

# Glen Canyon Dam Environmental Impact Statement

Volume I

Scoping Letters from Federal, State, and  
Local Government and Indian Tribes

September 1990

Prepared by the Colorado River Studies Office  
Bureau of Reclamation

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State, and Local Government,  
and Indian Tribes

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FLDR # 20990

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# AK-CHIN INDIAN COMMUNITY



Route 2, Box 27 - Maricopa, Arizona 85239 - Phone 568-2227

**C10055**

April 24, 1990

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APR 27 '90

Date	Initials	To
		W/S

Suos. Corresp.  
Date App'd

The Honorable Manuel Lujan, Jr.  
Secretary of the Interior  
Room 6151  
C Street between 18th and 19th Streets, N.W.  
Washington, D.C. 20240

Dear Honorable Lujan:

Please find enclosed a statement of the Ak-Chin Indian Community concerning the National Environmental Protection Act and the EIS study period on Glen Canyon Dam.

If you have any question, please feel free to call me anytime.

Sincerely,

Delia M. Antone, Chairman  
Ak-Chin Indian Community Council

NOTICE: IF YOU DETACH  
ENCLOSURES PLEASE INSERT  
CODE NO. \_\_\_\_\_

cc: BUREAU OF RECLAMATION  
Dennis B. Underwood, Commissioner  
Roland G. Robinson, Upper Colorado Regional Director

CONGRESS  
HOUSE OF REPRESENTATIVES  
The Honorable Morris K. Udall  
The Honorable Don Young  
The Honorable George Miller  
The Honorable Denny Smith

SENATE  
The Honorable J. Bennett Johnston  
The Honorable James A. McClure  
The Honorable Bill Bradley  
The Honorable Conrad Burns

STATE GOVERNORS  
The Honorable Rose Mofford  
The Honorable George Deukmejian  
The Honorable Roy Romer  
The Honorable Richard H. Bryan  
The Honorable Garrey E. Carruthers  
The Honorable Norman H. Bangerter  
The Honorable Michael J. Sullivan

**C10055**

**STATEMENT OF THE AK-CHIN INDIAN COMMUNITY  
CONCERNING THE GLEN CANYON DAM  
ENVIRONMENTAL IMPACT STATEMENT SCOPING PROCESS  
APRIL 18, 1990**

The Ak-Chin Indian Community's main source of power and water could be materially affected by any change in the fluctuation in the river flow from the Glen Canyon Dam. The extent of the impact on the Community can only be determined after the development of an accurate and objective Environmental Impact Statement ("EIS") which was authorized by Interior Secretary Manuel Lujan, Jr. approximately nine months ago.

The economic foundation of the Ak-Chin Indian Community is agricultural. Any operational changes of the Glen Canyon Dam that would affect the Community's water and power supply during any crop year could destroy our economic foundation and self-reliance. This would force our Community to revert to federal governmental support for social and other services which are now funded from tribal income.

In 1962, the Community established Ak-Chin Farms as a Community-owned farming enterprise. Through the application of sound business and water conservation practices, Ak-Chin Farms has emerged as a highly profitable Indian-owned enterprise, and the Community has achieved near economic self-sufficiency.

It should also be noted that under the provisions of Public Law 98-53, 48 Stat. 2698 ("Act"), and the Contract between the Secretary of the Interior and the Community executed thereunder ("Contract"), the Secretary is responsible for the delivery of the

Community's agricultural water supply at no cost to the Community. If the Secretary is unable to deliver this water when needed during a crop year, the United States, under the provisions of the Act and Contract, would be liable for monetary damages. Any increase in the cost of power needed to deliver the Community's settlement water would increase the Secretary's cost of water deliveries mandated by the Act. Therefore, it would certainly be in the best interest of the United States not to abort the National Environmental Protection Act ("NEPA") process by imposing immediate operating restrictions on Glen Canyon Dam as contemplated by H.R. 4498.

The Ak-Chin Indian Community is, and always has been, very concerned about the environmental problems facing the Nation and has always encouraged, supported and cooperated with well-thought-out changes that would improve or protect the environment. The Community is certainly concerned with the ecology and natural resources of Glen Canyon, as they are affected by the Glen Canyon Dam operation.

Therefore, the Ak-Chin Indian Community opposes H.R. 4498 which would impose immediate operating restrictions on Glen Canyon Dam during the EIS study period. It is our position that the EIS process must be completed prior to the making of any decision affecting the Glen Canyon operation to insure that any decision is based on scientific facts and the result of any decision is in the best interest of all parties involved.

I thank you for giving the Ak-Chin Indian Community the opportunity to submit our concerns on this matter, and the

Community will certainly fully cooperate with the Bureau of Reclamation in developing an accurate and objective Environmental Impact Statement regarding the operation of the Glen Canyon Dam.

Delia M. Antone

Delia Antone, Chairperson  
Ak-Chin Indian Community

C10055



Mr. Roland G. Robison  
Page -2-  
March 16, 1990

Thank you for the opportunity to be involved in the GCES process. We look forward to working with you during your EIS process.

007253

Sincerely,



N.W. Plummer  
Director

cc: Jerry Zimmerman  
Dick Angelos, California  
Jack Stonehocker, Nevada

NWP/TH/jmc

710-5000

Governor  
Rose Mofford

Commissioners:

Thomas G. Woods, Jr., Phoenix, Chairman  
Phillip W. Ashcroft, Eagar  
Gordon K. Whiting, Klondyke  
Larry Taylor, Yuma  
Elizabeth T. Woodin, Tucson

Director

Duane L. Shroufe

Deputy Director

Thomas W. Spalding



THE STATE

OF ARIZONA

CONT. #

90-21352

F.L.D.R. #

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# GAME & FISH DEPARTMENT

2221 West Greenway Road, Phoenix, Arizona 85023-4312 (602) 942-3000

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Date	Initials	To
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Date Rec'd _____		

Glen Canyon Dam  
Environmental Impact Statement  
US, Bureau of Reclamation  
P.O. Box 11568  
Salt Lake City, Utah 84147

Gentlemen:

Re: Written Scoping Comments for Glen Canyon Environmental Impact Statement

The Arizona Game and Fish Department provided oral comments at the scoping meetings held in Arizona and in Washington, DC. In those statements, I tried to identify issues that the Department feels must be addressed with respect to any alternative identified within the Environmental Impact Statement. I am hopeful that you will actually employ an interdisciplinary approach to identifying alternatives and issues, and that you will fully evaluate each alternative with respect to the issues identified. This was not only your charge from the Secretary of the Interior, but it is clearly the intent of the Council on Environmental Quality guidelines for NEPA compliance.

In order to reiterate the comments that the Department provided at the scoping meetings, I have attached a transcript of my statements provided at those meetings. Those comments concentrated on issues and concerns. With respect to alternatives, I believe that there is an approach which has received too little attention. This is what I perceive to be a procedural alternative.

A procedural alternative is directed at the process by which operating criteria are identified for Glen Canyon Dam, and by which they are modified or refined on a recurring basis. The framework for this alternative already exists in the five-year review process for operating criteria. The inadequacy of the current procedure lies in the fact that it virtually ignores values associated with Glen Canyon Dam other than water conservation and hydropower. Unquestionably, water conservation and delivery is in a position of priority for dam operations.

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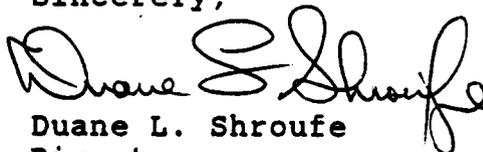
May 3, 1990

However, incorporation of other value factors - for fish and wildlife, with emphasis on threatened and endangered species, recreation, boating safety, hydrological and ecological integrity of the Grand Canyon - along with hydropower into the human equation for determining operating criteria at Glen Canyon would suit the intent of federal law and resolve the issues and concerns of the public. The process must be defined, clearly identifying resource values and the representatives for each of those resource values associated with Glen Canyon Dam and the Colorado River through Glen and Grand canyons. The process must be charged with the task of seeking rational balance among the identified values, and iteratively refining that balance on a recurring basis.

A procedural alternative is superior to a structural alternative or a fixed-operations alternative that places a one-time bandage on operations at Glen Canyon Dam. A one-time fix will lack the flexibility necessary to reach resolution of the issues facing operation of Glen Canyon Dam. An interactive, ongoing solution will assure the public influence in operations.

As always, the Department stands ready to lend its expertise and assistance in the development of this EIS. If the Department can provide further information or service, please contact Larry Riley of my Habitat Branch (602-942-3000, ext. 324).

Sincerely,

  
Duane L. Shroufe  
Director

DLS:LR:lr

cc: Sam Spiller, US Fish and Wildlife Service  
Bruce Taubert, AGFD Wildlife Management Division Chief  
Tom Britt, AGFD Region II Supervisor  
Joe Janisch, AGFD Fisheries Branch Supervisor  
Jim DeVos, AGFD Research Branch Supervisor  
Terry Johnson, AGFD Nongame Branch Supervisor

C19127

SCOPING STATEMENTS - GLEN CANYON DAM OPERATIONS EIS  
PRESENTED BY THE ARIZONA GAME AND FISH DEPARTMENT  
March 15, 16, and 27, 1990

Tonight's meeting, as with any NEPA scoping meeting, is a forum for identifying issues that the Bureau of Reclamation must address in its Environmental Impact Statement for Operations of Glen Canyon Dam. It is essential that the Bureau fully consider all issues identified through out this scoping process; and fully and publicly disclose all of the environmental impacts of Glen Canyon Dam operations with respect to those issues.

The Arizona Game and Fish Department is fully committed to the furtherance of this process. We have freely offered our assistance directly to the Bureau of Reclamation, in hopes of assuring a process that is fair and equitable to all of the resources involved in this environmental analysis. That assistance will continue to be offered through what ever avenues are available to the Department. The Department's commitment to wildlife resources; recreational appreciation and use of those resources; and legal jurisdiction and responsibility for those resources in Glen and Grand canyons will never be abrogated.

With this commitment in mind, the Department has identified several broad issues that must be given due consideration through this EIS process.

The Department believes the major issues to be:

1) Relative Priority of Operational Objectives:

The question of priority must be addressed prior to approaching any of the other issues. We understand the Colorado River Basin Project Act of 1968 to clearly identify the prime purpose of the Colorado River dams to be water storage and delivery. A variety of secondary purposes were identified in that legislation. Those secondary purposes included wildlife enhancement, recreation, and hydroelectric power generation. Annual

and monthly operating schedules for Glen Canyon Dam have been determined by the necessities of water storage and delivery, and properly so. However, hydroelectric power generation has risen to the level of a primary determinant of daily release schedules and patterns over and above all of the other beneficial purposes identified by legislation. Does, in fact, power production have some legal priority over the other purposes of Glen Canyon Dam that give it preference over wildlife and recreational purposes that are provided equal weight by federal law? Resolution of this prime issue will bear directly upon any proposed alternatives for operation of Glen Canyon Dam, and how those alternatives influence the issues identified here tonight.

2) Special Wildlife Species:

The operation of Glen Canyon Dam has been held to jeopardize an endangered species of fish, the humpback chub (Jeopardy opinion issued 1978). Undoubtedly, the operation of Glen Canyon Dam will continue to be a major influence upon the extremely valuable population of humpback chub that continues to persist in the Grand Canyon. Certainly, a species with the status of the humpback chub should figure into the operation of a major federal structure like Glen Canyon Dam.

The humpback chub is not the only animal of special concern found in Glen or Grand canyons. Both the bald eagle and the peregrine falcon can be found within the canyon. Are these species influenced by the operation of Glen Canyon Dam?

3) The Recreational Fishery:

Since completion of Glen Canyon Dam, and consistent with its purpose, a significant recreational fishery has been developed in the tailwater through Glen and Grand

canyons. This very popular coldwater fishery certainly could not exist without the dam, however some features of its operation can be detrimental. The issues of concern here revolve around stranding of fish. This stranding directly influences some of the largest fish in the population, those moving inshore for spawning; and the smallest fish in the population, those eggs and fry exposed by receding waters. Algal and invertebrate food resources used by trout, now important parts of this Grand Canyon Ecosystem, are also stranded providing indirect, though no less important, impacts to the fish community. The Department feels this wildlife resource, an important purpose for Glen Canyon Dam, should figure into its operation.

The question of access for recreationists moving both up and down river, and the safety and quality of their experience must also be taken into account. Rapid, or unpredicted changes in release patterns can present navigational hazards and potentially dangerous conditions for those recreating on the river.

4) Boundaries:

There has been some serious concern that analysis of impacts associated with Glen Canyon Dam Operations would only be carried out with respect to a narrow corridor of concern down river from the dam. These boundaries are arbitrary and certainly not in keeping with the recommendation provided to the Bureau by the National Academy of Sciences Oversight Committee following Phase I studies. Certainly, the Bureau will be concerned with ALL areas of impact and will fully treat cumulative impacts with all of the regard they are due, and to the full extent required by NEPA.

5) Greater Grand Canyon Ecosystem:

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This issue has been saved for last, not because it is the least important, but because it is the thread that binds all of the relevant issues together. The Grand Canyon is a national, if not a global treasure. The Bureau must recognize that down river impacts will have influences that reverberate throughout the ecosystem. These reverberations bear upon the system's integrity as well as the public's ability to enjoy and appreciate it. Only an integrated approach - an ecosystem approach to analysis will justly disclose the magnitude of impacts. We feel it is essential that the Bureau apply this rigorous approach to understand and predict the effects of Glen Canyon Dam operations.

Because an integrated, ecosystem approach is so important to successful implementation of NEPA for a project of this magnitude, it is imperative that the Bureau give close attention to the time allotted for this EIS, and the Glen Canyon Environmental Studies. We should take time now to ensure that an integrated, thorough, well planned, and ultimately credible EIS will be produced.

I urge the Bureau to take advantage of the expertise that has been made available to it. The Department stands ready to lend assistance to the Bureau, and coordinate closely through strict adherence to the Federal Fish and Wildlife Coordination Act. I sincerely urge you to seek a rational approach to measuring the impacts associated with Operation of Glen Canyon Dam. And, like blind justice with her scales, seek alternatives that appropriately balance all of the purposes identified for Glen Canyon Dam without asking the people of Arizona - the people of the United States - to sacrifice the treasures that are found along the Colorado River in Arizona.

DLS:LMR:lr

C1012



STATE OF ARIZONA

# GAME & FISH DEPARTMENT

2222 West Greenway Road, Phoenix, Arizona 85023 (602) 942-3000

# 28244

Governor  
Rose Mofford

Commissioners:  
Francis W. Warner, Tucson, Chair  
Thomas G. Woods, Jr., Phoenix  
Phillip W. Ashcroft, Eagar  
Gordon K. Whiting, Klondyke  
Larry Taylor, Yuma

Director  
Duane L. Shroufe  
Deputy Director  
Thomas W. Spalding

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RECLAMATION  
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DR #

Pio 3.00 '05/14/90

May 4, 1990

Mr. Manuel Lujan  
US Department of the Interior  
Interior Building  
C Street  
Washington, DC 20240

cc

TO	INIT	DATE
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MAY 29 '90	
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Dear Secretary Lujan:

Re: Request for cooperators status on the Glen Canyon Dam Operations EIS, Glen Canyon, Arizona.

