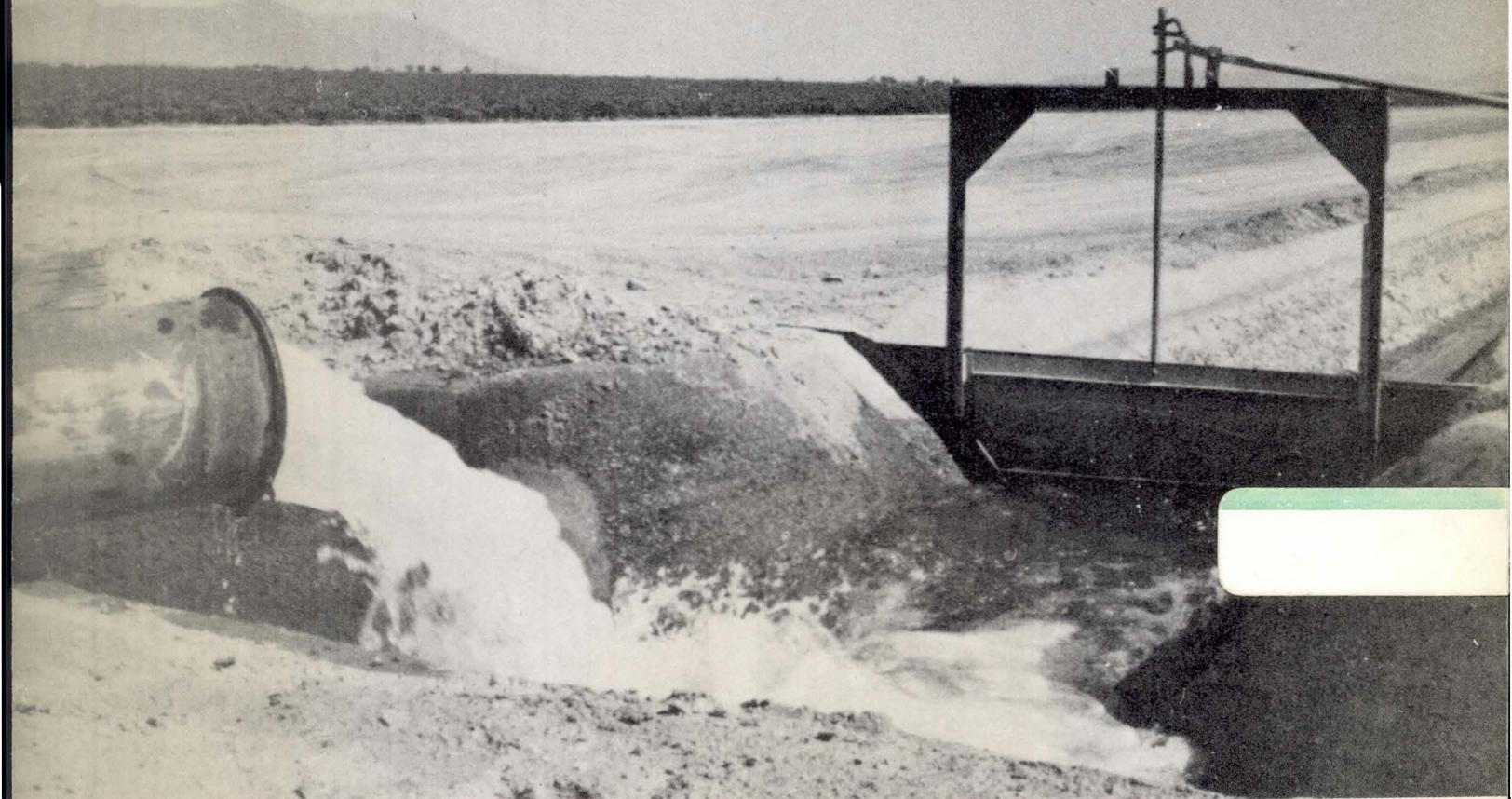


# AK-CHIN WATER SUPPLY PROJECT



## Final Environmental Impact Statement

FES 81-33

U.S. DEPARTMENT OF THE INTERIOR  
BUREAU OF INDIAN AFFAIRS  
PHOENIX AREA OFFICE, ARIZONA



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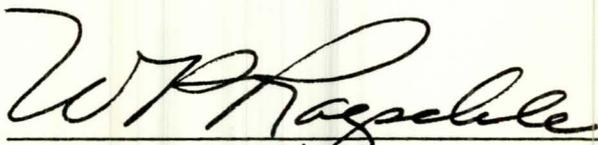


United States Department of the Interior  
BUREAU OF INDIAN AFFAIRS  
PHOENIX AREA OFFICE  
P. O. Box 7007  
Phoenix, Arizona 85011

IN REPLY REFER TO:

This Final Environmental Impact Statement for the Ak-Chin Water Supply Project has been prepared in accordance with current Council on Environmental Quality regulations. The abbreviated format for this final statement is to be used in conjunction with the draft statement, thereby eliminating the requirement for republication of the entire document.

We appreciate your interest in this project.

  
Area Director

ENVIRONMENTAL IMPACT STATEMENT

( ) DRAFT

(X) FINAL

AK-CHIN WATER SUPPLY PROJECT  
Maricopa and Pinal Counties, Arizona

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ABSTRACT

The Ak-Chin Water Supply Project was authorized by enactment of Public Law 95-328 on July 28, 1978. The Act provides for the settlement of the Ak-Chin Indian Community's claim for water by meeting their emergency needs through construction of an interim water delivery system capable of providing 85,000 acre-feet annually from nearby Federal lands for 25 years. This Final Environmental Impact Statement, in conjunction with the Draft Statement, addresses the impacts resulting from the construction and operation of alternative interim water supply systems from nearby Federal lands to provide the water requirement to the Reservation. The preferred plan consists of a well field located in the Vekol Valley, a buried pipeline water conveyance system, and 115 kV electrical transmission facilities to supply power for the project. Integration of water from the Central Arizona Project would allow for reduced pumping requirements, reduced groundwater project costs, and would serve to minimize impacts in the selected basin.

RESPONSIBLE FEDERAL AGENCIES

Lead Agency and Contact

Bureau of Indian Affairs  
Phoenix Area Office  
Attention: James R. Crowther  
3030 North Central Avenue  
Phoenix, Arizona 85012  
Telephone: (FTS) 8-261-2275  
(602) 241-2275

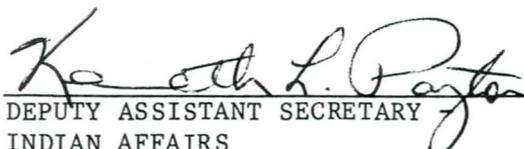
Cooperating Agencies

Office of Environmental Project  
Review, Department of the Interior  
Bureau of Land Management  
Fish and Wildlife Service  
U. S. Geological Survey  
Bureau of Reclamation (Formerly WPRS)  
National Park Service, Western  
Archeological Center  
Western Area Power Administration,  
Department of Energy

Date Statement made available to EPA and to the Public.

DRAFT: 11 March 1981

FINAL: 28 AUG 1981

  
DEPUTY ASSISTANT SECRETARY  
INDIAN AFFAIRS  
(OPERATIONS)

AGENCIES CONTACTED FOR COMMENTS

Federal Agencies

Bureau of Land Management  
Bureau of Reclamation  
Environmental Protection Agency  
Fish & Wildlife Service  
Geological Survey  
National Park Service  
Office of Environmental Project Review, Department of the Interior  
Soil Conservation Service  
Western Area Power Administration

State Agencies (Arizona)

Arizona State Clearinghouse  
Commission of Agriculture and Horticulture  
Department of Health Services  
Department of Transportation  
Department of Water Resources  
Game and Fish Department  
Office of Economic Planning and Development  
State Historic Preservation Office  
State Land Department  
State Parks Department  
University of Arizona  
Water Commission

Local Agencies, Other Organizations and Individuals

Ak-Chin Indian Community  
Gila River Indian Community  
Papago Tribe of Arizona  
Numerous organizations and individuals expressing interest in the proposed action were sent copies of the draft Environmental Impact Statement and were invited to comment.

## INTRODUCTION

The Ak-Chin Water Supply Project Draft Environmental Impact Statement was filed with the Environmental Protection Agency and released to the public on March 9, 1981. Approximately 700 copies of the draft statement were distributed for review.

Public Hearings on the draft were held in Casa Grande, Arizona, on April 28, 1981, and in Phoenix and the Buckeye-Gila Bend area on April 29, 1981. Approximately 70 people attended the three hearings. The official transcript of the proceedings is available for inspection in the Phoenix Area Office of the BIA, at the address given on the abstract page of the EIS.

