water service contracts. The Department has developed, in consultation with the affected interests, proposed contract language which provides that Indian tribes may be required to enter into substitute water agreements, but only after a series of stringent conditions are met. These

include:

(1) The suitability of the substitute water will be determined by the Secretary on stated criteria: (a) that the delivery facilities are equivalent to CAP facilities, (b) that the supply is available in comparable quantities at the time and place of need, (c) that the quality of the water meets all applicable regulatory requirements, including, but not limited to those relating to treatment and delivery, and (d) that the water shall be of suitable quality for the beneficial uses under a reasonably diversified cropping pattern customary for lands of like character in the region.

(2) All costs of substitution will be borne by the Central Arizona Water Conservation District or by the

Indians who benefit from the CAP should be required to meet the same water conservation and groundwater requirements as non-Indians. Most of the Indian commentators, however, charged that Indian lands have been systematically depleted of groundwater by the pumping activities of their non-Indian neighbors. The Indians argue that they have not been able to develop their groundwater resources fully, and that the aquifers under their reservations have been depleted by non-Indian users. Groundwater pumping on tribal lands is arguably less, proportionately, than pumping throughout the region as a whole for two reasons: The reservations lack dense urban settlements, and they have less irrigated agriculture. The tribes also have been severely restricted in their ability to tap underground water by their lack of financial resources and access to capital. Despite these concerns, a principal purpose of the CAP remains the conservation and management of groundwater. For this reason, Indian water service contracts will contain provisions requiring the integrated management and control of surface and groundwater on Indian reservations receiving CAP water to the end that groundwater withdrawals are managed on a responsible basis.

Credits Against Winters Rights

These allocations to the tribes will be credited against the reservations' *Winters* rights, as and when finally adjudicated or finally determined by Federal legislative action. This stipulation will be included in the contracts with the tribes for these allocated supplies.

To the extent that a CAP allocation is credited against *Winters* rights, the reservation being so credited will be able to use such water in any manner and for any uses permitted under its *Winters* rights.

In this context it should be added that the allocation of CAP water to the tribes will not constitute a taking, either directly or by implication, of any water rights of the tribes; nor will it constitute the Department's opinion as to the legal rights of these tribes.

Possible Additional Water for the Tribes

Except as specifically provided in the above allocations, the tribal allocations are limited to irrigation uses on the reservations. The tribes, however, are not precluded from contracting for project M&I water just as any other entity in central Arizona may so contract. As long as such water has not been contracted to other users, such contracts may be made through the Secretary of the Interior. If the tribes do

decide to contract for this M&I water, they should be prepared to execute a contract at the same time, and under the same conditions as other M&I users contract with the CAWCD and the Secretary.

In a related matter, the asserted needs for tribal irrigation water exceed the allocations. It is my view that tribal irrigation requests above and beyond these allocations should be treated in the same way as requests from others seeking irrigation water.

Non-Indian Water Use

In 1976, the Arizona Water Commission, now the Department of Water Resources, recommended water allocations for non-Indian M&I and agricultural users. In the four years since the recommendations various conditions have changed, including the proposed increased tribal allocation contained herein, and increased estimates of the potential cost of CAP water.

In light of these changed circumstances, I have asked the DWR to revise its original recommendations for both M&I and agricultural use. I have been advised by Governor Babbitt that the State's revised recommendations for the allocation of CAP non-Indian water supplies will be submitted promptly following the publication of this notice.

Evaluation of Environmental Impacts

The requirements of the National Environmental Policy Act have been integrated into all phases of the Central Arizona Project. A programmatic Environmental Impact Statement was completed in 1972 and site-specific statements have been or are in the process of being done on particular phases of the project. The Bureau of Reclamation (now the Water and Power Resources Service) prepared an environmental assessment of the Indian allocations of CAP water as proposed on April 18, 1975—(40 FR 17927). Based on that assessment, the Bureau concluded in a "Negative Determination of Environmental Impact," dated June 4, 1976, that the proposed allocations did not significantly affect the quality of the human environment. The Solicitor's Office reviewed and approved the assessment and negative finding.

Since the preparation of those documents, several other reports evaluating the potential environmental effects of possible CAP allocations have been written. These include:

An environmental evaluation of the AWC recommended M&I allocations (March, 1979).

A two-part conceptual and technical assumptions review of the AWC recommendations (November 9, 1979 and December 31, 1979);

A supplemental environmental evaluation analyzing the potential M&I users rejected by the AWC (December, 1979);

A report on potential water use by non-Indian agriculture as recommended by the AWC (December, 1979).

Finally, the Water and Power Resources Service has completed an environmental assessment on the Indian allocations as proposed in the August 8 *Notice*. Water and Power has concluded in a Finding of No Significant Impact (FONSI) dated October 15, 1980, that these allocations do not significantly affect the quality of the human environment and therefore preparation of an Environmental Impact Statement is not required. Copies of that assessment and subsequent FONSI are available to the public upon request.

Effect on Previous Decisions

The adjustments to the 1976 allocation have been made with the understanding that Secretarial decisions are precedent in the Department and are not generally revised without substantial reason. However, the temporary priority for Indian water use under the 1976 allocation is unreasonable and justifies a revision from a first, but temporary, priority in CAP water, to a shared priority with M&I users over the life of the project. In addition, we are aware of no decisions which have been made by the non-Indian community in reliance on the 1976 allocations which would restrict the Secretary from revising the allocation for good cause.

My final decisions on the allocations contained herein supersede the decisions published by Acting Secretary Frizzell on October 15, 1976 and by Secretary Morton on December 15, 1972, 37 FR 2802; and insofar as those decisions are inconsistent with these final decisions, they are rescinded.

Dated: December 5, 1980.

Cecil D. Andrus,

Secretary of the Interior.

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Regional Oil Shale Coal Team; Meeting

Pursuant to the Federal Advisory Committee Act (Public Law 92-163), notice is hereby given of a meeting of the Regional Oil Shale Team, composed of the Green River-Hams Fork and Uinta-Southwestern Utah Regional Coal Teams of the Federal-State Coal Advisory Board, to be held at 10:00 a.m., Tuesday, January 6, 1981, in Room 503, Federal Court House, 1921 Stout Street, Denver, Colorado 80202. The Team will meet to discuss a Memorandum of Understanding covering its