Operation of the Glen Canyon Dam is a matter that is hotly debated, not only here in Arizona, but all over the United States. The controversy is not centered on the existence of the dam itself. It has, in fact, become a part of the existing setting in Glen Canyon. It is the operation of the dam, or more precisely the criteria governing the operation of the dam, that lays at the heart of this controversy. The public perceives that operation of the dam influences the intricate workings of the Grand Canyon, and correctly so. You acted in accordance with the importance of this issue and ordered the initiation of an Environmental Impact Statement to assess the effects of alternative operational actions at Glen Canyon. Only full disclosure of impacts, and open communication about Interior's plans for avoiding or mitigating those impacts will satisfy the American people.

My Department has intense interest in the conduct and outcome of this EIS. The Department's desire is for a thorough, well planned, and ultimately credible EIS. Because of this desire, the Arizona Game and Fish Department requested full cooperators status on this EIS in December of 1989. I reiterated that request in early February of 1990, and on February 14, Mr. Roland Robison (USBR) formally denied my request. Coordination through the Fish and Wildlife Coordination Act was cited as the appropriate path of involvement for the Arizona Game and Fish Department. In March, I was compelled to protest to the US Fish and Wildlife Service because of our restricted involvement in review of prescoping documents being prepared by Reclamation. Third party coordination on an Arizona wildlife issue of this magnitude is unacceptable.

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An Equal Opportunity Agency

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29 May 90.  
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May 4, 1990

I cannot fault Reclamation or the Service completely for excluding the Department from its proper involvement. Very tight time constraints on an extensive EIS of limited duration, as specified by the Notice of Intent, places them in compromising positions. I must believe that the Federal Government would not intentionally compromise the integrity of a NEPA evaluation of this importance, though that is the impression that many involved parties have formed. Because of the growing public distrust of Reclamation, because of the importance of this evaluation and the essential nature of our involvement in this process, and the Arizona Game and Fish Commissions unquestionable jurisdiction and authority for wildlife in Arizona; I must again request that the Arizona Game and Fish Department be considered for full cooperator status on this EIS. Statements made by a wide variety of individuals at scoping meetings in Arizona reinforced the public's skepticism over the eventual credibility of this NEPA effort. Arizonans, which the Department represents, recognize and understand the public laws governing this issue. If this NEPA evaluation is to satisfy this informed public, and if it is intended to fulfill your promise to conduct this evaluation in "full view of the American people"; it must be conducted in the most circumspect fashion. I believe that direct involvement by this Department as a full cooperator can give Arizonan's, and American's in general, renewed faith in this process. Further, I believe that direct participation and oversight of this NEPA evaluation by the Department of the Interior Office of Environmental Project Review would provide some assurance to all concerned that the principals of NEPA and the spirit of the process outlined by CEQ will be rigorously followed.

I am hopeful that you will give full consideration to my application for cooperator status. Because the impacts addressed by this EIS will be concentrated in areas within the Arizona Game and Fish Commission's jurisdiction, full Departmental representation is essential. I look forward to your response. If I can provide further information about the Department's involvement at Glen Canyon in the past or events leading up to this request, please feel free to contact me directly.

Sincerely,

  
Duane Shroufe  
Director

DLS:LR:lr

cc: Roland Robison, USBR Upper Colorado Region  
Michael Spear, USFWS Region II

90018018  
20990

# BEAVER CITY CORPORATION



P. O. BOX 271  
BEAVER CITY, UTAH 84713

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APR 30 '90

Date	Initials	To
		115

April 20, 1990

The Honorable Manuel Lujan, Jr.  
Secretary of the Interior  
U. S. DEPARTMENT OF THE INTERIOR  
C Street between 18th & 19th Streets, N.W.  
Washington, D.C. 20240

Dear Mr. Secretary:

Beaver City is one of 26 municipal electric systems who contract for approximately 250 megawatts of power from the Colorado River Storage Project, principally from the Glen Canyon Dam.

The changes proposed by the Glen Canyon Dam EIS will seriously inhibit the economic growth of our small community. The changes will not only impact our small city, but hundreds of other small communities who rely on this power. There are thousands of small farms and industries who will not survive without the power generated from the Glen Canyon Dam.

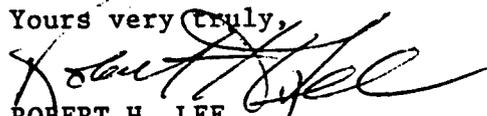
Beaver City has been trying to entice small businesses and industries to relocate in our area. One of our main selling points has been that we can sell them power at an economical rate. The future of our city is dependent on the power generated from the Glen Canyon Dam.

In our valley alone, there are numerous agricultural entities who use our power to pump water. If Beaver City loses the use of the Glen Canyon Dam power, or must pay higher costs for this use, these users will suffer extreme hardship.

The decisions made on operation of the Glen Canyon Dam will have a far-reaching impact on the 22 million residents of the seven states who depend heavily on the river's resources. The EIS must be researched by the decision-makers and all aspects of the effects any change in the operation of the Dam on all users must be carefully researched and examined.

Thank you for your continued assistance to your constituents.

Yours very truly,

  
ROBERT H. LEE  
Beaver City Mayor

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-16-

cc: Dennis B. Underwood, Commissioner, Bureau of Reclamation  
Roland G. Robinson, Upper Colorado Regional Director, Bureau Reclamation

SCNT: # 20218009  
FLDR # 20990

P10-300-6C

# BOUNTIFUL CITY LIGHT AND POWER

April 26, 1990

RECEIVED FOR BLDG		
CLIFFORD C. MICHAELIS		
OFFICIAL DIRECTOR		
APR 30 '90		
Date	Initials	To
		113
State Office		
Date		

Mr. Roland Robison, Director  
Glen Canyon Dam/Environmental Impact Statement  
U.S. Bureau of Reclamation  
P.O. Box 11568  
Salt Lake City, UT 84147

Dear Director:

I am writing representing Bountiful City Light & Power (BCL&P). BCL&P is a municipally owned non-profit electrical utility serving approximately 12,500 customers, who make up approximately 34,000 residents of Bountiful, Utah. BCL&P purchases nearly 70% of the power and energy which is used by its customers from the Colorado River Storage Project (CRSP). BCL&P is a member of and supports the written and public hearing comments made by the Colorado River Energy Distributors Association (CREDA) and the Intermountain Consumer Power Association (ICPA).

The Colorado River Storage Project (CRSP) has long been a commitment of Bountiful City. We have a long term commitment to the repayment and interest schedule of the CRSP Federal Obligation. The power and energy from this project is very valuable to us and because of its timing and loading factor, it allows us to use less oil and coal fired resources for peaking needs by using this clean hydropower electric resource instead. If the Glen Canyon Dam were to be operated as a flow through project, the peaking capacity could be reduced, thus forcing BCL&P, as well as other utilities, to make up the peaking capacity needed by utilizing oil and coal fired resources for our peaking needs. This would put a great impact on the air quality which the nation is now working hard to improve. In the interest of the environment, we avoid the use of our oil fired generation whenever possible, and replace it with renewable resources, which are environmentally clean. Our operating record substantiates this. Our oil fired resources are used for less than 10% of our needs.

We also have a very excellent record, environmentally, in cleaning up the PCB problem which we all share in the Electric Utility Industry. We began Phase I of our PCB clean up plan in February of 1987 with sampling and testing of each of our 3,674 transformers. Samples were sent to an independent testing laboratory and any specimens found to exceed the EPA limit were scheduled for immediate removal and disposal. Bountiful, as of March 1, 1990, has tested each individual transformer in our

007243

service area and has removed 98% of all PCB contaminated transformers. Of these 98%, 34 contained PCB's over 500 p.p.m. and 255 had between 50 and 499 p.p.m. PCB contaminates. The other 2% of the contaminated PCB transformers are presently being removed and properly disposed of. We plan to have this project completed by January of 1991. Total cost for this project will exceed a half million dollars. We will continue to work closely with government agencies and our own local government to provide a clean safe environment.

We are managing an energy conservation program approved by the Western Area Power Administration (WAPA), which insures that we are trying to use the power we receive as economically and efficiently as possible. Conservation is a very important future power resource to BCL&P.

As part of our conservation program BCL&P, has a street light policy of changing our older existing mercury street lights to more efficient high pressure sodium lighting. We have recently gone through a cost of service study and implemented a flat rate charge per kilowatt hour which is conducive to energy conservation. By changing from a declining block rate, where power was less expensive as you used more, to a flat rate where every kilowatt hour saved is worth as much as the first kilowatt hour consumed, we're sending an important signal to our customers about our commitment to conservation.

We have a program available to do energy audits to help our residential and commercial customers in using their energy resources in the most economical and efficient manner.

BCL&P is presently planning, constructing, and operating small hydroelectric projects on several dams in Utah. These projects are clean natural renewable resources and lessen the need for additional supplemental coal fired electrical production.

Bountiful City Light & Power has long had a commitment to environmentally clean renewable resources. This is one major reason we have been a supporter of the CRSP Project from the beginning.

We feel there are great advantages gained from the Glen Canyon Dam Project and its associated water storage. Thousands of farms and communities are supplied with invaluable water as well as electricity which lights many cities in the West. Other great spin-off advantages are in recreational boating, fishing, and camping, which millions of people throughout this country are able to enjoy.

007243

Page 3 of letter dated April 26, 1990  
Roland Robison, Director  
Glen Canyon Dam/Environmental Impact Statement

We are committed to the current Environmental Impact Statement (EIS) Study. We feel the process will fairly evaluate the impacts of all users of this great resource, as well as the cost to mitigate those impacts. We feel the EIS will also fairly evaluate the great benefits which we enjoy today from this project. The completing of the EIS must be oriented toward solving any identified problems, taking into consideration the multiple uses of the river. BCL&P is financially committed to the Glen Canyon Project through our power costs and we would only request that other users of this resource also pay their fair share.

We welcome carefully defined studies, which will find solutions to problems, apply concepts from original agreements, and use least-cost alternatives that work to correct any problems identified. We hope that all of the benefits will be taken into consideration as well as the impacts. Again, we commit our resources and time to assist in whatever way we can in this EIS.

Thank you for the opportunity to present these written comments which express the views of Bountiful City Light & Power. We look forward to working with you in this challenging endeavor in the future.

Sincerely,



Clifford C. Michaelis  
Director

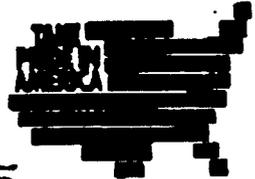
CCM:paw

007243



United States Department of the Interior

BUREAU OF INDIAN AFFAIRS  
WASHINGTON, D.C. 20245



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26 JAN 1990  
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Memorandum

To: Commissioner, Bureau of Reclamation

From: Deputy to the Assistant Secretary - Indian Affairs  
(Trust and Economic Development)

Subject: Environmental Impact Statement (EIS) for the Glen Canyon Dam

It is our understanding that the Bureau of Reclamation is in the early phases of preparing an EIS for the Glen Canyon Dam project. Since this project could have significant impacts to Indian tribes in the northern Arizona area, the Bureau of Indian Affairs requests that it be afforded cooperator status on the preparation of the document.

Mr. George R. Farris, Chief of the Bureau's Environmental Services Staff should be contacted with your determination. Mr. Farris can be reached on 343-2791.

cc: Surname - 200 - chron - pending  
204:GFarris:mam:1/18/90

18 JAN 1990

/s/ Patrick A. Hayes

NOc'd BOR SLCU  
on 29 May 90  
Maf

INT. # 70-101-1  
DR # 20990

4103.00  
**ORIGINAL**  
**CITY OF ENTERPRISE**

APR 19 '90

SEARCHED	INDEXED
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APR 19 1990	
FBI - SALT LAKE CITY	

P. O. Box 340  
ENTERPRISE, UTAH 84725  
PHONE 878-2212

April 4, 1990

Bureau of Reclamation  
Glen Canyon Dam - EIS  
ATTN: WAYNE COOK UC-400  
P.O. Box 11568  
Salt Lake City, Utah 84147

RE: EIS SCOPING MECHANISM

TO WHOM IT MAY CONCERN:

As a small rural Utah Public Power community who relies upon CRSP for 50% plus of its resource, we are deeply concerned about the blatant misuse and distortion of the facts and figures pertaining to the Glen Canyon Dam (CRSP) power production.

We are anxious to preserve our natural resources and prevent the endangering of species but at the same time, care must be taken to preserve man's quality of life and economic welfare.

It distressed us to see so many of the commentators from the private business sector (river rafters and other recreation concessioners) who have profitted from the dam's construction, while we have been footing the bill, present distorted comments at the public hearings held during the last month.

While we agree that compromise needs to be part of the solution, we also believe that the original reasons for the construction of the dam, water development projects and the funding mechanism, that being power sales - NOT RECREATION - should be the primary areas of consideration. We feel that the fringe benefit recipients of the dam, such as boating, rafting, fishing industries, etc. should be responsible for absorbing a portion of the costs created by their demands for changes in the past operation methods of the Bureau of Reclamation and the

C37250

Bureau of Reclamation  
04-04-90  
Page Two

present EIS costs. The profit margins for the private business capitalizing on the dams are considerably larger than those of public power entities and yet the burden of increased costs is being directed solely at the power purchasers.

Please consider the impacts to the average power user's economic status if forced to pay power rates - (a necessity - not a luxury) that have a 46 percent increase.

Respectfully,

*Merrill A. Staheli*  
MERRILL A. STAHELI  
Mayor  
City of Enterprise

MAS:et

007250

# City of Santa Clara

2721 West Santa Clara Drive / P.O. Box 699 / Santa Clara, Utah 84765 / (801) 673-6712

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FLDR # 20990

25 April 1990

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MAY 9 '90

DATE	INITIALS	TO
		MS

The Honorable Manuel Lujan, Jr.  
Secretary of the Interior  
Room 6151  
C Street between 18th & 19th Streets, N.W.  
Washington, D.C. 20240

Dear Secretary Lujan:

I am writing to express our grave concerns on matters pertaining to Glen Canyon Dam and the Colorado River Storage Project systems. Having lived in Utah on the Colorado and Green Rivers and having been associated with first irrigation and more recently with use of electricity generated at Glen Canyon Dam, we find great cause for concern.