The public comment period on the draft statement ended on May 11, 1981. Comments received by mail and at the hearings totaled 13. All comments received are reproduced herein, with each substantive comment identified by number and responded to in the "Responses to Comments" Section of this document. An "Errata" Section is also included, denoting changes and corrections to the draft.



Bruce Babbitt  
Governor

1

Arizona

State Land Department

1624 WEST ADAMS

PHOENIX, ARIZONA 85007



Joe T. Fallini  
Commissioner

March 31, 1981

Mr. James Crowther  
Bureau of Indian Affairs  
Phoenix Area Office  
P. O. Box 7007  
Phoenix, Arizona 85011

Re: Ak-Chin Water Supply Project

Dear Mr. Crowther:

The staff of the Arizona State Land Department has reviewed the draft document, Ak-Chin Water Supply Project, and offer the following comments for your consideration.

- 1-1 | 1. The document appears to be generally complete and comprehensive.
- 1-1 | 2. We agree with the preferred alternative of VeKol Valley and would have major problems with the Bosque alternative if it were pursued.
- 1-2 | 3. The questions of acquisition of inholdings and compensation are of major concern to this department. It is our opinion that acquisition of inholdings is essential and that consideration for just compensation must be extended to contiguous holdings that are impacted by the project.
- 1-3 | 4. We do not agree with your statement on page v relative to the potential conflicts with the State's groundwater law. We recommend that this subject be fully expanded in the document and treated as a serious potential problem.

Thank you for the opportunity to comment.

Sincerely,

Robert Yount  
Division of Natural Resources

REY:nhk

RECEIVED  
REAL PROP. MGMT.

1 APR 1981

Donald D. Walter  
6121 E. Vernon  
Scottsdale, Arizona 85257

12 April 1981

Bureau of Indian Affairs  
Phoenix Area Office  
P. O. Box 7007  
Phoenix, Arizona 85011

Dear Mr. Crowther:

In response to the Draft **Environmental Impact Statement**, I would like to briefly make a few comments as solicited by the assistant area director Phoenix Office of the Bureau of Indian Affairs on Page 1 of the statement.

For one thing; apparently a great amount of time, effort, and expense has gone into the reconciliation of the differences created between the Papago and Ak Chin tribes because of a plan to pump water from under the papago lands and give it to the Ak Chin, all at taxpayer's expense.

2-1 No one has sat down in conference with me to try to resolve the same injustice that will be done to me, a private citizen, if this same plan goes into operation. Public Law 95-328 clearly says, "It is the intention of this Act not to discriminate against any non-Indian landowners or other persons." Could it be that I am not afforded the same courtesy as the Indian because I am white?

2-2 The Draft Environmental Impact Statement admits that it took thousands of years for the aquifer under Vekol Valley to accumulate water to its present level and that it is proposed to pump it down precipitously in just 1/4 century, but it tries to play down the adverse effects on the people who have irrigation wells in this Valley. The report says we are few in number so the impact will be slight. Edwards is quoted as saying that land in nearby Hidden Valley sells for \$1500-\$2500 per acre, but he does not say Hidden Valley has no water. The people there have to haul all of their water! Even Scottsdale, Arizona or the Ak Chin Reservation would have little value without water. Further attempts to downgrade the damage that will be done to us is attributed to Farrer 1980; "The costs for deepening wells are currently estimated at \$10 per foot (in 1980 dollars) for stock and domestic wells and \$20 per foot for irrigation wells."

2-3 I was quoted \$50 per foot for only a 16 inch well in 1977 by Moss Webber Drilling Company. I don't know what they would have quoted by 1980!

Bureau of Indian Affairs  
Attn: Mr. Crowther  
Page No. 2

2-4

Another thing that troubles me about the Draft Environmental Impact Statement is the attempt to downplay the energy cost estimate for the 25 year period. The Statement says no decision has been made on where the power will come from, but it bases the cost of power at 40 mils! Yet Arizona Public Service Company released news through the Arizona Republic Newspaper that their cost of producing electricity is 6.5¢ per K.W.H. at this time. That difference would represent a huge underestimate of government cost of electricity, and who gets the pollution that is caused by the generation of this electricity?

In the interest of brevity, which is more than I can say for the Draft Environmental Impact Statement, I will limit my remarks at this time to the above.

Yours truly,

*Donald D. Walter*

Donald D. Walter  
Vekol Valley Land Owner

RECEIVED  
Bureau of Indian Affairs

APR 17 1961

PHOENIX, AZ 85011



DEPARTMENT OF ENERGY  
Western Area Power Administration  
P.O. Box 200  
Boulder City, Nevada 89005

APR 24 1981

IN REPLY  
REFER TO: G2330  
5440-AK-CHIN

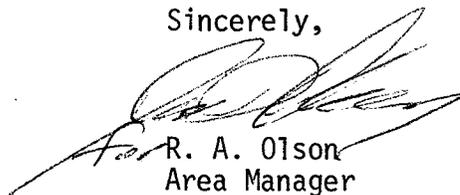
Mr. James Crowther  
Bureau of Indian Affairs  
Phoenix Area Office  
P.O. Box 7007  
Phoenix, Arizona 85011

Dear Mr. Crowther:

We have reviewed the Draft Environmental Impact Statement (DEIS) for the Ak-Chin water supply project. We have no serious problems with the document and offer only the following comments.

- 3-1 | 1. In the section concerning cultural resources mention should be made of the Old Butterfield Stage Route in the Bosque Area. It is mentioned on p. 4-45 under visual resources, and is in the back-up document for cultural resources but not in the DEIS identification of cultural resources.
- 3-2 | 2. On p. 5-57, Western should be included with those agencies consulting on a mitigation program for cultural resources.

Sincerely,



R. A. Olson  
Area Manager

COMMENTS OF THE PAPAGO INDIAN TRIBE  
AND THE SIF Oidak DISTRICT OF THE PAPAGO  
TRIBE ON THE ENVIRONMENTAL IMPACT STATEMENT  
ON THE AK-CHIN WATER SUPPLY PROJECT

April 28, 1981

Presented by:

Enos Francisco, Jr.  
Max Jose  
Willard Juan  
Robert Pelcyger, Attorney  
Rosemary Lopez  
John Jose  
Albert Frank  
Ernest Andrew

The Papago Tribe and the Sif Oidak District of the Papago Tribe oppose the proposal to obtain water for Ak-Chin Water Supply Project from the Vekol Valley. The Draft Environmental Impact Statement of that proposal is manifestly deficient in its treatment of the impact of the Vekol Valley alternative on the Papago Indian Reservation.

4-1 The Draft EIS does acknowledge that pumping water from the south basin of the Vekol Valley will result in withdrawal of groundwater from beneath the Papago Indian Reservation. Pages 5-23 and 5-54. The Draft EIS fails, however, to discuss any measures that could or would be taken to compensate or mitigate for the withdrawal of the Papagos' groundwater and for the irreparable subsidence and compaction damages to the reservation.

4-2 The Draft EIS states (at pages 5-54) that "negotiations are underway between the Ak-Chin Community and Papago Tribe to forestall any potential conflicts arising from development of the South Vekol basin." This statement is not true. There have not been any such negotiations. There have been one or two meetings between Papago representatives and representatives of the Ak-Chin Community or Interior Department officials to discuss the proposed project and its impact on the Reservation, but no one has presented any proposals for a negotiated solution or for the avoidance of conflicts to the Papagos. Even if such negotiations had taken place, that would not excuse the failure of the Draft EIS to include a full and complete

discussion of the entire issue. Any such discussion must encompass an assessment of all potential measures to compensate or mitigate for the damage to the Papago Reservation and the costs and benefits of all such measures and their environmental effects.

4-3

The water underlying the Papago Reservation is for the use and benefit of the Papago people, for our children and our children's children. Without it we cannot survive in our desert environment. For too long, the government has stood by and watched as the water resources underlying other portions of our reservation have been ruthlessly exploited and ruined by non-Indian pumpers and users. Only now, for the first time, the United States is attempting to remedy the violation of our prior and paramount rights under the Winters doctrine to the surface and groundwaters of the San Xavier portion of our reservation. Similar problems exist at Gila Bend, the Garcia Strip and nearby at <sup>Chui Chu.</sup> ~~Chiu Chiuschu~~. It is ironic and painful that the same government which has now belatedly recognized its failure to protect the water resources on other portions of our Reservation is itself proposing to take away the water from one area, the Vekol Valley, that has so far escaped such exploitation. Our need is for all of our reservation's water resources to be protected so that they can be developed and utilized by the Papago people.