The issue of limiting fluctuations of the river below Glen Canyon Dam by reducing stream flow fluctuations is somewhat naive and inconsequential when placed in perspective. Stream flow fluctuations prior to Glen Canyon Dam were so much greater that most of what the "environmentalists" see now as damage did not even exist in the river until after Glen Canyon Dam construction. If some of those who feel they are being damaged had played on the river before the dam, they wouldn't be here now to cause the kind of rhetoric we are hearing. It appears that a good figure of the numbers who may be involved in the attempt to make their stand for environmental impacts that affect their pleasure, safety and rafting would be 22,000.

The reason I say those suggesting changes are naive is because the Colorado River resource as presently allocated and used at Glen Canyon is not a simple issue. Water rights are legally binding rights as are the rights of electric customers. Any change in amounts of electricity generated or variation in time of day of this generation will have grave and immediate affects on the people I represent, plus all others presently being supplied electric power from River sources.

The type of generation at Glen Canyon is environmentally desirable compared to most other methods of generation. Shouldn't environmentalists be encouraging this type of generation, if they are honest? When does

The Honorable Manuel Lujan, Jr.

25 April 1990

Page 2

recreational use by a few become a more critical consideration than electric power for far greater numbers?

Many of those affected by suggested changes in stream ~~flow~~ <sup>C10214</sup> small farmers and businesses who can ill afford increased costs that will, in all likelihood, occur. Couple this with the fact that the Colorado water users, in these rural areas, have the obligation to repay the development costs of the Colorado River Water Projects and it is rather self evident that any change will have a negative impact. Recipients of Colorado River resources, who have few good choices or alternatives if their supply of water or power is negatively impacted, must be given adequate consideration.

As a city councilman of a city of about 2,300 people located in Southern Utah, I have responsibility for our electric utility. We find the increased cost of CRSP power proposed for 1991 by WAPA to be a serious and possibly devastating blow to the economic viability of our distribution system. We understand the necessity for the proposed increase is due, at least in part, to anticipated costs of conducting and paying for the Environmental Impact Statement. We respectfully object to having to assist in paying the costs of the impact statement as these costs will increase our costs of doing business. If our costs increase, the amount we charge our customers per kwh for power will have to be increased or we won't have the necessary funds to cover our expenses.

If stream flow fluctuations are really the problem, a small structure in the river below Glen Canyon Dam, capable of correcting any 24 hour stream flow fluctuations and stabilizing them at a fairly constant level, could probably be constructed at or near the cost of the EIS, then we wouldn't have a problem any more. As a retired professor of Agricultural Economics at Utah State University for 31 years, this suggestion has a much greater benefit-cost relationship than many EIS documents, which already exist and have cost billions. Realistically, we recognize that the Environmental Impact Statement will be completed and thus, Mr. Secretary, we hope you, and Congress, won't try to re-invent the wheel. Years of study and experience have been committed to what has been achieved on the upper reaches of the Colorado, so to leave things as they are until research and study can be completed would appear to be a logical and prudent basis for new decisions.

We would appreciate your using your influence to discourage Congress from any attempt to substitute arbitrary change that would impose its judgment on those who have been given the responsibility for studying the issues and making sound scientific, sociological, environmental and economic decisions.

Respectfully



Paul R. Grimshaw, Ph.D.  
Councilman over Power

PRG:aa

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RESOLUTION NO. 90-13

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A RESOLUTION OF THE MAYOR AND COUNCIL OF THE CITY OF SEDONA, ARIZONA RECOGNIZING THE IMPORTANCE OF MAINTAINING THE INTEGRITY OF THE GRAND CANYON NATIONAL PARK ECOSYSTEM.

WHEREAS, the Grand Canyon National Park is one of the foremost natural resources known to man; and

WHEREAS, there is currently underway an environmental impact study of the Grand Canyon and Glen Canyon resource areas being conducted by the Bureau of Reclamation; and

WHEREAS, the purpose of the environmental impact study is to assess the need for measures to minimize the impact of operation of Glen Canyon Dam on the downstream environment and ecological resources of the Glen Canyon National Recreation Area and the Grand Canyon National Park; and

WHEREAS, the primary areas of concern identified by the environmental impact study focus on the aquatic environment, the sediment and beaches, the recreation uses and the Grand Canyon ecosystem; and

WHEREAS, the importance of the study is to seek to minimize the impact of the operations of Glen Canyon Dam on the resources of the Grand Canyon.

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND COUNCIL OF THE CITY OF SEDONA, ARIZONA, recognizing the importance of maintaining the integrity of the Grand Canyon National Park ecosystem.

BE IT FURTHER RESOLVED that the Glen Canyon Dam Environmental Impact Statement scoping process should take all available measures to minimize the impact of the operation of the Glen Canyon Dam on the downstream environment and the ecological resources of the Glen Canyon National Recreation Area and the Grand Canyon National Park.

PASSED AND ADOPTED by the Mayor and Council of the City of Sedona, Arizona, 10 day of April, 1990.

*James Stansbury*  
Mayor

ATTEST:

*Mari Brown*  
City Clerk

APPROVED AS TO FORM:



\_\_\_\_\_  
City Attorney

cosgrand.ord

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MAY 29 '90

BUREAU OF RECLAMATION  
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Date	Initials	To
		115

APR 30, 1990  
CORT. # 70-25474  
FLDR # 20990

05/08/90

TO	INIT	DATE
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FILES		

The Honorable Manuel Lujan, Jr.  
Secretary of the Interior  
Room 6151  
C Street between 18th and 19th Streets, N.W.  
Washington, D.C. 20240

pro 3.00  
GC

Dear Secretary Lujan:

As the Water & Power Director of the City of St. George, Utah, I am writing to you, with great concern, in regard to the upcoming decisions which are being contemplated in respect to the management of the Glen Canyon Dam. This is not a simple issue, and the importance that the overall concept of the Glen Canyon Dam Environmental Impact Statement (EIS) be examined in great detail cannot be emphasized enough. The results will have a far-reaching impact on all the residents in the seven Colorado River Basin states and their needs must be considered and fulfilled.

The Colorado River resources play a very important role in this area and changes in the river's management may have a severe impact on the economy and could ultimately impact all users of Colorado River resources. If operational changes, which limit the options in connection with the Glen Canyon Dam EIS are instituted, then more restrictions on the vital resources that the Colorado River supplies would be perceived. Any reduction in the Glen Canyon power supplies may have a detrimental effect, not only on residents, but also on industry and agriculture in the entire Colorado River Basin, many of which are already facing economic stress.

Being a neighbor to the Grand Canyon, the City of St. George is very concerned with how the EIS is conducted and feel it is critical that all environmental factors be considered in this process. Throughout the years, the City has seen the canyon and the Colorado River survive together under a diverse number of conditions and calamities. Prior to the Colorado River Storage Project, the river washed away its beaches and banks during spring run-off. In the same year of devastating floods, this mighty river has been seen to dry up to a trickle where only the small and hardy fish varieties could survive, and wildlife species were diminished significantly in number.

The City feels that the environment and the beauty of the canyon is best served by the dams that have been constructed in the recent decades. The dam system helps to control flood conditions that used to occur annually and at the same time ensures adequate stream flows which have created some of the best fisheries in the west.

Rec'd on 29 May  
BOR SLC -  
Mof

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The Honorable Manuel Lujan, Jr.  
Page two  
April 30, 1990

Minor fluctuations in stream flows, that are necessary to take full advantage of the electrical generating equipment, do not harm the environment but, in fact, have improved man's ability to live with the river and use it more productively than ever before. The power that is generated at the dam, and is maximized by the current fluctuations in stream flows, is also very important to the City. We committed to pay for the Glen Canyon Dam when the project was being planned, based on the power supply and conditions agreed to at that time. This resource is critical to our electrical supply in St. George as it is one of our low-cost resources.

St. George is concerned about the environment. We currently enjoy prosperity in this area because of the clean, wholesome environment which surrounds us. In the Power Department of the City, we have taken steps to ensure that our environment is not jeopardized in any way.

Even if the stream flows are required to be constant, as we experienced in 1983, we cannot always anticipate flood conditions. When this happens, significant water must be released over the spillways which causes beach and other property damage downstream. The only way to better control beach erosion and better maintain fish and wildlife habitat is to install more water control structures.

Please take into consideration all possible consequences that the changes in the Glen Canyon Dam EIS could have on the millions of people that would be affected and we strongly urge you to support power utilities.

Sincerely,



Wayne M. McArthur  
Water & Power Director

mg

pc: Dennis B. Underwood  
Roland G. Robinson  
J. Bennett Johnston  
James A. McClure  
Bill Bradley  
Conrad Burns  
Orrin Hatch  
Jake Garn  
Morris K. Udall  
Don Young  
George Miller  
Denny Smith  
Jim Hansen  
Wayne Owens  
Norman H. Bangerter  
Alene Bentley

COLORADO RIVER BOARD OF CALIFORNIA

107 SOUTH BROADWAY, ROOM 8103  
 LOS ANGELES, CALIFORNIA 90012  
 (213) 620-4480

ORIGINAL



# 40-21456  
 20990

May 3, 1990

Mr. Roland Robison  
 Regional Director  
 U.S. Bureau of Reclamation  
 P.O. Box 11568  
 Salt Lake City, Utah 84147

C10200

MAY 8 1990	
Subs. Co.	115
Date Ans.	

Dear Mr. Robison:

This letter is being sent to you regarding the scope of the Environmental Impact Statement (EIS) on the operations of Glen Canyon Dam.

The Colorado River Board of California fully supports the comments contained in the letter that was signed by Mr. J. William McDonald on behalf of myself, the other six Colorado River Basin states' governors' representatives and the Upper Colorado River Commission. That letter enunciates our joint concerns regarding the desired scope of the EIS and the rationale for such a scope. Those comments will not be repeated herein but are attached for your reference.

California users of Colorado River water have been and are continuing to cooperate to implement conservation measures to meet their water demands as the demands for that water throughout the Colorado River Basin become greater. Those conservation measures are based on the legal framework that governs the operation of Colorado River reservoirs. Being downstream of Glen Canyon Dam, conservation of the water resources within the Colorado River reservoir system is paramount, and the operation of Glen Canyon Dam must not jeopardize either that conservation storage or compact delivery and operational requirements.

Most of the impacts associated with water releases on the downstream environmental and ecological resources within Glen Canyon National Recreation Area and Grand Canyon National Park result from within-the-month power operations. Therefore, the EIS must focus on structural and non-structural alternatives to address those impacts and not address the monthly and annual release schedules governed by interstate compacts and the annual operating plan for the Colorado River reservoirs.

Mr. Roland Robison  
May 3, 1990  
Page 2

C10200

The Colorado River Board appreciates the opportunity to comment on the scope of the EIS and looks forward to our further participation in the EIS process.

Sincerely,



Gerald R. Zimmerman  
Executive Director

Attachment

cc: Basin States Representatives

D. Larry Anderson, Director  
Utah Division of Water Resources

Gordon W. Fassett, State Engineer  
Wyoming State Engineer's Office

J. William McDonald, Director  
Colorado Water Conservation Board

Philip B. Mutz, Acting State Engineer  
New Mexico State Engineer's Office

N. W. Plummer, Director  
Arizona Department of Water Resources

Jack L. Stonehocker, Director  
Colorado River Commission of Nevada



# 90-21484  
# 20990

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6C

# Department of Water and Power



# the City of Los Angeles

TOM BRADLEY  
Mayor

Commission  
RICK J. CARUSO, *President*  
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ANGEL M. ECHEVARRIA  
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NORMAN E. NICHOLS, *General Manager and Chief Engineer*  
ELDON A. COTTON, *Assistant General Manager - Power*  
DUANE L. GEORGESON, *Assistant General Manager - Water*  
DANIEL W. WATERS, *Assistant General Manager - External Affairs*  
NORMAN J. POWERS, *Chief Financial Officer*

May 2, 1990

Mr. Roland Robison  
Regional Director -  
Upper Colorado Regional Office  
Glen Canyon Dam Environmental  
Impact Statement  
United States Bureau of Reclamation  
P.O. Box 11568  
Salt Lake City, Utah 84147

C10208

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MAY 9 '90	
Date	115

Dear Mr. Robison:

Thank you for this opportunity to comment on the operation of Glen Canyon Dam and the scoping of the Glen Canyon Environmental Impact Statement (GCEIS).

The Los Angeles Department of Water and Power (LADWP) has been a participant of the Hoover Power Plant since its inception in 1936. We also served as an operating agent at Hoover Power Plant from the beginning of operations until May 31, 1987. At that time, our contract as agent expired but we continue to be a Hoover participant. The LADWP has had the benefit of Hoover peaking energy all these years and expects to utilize this resource for years to come. Although the GCEIS is aimed at Glen Canyon operations, we are concerned that establishing more stringent constraints in the area of minimum flows, fluctuating flows, or constant flows at Glen Canyon Dam may set precedence that would impact other plants on the Colorado River operated by the United States Bureau of Reclamation (Bureau).

We recognize the importance of preserving our natural wildlife habitat and recreational areas, but we strongly feel that sufficient attention must be given to the adverse impacts on power production before any decision is made to include minimum flow or any other power constraining flow limit in the Glen Canyon Operating Criteria. We are aware that these issues are currently being investigated by the Glen Canyon Environmental Studies (GCES) Technical Studies Team, and that the final decision on policy will be made by the Secretary of the Interior upon recommendation by the Executive Review Committee and the GCES report.

At the GCES Technical Studies Team meeting in Tempe, Arizona on March 8, 1990, the Western Area Power Administration (Western) announced that the cost of studying the impacts of various constant or minimum flows as scheduled by the Bureau would be in the neighborhood of \$10.9 million. The study is scheduled to begin in mid-July 1990 and end in June 1991. Western pointed out that their cost estimate was based on the assumption that sufficient replacement capacity and energy would be available for purchase at a reasonable price during the on-peak hours, and also that there would be a sufficient market for Glen Canyon generation during the off-peak hours when constant or minimum flows are being met. Neither of these assumptions can be assured.

The above estimate for the cost of conducting minimum and constant flows appears to be correct in view of the current market. Indeed, if Hoover was forced to maintain a minimum or constant flow in an average water year, assuming reduced Hoover peaking capacity can be replaced by existing alternative resources and based on today's capacity and energy prices, the estimated loss to the LADWP would range from \$1 million per year for a 5000 cfs minimum flow to \$9 million per year for monthly averaged constant flows. These estimates would be much higher during adverse hydro years.

Ultimately, new peaking resources would have to be built. The cost of building new conventional oil- and gas-fired generation resources is approximately \$900 per kilowatt. Replacing Hoover peaking capacity under minimum flow or constant flow conditions results in new resource costs of approximately \$27 million to \$372 million for LADWP's share of Hoover.