The failure to assess the impact of the Vekol Valley alternative on the Papago Tribe is illustrated by several notable omissions. In the discussion of the project's relationship to federal, state, regional and local plans beginning at page 5-46, there is no mention of any plans of either the Bureau of Indian Affairs or the Papago Tribe for the Papago Reservation. Similarly, the EIS fails to disclose the loss of potential agricultural development on the Papago Indian Reservation in Chapter 5, Section C.3.k (Page 5-42).

4.4 In fact, the entire statement simply assumes that the severe problems posed by the Vekol Valley alternative to the Papago Reservation will somehow disappear or be magically resolved. Until the Papago problems are addressed and resolved, there is no basis for preferring the Vekol Valley to the Bosque Area and Waterman Wash alternatives. The entire project should be reassessed based on the assumption that the government will not construct and operate a project to supply water to the Ak-Chin Indian Reservation at the expense and in violation of the rights of the Papago Indian Tribe.

4.5 If the Vekol Valley is to be used to furnish water to the Ak-Chin Reservation, the pumping should be limited to the north basin. This alternative should be more fully considered. The south basin should not be disturbed.

4.6 The Draft EIS does not adequately explain the hydrological relationship between the north and south basins

of the Vekol Valley. The following questions should be addressed: How much groundwater moves from the south basin to the north basin under present circumstances? To what level must the pumping in both basins be limited in order to maintain hydraulic communication between them? How will such a limitation affect the proposed project? Why is it necessary or desirable to maintain hydraulic communication between the two basins?

4.7 The Draft EIS does not describe the specific impacts of the project on the portion of the south basin of the Vekol Valley that lies within the Papago Indian Reservation. Since the Papago Reservation is located on the outer fringes of the south basin, it is reasonable to expect that the reservation areas would be most vulnerable to significant pumping of groundwater and that underground water would flow out from under the reservation to the north and west. The EIS should describe the precise impacts on the reservation including such matters as: (i) the current depth to groundwater on the reservation portions of the basin; (ii) the depth of the water bearing materials underlying the reservation; (iii) the rate of decline of the water table underlying the reservation under various possible scenarios; (iv) the current amount of water in storage beneath the reservation; and (v) the amount of water that will remain in storage under the reservation under the various possible scenarios. The EIS should also

consider whether anything can be done to reduce the adverse impact on the reservation portion of the south basin.

The other major concern of the Papago Tribe is the impact of the Vekol Valley alternative on the area's significant archaeological and cultural resources that are particularly important to the Papagos. The Papago people want these sites to be left alone and preserved. The Draft EIS acknowledges the existence and importance of the numerous archaeological sites in the Vekol Valley. The comparative absence of similar resources in the ~~Desque and~~ Waterman Wash area<sup>s</sup> is one significant factor that militates strongly in favor of ~~these~~ <sup>the Waterman Wash</sup> alternatives<sup>s</sup> and against utilizing the Vekol Valley for the Ak-Chin water supply.

4.8

While the Draft EIS states that the Vekol Valley alternative will have significant and inescapable adverse impacts on the area's cultural and archaeological resources, it fails to describe the extent, nature and cost of adequately protecting those resources and of complying with the National Historic <sup>Res</sup>ervation Act of 1966, the Historic Sites Act of 1935, the Archaeological Resources Protection Act of 1979, and other related laws. The Draft EIS mentions the need for "an active preservation and protection program" (page 5-27) but neither the feasibility nor the likelihood nor the effectiveness of any such program is assessed. In particular, the Papago Tribe demands assurances that if the Vekol Valley alternative

is selected sufficient law enforcement personnel will be assigned to the Vekol Valley to assure enforcement of Sections 6 and 7 of the Archaeological Resources Protection Act. The cost of such police functions should be regarded as a project cost.

The Draft EIS (at page 4-40) acknowledges that some, if not all, of the sites appear to be significant and "potentially qualify" for the National Register of Historic Places. The Draft EIS also states that the potential direct and indirect impacts in the Vekol Valley would be on the order of 20 or more times greater than expected for the Bosque or Waterman Wash areas because of the large number of known and predicted sites. Page 5-26. In view of these findings, the Vekol Valley alternative should not have been recommended until after determinations had been made whether any of the sites will be included in, or are eligible for, the National Register of Historic Places. If any of the Vekol Valley sites do qualify for inclusion in the Register, the views of the Advisory Council on Historic Preservation must be sought. See 16 U.S.C. §407f.

4-9

To summarize the position of the Papago Tribe, it appears that the Vekol Valley alternative was selected as the preferred recommendation only because the two most significant problems associated with that alternative were largely ignored. The Draft EIS simply assumes, without justification, that the Papago Tribe will permit its water resources to be pumped out from under its reservation once again and the conflict between

the Vekol Valley proposal and the Papagos' water rights will magically vanish. Similarly, the Draft EIS does not realistically assess or confront the enormous difficulties to the Vekol Valley alternative posed by the area's rich treasure of archaeological and cultural resources. Both of these matters are of immense importance to the Papago Tribe. The Tribe urges the Bureau of Indian Affairs and the Department of the Interior to reassess the Ak-Chin Water Supply Project and the Vekol Valley recommendation in light of these two significant obstacles.

Phoenix, Arizona

April 29, 1981

As an owner of land in the Vekol Valley, I address the following comment to the Bureau of Indian Affairs and Cooperating Agencies concerned with the implementation of the Ak-Chin Water Supply Project as authorized by enactment of Public Law 95-328 :

- 5-1 | 1. According to the Draft Environmental Impact Statement, some of the ground water supply in the South Vekol Basin lies underneath the Papago Reservation. The delivery of 85,000 acre feet annually to the Ak-Chin Indian Reservation solely from the Vekol basin would deplete the ground water supply in the South Vekol basin, thereby infringing on the Papago water rights and hindering development of water resources within the Papago Reservation.
- 5-2 | 2. Delivery solely from the Vekol Valley would cause subsidence and fissuring to the extent of damaging the El Paso Natural Gas Pipeline, Interstate 8, and any structures that are built in the future.
- 5-3 | 3. Conditions of subsidence and fissuring to the extent estimated would seriously reduce the overall potential for development in the Vekol Valley.
- 5-4 | In view of the adverse effects stated under 1, 2, and 3, any water delivery from the Vekol Valley to the Ak-Chin Indian Reservation should be linked with partial delivery from the Central Arizona Project.

*Rollins L. Winslow*  
 Rollins L. Winslow  
 5265 S 20th Place  
 Phoenix, Arizona 85040

Vekol Valley Property Description :  
 Sec/Tr 9 TWNS/BLK 6S Range/Lot 1E  
 E2 N2 NW4 NW4 10 AC

3379 Kehala Drive  
 Kihei, Hawaii 96753  
 April 30, 1981

Mr. James Crowther  
 Bureau of Indian Affairs  
 Phoenix Area Office  
 P.O. Box 7007  
 Phoenix, Arizona 85011

Dear Mr. Crowther:

In response to the notice of public hearings and invitation to present written comments on the Draft Environmental Impact Statement of the Ak-Chin Water Supply Project the following is offered:

1. Our parcel of land in the Vekol Valley area is the N/2NE4, Sec. 4, twn 7 S, Rng IE comprising 80 acres on Vekol Road which we have owned since 1959.
- 6-1 2. The cost of the project will be far in excess of \$50,000,000 by the time it is started. The additional cost of providing 27.5 MW of electrical power for pumping plus the maintenance crew are a huge load to place on the over burdened tax payers when the President is valiantly trying to reduce government expenditures.
- 6-2 3. The entire project is in conflict with the Arizona Ground Water Management Act.
- 6-3 4. The draft has gone into great detail and expense to evaluate the influence of the project on the wildlife, artifact preservation and similar items. However, very little consideration has been given to the economic effect on the land owners whose property values will be destroyed.
5. The land owners in the project area expect compensation by outright purchase or exchange for federal land of equal value in some other area.

Sincerely,

Leighton S. King, Sc.D.

State of Arizona 7

# DEPARTMENT OF WATER RESOURCES

99 E. Virginia Avenue, Phoenix, Arizona 85004

April 30, 1981



BRUCE BABBITT, Governor  
WESLEY E. STEINER, Director

Mr. James Crowther  
Bureau of Indian Affairs  
P.O. Box 7007  
Phoenix, Arizona 85011

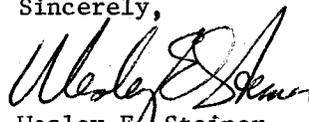
Dear Mr. Crowther:

The Department of Water Resources comments on the "Draft Environmental Impact Statement - Ak Chin Water Supply Project" are as follows:

- 7-1 | 1. The report satisfactorily considers alternatives and selects Vekol Valley as the "best source" of the areas considered for providing an interim water supply to the Ak Chin Indian Reservation.
- 7-2 | 2. The report calls for an 85,000 acre-foot supply for 16,725 acres of irrigated land. This results in a 5.08 acre-foot per acre application rate. Data from farming operations in the surrounding area indicates an application rate of less than 5 acre-feet per acre to be more reasonable. The Reservation Indians are proposing a highly efficient irrigation distribution system coupled with land treatment to achieve high efficiency of water use. Within the context of the proposed distribution systems and careful water management practices, an application rate of over 5 acre-feet per acre appears excessive and wasteful. The impacts from application of the excessive amounts of water should be addressed. Additionally, it is doubtful that all 16,725 acres can be economically developed because of poor soil conditions. This casts further doubt on the reasonableness of having a delivery capacity of 85,000 acre-feet per year.
- 7-3 | 3. Land subsidence with resulting earth fissures and aquifer compaction are all part of the geologic setting. The language of the report should state that the geologic setting will be altered.
- 7-4 | 4. Vegetation in many alluvial basins in Arizona has been affected by water level declines. Nothing in the report supports the conclusion that vegetation will not be affected by pumping the aquifer.
- 7-5 | 5. Existing deep wells in Vekol Valley would be affected by the project. The report should discuss the effects on deep wells.

Thank you for the opportunity to comment.

Sincerely,

  
Wesley E. Steiner  
Director

16  
Think Conservation!

Office of Director 255-1554

Administration 255-1550, Water Resources and Flood Control Planning 255-1566, Dam Safety 255-1541,  
Flood Warning Office 255-1548, Water Rights Administration 255-1581, Hydrology 255-1586.

BRUCE BABBITT, Governor

8

Commissioners:

C. GENE TOLLE, Phoenix, Chairman  
WILLIAM H. BEERS, Prescott  
CHARLES F. ROBERTS, O.D., Bisbee  
FRANK FERGUSON, JR., Yuma  
FRANCES W. WERNER, Tucson

Director:

ROBERT A. JANTZEN

Deputy Director:

ROGER J. GRUENEWALD



**ARIZONA GAME & FISH DEPARTMENT**

2222 West Greenway Road Phoenix, Arizona 85023 942-3000

May 1, 1981

James Crowther  
Bureau of Indian Affairs  
Phoenix Area Office  
P.O. Box 7007  
Phoenix, Arizona 85011

RE: Draft Environmental Impact  
Statement: Ak-Chin Water  
Supply Project

Dear Mr. Crowther:

Our Department has reviewed the above draft E.I.S. and offers the following comments.

8-1 | The draft EIS appears to adequately and accurately address potential impacts on wildlife resources.

8-2 | Our Department believes that the Vekol Valley pipeline alternative is the most acceptable from the standpoint of potential impacts on wildlife resources. If an alternative is chosen which utilizes open aqueducts, adequate escape ramps providing a gentle slope out of the aqueduct should be installed at adequate intervals to minimize drownings of large mammals. In addition, adequate crossing and drift fences should also be installed.

We appreciate the opportunity review and comment on this document.

Sincerely,

Roger J. Gruenewald  
Deputy Director

*William E. Werner*

William E. Werner  
Habitat Specialist  
Yuma Regional Office

WEW:kh

cc: Planning & Evaluation Branch, Phoenix

8544 Via De Dorado  
Scottsdale, Arizona  
85258

May 4, 1981

Bureau of Indian Affairs  
Phoenix Area Office  
P.O. Box 7007  
Phoenix, Arizona 85011

ATTN: James Crowther

Dear Sir:

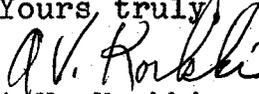
As property owners in the Ak-Chin Water Supply Project Area of Vekol Valley, we have attended meetings at Phoenix and have studied the data in the Environment Impact Statement. We realize the damage that will be caused by this project. The depletion of the water table and the subsidence of the land in this area will cause it to be undevelopable and saleable.

9-1

Our property is bordered on the North by Interstate 8, legal description; E $\frac{1}{2}$  of E $\frac{1}{2}$  of Sec 12 TS 7 Range 1 East..

As residents and taxpayers in Maricopa County for 19 years, we must, after considering all the factors in the environmental Impact Statement, object to this project as it will destroy the value of the land.

Yours, truly

  
A.V. Korkki

May 8, 1981

Mr. James Crowther  
BUREAU OF INDIAN AFFAIRS  
Phoenix Area Office  
3030 North Central Avenue  
Phoenix, Arizona 85012

Re: Ak-Chin Water Supply Project

Dear Mr. Crowther:

The undersigned are owners of acreage, i.e.,  
N½ Sec. 26, T5S, R4E and N½ SE4NW4 Sec. 9, T6S, R1E,  
Maricopa County, Arizona, which will be adversely effected  
by the above referred to project.

Depletion of the water table caused by project  
pumping can only give rise to increased financial cost to  
provide water for our land and a substantial decrease of  
interest by any potential user or purchaser of the property.

10-1

Our property was purchased as a long term investment  
and implementation of the project would substantially impair  
any projection of this as the viable investment which we  
contemplated as a source of income to assist us in our  
retirement.

This letter is for the purpose of recording our  
strong objection to the Ak-Chin Water Supply Project.

Sincerely yours,

*Ainsworth B. Cook*

*Imogene C. Cook*

Mr. and Mrs. Ainsworth B. Cook  
3610 East Colter Street  
Phoenix, Arizona 85018



11

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

215 Fremont Street  
San Francisco, Ca. 94105

Project # D-BIA-K31002-AZ

MAY 11 1981

James R. Crowther  
Bureau of Indian Affairs  
Phoenix Area Office  
P.O. Box 7007  
Phoenix, AZ 85001

Dear Mr. Crowther:

The Environmental Protection Agency (EPA) has received and reviewed the Draft Environmental Impact Statement (DEIS) titled AK-CHIN WATER SUPPLY PROJECT.

The EPA's comments on the DEIS have been classified as Category ER-2. Definitions of the categories are provided by the enclosure. The classification and the date of the EPA's comments will be published in the Federal Register in accordance with our responsibility to inform the public of our views on proposed Federal Actions under Section 309 of the Clean Air Act. Our procedure is to categorize our comments on both the environmental consequences of the proposed action and the adequacy of the environmental statement.

The EPA appreciates the opportunity to comment on this DEIS and requests five copies of the Final Environmental Impact Statement when available.

If you have any questions regarding our comments, please contact Susan Sakaki, EIS Review Coordinator, at (415) 556-7858.

Sincerely yours,

*Sheila M. Prindiville*

Sheila M. Prindiville  
Acting Regional Administrator

Enclosure

EPA CATEGORY CODES

Environmental Impact of the Action

LO--Lack of Objections

EPA has no objection to the proposed action as described in the draft impact statement; or suggests only minor changes in the proposed action.

ER--Environmental Reservations

EPA has reservations concerning the environmental effects of certain aspects of the proposed action. EPA believes that further study of suggested alternatives or modifications is required and has asked the originating Federal agency to reassess these aspects.

EU--Environmentally Unsatisfactory

EPA believes that the proposed action is unsatisfactory because of its potentially harmful effect on the environment. Furthermore, the Agency believes that the potential safeguards which might be utilized may not adequately protect the environment from hazards arising from this action. The Agency recommends that alternatives to the action be analyzed further (including the possibility of no action at all).

Adequacy of the Impact Statement

Category 1--Adequate

The draft impact statement adequately sets forth the environmental impact of the proposed project or action as well as alternatives reasonably available to the project or action.

Category 2--Insufficient Information

EPA believes that the draft impact statement does not contain sufficient information to assess fully the environmental impact of the proposed project or action. However, from the information submitted, the Agency is able to make a preliminary determination of the impact on the environment. EPA has requested that the originator provide the information that was not included in the draft statement.

Category 3--Inadequate

EPA believes that the draft impact statement does not adequately assess the environmental impact of the proposed project or action, or that the statement inadequately analyzes reasonably available alternatives. The Agency has requested more information and analysis concerning the potential environmental hazards and has asked that substantial revision be made to the impact statement.

If a draft impact statement is assigned a Category 3, no rating will be made of the project or action, since a basis does not generally exist on which to make such a determination.

### Water Quality Comments

1. The DEIS indicates that among the potential impacts which may result from the proposed project are significant land subsidence (p. 3-24), changes in groundwater flow patterns (pgs. 5-16 and 17, 5-22 through 24), and alteration of surface drainage.