The LADWP has approximately 25 percent of Hoover capacity and 15 percent of Hoover energy. Assuming similar cost impacts among the other 14 Hoover participants, the total Hoover replacement cost may be in the neighborhood of \$7 million to \$1 billion to replace Hoover capacity with new resources if constant flows are imposed. Since Glen Canyon capacity is roughly 70 percent of Hoover, we estimate that its cost would also be substantial.

Again, these estimates are based on average water year quantities and the assumption that replacement capacity and energy will be available at reasonable prices to all of the Hoover and Glen Canyon participants. The annual cost estimates would be much greater if adverse hydro years were considered.

In view of the costs stated above and the possible impact on other peaking hydroelectric generating plants resulting from the precedence set by the GCEIS, we strongly urge that consideration be given to all of the ramifications before

C10208

Mr. Roland Robison

- 3 -

May 2, 1990

minimum or constant flow limits are included in the Glen Canyon Operating Criteria. To operate at an increased minimum flow, or worse, to base load the power plant to meet a constant flow requirement, would waste scarce fossil fuel resources and adversely impact environmental efforts.

Sincerely,



NORMAN E. NICHOLS  
General Manager and Chief Engineer

CONT. # 90-21669

FLDR # 21990

P10.300-  
G.C.

Department of Water and Power



the City of Los Angeles

TOM BRADLEY  
Mayor

Commission  
RICK J. CARUSO, *President*  
JACK W. LEENEY, *Vice President*  
ANGEL M. ECHEVARRIA  
CAROL WHEELER  
WALTER A. ZELMAN  
JUDITH K. DAVISON, *Secretary*

NORMAN E. NICHOLS, *General Manager and Chief Engineer*  
ELDON A. COTTON, *Assistant General Manager - Power*  
DUANE L. GEORGESON, *Assistant General Manager - Water*  
DANIEL W. WATERS, *Assistant General Manager - External Affairs*  
NORMAN J. POWERS, *Chief Financial Officer*

C10467

May 3, 1990

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MAY 11 '90
Date: _____
Subs Corresp. _____
Date Ans'd _____

Glen Canyon Dam Environmental Impact Statement  
United States Bureau of Reclamation  
P.O. Box 11568  
Salt Lake City, Utah 84147

Gentlemen:

Glen Canyon Dam Environmental Impact Statement

On October 27, 1989, the Bureau of Reclamation published in the Federal Register (54FK 43870) a Notice of Intent to prepare a Draft Environmental Impact Statement (EIS). The Draft EIS will be used to determine specific options to minimize the impact of operations of Glen Canyon Dam on the downstream environmental and ecological resources of the Glen Canyon National Recreation Area and the Grand Canyon National Park.

The Los Angeles Department of Water and Power encourages development of alternatives for the operation of Glen Canyon Dam which maintain full water deliveries and do not significantly impair average and peak power generation with due consideration to protection of downstream environmental and ecological resources.

We request the opportunity to review the Glen Canyon Dam Draft EIS when available.

Sincerely,

*James F. Wickser*  
JAMES F. WICKSER

Assistant General Manager - Water

10467-10471a



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION IX  
215 Fremont Street  
San Francisco, CA 94105

05 JUL 1990

Mr. Thomas Slater  
Manager, Glen Canyon Dam Environmental Impact Statement  
Bureau of Reclamation  
P.O. Box 11568  
Salt Lake City, Utah 84147

Dear Mr. Slater:

The Environmental Protection Agency (EPA) has received the Notice of Intent to prepare an environmental impact Statement (EIS) on operating criteria for Glen Canyon Dam. The EPA is especially interested in this effort because it is an important opportunity to bring multi-jurisdictional resource protection measures to bear on Dam operations and resource management within the Glen Canyon National Recreation Area and Grand Canyon National Park. Having attended the Colorado River Management Symposium in Santa Fe, we are impressed by the ambitious Glen Canyon Environmental Studies research program associated with this EIS. We are also aware of the complexities which a review of this scale presents for inter-agency coordination, public participation, and reaching agreement on an appropriate set of operating criteria and other measures to protect the resources of the Grand Canyon. The attached scoping information indicates EPA's concerns regarding evaluating the environmental impacts of dam operations and compliance with the National Environmental Policy Act. These comments were prepared in consultation with Region 8 of the EPA.

We are particularly concerned with the definition of the operational and geographic scope of this EIS and the relationship of the Bureau's EIS to the impact statement being prepared by the Western Area Power Administration, an agency of the Department of Energy. We believe that the issues associated with impacts of Bureau facilities in the Colorado River Basin are of such magnitude and long-term significance that the Bureau should seriously consider linking the Glen Canyon EIS with a broader examination of dam operations through tiered impact statements.

There was a strong consensus among the scientists and resource managers at the Colorado River Symposium that current dam operations have adversely affected the environment of the Grand Canyon. Based upon Symposium presentations, we urge the Bureau to adopt the following recommendations.

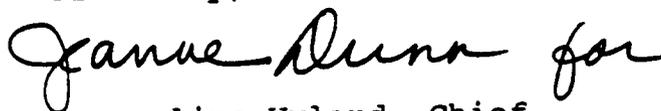
- 1) Extend the phase II for the EIS to the minimum recommended by scientists to obtain credible results, preferably four years.

2) Raise minimum flows released from the dam during the period required to complete the EIS. The scientists involved in the GCES stated emphatically that increased interim flows would in no way compromise their study, but would help the environment.

3) Follow the EIS with long-term monitoring of the impacts of dam operations and a commitment to reevaluate operations either on a periodic basis or when pre-established environmental thresholds are exceeded.

We look forward to further participating in the scoping process and to providing detailed review of preliminary documents and the draft environmental impact statement. We would greatly appreciate receiving all preliminary documents and project updates produced by your office or the Glen Canyon Environmental Studies program, and notification of any public or interagency meetings scheduled for this work. Please send four copies of the DEIS to this office at the same time the impact statement is officially filed with the Washington, D.C., office of EPA. If you have any questions about the scoping comments or other EPA review procedures, please contact me at FTS 556-5114, or Jeanne Dunn at FTS 556-5104.

Sincerely,



Jacqueline Wyland, Chief  
Office of Federal  
Activities

Enclosure: 7 pages

dcn: 90-441

cc: Bob DeSpain, EPA Region 8  
Wayne Deason, Bureau of Reclamation, Denver  
Steve Magnusson, Bureau of Reclamation, Boulder City  
James Young, Fish and Wildlife Service  
Ken Maxey, Western Area Power Administration  
Stan Albright, National Park Service  
Patricia Port, Department of the Interior  
Dennis Kubly, Arizona Game & Fish  
Amy Heuslien, Bureau of Indian Affairs  
Clark Jack, Jr., Havasupai Tribal Council  
Carrie Bender, Hualapai Tribal Council  
Vernon Masayeva, Hopi Tribal Council  
Leonard Haskie, Navajo Tribal Council

EIS Preparation and NEPA Compliance

1. Time frame EPA is concerned that the time frame for completion of the EIS may not afford sufficient time to enable completion of critical elements of the Glen Canyon Environmental Studies (GCES) nor allow adequate time for public review of the data and complex issues. We understand that the Phase II impact studies required for sound decision-making regarding changes to dam operations initially were to have taken four years, but have been cut back to two years. Scientists indicate that four years of study would reduce uncertainties in data, rendering the results more credible. Reportedly several competent researchers have declined to even try to obtain the needed information because the time limits imposed on the study preclude reasonable analysis. Although the Federal Register notice first issued for the EIS (October 1989) announced December 1991 as the expected completion date for the Draft EIS, a more recent notice indicates that this date is now targeted for completion of the Final EIS. We encourage you, during review of scoping comments, to reassess this deadline. We would appreciate a clarification of the relationship between the deadline for completion of analysis and conclusions of Phase II of the Glen Canyon Environmental Studies and publication of the EIS. Is it intended that this work be integrated with the EIS? Will there be a commitment in the ROD to adjusting operations at Glen Canyon Dam in light of subsequent environmental impact monitoring?

2. Scope The Bureau has suggested defining the scope of the EIS as primarily downstream of Glen Canyon Dam to Separation Rapids, near Lake Mead, thus excluding both Lake Mead and Lake Powell, as well as other components of the Colorado River Storage Project (CRSP). While we appreciate the need to define a manageable scope of agency actions for EIS evaluation, it is important to recognize that consideration of related, indirect, and cumulative impacts pursuant to NEPA dictates a broader perspective for impact analyses. For instance, we believe consideration of water quality in Lake Powell to be essential in evaluating the effects of operations alternatives on water quality downstream (e.g., nutrient depletion in Lake Mead). (This is discussed more fully under Water Quality.)

Moreover, if the EIS is to include an analysis of alternative peaking power sources (Bureau of Reclamation, "Development of Alternatives," March 1990, p.3), then it appears that the EIS should evaluate potential changes in the hydroelectric power operations at other CRSP facilities, such as Flaming Gorge, the Wayne Aspinall Unit, and Navajo Reservoir, and at Hoover Dam.

Since 70 percent of hydropower currently generated within the CRSP facilities comes from Glen Canyon, changes there could clearly have substantial impacts on power users.

3. Coordination with Other Impact Analyses In light of the potential scope of impacts associated with changing Glen Canyon Dam operating criteria, we believe there is a critical need to prepare a programmatic EIS on the cumulative impacts of CRSP hydropower operations. This cumulative analysis should include an assessment of the environmental consequences of peaking power operations and alternatives for generation of this power. With respect to power operations alternatives, consider combining the analysis with the NEPA analysis being prepared by the Western Area Power Administration (Western) in response to a basin-wide review of its power marketing criteria (pursuant to a court action: U.S. District Court, District of Utah, Civil No. 88-C-1175G, September 29, 1989). The provisions of the Order of Injunction, particularly sections 7 and 8, clearly demonstrate the strong connection between the issues to be addressed in the Western and Glen Canyon EISs. It is our understanding that Western is considering a somewhat longer period for completing its EIS, and we ask that the Bureau clarify how the Glen Canyon alternative analysis will be coordinated with the Western review and EIS. We recognize that Western will be a cooperating agency for the Glen Canyon Dam EIS, but we are concerned that separate NEPA reviews may be unable to promote full disclosure and analysis of the alternatives and environmental impacts for both projects. We suggest serious consideration be given to a programmatic (tiered) EIS to be followed by separate NEPA documents for these projects.

The Bureau's Boulder City office announced on May 16, 1990, a proposal to reevaluate the feasibility of modifications to the Hoover Dam power plant which were originally described in a 1984 final EIS. That project consists of adding several generators to increase the energy provided to Arizona and Nevada. We understand that the Bureau intends to evaluate power operations and the Western Area Power Administration transmission requirements.

We suggest that the Bureau and Western also seriously consider a reevaluation of the EIS for this project in accordance with the five year rule-of-thumb. That is, conditions can reasonably be expected to have changed enough to warrant supplemental analysis for projects not initiated within five years of completion of their EIS. The Bureau's May 16 memo cites market and economic changes over this period, while studies of the Colorado River have documented environmental changes and impacts caused by operations at another power facility, the Glen Canyon Dam. The generation of peaking power appears to be a

major factor in the environmental problems caused by dam operations. We urge you to consider whether increasing the generating capacity at Hoover Dam is an alternative to meet the region's peak energy needs. If so, it appears desirable to combine consideration of Hoover Dam and Glen Canyon Dam power operations in a comprehensive evaluation of peaking power generation capacity and transmission capacity serving the energy needs of this geographic region. We therefore recommend that the Bureau of Reclamation and Western Area Power Administration prepare a programmatic (tiered) EIS to consider the broad alternatives and consequences of hydropower production in this region.

4. Alternatives Analysis NEPA specifically requires a full examination of reasonable alternatives, including those which may require implementation by agencies other than the lead and cooperating agencies, or which are currently constrained by existing law (40 CFR Part 1502). NEPA provides no justification for restricting the scope of Glen Canyon Dam operating criteria alternatives because Bureau policy and arrangements with other agencies and participating states currently preclude these actions. In order to respond to the issue of actual or perceived "Law of the River" constraints, we suggest that the EIS take two general paths of analysis: (1) specific operational procedures based on legal constraints should be established for long-term operations; and (2) river management optimization techniques should be used to assess a variety of flow operational criteria without legal constraints. Such analyses, perhaps using linear programming or network algorithms, would be useful in highlighting tradeoffs between the competing environmental, recreational, water supply, and power uses. Such operational schemes may also identify opportunities to "maximize" collective benefits from various reservoir operational alternatives.

5. Legal Framework The EIS should explain the legal basis of current operating practices and the assumptions used to define action alternatives. Operation of Glen Canyon is usually viewed as constrained by the "Law of the River," although we note that to date Dam operations have not been dictated by the allocation requirements between the upper and lower basin, and Mexico (Committee to Review the Glen Canyon Studies, "River and Dam Management," p.20). The Bureau's "Background Paper" (March 1990, p. 5) appears to indicate that while the ten year average flow is set by this body of law, the annual and monthly flows are instead guided by the Operating Criteria and other "Law of the River" mandates. While it may be prudent management to ensure a minimum annual release of water, the Bureau should clarify whether they have the discretion under law to reduce this under the "ten year average" provision. Of greater significance is the discretion

available for monthly flow management. It appears that there is great flexibility under the law to adjust monthly flows to ensure a balance between hydropower demands and other needs recognized in the Colorado River Basin Project Act of 1968 (P.L. 90-537). It is essential that the EIS explain the relationship in law and policy between water rights allocations established under the "Law of the River" and flow releases for hydropower operations.

### Water Quality

1. Pursuant to Section 313 of the Clean Water Act, the Bureau is obligated to comply with all Federal, State, interstate, or local requirements with respect to control and abatement of water pollution. The EIS should evaluate all alternatives with respect to compliance with State of Arizona water quality management plans and state-adopted, EPA-approved water quality standards, as well as any local or interstate standards that might apply.

a. The EIS should coordinate with the Arizona Department of Environmental Quality regarding the review of this project for consistency with the State's nonpoint source management program per Section 319(b)(2)(f). Project-related hydrologic modifications along the Canyon should be evaluated for consistency with goals of the State nonpoint source management program.

b. It is our understanding that the Glen Canyon Dam hydropower operations are subject to State of Arizona certification under Clean Water Act Section 401, which reviews actions for compliance with applicable state water quality standards and other requirements. The EIS should explain how this compliance is being reviewed and verified. This review would especially apply to protection of riparian habitat and wetlands.

2. Noting the National Academy of Sciences criticism of limiting the scope of the GCES to the reach of the Colorado between Glen Canyon Dam and Lake Mead ("River and Dam Management," p. 48), we believe that the EIS would benefit by expanding the analysis of water quality to include lakes Powell and Mead. Discussion of water quality in Lake Powell should assess, at a minimum, the effects on temperature, dissolved oxygen, salinity, suspended solids, toxics, and other relevant pollutant concentrations of drawing water from alternative reservoir levels, as well as the effects of alternative power operations. This information should be used to evaluate impacts on downstream resources, including water quality and resources at Lake Mead. Discussion of impacts on Lake Mead should include a discussion of nutrient inputs to the Lake under the various project alternatives.