11-1

The discussion of water resources beginning on page 4-6 shows that groundwater withdrawal can significantly alter historical groundwater flows. The complex relationship which exists among the groundwater basins in Vekol Valley, Waterman Wash, and Santa Cruz (p. 4-6) should be discussed in greater detail in the FEIS to afford a better understanding of the groundwater flows between adjacent hydrological units in the study area. Diagrams which show geological cross sections of the aquifers and more detailed maps indicating surface and subsurface flow patterns as well as flow relationships between hydrological sub-units in the study area should be included in the FEIS. The area which should be discussed is bounded by the Pima County line to the south, U.S. Highway 80 to the west and north, and Interstate Highway 17 to the east.

11-2

2. The discussion of reduction of groundwater storage in Vekol Valley on page 5-23 of the DEIS indicates that any depletion of groundwater in the South Vekol Basin would have the result of withdrawing water from beneath the Papago Reservation. The FEIS should provide estimates of the amount of groundwater that would be withdrawn from the Papago Reservation and a discussion of any other impacts to the Papago Reservation.

### Hazardous Waste Comments

11-3

On February 26, 1981, Governor Babbitt signed a bill designating a location in the Rainbow Valley, six miles west of Mobile, as the site for a hazardous waste disposal facility for the State of Arizona. Since the DEIS was prepared prior to approval of the hazardous waste site, there is no discussion of the potential adverse impacts resulting from the proximity of the hazardous waste site to the study area.

The FEIS should address any impacts that the proposed hazardous disposal facility may have on the three alternative water supply sites and the effects on the disposal facility which may result from withdrawal of 2.1 million acre feet of groundwater over a period of 25 years.



12  
ARIZONA DEPARTMENT OF HEALTH SERVICES

Division of Environmental Health Services

BRUCE BABBITT, Governor  
JAMES E. SARN, M.D., M.P.H., Director

May 11, 1981

Mr. James Crowther  
Bureau of Indian Affairs  
Phoenix Area Office  
P.O. Box 7007  
Phoenix, Arizona 85011

Dear Mr. Crowther:

RE: Comments on DES 81-10 Ak-Chin Water Supply Project

The Arizona Department of Health Services (ADHS) supports the Vekol Valley preferred alternative proposed by the Bureau of Indian Affairs in the Draft Environmental Impact Statement, "Ak-Chin Water Supply Project" (DES 81-10).

The ADHS has a substantial interest in the study areas as a result of A.R.S. § 36-2802 which authorizes the Director of ADHS to acquire title to a section of land (Section 32, Township 4 South, Range 1 West) in Maricopa County for use as a Statewide hazardous waste facility.

12-1

Based upon our preliminary evaluation, water development in the Vekol Valley study area would not have a significant or adverse impact upon the development or operation of a hazardous waste facility. Proposed water conveyance systems which may intersect or abut major transportation corridors providing access to a hazardous waste facility, however, should be closed or buried. Proposed water development in the Bosque study area, from our perspective, would also be acceptable provided nearby water conveyance systems were buried or closed. Proposed development in the Waterman Wash study area may adversely conflict with hazardous waste site development and operation, particularly as it relates to increased subsidence potential and changes in ground water flow velocities.

For inclusion in the hearing record, we respectfully submit these comments, a copy of A.R.S. § 36-2800, and "A Report to the Arizona State Legislature Regarding Siting of a Statewide Hazardous Waste Disposal Facility".

We look forward in continuing to develop a strong working relationship with your agency as our planning processes continue. If I can be of further assistance or in the event you may have any additional questions, please do not hesitate to call me at 255-1130 or Tibaldo L. Cañez, Chief, Bureau of Waste Control at 255-1170.

Sincerely,

Ronald L. Miller, Ph.D.  
Acting Assistant Director

RLM:TLC:jr  
Enclosures

*The Department of Health Services is An Equal Opportunity Affirmative Action Employer. All qualified men and women, including the handicapped, are encouraged to participate.*

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## Native American Rights Fund

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13  
May 11, 1981

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Mr. Curtis Geiogamah  
Acting Area Director  
Phoenix Area Office  
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P.O. Box 7007  
Phoenix, Arizona 85011

Dear Mr. Geiogamah:

This office represents the Papago Indian Tribe insofar as its interests are affected by the Ak-Chin Water Supply Project and the implementation of the Ak-Chin Water Settlement Act, Public Law 95-328, 92 Stat. 409.

The Papago Tribe is opposed to the proposals to supply water to the Ak-Chin Reservation from both the south basin of the Vekol Valley and the Bosque Area. The reasons for the Tribe's opposition were presented in oral and written comments at the April 28, 1981 hearing on the Draft Environmental Impact statement on the Ak-Chin Water Supply Project.

The Papago Tribe requests your office to reevaluate and change the manner in which the Ak-Chin matter has been handled. Everyone acknowledges that the Ak-Chin proposal affects vital Papago interest. Various BIA officials have met with representatives of the Papago Tribe and suggested that there might be ways to work out a solution that would be acceptable to both the Ak-Chins and the Papagos. But these suggestions have been extremely vague. The government officials who have met with the Papagos have not been authorized to make concrete offers, to enter into meaningful negotiations, or to commit the government to specific compensation or mitigation measures. The BIA's draft Environmental Impact Statement simply assumes that the Papago problems will somehow magically vanish or will eventually be resolved in a satisfactory manner. My discussions with BIA officials have confirmed that underlying assumption. The attitude seems to be that the BIA will press for a decision from the Secretary of the Interior to go ahead with the Vekol Valley alternative on the basis of the current information. There are no plans to address or resolve the Papago problems until that secretarial decision has been made.

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MAY 13 1981

(DATE)

## Native American Rights Fund

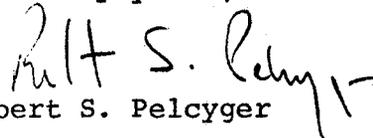
Mr. Curtis Geiogamah  
May 11, 1981  
Page two

The Ak-Chin Settlement Act does not authorize the Secretary to take or interfere with the Papago Tribe's water and property rights. Nor does it diminish or abrogate the federal government's trust responsibility to protect the Papago Tribe's water rights and other property. Section 16 of the Indian Reorganization Act specifically vests the Papago Tribe with the authority to prevent the disposition or encumbrance of interests in tribal lands or other tribal assets without tribal consent. The self-determination policy embodied in recent federal laws, to which the President and the Secretary of the Interior are firmly committed, calls for meaningful consultations with tribes before decisions that vitally affect their interests are made. Therefore, the BIA should not recommend, and the Secretary certainly should not adopt, any proposal for supplying water to the Ak-Chin Reservation that will impair or affect Papago interests without first consulting with the Papago Tribe and determining whether any such proposal is consistent with the government's trust responsibilities to the Papagos and is acceptable to the Papagos. An essential part of any such proposal must include whatever measures are deemed necessary for the adequate protection and utilization of the Papago Indian Reservation; it cannot be limited simply to the manner in which water is to be made available to Ak-Chin.

The BIA's current approach, as reflected in the Draft Environmental Impact Statement and in my discussions with BIA officials, is not acceptable. Indeed, it is unlawful. The BIA certainly and rightfully would strenuously object if any other federal or state agency made critical decisions without considering fundamental tribal concerns.

The Papago Tribe is willing to sit down and discuss this important matter and explore potential solutions with government officials and other interested parties. The Tribe is not willing, however, to sit back, accept and rely on vague assurances that someone will attempt to work out a solution sometime in the future after the most important decision has already been made. Although the Tribe will sit down and discuss any and all alternatives, its preference is for the BIA to eliminate the proposals to supply water to the Ak-Chin Reservation from the south basin of the Vekol Valley and from the Bosque Area because of their interference with vital Papago interests.