We also suggest that the EIS address the effects of alternative storage levels in Lake Powell on the concentration of pollutants in backwater reaches. We understand that inflow to Lake Powell is a derived rather than measured figure and there is concern that the Bureau underestimates spring and summer evaporation. We recommend a vigorous reexamination of the methodology for calculating the storage capacity and fluctuations in stored volume of Lake Powell as this is a significant component of determinations of the volume necessary to meet contracts and conversely the volume available for other purposes.

Wetlands Protection and Clean Water Act Section 404 Review

1. According to the GCES, between 1983 and 1986 approximately 95 percent of the marshes along the river were lost due to flooding. The EIS should evaluate all proposed flow regimes closely with respect to potential for reestablishing and maintaining backwaters and wetlands. Recognizing the devastating effect which floods can have on beaches and wetlands habitats, the EIS should explain how present operating criteria address flood control and should assess all alternative operating criteria with respect to risk of high volume releases. The EIS should explain how high flows and "flood releases" are defined, and should distinguish the degrees of damage associated with differing levels and durations of flood releases. The EIS should evaluate whether the proposed alternatives are consistent with Executive Order 11990, "Protection of Wetlands" (May 24, 1977).
2. The DEIS should fully describe direct and indirect impacts to wetland and riparian habitats, and should provide maps and tables that identify the location and area occupied by wetlands, non-wetland riparian habitat, and aquatic habitat. The DEIS should establish base line conditions and portray how individual project components will affect these habitats. Additionally, cumulative impacts to fish and wildlife, wetlands, and riparian habitat should be discussed and quantified.
3. If wetlands may be adversely affected by the proposed operational changes, the DEIS should contain a mitigation plan that assures no net loss of wetland or riparian functions, values, and acreage. Areas which already qualify as wetland/riparian habitat are not generally considered by EPA to be suitable as mitigation sites. Although we encourage enhancement of existing wetland/riparian habitat, enhancement of existing habitat is not in itself sufficient mitigation to meet EPA's national goal of "no net loss" of wetlands.

We recommend that mitigation measures be characterized by specific, measurable goals and physical, chemical, and biological criteria which can be used to gauge the success of mitigation. Examples include sedimentation rates, benthic species composition, and numbers of breeding pairs of endangered species. The DEIS should also discuss monitoring plans to establish whether project goals, water quality objectives, and wildlife habitat and wetland functions and values are being achieved.

4. Several of the structural elements which may be considered in the EIS, such as a regulation dam or sediment augmentation measures, would likely require a U.S. Army Corps of Engineers Section 404 permit for discharge of dredged or fill material in waters of the United States. If a permit is required, EPA will review the proposed project for compliance with the Federal Guidelines for Specification of Disposal Sites for Dredged or Fill Material (40 CFR 230), promulgated pursuant to Section 404(b)(1) of the Clean Water Act.

If sediment augmentation/beach nourishment is evaluated as mitigation, the chemistry of potential sediment sources should be analyzed to predict whether dredging these sediments or placing them in the Colorado River would result in a release of toxic elements to the aquatic ecosystem. For example, we understand that some Lake Powell sediments contain levels of mercury and selenium which upon resuspension are sufficient to suppress algae productivity. EPA's evaluation of sediment augmentation will focus on maintenance of water quality and protection of fisheries, wildlife, threatened or endangered species, and special aquatic sites, including wetlands. The 404(b)(1) guidelines require that no discharge shall be permitted which will result in unacceptable adverse impacts on the aquatic ecosystem. To comply with the Guidelines the proposed project must meet the following criteria:

a. The proposed project does not violate water quality standards, toxic effluent standards, or jeopardize the continued existence of federally listed species or their critical habitat [40 CFR 230(b)].

b. The proposed project will not cause or contribute to significant degradation of waters of the United States, including wetlands [40 CFR 230.10(c)]. Significant degradation includes loss of fish and wildlife habitat, including cumulative losses.

c. There is no practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem [40 CFR 230.10(a)].

EPA Scoping Comments July, 1990  
Glen Canyon Dam Operating Criteria

d. All appropriate and practicable measures have been taken to avoid or minimize adverse impacts on the aquatic ecosystem [40 CFR 230(d)].

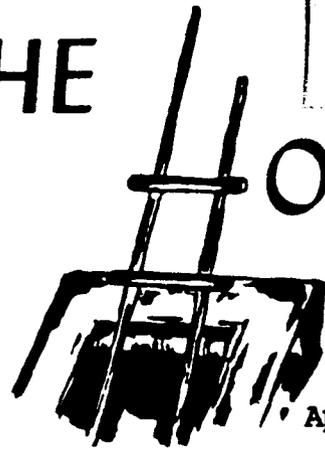


Written comments on the scope of the Glen Canyon Environmental Impact Statement are welcome and will be accepted at the meetings or by mail until April 16, 1990. Written comments should be addressed to:

Glen Canyon Dam Environmental Impact Statement  
U.S. Bureau of Reclamation  
P.O. Box 11568  
Salt Lake City, Utah 84147

THE

HOPI TRIBE



CONT. # 90-15664  
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0399

Vernon Masayesva  
CHAIRMAN

Patrick Dallas  
VICE-CHAIRMAN

April 03, 1990

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Date

In reply refer to:

United States Department of the Interior  
Bureau of Reclamation  
Upper Colorado Regional Office  
P. O. Box 11568  
Salt Lake City, Utah 84147

Gentlemen:

Re: Glen Canyon Environmental Studies

The Hopi Tribe hereby submits for the record the following preliminary position in relation to the impact that the Glen Canyon Dam operations will have on environmental and cultural resources.

- 1) The Hopi Tribe, through the Hopi Cultural Preservation Office, must be involved in mitigation planning that affect cultural resources; including but not limited to, archaeological sites, sacred areas including shrines, herb gathering areas, clay source areas, and traditional trails.
- 2) The Hopi Tribe strongly recommends that a comprehensive Environmental Impact Study be conducted to address the many issues that have been presented for the record. The EIS effort must involve all the tribes that have an interest in the Grand Canyon and the Colorado River.
- 3) The Hopi Tribe requests that it be included as a separate number of the Executive Review Committee; not to be represented by the Department of the Interior.
- 4) The Hopi Tribe must have the opportunity to review any management plans that affect the Little Colorado River drainage taking into consideration that water rights to the LCR is in the process of adjudication.

The above points, at this time, represent an outline of the Hopi Tribe's position. Please contact Mr. Leigh Jenkins, Director, Hopi Cultural Preservation Office or Mr. Thornton Coochyouma, Director, Hopi Tribal Water Resources Program at (602) 734-2441, Exts. 218 and 235,

respectively, for any further collaboration on the Glen Canyon  
Environmental Studies.

Thank you for this opportunity to comment on the GCES.

Sincerely

*Vernon Masayesva*

Vernon Masayesva, Chairman  
Hopi Tribal Council

99  
Copies: Hopi Cultural Preservation Office  
Hopi Water Resources Program  
Hopi Resources Committee  
File

CONT. # 10-60-1

FLDR # 30770

**INTERNATIONAL**

P10 200



**INTERNATIONAL BOUNDARY AND WATER COMMISSION  
UNITED STATES AND MEXICO**



OFFICE OF THE COMMISSIONER  
UNITED STATES SECTION

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Mr. Roland Robison  
Regional Director  
Bureau of Reclamation  
Upper Colorado Regional Office  
P.O. Box 11568  
Salt Lake City, Utah 84147

Dear Mr. Robison:

Thank you for your March 5, 1990, letter (reference: UC-140) providing opportunity to participate in and background information for the initial scoping process of the Glen Canyon Dam Environmental Impact Statement. We understand that the purpose of the GCD-EIS is to determine the impact of operations of the Glen Canyon Dam on downstream ecological and environmental resources within the Grand Canyon National Park and the Glen Canyon National Recreation Area.

The United States Section of the International Boundary and Water Commission is entrusted, as is its counterpart in Mexico, the Mexican Section, with implementing the terms of the Treaty of February 3, 1944, for "Utilization of the Waters of the Colorado and Tijuana Rivers and the Rio Grande" (TS 994; 59 Stat. 1219). The 1944 Treaty distributed between the two countries the waters of these international river systems. Article 10 of the 1944 Treaty allotted to Mexico a guaranteed annual quantity of 1.5 million acre-feet of Colorado River waters. Our concern is that nothing be done that might affect these deliveries at the present time or in the future.

Although we have no specific comments regarding alternatives at this time, we are interested in being kept informed as the GCD-EIS develops. We, therefore, request that the U.S. Section remain on the Glen Canyon Environmental Studies mailing list.

Sincerely,

*Thomas B. Waller*

for Conrad G. Keyes, Jr.  
Principal Engineer

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FLDR # 20990

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WRITTEN COMMENT  
GLEN CANYON DAM ENVIRONMENTAL IMPACT STATEMENT

SCOPING

Name: John W. Thacker  
Affiliation: Kaysville City  
Address: 23 East Center  
Kaysville, Utah 84037

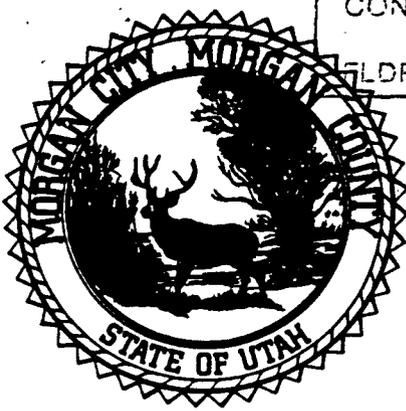
Comments on Glen Canyon EIS issues:

Glen Canyon Dam is the heart of the Colorado River Storage Project (CRSP) system which supplies the 13,000 people of Kaysville with a portion of our electric power. Kaysville City got into the public power business in 1908. Twenty years ago we were convinced by CRSP project promoters to make Glen Canyon one of our resources. We invested in Glen Canyon instead of other power sources. Glen Canyon power has been developed, used, and paid for since then. We depend on Glen Canyon for an adequate and timely supply of power. Changes to that supply will have cost consequences to the not so affluent users in Kaysville. We depend on the Colorado River as do other users.

Comments on Possible Policy Options:

The scope of the Glen Canyon Dam EIS should include all impacts and accommodate the needs of all users, not just those who use the canyon below the dam. Impacts on power users and mitigation of those impacts should be included in the study. Costs of solutions should be allocated according to benefits enjoyed. If loss of peaking power is part of the solution, alternate sources and methods for mitigating the costs should be included. The canyon has national value so national mitigation methods are appropriate. The EIS should identify and recommend such methods for mitigating impacts to all users, including power users.

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CONT. # 90-21559

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G.C.

FLDR # 2097a  
Morgan City Corporation

48 West Young Street P.O. Box 267 Morgan, Utah 84050 (801) 829-3461

BUREAU OF  
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April 27, 1990

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TO	INIT	DATE
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<u>Sero</u>		
FILES		

The Honorable Manuel Lujan, Jr.  
Secretary of the Interior  
Room 6151  
C Street between 18th & 19th Streets, N.W.  
Washington, D.C. 20240

Dear Honorable Manuel Lujan, Jr.,

Morgan City Corporation has had its own power distribution system since 1933. During this time the residents have enjoyed good service and low rates, due to the foresight of previously elected officials. As a small rural community with little tax base, these low rates serve as a good economic attractor for building our tax base to a point where it will be beneficial to our school systems, our City and most of all our citizens.

MAY 19 1990

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As we look at the process of generating the EIS, we feel there is an injustice being done to the utilities, in that we are the ones who are having to pay for the EIS, not the environmentalists who are the reason for the EIS in the first place. We feel we should participate, but we also feel they, the environmentalists, should also financially support it. As seems to be the case with other areas such as PCB's, we didn't build the transformers, we purchased them from a supplier. Yet the utility gets fined and has to cover costs of clean up, not the supplier.

Proposed rate increases from Western Area Power Administration (WAPA) poses a big threat to our small utility in that even without the increase we see private utility companies trying to buy out smaller utilities such as ours. If we are faced with large rate increases, it will be that much more difficult for us to avoid having to deal with this type of problem.

We believe that the 22,000 rafters and others who use the waters below Glen Canyon Dam would not have these pleasures were the Dam not in place. Fluctuations in river flow can be controlled better with the Dam than they can be in early spring run off or during low water years such as we are in now.

Morgan City appreciates the opportunity to have the present agreements we now enjoy with Western and the Bureau. These agreements have been good for us and we desire to have them continue that way.

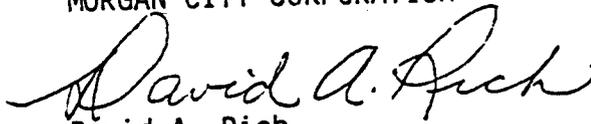
We would encourage the Bureau to take a good look at the millions of people affected by making any changes in the current administration as compared to the small number of people who want to see these changes.

We understand the importance of this scoping process and realize the Bureau has some difficult decisions ahead of them.

We, as a small rural City, pledge our support in seeing these decisions are made to satisfy everyone's needs.

Sincerely,  
MORGAN CITY CORPORATION

C13249



David A. Rich  
Mayor

DAR/mkc

CONT.# 9-10771  
FLDR# 20990

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# MURRAY CITY CORPORATION

## City Council

P. Gary Ferrero, District 1  
Lynn H. Turner, District 2  
Julie L. Davis, District 3  
Arline Gillen, District 4  
Mary-Jane Ashton, District 5  
(801) 264-2603

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March 21, 1990

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Glen Canyon Dam -  
Environmental Impact Statement  
U. S. Bureau of Reclamation  
P. O. Box 11568  
Salt Lake City, Utah 84147

I would like to submit the following for your consideration in addition to comments I made at the E.I.S. Scoping meeting on March 12, 1990:

The results of the proposed Environmental Impact Statement on Glen Canyon Dam will have a profound effect on a variety of activities, as well as the fragile and unique ecosystem it represents. Because of the many factors involved, I urge you to extend the proposed length of study beyond the stated two years.

At the meeting on March 12, 1990 there seemed a tendency to portray power generation as the "enemy" and the only source of impact on the environment. Nothing was said about the 22,000 people a year who are allowed to take raft trips through the canyon. Little was mentioned about the flood control or irrigation functions of the dam.

It seems fair to say that the environmental impact of Glen Canyon Dam is multifaceted, and a study that emphasized only one source would be invalid.

Please allow more time, and enlarge the scope of the study to include all possible sources of environmental impact. I ask that you weigh your actual findings against the benefits to the various groups involved.

We all share the benefits of Glen Canyon Dam --  
let's all share in the solutions to its problems.