Sincerely yours,

  
Robert S. Pelcyger

## Native American Rights Fund

Mr. Curtis Geiogamah  
May 11, 1981  
Page three

cc: Max Norris  
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Willard Juan  
Max P. Jose  
Rosemary Lopez  
John Narcho  
Patricia Domingo  
Albert Frank  
Ernest Andrew  
Bill Swan  
Dan Jackson  
Charles Winzer

## RESPONSES TO COMMENTS

- 1-1 Comments noted.
- 1-2 The draft EIS at page 5-58 discusses the range of possible mitigation measures including purchase of properties affected by the proposed action.
- 1-3 A full discussion of the Arizona Groundwater Management Act of 1980 as administered by the Arizona Department of Water Resources appears on pages 5-49 and 5-50 of the draft EIS. A copy of the opinion from the Office of the Solicitor of the U.S. Department of the Interior to the BIA regarding the Act's effect on Public Law 95-328 is provided as Appendix C to the EIS. Please see the Errata sheet.
- 2-1 To determine the range of significant issues addressed in an EIS, an early scoping process was implemented. The scoping process involves communication among governmental agencies and the general public including those opposed to the project on environmental grounds. The opportunity for citizens to be involved in this project was available at two informational meetings in December 1979 and three formal scoping meetings held in October 1980.
- The draft EIS discusses a range of measures to mitigate the impacts to landowners of the proposed action on page 5-57 and page 5-58.
- 2-2 The adverse effects of withdrawal of groundwater are described in detail in the draft EIS. The comparative analysis of these effects in the alternative basins indicates that impacts in the Vekol Valley would be less substantial because significantly fewer water users would be affected.
- 2-3 Estimates for deepening wells or drilling new wells would vary from company to company.

2-4 An increase in K.W.H. costs from 40 mills (4.0¢) to 65 mills (6.5¢) in a two-year period is not uncommon in these inflationary times. Pollution, if any, caused by the generation of electricity, has been or will be addressed, where applicable, in the environmental documents dealing with specific power plant installations.

3-1 Text revised. See Errata sheet.

3-2 Text revised. See Errata sheet.

4-1 The draft EIS discusses a range of possible mitigation measures, including compensation, for adverse effects related to groundwater withdrawal and those related to subsidence.

4-2 Text revised. See Errata sheet.

Meetings have been held with the Papago Tribe as indicated on page 5-54 of the draft EIS with the intent of identifying potential environmental conflicts resulting from development of the Vekol Valley.

Should the preferred alternative be implemented, a portion of the water removed from the Vekol Valley aquifer would be that moving in to the well field from underneath Papago Indian Reservation lands. Detailed discussions of precise mitigation measures to be employed will be addressed if the Vekol Valley is selected as the source of groundwater in this proposed action. Mitigation measures are discussed in the draft EIS. See response to Comment 4-1.

4-3 Comment noted.

4-4 The BIA has not been made aware of any plans or potential agricultural development programs of the Papago Tribe in the area which may be impacted by groundwater withdrawal in the Vekol Valley.

4-5 Comment noted.

If the Ak-Chin Water Supply Project were to be implemented solely by means of a well field in the north basin of Vekol Valley, impacts could be severe. Since the transmissivity of aquifer materials in the north basin appears to be lower than in the south basin, such a well field would require substantially more wells and closer well spacing, and result in substantially greater water level declines, than the preferred alternative. Such an operation could also deplete as much as two-thirds of the water in storage in the north basin, contrasted with a depletion of only about one-quarter of the water in storage in the entire Vekol Valley under the preferred alternative.

4-6 In the vicinity of the buried ridge separating the north and south basins of Vekol Valley, the hydraulic gradient is approximately 90 feet per mile and the thickness of the sediments overlying the ridge is less than 700 feet (page 4-15, EIS). The depth to water in the vicinity of the buried ridge is approximately 450 feet (Figure 4-6, EIS). Consequently, the saturated thickness of aquifer materials overlying the buried ridge is approximately 250 feet. The width of the valley in the vicinity of the buried ridge is approximately three miles (Wilson, 1979). These estimates of the thickness and width of materials overlying the ridge are confirmed by recent USGS seismic studies. The hydraulic conductivity of aquifer materials in the vicinity of the buried ridge could range between 2 and 8 ft/day, based upon aquifer tests which indicate a transmissivity of 3,600 ft<sup>2</sup>/day in the north Vekol basin and 13,000-14,000 ft<sup>2</sup>/day in the south Vekol basin. Based upon these hydrologic properties, it is possible to obtain estimates of the amount of water flowing across the buried ridge from the south Vekol basin to the north Vekol basin by applying the formula:

$$Q = KIA,$$

where  $Q$  = the volume of flow through a cross-section of the aquifer above the buried ridge,

$K$  = the hydraulic conductivity of aquifer materials overlying the buried ridge,

I = the hydraulic gradient across the buried ridge, and

A = the cross-section of saturated aquifer materials lying above the buried ridge.

The estimated flow from the south Vekol basin to the north Vekol basin, based upon this analysis, is approximately 2,800 acre-feet per year, assuming a hydraulic conductivity of 5 ft/day. It should be emphasized that this is not a precise calculation of the actual flow between the basins, but it is believed to represent a reasonable order-of-magnitude estimate of that flow.

The saturated thickness of aquifer materials above the buried ridge separating the two basins is approximately 250 feet. Consequently, an average water level drawdown of about 200 feet would still maintain sufficient saturated thickness to allow hydraulic communication between the two basins. Since the estimated average drawdown in Vekol Valley is approximately 300 feet over the 25-year life of the project, a limitation of the drawdown to only 200 feet would require a reduction of pumping of about one-third or a reduction of duration of pumping of about one-third.

A reduction of one-third in the total pumping rate for the Ak-Chin water supply project would require production to be reduced from 85,000 acre-feet per year to 57,000 acre-feet per year. The balance of 28,000 acre-feet per year would presumably have to be supplied from an alternate source. A reduction of one-third in the total duration of pumping required for the Ak-Chin water supply project would reduce the length of the project from 25 years to approximately 17 years. An alternate water supply would presumably have to be obtained for the other eight years of production.

Any operational scheme which will maintain hydraulic communication between the north and south Vekol basins will provide a minimum of disturbance to the natural hydrologic regime of the basin. Any operation which will tend to reduce or discontinue hydraulic communication between the two basins will have the effect of hampering

the return to natural hydrologic conditions following termination of the project, because of the very low rates of natural recharge to the basin.

4-7 The estimated depth to groundwater in that portion of south Vekol basin which underlies the Papago Indian Reservation is approximately 400-600 feet (Figure 4-6, EIS). The thickness of the water bearing materials underlying those portions of the south Vekol basin lying on the Papago Indian Reservation ranges from approximately zero at the margins of the Valley, to greater than 1500 feet near the center of the Valley (Wilson, 1979). The saturated thickness of water bearing material underlying the portions of the south Vekol basin lying under the Papago Reservation may thus be as great as 1000 feet or more.

The rate of decline of the water table in south Vekol basin for the proposed project is approximately 12 feet per year at 85,000 AF/year withdrawal (page 3-32, EIS). This represents an average rate of decline of the water table throughout the entire Vekol Valley, including both north and south basins. It is not possible to distinguish the portions of the south basin which lie under the Papago Reservation from any other portions of the basin on the basis of average rate of water level decline. Consequently, the best current estimate of the rate of decline of the water table under the Papago Reservation would also be 12 feet per year. If the Ak-Chin Water Supply Project were implemented in the Bosque or Waterman Wash areas, the effects on the water levels underlying the Papago Reservation would be negligible.

Based upon estimates of the saturated thickness of the basin-fill deposits in Vekol Valley (Figure 5, Wilson, 1979), the total volume of saturated fill under the Papago Reservation within the south Vekol Valley is approximately 19 million acre-feet. For a specific yield of 0.1 (Wilson, 1979), the volume of water stored beneath the reservation in the south Vekol valley is approximately 1.9 million

acre-feet, or 41% of the total storage of 4.6 million acre-feet within the south basin. Under the proposed plan for development of the Vekol basin, it is estimated that the project will reduce the total amount of water in storage within the basin by 27% (Page 5-23, EIS). Assuming that the same 27% reduction factor can apply to that portion of the south Vekol basin lying beneath the Papago Indian Reservation, it is estimated that 1.4 million acre-feet of water will remain in storage under the reservation, compared with an estimated 1.9 million acre-feet currently in storage beneath the reservation. If the Ak-Chin Water Supply Project were implemented in the Bosque or Waterman Wash areas, the effects on groundwater storage beneath the Papago Reservation would be negligible.

General methods for mitigating water resources impacts of the proposed project are discussed on pages 5-53 and 5-54 of the EIS. Some of these methods, such as those designed to minimize the effects of land subsidences, would be applicable to impacts on the Papago Reservation.

4-8 The archaeological survey for the EIS was a sampling strategy rather than the 100 percent survey of the area. A 100 percent survey of the affected areas will be required prior to project construction. Until a determination is made regarding preservation in place or preservation of potentially impacted resources by excavation, any estimates of the cost and time required to protect such resources would be potentially inaccurate and misleading.

Regarding the feasibility of any projected preservation and protection program, it can be stated that many such programs have been successful while others have been less successful, if not completely unsuccessful. The federal laws, rules and regulations under which the proposed project would be implemented should insure a relatively high probability of success. The Papago Tribe will be consulted, along with other agencies, regarding the design of any mitigation plans.