Sincerely yours,  
MURRAY CITY MUNICIPAL COUNCIL

*Julie L. Davis*

Julie L. Davis  
Chairman

JLD:ss

cc: Council Members  
Mayor Lynn F. Pett  
John Mohlman



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United States Department of the Interior

NATIONAL PARK SERVICE  
P.O. BOX 37127  
WASHINGTON, D.C. 20013-7127

IN REPLY REFER TO:  
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DEC 90/0006

MAY 14 1990

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RE:	SLCU
OF:	
MAY 17 '90	
700 5/17 - RG 115V 140 Thom	

Mr. Rick Gold  
Assistant Regional Director  
U.S. Bureau of Reclamation  
P.O. Box 11568  
Salt Lake City, Utah 84147

Dear Mr. Gold:

As a cooperating agency, the National Park Service (NPS) has reviewed the scoping material for the Environmental Impact Statement (EIS) on the Operations of the Glen Canyon Dam. We previously have provided you with comments on the draft package of this material (letter of February 9, 1990, enclosed).\*

We remain concerned with the limitation of the scope of the EIS. The development of the EIS takes place within the context of the regulations implementing the National Environmental Policy Act (NEPA). This must involve development of a draft EIS "in accordance with the scope decided upon in the scoping process" (40 CFR 1502.9 (a)).

While the primary impacts of changes in operations may most immediately affect the Colorado River in Grand Canyon National Park, we continue to have concerns about potential impacts to other units of the National Park System along the River. In addition to the Grand Canyon, the scope should include an examination of potential effects on Cataract Canyon in Canyonlands National Park, Lake Powell and the area below the dam within Glen Canyon National Recreation Area, and Lake Mead National Recreation Area further downstream.

If it is clear that none of the alternatives will impact the other areas, then the issues can be considered and dismissed within the NEPA document as issues "considered and dismissed." By raising and considering issues in an open and forthright manner, both the public and the other agencies can see that the full range of issues, alternatives, and impact were examined.

We also think that Canyonlands National Park could serve as an important baseline area for the EIS. As a contiguous NPS unit through which runs a relatively free-flowing portion of the

\* the referenced letter was not included. Per discussion with Jerry Mitchell, NPS-GC, the attached memorandum was the letter they were referring to May 13 Aug 90 -54-

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Colorado River, Canyonlands has the nearest, least disturbed range of habitats against which to measure downstream changes. A clearer understanding of the dynamics of these relatively natural systems could establish the base of information against which to make trade-offs in changing the downstream operational regime.

The coverage of issues, concerns, and alternatives is incomplete from the perspective of the NPS. We strongly urge you to include the following for evaluation in the EIS process:

**I. ISSUES AND CONCERNS**

1. The potential changes to carrying capacity of the Colorado River from the dam to Lees Ferry resulting in changes from operation of the dam or in structural modifications should be recognized.
2. Potential impacts to angler safety on the river resulting from operational changes should also be recognized as an issue.
3. Impacts to cultural resources should be treated as a separate issue and/or impact topic and should include impacts to the historic Spencer steamboat. In addition loss of archeological resources resulting from flow fluctuations should be addressed.
4. Non-use values such as opportunity (i.e. willingness to pay to use the area now) and bequest (willingness to pay to allow for use in the future) values should also be addressed as an issue. When the visiting public has been asked to identify the economic values of national parks, these values rank high among those identified. In addition, environmental and social costs should be included in any discussion of socio-economic impacts.
5. Impacts to endangered fishes in Lake Powell and influent rivers if affected by changes in lake levels should be considered within the EIS.
6. Impacts to lake recreation if affected by changes in lake levels should be considered within the EIS. This should include a discussion of potential impacts to facilities and cost estimates for modifications. Cost estimates can be supplied by the NPS.
7. Potential impacts to waterfowl populations resulting from changed regimes should also be discussed.

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8. If price is a factor, then the contribution of tourism to the regional economy should receive an equal emphasis. The EIS must equally evaluate economic and non-economic values contributed by national parks in addition to the regional power marketing aspects of dam operations.
9. If the EIS considers the economics of distant utility companies and consumer, then the consideration of non-use values should also be broadened to include distant publics, both domestic and foreign.
10. Although the dam has dramatically altered the aquatic systems, some sort of system now exists in and adjacent to the river. Any analysis of the unnatural fluctuations occurring on the river should include not only descriptions of existing conditions but also describe the aquatic ecosystems before and after the construction of the dam and any resulting changes from changed operations. For example, river flows play an important role in the establishment and propagation of tamarisk. If stable flows are eventually selected as an alternative this will certainly result in an increase in tamarisk growth along the river.
11. A known direct effect on Canyonlands National Park is the size of the lake crossing after leaving the Big Drop rapids and entering Glen Canyon National Recreation Area. The exposed mud flats, tamarisk-covered campsites, and miles of lake crossed by boats primarily designed for river running can affect the last 2 days of river trips through Canyonlands. Any potential changes in lake levels resulting from changes in operations should include a discussion of impacts to this recreational activity.
12. Power production considerations must receive the proper consideration as "incidental" to other affected resources or values. The purposes of the Colorado River Storage Project (CRSP) are a separate consideration from purposes of parks affected by CRSP; for Grand Canyon, the park predates CRSP.
13. Long-term monitoring and mitigation requirements should be included in the EIS as one of the "operating costs" paid for by power revenues.
14. The body of Federal law affecting natural, cultural, and recreation resources and values should be considered in an equal and proper context along with "law of the river." These laws are also clearly the appropriate "law to apply" in making decisions concerning any changes in operations.

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- 15. The emphasis on power production should be redirected. The purpose of the EIS is to evaluate a reasonable range of alternatives and their potential impacts. As a consequence, an equal emphasis should be given to protection and enhancement of resources and attendant values as well as power revenues. Sufficient discretion exists within the legal framework governing river operations to allow for this consideration as well as power production.
- 16. If the cost of power were to increase because of operation changes necessary to protect resources and other values, then a discussion of impacts should include market pressures which may then result in a decrease in peaking power demand from this facility. This could directly relate to an energy conservation scenario in which changes in operation are complimented by conservation measures by users.

II. ALTERNATIVES

- 1. The No Action alternative needs to be more carefully defined. The No Action alternative could include a return to operations before the 1982 rewind. Another alternative called Present Operations could then show existing conditions.
- 2. The alternatives should represent the realistic range of operational concerns and not be developed around benefits to a single resource such as "trout fishery" or "white water rafting." Otherwise, any decision could end up being based upon a single benefit rather than overall balance. An example of this is the development of an entire operation alternative around the trout fishery. Important as the trout fishery is, management for a single resource distorts the alternatives and does not result in a consideration of a reasonable range of alternatives as required by NEPA.
- 3. Because the net annual delivery of water is fixed by the Colorado River Compact and the maximum planned releases from the dam should match power plant capacity, minimum flows and seasonal delivery are the two variables remaining. Alternatives such as "No Action," "Maximizing Power Generation: (no minimum season of delivery, follows power demand)", and "Base Flow" (steady release of amount required by law and flood control needs, opportunistic power generation) are better than those developed around a single resource.

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Additionally, other alternatives should combine optimal minimum flows and delivery season for the majority of affected resources. A full review of impacts would then consider all parks.

- 4. If possible, an identification of an alternative that would begin to reverse or rectify impacts that have already occurred should be made.
- 5. At least one alternative could combine legal or administrative changes. Extending the time to pay back project costs from 50 to 75 years, for example, could reduce the immediacy of power revenue requirements and natural, cultural, and recreation resource management and mitigation costs could be included in total project costs. Alternatives such as this should not be dismissed out of hand merely because legal or administrative changes would be required.

The National Park Service is committed to working with the Bureau of Reclamation as a cooperating agency on this EIS to ensure that national park resources and values receive full and appropriate consideration throughout its development. If you have any questions or need further information, please contact Jacob J. Hoogland, Chief, Environmental Quality Division, at FTS 268-3163.

Sincerely,



Denis P. Galvin  
Associate Director  
Planning and Development

L7619

## Memorandum

To: Program Manager, Glen Canyon Environmental Studies

From: Resource Management Specialist, Grand Canyon National Park

Subject: Comment on Glen Canyon Dam EIS Prescoping Informational Package

We have reviewed the subject documents and have the following comment.

General Overview

The package seems to be thorough. We will concentrate our comments on helping to make the package focussed and easily comprehended. To this end we begin by suggesting the package have three component parts instead of two: a) Introduction, possibly as a cover letter written on BOR letterhead, and including the overview discussion of the NEPA process, with a request for comments and a signature (probably Roland Robison's-); b) separate the management guidelines, project history and environmental issues section (beginning with the discussion of Glen Canyon Dam--current section IV.) from the above and make it its own separate enclosure; and c) as is currently planned, use the alternatives/issues discussion as a separate enclosure. We believe this format may make the dissemination of information more manageable/organized.

Specific Comments

## A. COVER LETTER/NEPA DISCUSSION:

In the introduction:

-1st paragraph--change "as a means to reduce", to "to consider means of reducing"

-3rd paragraph--delete comma after the word provide and place commas as follows "you, the public,"

Under, Objective of the Glen Canyon Dam - Environmental Impact Statement Process:

-Add, as a major objective, "To carry out the Secretary of Interior's directive to prepare an EIS on Glen Canyon Dam operations. In so doing, the Secretary has committed to balancing the mandates of national park protection and management with that of legislated requirements for water storage and related benefits of the Colorado River Project Act."

-1st par., 1st sentence--add following Reclamation, "and the participating agencies", and change "and no specific change

in operations...", to "no alternative is being proposed as preferred at this stage of the NEPA process".

-Refinement of the objectives section. "The GCD-EIS process has three major objectives: 1. To provide the framework for discussion and understanding of the issues and concerns regarding the present operation of Glen Canyon Dam; 2. To identify and define potential alternatives to the present operation of Glen Canyon Dam; and, 3. To provide a basis for a comprehensive and open decision process on future operations of the dam, taking into account mandates and environmental concerns.

-The last paragraph in that section may not be necessary

You could move the section titled "Document Organization" to the end of the cover letter, and simply list the enclosures in the paragraph where you explain their purpose.

Program Organization--Looks pretty good; you might explain that NPS, FWS and WAPA are cooperating agencies with jurisdiction by law.

In the second paragraph, you could restate the first and second sentences something like, "As lead agency BOR has the responsibility to supervise the preparation of the EIS (40 CFR 1501.5(a), and to use the environmental analysis and proposals of cooperating agencies with jurisdiction by law and special expertise... (40 CFR 1501.6(a)(1))."

Geographic boundaries of the EIS--Looks good (if we have any comments on this section, it will come through our Washington Office).

Project boundaries for the EIS--Looks good

We suggest a section outlining the proposed schedule for the EIS. Please use the following only as a guide to demonstrate my suggestion:

-Scoping	Places and Dates
-Final date for comment on scoping	April 10, 1990 (?)
-Agency review of Alternatives and Issues complete; analysis provided to public.	Date (maybe June 1)
-Comments received	Date
-Draft EIS	Date
-Final EIS	Date
-Record of Decision	Date

-Decision	Date
-Any steps with Interior Dept.	Date

We suggest that you move some paragraphs listed under SUMMARY AND CONCLUSION (page 17) to this point; these paragraphs would be numbers three and four for the heading. Also, insert between those paragraphs the following:

Attached are the following: a discussion of alternatives and issues, and a discussion of the management guidelines and environmental concerns that will come into play in making a decision on operations of Glen Canyon Dam. We encourage you to review the enclosures, attend a scoping meeting if you can, and--whether you attend or not--provide us your comments by April 10, 1990. At this stage of the process, please address with your other comments, the following:

1. Does the list of alternatives present all reasonable alternative operations for Glen Canyon Dam? Why? If not, what other alternatives should be considered and why?
2. Does the list of issues to be evaluated under each alternative represent the full and reasonable range of significant issues that should influence operation of Glen Canyon Dam? Why? If not, what other issues should be considered and why?
3. Does the list of management guidelines represent the full range of legal, policy and public interest guidelines that do or should influence operations of Glen Canyon Dam? Why? If not, what other management guidelines should influence management of Glen Canyon Dam and why?

#### B. MANAGEMENT GUIDELINES, PROJECT HISTORY AND ENVIRONMENTAL CONCERNS

At the beginning of this document should be a historical perspective on how we got to where we are now, beginning with the uprating/rewind process at Glen Canyon Dam, going through the decision for and results of the Glen Canyon Environmental Studies, and the decision by the Secretary of Interior to prepare an EIS on Glen Canyon Dam operations.

Under "Historic Operations of Glen Canyon Dam", Phase III. Lake Powell, post-filling, 1981 to present. Add flow rate discussions, as is found above in Phase I and II narratives, using a similar description of common, minimum and maximum flows (in cfs).

Under "Power Marketing and the CRSP", end discussion by specifying the current status of contracts, per the recent WAPA court ruling.

The following are the narratives on the National Park Service and Grand Canyon National Park that we promised to provide at the Alternative Discussion Meeting in Salt Lake City:

#### NPS Management Guidelines

The National Park Service was established in the Act of August 25, 1916, otherwise known as the Organic Act, as follows:

"The service thus established shall promote and regulate the use of the Federal areas known as national parks, monuments and reservations...by such means and measures as conform to the fundamental purpose of the park, monuments, and reservations, which purpose is to conserve the scenery and the natural and historic objects and wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations". (16 U.S.C. 1)

The General Authorities Act of 1970 (16 U.S.C. 1c(b)) declared, "each area within the national park system shall be administered in accordance with provisions of any statute made specifically applicable to that area and with the various authorities relating to the national park system unless specific legislative provisions conflict with the broader mandates. In 1978, the Congress amended the General Authorities Act as follows:

"The authorization of activities shall be construed and the protection, management and administration of these areas shall be conducted in light of the high public value and integrity of the National Park System and shall not be exercised in derogation of the values and purposes for which these various areas have been established, except as may have been or shall be directly and specifically provided by Congress."

The Federal Power Act of 1920 provides that dams may not be ~~constructed~~ in units of the national park system without specific Congressional approval.

#### Grand Canyon Management Guidelines

Grand Canyon National Park was established as a "public park for the benefit and enjoyment of the people" on February

*actually permitted by FERC*

26, 1919. The park has been enlarged by several acts of congress, the most significant of which was the Grand Canyon Enlargement Act. Signed on January 3, 1975, this Act provided for, "the further protection of the Grand Canyon in keeping with its true significance . . . to add prime portions of the canyon possessing unique natural, scenic and scientific values". The Act enlarged the park to its current 1,215,735-acre size, adding a mixture of state and federal lands which included: Marble Canyon National Monument, Grand Canyon National Monument, portions of Lake Mead National Recreation Area and U.S. Forest Service, Bureau of Land Management and Bureau of Indian Affairs lands. In all, there are approximately 20 pieces of legislation contributing to the establishment, protection and management of Grand Canyon National Park.

Under the Federal Power Act, no dam can be permitted or authorized within any national park without specific authority of congress; there is similar language within park designating legislation. In addition, the legislated authorities of the Colorado River Storage Project make it clear that the provisions of the Federal Power Act do not apply to the section of the Colorado River between Glen Canyon Dam and Lake Mead. The portions of Grand Canyon formerly of Lake Mead that were added by way of the Enlargement Act of 1975 are subject to review and consideration for a government reclamation project, whenever consistent with the primary purposes of the park (in 1984, Secretary of Interior William Clark revoked the last remaining public land orders that were in place for possible future construction of dams, reservoirs and related hydroelectric facilities inside Grand Canyon National Park). Considering the primary purposes of the park, and the provisions of the General Authorities Act, and as amended in 1978, the National Park Service has consistently taken the position that construction of dams or other facilities would require Congressional authorization. No authorities exist for allowing reclamation projects on lands downstream of Glen Canyon Dam, within Glen Canyon National Recreation Area.

On October 26, 1979, Grand Canyon National Park was designated a World Heritage Site by the United Nations Educational, Scientific and Cultural Organization (UNESCO). The World Heritage Convention establishes that it is in the interest of all mankind to protect, for future generations, areas such as Grand Canyon which are of scientific interest or of great beauty, or which are centers of universal cultural and natural heritage. In 1973, the United States became the first nation to adhere to the World Heritage Convention. The Colorado River corridor, and its biological environs, unique and rare species, cultural resources and

scenic beauty, are recognized as contributing elements of the World Heritage Site.

The Wilderness Act of 1964 requires all federal land-managing agencies to examine their resources for possible wilderness classification. Grand Canyon National Park lands have been studied and evaluated for placement in the National Wilderness Preservation System. A draft proposal and draft environmental impact statement (DES-76-28) was prepared and circulated to the public in 1976. Based on public input received, a final proposal was developed and submitted to the NPS Washington Office in 1980. To date, the proposal has not gone before congress as a "recommendation", and lands are managed as "de-facto" wilderness.

Additional legislation that may be relevant to this issue, and that influences resources management activities in units of the National Park System includes: the Archeological Resources Protection Act of 1979; Antiquities Act of 1906; National Environmental Policies Act of 1969; the National Historic Preservation Act of 1966 and as amended in 1980; and, the Endangered Species Act of 1973.

#### Grand Canyon General Information

Grand Canyon National Park is 1,215,735 acres in size; the Colorado River runs through the park for a length of 277 miles. Annual visitation to Grand Canyon has exceeded 3.8 million per year for the past two years (1988 and 1989). Over 20,000 river users per year, spend up to 159,521 user days within the river corridor. Over 82,000 backcountry nights are spent in the canyon, many of which are on or along the river corridor. Over 16,000 participants take mule rides into the canyon each year.

Add related information for Glen Canyon NRA

#### C. ALTERNATIVES TO THE OPERATION OF GLEN CANYON DAM

Add, under A. Legal Requirements, and following, "the requirements on the Grand Canyon National Park legislation", "...Glen Canyon National Recreation Area and the National Park System."

Under, Resources of Concern, resource h. Grand Canyon Ecosystem, add (and Glen Canyon ecosystem, Lees Ferry Reach).

We think it might possibly be more appropriate to label the alternatives by operational characteristic and show the benefits and drawbacks of each. You can then state why each is being considered and use your current labels (trout, endangered

species, power, Grand Canyon ecosystem) has benefiting values. This would keep people from being misled into believing that an alternative has been devised to benefit a single resource when in fact a whole range of resources may respond in a positive way.

We have two additions for consideration under Issues:

Fisherman safety in Glen Canyon NRA; evaluate the influence of high ramping rates on safety for wading fishermen, at Lees Ferry, for example. This could possibly be evaluated with the Trout Fishing Access issue.

Another issue for evaluation would be in the realm of administration; evaluate pay back period, under each alternative, including possibility of extending such as a mitigation. Also, include price of environmental mitigation and resource management (as part of project purpose) as a part of cost of power production and as authorized under project authorities (CRSPA).

These are all the comments we can think of at this time. We will call you if we can think of others. We will also be providing a copy of this correspondence to Jake Hoogland in our Washington office, for his use should he desire to make another submission. If we can answer any questions, please give me a call.

Jerry Mitchell

bcc: Hoogland  
Davis  
Rowlands  
Wood  
Kimball/Jackson  
Turk  
Mitchell

JMMitchell: (2/7/90) FTS 765-7753

ONT. # 90034384

LDR # 2964

ENUG.00-

GCS



ORIGINAL

United States Department of the Interior

NATIONAL PARK SERVICE  
GRAND CANYON NATIONAL PARK  
P.O. BOX 129  
GRAND CANYON, ARIZONA 86023-0129

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IN REPLY REFER TO:  
L7619(GRCA-8213)

AUG 2 1990

Memorandum

To: Rick Gold, Upper Colorado Region, Bureau of Reclamation

From: Superintendent, Grand Canyon National Park

Subject: Resource Priorities and Management Objectives (EIS)

On July 10, 1990, at the meeting in Flagstaff of the Ad Hoc Committee to discuss alternatives and issues for the Glen Canyon Dam Environmental Impact Statement (EIS), Jerry Mitchell of my staff presented a list of National Park Service resource priorities and management objectives. He informed me that you were pleased to see our attempt to clarify our needs, as was recommended in Santa Fe by members of the National Academy of Sciences panel, and that you inquired as to whether Jake Hoogland and I agreed with the priorities he presented.

The staff at Grand Canyon National Park and at Glen Canyon National Recreation Area have reviewed the package. With some minor modifications, enclosed are the National Park Service's priorities and management objectives for managing the resources along the Colorado River within Grand Canyon National Park and Glen Canyon National Recreation Area. These priorities and objectives are consistent with provisions of the Colorado River Management Plan.

Our desire is that these will be of benefit during the process of writing the EIS by providing the cooperating agencies and the researchers with a framework within which the National Park Service seeks to conserve the purposes and values of Grand Canyon National Park. Our participation in and review of the EIS process will be guided by these management objectives.

If you have any questions, please contact Jerry Mitchell at FTS 765-7753.

  
John H. Davis

Enclosure

NOTE: IF YOU DETACH  
ENCLOSURES PLEASE INSERT  
CODE NO \_\_\_\_\_

**ALTERNATIVES AND ISSUES POSITION PAPER  
NATIONAL PARK SERVICE**

**BACKGROUND**

The riparian ecosystem within the Colorado River corridor through Grand Canyon National Park and Glen Canyon National Recreation Area is a naturalized system. Our overall objective in managing the ecosystem is to preserve remaining native components by actively managing those exotic components and processes that enhance/ensure their retention.

**Priorities as they relate to management of the Grand Canyon ecosystem:**

- 1) Sediment (including beaches and cultural resource values dependent upon beach stability)
- 2) Humpback Chub, Razorback Sucker and other native fishes
- 3) Native fauna
- 4) Cultural resources
- 5) Riparian vegetation
- 6) Water Quality
- 7) Recreation
- 8) Trout fishery

**Rationale for priorities:**

- 1) Sediment--Sediment is the pivotal link in the system, providing backwater habitat required by certain life-history stages of the Humpback Chub and substrate for vegetation and the protection of cultural resource values, as well as providing surface for camping by river recreationists.
- 2) Humpback Chub, Razorback Sucker and other native fishes--Additional management responsibilities are in place because the Endangered Species Act mandates protection of species and habitat.
- 3) Native fauna--Native components, such as riparian birds and reptiles, will indicate the relative condition of the riparian system; some are protected by the Endangered Species Act.
- 4) Cultural resources--Retention of sediment would assure preservation of most sites, but some (Spencer Steamboat for example) are directly influenced by flows; NHPA mandates preservation of archeological and historic resources.
- 5) Riparian vegetation--Is an altered system but exotic plant components (tamarisk, etc) are now required to afford scour resistance to sediment deposits and to allow natives species the opportunity to establish themselves through the long-term replacement of these exotics.
- 6) Water Quality--Is altered in character (temperature, sediment load, etc.), but ecosystem components require certain water quality attributes and conditions to assure preservation.
- 7) Recreation--Management of recreation is secondary to resource preservation but, ultimately, will be enhanced through resource protection and conservation.

- 8) Trout fishery--Management of native fishes takes precedent over the management of the introduced trout fishery. However, trout are a valuable recreation resource; their value is greatest within the section of the river managed as Glen Canyon National Recreation Area.

Management Objectives:

The following are broad-based objectives for the management of the Colorado River Corridor through Grand Canyon National Park and Glen Canyon National Recreation Area:

- Sediment
- a) Distribution--maintain stable sediment deposits (including beaches) throughout, but of critical concern are those in narrow reaches of the river.
  - b) Sediment Sizes--Create conditions which enhance aggradation of silts and muds to reduce erodibility of affected beaches.
  - c) Shape and Slope--create conditions which generally maintain beach deposits at less than angle of repose.
  - d) Soil Chemistry--Contaminant free environment and stable soil nutrient conditions.
  - e) Deposit Size--Maintain a distribution of sediment deposits of a size to maintain/enhance camping.

Channel Configuration

- a) Channel Geometry--Establish a channel regime to assure that mainstem pools are able to store sediment.
- b) Substrate--habitat diversity; and distribution of types.
- c) Eddies and Recirculation--Establish management practices which maintain or enhance eddies along with a range of flows that sustain seasonal availability.

Vegetation

- a) Species and Diversity--Manage to sustain native vegetation components of the system and allow their eventual replacement of exotics. Retain and actively manage exotic species, such as tamarisk, to assure the preservation of sediments (through providing scour resistance) and allow the native riparian species (willows, bacharis, mesquite, acacia, etc.) the opportunity to establish themselves by replacing exotics through succession.
- b) Condition--Restore or maintain natural ecosystem resiliencies.

Archeological  
and Histori-  
cal Sites

- a) Condition and Context--Preservation and protection including site stability, completeness and integrity of the site and its context, as per NHPA;
- b) Site Sediment Deposits--Retain quality and quantity of sediment at location and promote aggradation to assure maintenance of the deposits that protect archeological sites.

Water

- a) Flow Regime--Reestablish seasonal fluctuations and ameliorate fluctuating flows.
- b) Temperature--More stable back-water temperatures to maintain or enhance their diversity and productivity.
- c) Quality--Maintain at State of Arizona standards for warm and cold water fisheries and total body, recreational contact.
- d) Nutrients--Maintain or enhance mainstream nutrient levels.
- e) Quantity--Manage for seasonal high flows to back up the Little Colorado River to meet the needs of the Humpback Chub, if determined necessary by research; sustain seasonal backwaters; retain/enhance navigability.

Native  
Fauna

- a) Species--Precedent to maintaining native faunal components of ecosystem.
- b) Opportunistic Species--In as much as such management is not deleterious to naturally occurring (and priority) ecosystem components (such as sediment), consider and mitigate the impacts of actions to special status species (such as the Bald Eagle).
- c) Habitat--Manage the viability of the food chain for native fauna, including the Peregrine Falcon, Willow Flycatcher and other special status species (both state and national).

Recrea-  
tion

- a) Dependence on Condition of Resource--Manage recreation as secondary to resource preservation; recreation itself will be enhanced through resource protection and conservation.
- b) Navigability--Flows that do not prevent passage by boats.
- c) Nature of activity--Flows that contribute to primitive experience (wild-ness).
- c) Influence on Ecosystem--Recreation activities will be managed to maintain the resiliencies of the ecosystem (i.e., their impacts are held within the limits of the standards defined in the Colorado River Management Plan).

Trout

Fishery

- a) Status as Resource--Manage trout as a recreational resource that does not take precedence over native species.
- b) Population Dynamics--Enhance reproduction and survival especially in the Lees Ferry Reach.

CONCLUSION

Alternatives:

Considering the above background, the following is a list of alternatives that we feel must be evaluated by the EIS in order for National Park Service and all other agencies to properly evaluate this issue:

- No Action (peaking power optimization);
- Base Flow--within monthly water delivery constraints (optimum beach retention flow);
- Reduced range of flows and rate of ramping--for example +/- 25% around the mean (possible sediment and recreation impact mitigation alternative);
- Potential Beach Building--possible high discharge (10 to 20 year interval) during tributary flood events;
- Fisheries Enhancement--seasonally moderated flows with periods of high discharge.

Issues:

- Sediment deposits (including camping beaches) and depositional processes;
- Native fishes, including Humpback Chub and Razorback Sucker, and their utilization of the mainstem of the Colorado;
- Special Interest Fauna, including peregrine falcon, willow flycatcher, and Bald Eagle;
- All other native fauna;
- Trout fishery, especially in the Lees Ferry Reach;
- Native flora;
- Exotic but beneficial flora;
- Food chain, including aquatic invertebrates, for fisheries and bird life;
- Cultural resource protection, including site stability;
- Recreation values:
  - white water rafting;
  - fishing;
  - boating;
- Non-use values for natural and cultural resources:
  - existence values;
  - bequest values;
- Wilderness values

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Action to <i>715</i>
Information to <i>John Slater</i>
Subs Corresp: _____ Date Ans'd _____

March 26 1990

Mr. Roland Robison  
 Regional Director  
 Upper Colorado Region  
 US Bureau of Reclamation  
 PO Box 11568  
 Salt Lake City, Utah 84147

Dear Mr. Robison,

The Navajo Nation has been provided a copy of "Glen Canyon Environmental Impact Statement, Background Paper, and Alternatives to Operations." These reports have been reviewed, and we have comments and suggestions.

The Navajo Nation not only has considerable lands adjacent to the Colorado River, but has jurisdiction over a substantial portion of the Little Colorado River, including essential habitat of the humpbacked chub. The Navajo Nation is committed to protection of the greater Grand Canyon ecosystem for the preservation of water quality, recreational opportunities, and biodiversity. Because of undeniable jurisdiction of the Navajo Nation in large portions of the project area, the Navajo Nation has requested that the Commissioner of the Bureau of Reclamation grant it cooperating status in the NEPA compliance. Indeed, section DM 1.5 of the 516 Manual of the Department of Interior denotes specifically that individual Indian Tribal governments will be full participants in the NEPA process. Whether or not the BIA has cooperator status is irrelevant to the Navajo request as the interests of the BIA and the Navajo Nation are not necessarily synonymous. In fact, three BIA biologist positions on the Navajo Nation have been vacant for over a year. Is the Navajo Nation to be represented by biologists in absentia? The Navajo Nation expects to be granted cooperator status so that its concerns can be met.