There is no reason why nomination of some or all of the Vekol Valley sites to the National Register need occur at this time. Prior to project construction the sites to be impacted will be evaluated as to their significance and eligibility for nomination to the National Register. Actual nomination is often left to the agency which administers the lands on which the sites are located, in this case, the Bureau of Land Management.

- 4-9      Comments noted. See previous responses.
- 5-1      See our response to comments 4-4, 4-6, and 4-7.
- 5-2      Comment noted. The draft EIS discusses these impacts on page 5-24.
- 5-3      Comment noted. The draft EIS discusses these impacts on page 5-59.
- 5-4      The draft EIS considers the environmental impacts of the withdrawal of 85,000 acre-feet from one groundwater source as a worst case scenario. The plan to integrate an allocation of 58,300 acre-feet from the Central Arizona Project is discussed on page 3-4 of the draft EIS and presents the environmental impacts of the integrated system throughout the document.
- 6-1      Comment noted.
- 6-2      See response to comment 1-3.
- 6-3      See responses to comments 1-2 and 4-1.
- 7-1      Comment noted.
- 7-2      Public Law 95-328 and the provisions of the Ak-Chin Water Delivery Contract specifies that 85,000 acre-feet of water be provided. The development plans for the farming activities on the Reservation are

outside of the scope of the draft EIS but are addressed in the Community's Small Reclamation Loan Application and Feasibility Study submitted to the Bureau of Reclamation.

7-3 As indicated in the draft EIS no significant changes are expected in the regional geological setting. The expected impacts resulting from land subsidence are discussed under the heading of topography.

7-4 It is agreed that water drawdown has affected vegetation in Arizona in several places and references are cited of these on page 5-25 of the draft EIS. The conclusion that no adverse impacts to existing vegetation are expected from water drawdown to the Vekol aquifer is based upon two lines of evidence. First, the maximum root depth of existing vegetation in the Vekol Valley, and second, the depth to water. As discussed in chapter 4, the depth to the aquifer varies from 150 to 400 feet in the north basin, and from 350-500 feet in the south basin. Of the vegetation in Vekol Valley, the species with the greatest reported root depth is mesquite at 175 occurring in the Valley only along washes. Because of the depth to the aquifer, it is highly improbable that this species is dependent for survival on water contained in the aquifer. The survival of mesquite, and other more shallowly rooted species, appears to be dependent on surface flows generated from precipitation and runoff. Therefore, withdrawal of water from the Vekol aquifer is not expected to adversely affect the vegetation in Vekol Valley.

7-5 The effects on the existing wells in the Vekol valley are discussed on page 5-22 of the draft EIS. The locations and depth of these wells are reported by the U.S. Geological Survey in Open File Report 79-1165 by Wilson (1979).

8-1 Comment noted.

8-2 Mitigative measures to reduce adverse impacts to wildlife include these provisions and are discussed on page 5-55 of the draft EIS.

- 9-1 Comment noted. See response to comments 1-2 and 4-1.
- 10-1 Comment noted. See response to comments 1-2 and 4-1.
- 11-1 Figure 4.0, "Direction of Groundwater Flow" has been added. See the errata sheet.

As indicated in the errata sheet, the relationships between the Vekol, Santa Cruz, and Waterman Wash groundwater basins are quite complex. Groundwater underflow out of the Vekol Valley Basin is believed to flow eastward into the Santa Cruz Basin, as well as northward into the Waterman Wash Basin. The relative proportions of flow into those two basins are not known. Sufficient data are not available to provide detailed geological cross-sections and maps. Figure 4-0 depicts the probable direction of surface and subsurface flow patterns.

- 11-2 See response to comment 4-7.
- 11-3 The proposed hazardous waste disposal facility may only have potential adverse environmental impacts if the Waterman Wash area were selected for development. See the comments (12-1) provided by the Arizona Department of Health Services.
- 12-1 The text has been revised to include a discussion of the hazardous waste disposal facility. See the errata sheet.

The preferred alternative water conveyance system is described on page 3-13 of the draft EIS as buried pipeline or a combination of buried pipeline and concrete-lined canals. Buried pipeline will be used throughout the system, particularly where access routes would intersect the corridors.

13 Your comments and suggestions are noted.

We have responded specifically to the comments in your statement of April 28, 1981 (see our responses to comments under No. 4). The settlement of issues with the Papago Tribe will certainly take place. The EIS prepared for this project, including all comments received, describe concerns and issues for the decision maker; the Secretary of the Interior.

## ERRATA

### Arizona Groundwater Management Act of 1980 (Comment 1-3)

Add Appendix C to Chapter 9, pages 9-17 and 9-18, attached.

### Butterfield Stage Route (Comment 3-1)

- 1) Insert as paragraph four on page 4-35:

The supposed route of the Butterfield Overland Mail Company and Stage Line, as shown on USGS maps, runs through the general area of Bosque and Waterman Wash. However, only one sample unit, located in the Bosque area, actually contained part of the supposed route. Nine historic artifacts which possibly pre-date 1900 were noted in the area during the field survey, but they were scattered and did not appear to be definitely associated with the stage route. Traces of a track which generally follows the supposed route were also noted, but because of a lack of associated artifacts and the ubiquitous occurrence of such tracks in the general study area, it is not possible to determine whether or not the track was an actual remnant of the stage line. No site numbers were assigned in the area.

- 2) add to paragraph two on page 4-38:

The Butterfield Overland Mail Company and Stage Line route, initiated in 1858, passed through the general area of Bosque and Waterman Wash.

- 3) add to paragraph two under h. on page 5-10

The project would also indirectly affect portions of the Butterfield Stage route by modifying what is now a largely natural undisturbed setting.

Cultural Resources Mitigation (Comment 3-2)

- 1) Change the second sentence of the first paragraph on page 5-57 to read: "The appropriate mitigation program developed from this data base will be designed in consultation with BLM, WPRS, Western Area Power Administration, the Advisory Council on Historic Preservation, the State Historic Preservation Officer and the Papago Tribe."

Papago Meetings (Comment 4-2)

Change the second sentence of the fifth full paragraph on page 5-54 from "Negotiations are underway between the Ak-Chin Community and Papago Tribe to forestall any . . ." to, "Meetings have been held among representatives of the Ak-Chin Community, Papago Tribe and the BIA concerning . . .".

Groundwater Flow (Comment 4-6)

Add Figure 4-0 to follow page 4-6 in the EIS

Insert as the last paragraph on page 4-6:

Figure 4-0 illustrates the general directions of groundwater flow in the study area. In the Waterman Wash area, groundwater flows in a northwesterly direction parallel to Waterman Wash, flowing toward the major pumping center in the Rainbow Valley. In the Bosque area, groundwater flows in a northwesterly direction toward the major pumping center along the Gila River north of Gila Bend. In the Vekol Valley, groundwater generally flows in a northerly direction. However, at the northern end of the Vekol Valley the groundwater flow patterns become fairly complex. Much of the flow out of the Vekol Valley is directed toward the heavy pumping centers in the vicinity of the Ak-Chin Indian Reservation in the Santa Cruz Basin. However, some groundwater underflow out of Vekol Valley may still trend northerly through gaps between the Booth Hills and Haley Hills into the southern end of the Waterman Wash Basin.

Hazardous Waste Facility (Comment 11-3 and 12-1)

- 1) Insert as paragraph 3 on page 3-29:

Located approximately mid-way between the Bosque and Waterman Wash alternative study areas, but generally in the Rainbow Valley area of Waterman Wash is the site selected by the State of Arizona as a hazardous waste disposal facility. Section 32, Township 4 South, Range 1 West, Gila and Salt River Base and Meridian, is the location of the parcel of land selected. Water development in the Vekol Valley and Bosque areas would not affect the facility. Water development in Waterman Wash, however, could affect the site due to increased subsidence potential and changes in groundwater flow velocities.

- 2) in Table 3-3, "Summary Comparison of Impacts", change the first sentence under Land Use for the Waterman Wash Alternative, page 3-35:

"Subsidence could adversely affect water flows and irrigation operations, Southern Pacific Railroad tracks, the El Paso natural gas pipeline, a proposed crude oil pipeline, a proposed refinery near Mobile, and the proposed Arizona statewide hazardous waste facility to be located in Section 32, T4S, RIW, G&SRB&M."

- 3) add the following sentence to the end of the first full paragraph on page 5-18:

"The planned Arizona hazardous waste disposal site in Rainbow Valley may also be affected by subsidence."

- 4) Insert as the second paragraph under "other State agencies", page 5-50:

The Arizona Department of Health Services has been authorized by state law to acquire title to Section 32, T4S, RIW, G&SRB&M, Maricopa County, for the purpose of establishing a statewide hazardous waste disposal site. This is located approximately halfway between the

Bosque and Waterman Wash alternative areas. We have no information at this time as to when the facility will be constructed.

- 5) add to the end of the second paragraph under "Water Resources", page 5-53:

"Covered water conveyance structures would be used exclusively in areas which may potentially intersect transportation routes to the proposed hazardous waste disposal site in Rainbow Valley."

- 6) change the last sentence of the first full paragraph on page 5-58 to read:

"Information from such a monitoring program would be required in setting the level of compensation, water provision, or purchase or exchange values involved in mitigating project impacts as well as in detecting any effects from the proposed hazardous waste disposal site in Rainbow Valley."



APPENDIX C  
UNITED STATES  
DEPARTMENT OF THE INTERIOR  
OFFICE OF THE SOLICITOR

VALLEY BANK CENTER, SUITE 2080  
201 NORTH CENTRAL AVENUE  
PHOENIX, ARIZONA 85073

November 3, 1980

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07 NOV 1980

Memorandum

To: Area Director, Phoenix Area Office  
From: Field Solicitor  
Subject: Ak Chin Water Rights Settlement Act, P.L. 95-328  
(92 Stat. 409)

(DATE)

You have asked whether Arizona's Groundwater Management Act of 1980 will affect or limit groundwater pumping from nearby federal lands for use on the Ak Chin Reservation as permitted by P.L. 95-328, 90 Stat. 409. For the reasons set forth below, it is my opinion that the provisions of Arizona's Groundwater Management Act of 1980 are not applicable to the groundwater pumping from federal lands authorized by P.L. 95-328 and that these state law provisions will not affect or otherwise limit the pumping necessary to implement the Congressional intent to furnish the Ak Chin Indian Community with a permanent water supply.

The federal lands from which the groundwater is to be pumped are BLM lands. Prior to the 1978 passage of P.L. 95-328, neither the State of Arizona nor any of its citizens had established any legal right to the subject groundwater vis-a-vis the United States because groundwater is not approp-riable under Arizona law. Briston v. Cheatham, 75 Ariz. 227, 255 P.2d 173 (1953). Thus, the groundwater which is the subject of the present inquiry was, at the time of the passage of P.L. 95-328, unappropriated.

The State of Arizona did not acquire governmental control over the groundwater underlying federal land as against the United States either by admission to statehood or by subsequent state legislation, including the Groundwater Management Act of 1980. The United States Supreme Court clearly recognized the Federal government's continuing control over unappropriated waters on federal land in United States v. New Mexico, 438 U.S. 696, 698 (1978) when it stated:

BUREAU OF INDIAN AFFAIRS  
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9-17

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The Court has previously concluded that whatever powers the States acquired over their waters as a result of congressional Acts and admission into the Union, however, Congress did not intend thereby to relinquish its authority to reserve unappropriated water in the future for use on appurtenant lands withdrawn from the public domain for specific federal purposes. Winters v. United States, 207 US 564, 577, 52 L.Ed 340, 28 S.Ct. 207 (1908); Arizona v. California, 373 US 546, 597-598, 10 L.Ed.2d 542, 83 S.Ct. 1468 (1963); Cappaert v. United States, 426 US 128, 143-146, 48 L.Ed.2d 523, 96 S.Ct. 2062 (1976). (Emphasis added.)

In the instant case, the Ak Chin Reservation lands were reserved to provide a permanent tribal homeland for the Ak Chin Indian Community. At the time of that reservation, the land was intended to support an agricultural economy for these Indians. The on-reservation water supply became deficient and gave rise to the passage of P.L. 95-328. In enacting P.L. 95-328, Congress reserved up to 85,000 acre-feet of groundwater yearly from the then unappropriated supplies underlying the adjacent federal lands for use on the Ak Chin Reservation. These federal water rights in the groundwaters reserved by P.L. 95-328 are founded on the Property Clause and the Supremacy Clause of the Constitution of the United States. The exercise of these water rights are not dependent upon state law or state procedures, Cappaert v. United States, supra. The withdrawal of up to 85,000 acre-feet of water yearly from the unappropriated supply underlying the nearby federal lands, and related activities, for use on the Ak Chin Reservation pursuant to P.L. 95-328 can legally be accomplished without regard to the provisions of the Arizona Groundwater Management Act of 1980.

If you have further questions on this matter, please advise.

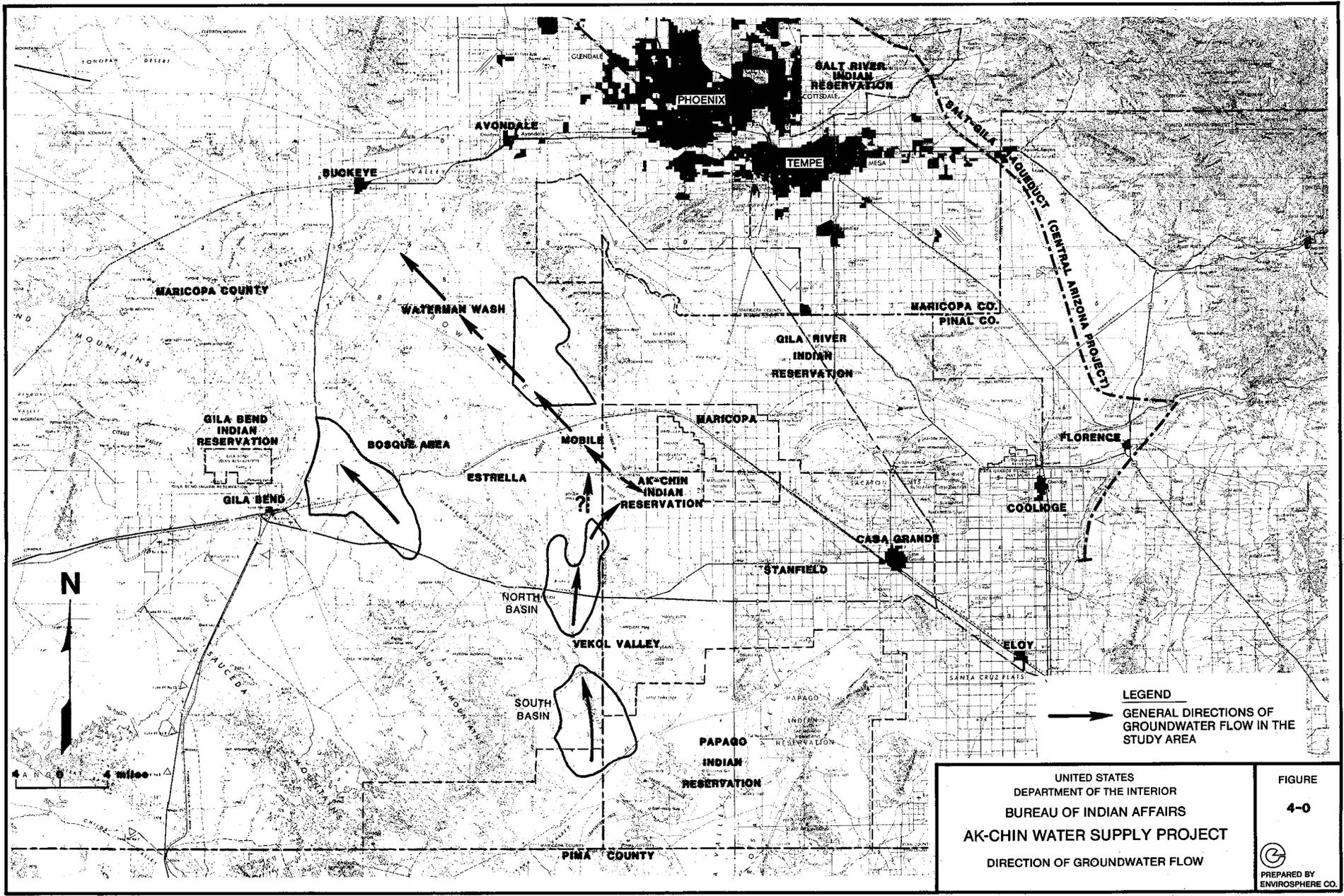


William G. Lavell  
Field Solicitor

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**AK-CHIN WATER SUPPLY PROJECT**  
DIRECTION OF GROUNDWATER FLOW

FIGURE  
4-0  
PREPARED BY  
ENVIROSPHERE CO.

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