A second concern is that of the confusing schedule for completion of the EIS. More time is needed for an adequate EIS. The original schedule called for the completion of the draft EIA by the end of 1991, but recent notices make that date the deadline for the final EIS. To allow time for adequate research and public involvement, the schedule should be extended another year. The timetable for completion of the EIS should dictate the schedule of the Glen Canyon Environmental Studies. GCES research needs to be extended beyond the EIS so that the adequacy of decisions made through the NEPA process can be determined.

The operation of the Glen Canyon Dam has been held to jeopardize an endangered species of fish, the humpbacked chub whose essential habitat is under Navajo jurisdiction. The Navajo Nation must not

only be involved in securing this habitat, but in monitoring populations when the EIS is completed. Several other wildlife species of special concern to the federal agencies and Navajo Nation are found in the Little Colorado River. These species must be adequately monitored post-EIS. Cultural resources including sacred plants, animals, and sites must be addressed as well. Arbitrary, narrow boundaries should not circumscribe concerns in the NEPA process.

The Navajo Nation believes that an ecosystem approach in the NEPA process is the only one that addresses the environmental, biological and cultural concerns of all those who hold the greater Grand Canyon ecosystem to be a treasure to be preserved.

Sincerely,



Michael Tremble,  
Coordinator,  
Navajo Natural Heritage Program

cc. Larry Benallie, Director, Fish and Wildlife  
Byron Huskon, Deputy Director, Division of Natural Resources  
Peter Deswood, Director, Division of Natural Resources  
Louise Linkin, Director, Environmental Protection Agency

009446

NT. # 90018032  
COUNCIL MEMBERS:  
Stephen G. Hanson  
Ray-Hiatt  
Mike Rogers  
Ellen Whitelock  
Irene E. York

**ORIGINAL**  
RICHARD A. HARMER Mayor

Glen K. Vernon, City Administrator  
Jeanette C. Callaway, Recorder  
Joan W. Nielsen, Treasurer  
James E. Box, Chief of Police  
Ned Deuel, Justice of Peace  
Dave McMullin, City Attorney

State of Utah  
**PAYSON CITY CORPORATION**

439 West Utah Avenue, Payson, Utah 84651  
801-465-9226

P10-300-  
WC

April 27, 1990

Glen Canyon Dam Environmental  
Impact Statement  
U.S. Bureau of Reclamation  
P.O. Box 11568  
Salt Lake City, Utah 84147

**RE: ENVIRONMENTAL IMPACT STATEMENT**

To Whom It May Concern:

I would like to comment on the Glen Canyon E.I.S. issues. As you go through the E.I.S. process, I recommend that the dam flows coming from the dam remain as they have in years past, and that the data obtained from these current flows be used to see a true picture of what is actually happening below the Glen Canyon Dam.

Since 1983 through 1984 were exceptionally high water years, the information and data received should be taken into careful consideration in the final policy making decisions of Glen Canyon Dam.

I hope you will analyze ALL aspects of the dam, including power, irrigation and recreation.

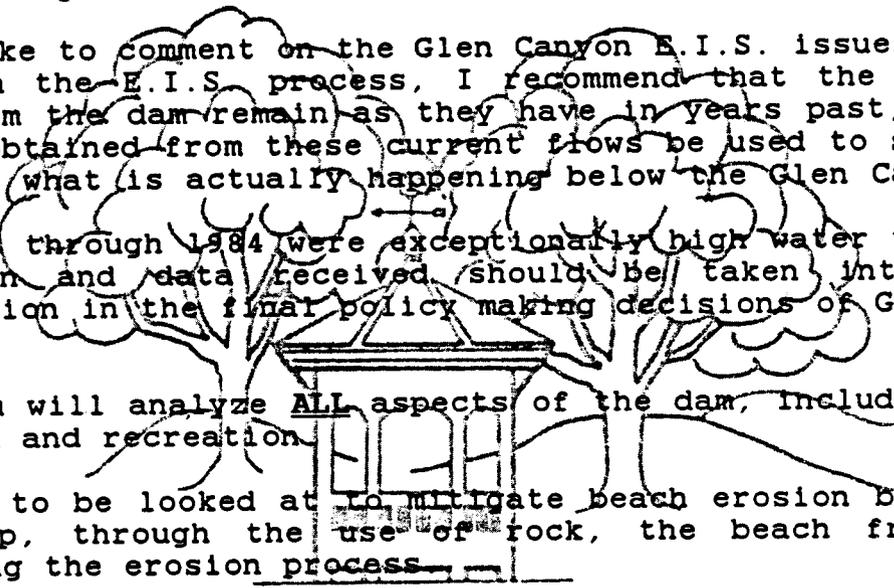
Ways need to be looked at to mitigate beach erosion by possibly shoring up, through the use of rock, the beach fronts thus eliminating the erosion process.

Limiting the size of groups going through the Canyon at any one time is another possibility that I feel should be considered. Keeping group size down would alleviate some problems with beach erosion and other problems associated with human traffic in such a sensitive area.

Through the E.I.S. process, you need to consider what has already been accomplished in conservation measures by CRSP power users. Payson City alone, over the past four years, has cut system losses by 4% per cent. This equates to 44,000 KWH saved per year, for a total savings of \$176,000 KWH. We have an ongoing commitment to conserve and more fully utilize our resources.

It would be good to have a study done to evaluate the economic impacts of all those involved. In this study I request that the economic studies be evaluated very carefully on what flow changes at the dam would make.

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Date



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Through the Environmental Impact Statement process, please consider the total picture as we fully optimize this valuable resource. In conjunction with caring for the environment, I feel that a positive solution will be met.

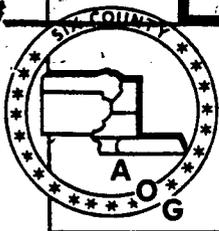
Sincerely,



RONNIE J. CRUMP  
Power & Light Director  
Payson City Corporation

RJC:bp

007221



# SIX COUNTY ASSOCIATION OF GOVERNMENTS

0248

**CONFIDENTIAL**

Sevier County Courthouse, P.O. Box 820  
Richfield, Utah 84701  
Phone: (801) 896-9222  
FAX: (801) 896-9226

Office of the Executive Director  
March 20, 1990

Glen Canyon Dam  
Environmental Impact Statement  
U S Bureau of Reclamation  
P.O. Box 11568  
Salt Lake City, Utah 84147

Dear Sirs:

It has come to the attention of members of our Governing Board that certain groups and individuals are attempting to change or restrict the water flow from the Glen Canyon Dam in the name of environmental protection.

We further understand that the Bureau of Reclamation has initiated a study of the allegations of the environmental community.

Our governing board has enacted a resolution opposing any change in the way the water is released from the Glen Canyon Dam or any unnatural change in the water surface of Lake Powell.

We believe that hydro-electric power continues to be the cleanest power available.

We object to any change in the production of power that will raise the cost of this power to the municipalities of this region.

We believe the dam and the lake to be a great benefit to our region and the western United States because of the production of electricity and agricultural production as well as for recreation purposes.

We further feel that any environmental concerns for the stream flow can be addressed and corrected through other structural alternatives in the Colorado River below the dam.

We would appreciate your attention and consideration for the residents of our region as you attempt to study this matter.

Sincerely,

*Carvel V. Magleby*  
Carvel V. Magleby,  
Executive Director

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CVM:jh  
cc: Bureau of Reclamation  
Legislative Offices

# SPRINGVILLE CITY CORPORATION

50 SOUTH MAIN SPRINGVILLE, UTAH 84663 (801) 489-5628 FAX:(801) 489-9767

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May 2, 1990

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The Honorable Manuel Lujan, Jr.  
Secretary of the Interior  
Room 6151  
C Street between 18th & 19th Streets, N.W.  
Washington, D.C. 20240

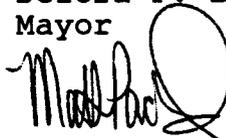
Dear Mr. Lujan:

Please find enclosed Springville City's position statement relative to the Environmental Impact Study of the Colorado River below Glen Canyon Dam. Thorough, unbiased consideration of this matter will be appreciated.

Sincerely,



Delora P. Bertelsen  
Mayor



Matt Packard  
Councilman and  
Chairman, Springville Power Board

DPB/MP:mje

13901

**STATEMENT OF SPRINGVILLE CITY MUNICIPAL POWER BOARD  
CONCERNING THE GLEN CANYON DAM ENVIRONMENTAL IMPACT STATEMENT  
SCOPING PROCESS**

May 1, 1990

Springville City Municipal Power, Springville, Utah, is a publicly-owned utility which provides electrical power to 5,060 accounts in Utah County, of which 4,360 are residential and 430 are commercial/industrial. The population served is 16,000.

We are concerned about the impact that the Glen Canyon Dam operations have on the Grand Canyon downstream, and upon the downstream users, i.e., fishermen, rafters, boaters, etc. We support the current Glen Canyon Dam Environmental Impact Statement process, but there are those who want to circumvent the National Environmental Policy Act (NEPA) process by attempting to impose interim flows because of a non-existent "emergency" situation in the Grand Canyon. There is no scientific support for the assumption that fluctuating water flows from the dam are causing more than normal erosion in the Canyon. Research teams must be able to examine the effects of varying flows while they are happening. Premature changes in operation would preclude this vital part of the study.

We are also concerned about power production from the Glen Canyon Dam because our system load is partially covered by resources covered by the Colorado River Storage Project (CRSP). The CRSP covers approximately 25% of our customer's total load. Glen Canyon is really the backbone of the CRSP system and accounts for approximately 70% of all the power that can be generated off CRSP dams in the Colorado River Basin. This power is valuable to Springville because it is produced at a time when our customers are most in need of electricity. It is the ability of the dams to produce this electric power, at these peak periods, that makes the resources so valuable. Power generated off CRSP dams allows Springville to burn less diesel and natural gas at our power plant.

Changing the present power-generation program on such a short notice as proposed by those who would impose interim flows, without a complete alternative plan for providing peaking power, would jeopardize power supplies during the highest demand periods. If any such changes are eventually made, it should be done in a way that is most compatible with all the people of the CRSP service area.

Our electric customers are under heavy obligation to repay the federal government for development of the Glen Canyon Dam and other projects under the CRSP Act. As a result, these power recipients

depend on an adequate and timely supply of power from the generating system for which they are currently paying.

Reasonably-priced power, delivered when it is needed, is vital to the economic development of our community. Any developments that would increase power rates could have a severe, negative impact on the residents and businesses in this area, many of whom are barely existing economically under current conditions.

When viewed from this perspective, it is apparent that major changes in the operation of the river will have the greatest economic impact on people of low to moderate income levels who reside in rural areas. An interesting contrast emerges when comparing the economic status of the majority of the recipients of Colorado River resources with the income levels of the participants of white-water rafting trips down the Grand Canyon. The rafting companies who operate in the Canyon are a multi-million dollar industry. We hope that the rural communities will not be required to bear the cost of enhancing the beaches for those who can afford the \$1,500 to \$2,000 per river trip, unless the scientific studies through the environmental impact process show the exact cause of beach erosion.

The operation of Glen Canyon Dam is a many-faceted operation that involves an intricate system of interconnected relationships. Recipients of Colorado River resources, who have few good choices or alternatives if their power is negatively affected, must be given adequate consideration. The development of an unbiased, accurate, and objective Environmental Impact Statement is necessary if this resource is to be optimally utilized for the majority of the people. Springville City asks you to consider the complexity of all the issues involved when conducting your analysis of the soon-to-be-completed Glen Canyon Environmental Impact Statement.

013901

*Arlene Zentler*  
Mayor  
Springville, Utah



P10-300-G-C

ORIGINAL



THE STATE OF WYOMING

MIKE SULLIVAN GOVERNOR

GORDON W. FASSETT STATE ENGINEER

State Engineer's Office

HERSCHLER BUILDING CHEYENNE, WYOMING 82002-0370 (307) 777-7354

REC OFF FOR SLCU COPY APR 20 '90

April 17, 1990

Roland Robison Regional Director Upper Colorado Region U. S. Bureau of Reclamation P. O. Box 11568 Salt Lake City, Utah 84147

011686

Re: Glen Canyon Dam Environmental Impact Statement (GCEIS)

Dear Mr. Robison:

I am writing to provide written comments for the Glen Canyon Dam Environmental Impact Statement scoping process. As an Upper Division State, Wyoming shares in the multi-purpose benefits accruing from the Glen Canyon unit of the Colorado River Storage Project (CRSP). Under Public Law 84-485, the CRSP Act, Glen Canyon Dam was authorized and constructed to provide conservation water storage for beneficial consumptive use, making it possible for the Upper Division States to utilize the Colorado River waters apportioned to them by the 1922 Colorado River Compact and among them by the 1948 Upper Colorado River Basin Compact. Storage behind the Dam, in Lake Powell, provides the necessary regulation of the River's flows to insure that the 75,000,000 acre feet of water required to be delivered to the Lower Division States at Lee Ferry in each consecutive period of ten years, as set forth in Article III(d) of the Colorado River Compact, are made while the Upper Division States can proceed with the development of beneficial uses of their compact apportioned waters.

Wyoming citizens receive a considerable portion of their electrical energy from Federal power, including CRSP power. Many

municipal and consumer-owned utilities in Wyoming, as well as non-utility purchasers, receive Federal hydroelectric power marketed by Western Area Power Administration. Among the municipal utilities in Wyoming that purchase Federal hydroelectric power, the average percent of load met by this power source is 74 percent, while 58 percent of the load of the consumer-owned utilities serving Wyoming in whole or part is met by this power source. On this basis, the vital interest which the State of Wyoming has in the continued multiple-purpose operation, including power production, of the Glen Canyon Dam.

It is Wyoming's view that, consistent with the CRSP Act, the EIS must not compromise the primary project purpose of water conservation, and if indeed the "priority" of management issues is necessarily determined during the course of the EIS preparation process, then water conservation must unequivocally receive the highest priority among those issues addressed in the Glen Canyon Dam EIS. We would further suggest that other management issues to be addressed EIS should include:

- endangered Fish (humpback chub);
- sediment resources, including sediment transport and deposition in the channel, stream bank erosion sediment deposition on beach areas;
- hydroelectric power resources generated at the Glen Canyon Dam;
- recreational resources, which should include sport fishing, boating, rafting and camping;
- tributary resources, including sediment contribution, habitat and access for exotic and native fishes;
- riparian vegetation adjacent to the river channel;
- cultural and archeological resources;
- water quality, including nutrients and temperature.

The alternatives selected for evaluation in the EIS must encompass a full range of options. Alternatives must not be limited to only operational changes to the existing Dam operations, but must also include other structural and non-structural alternatives. Non-structural alternatives which we suggest should be considered include: selecting one or several strains of trout species rather than the multiple strains currently being stocked; revising the number of permits allocated to float trips through the

Grand Canyon; restricting user Canyon Use Permits with regard to time of access and use; establishing appropriate advisory, warning and educational programs; revising fishing regulations below Glen Canyon Dam; and vegetative management programs to stabilize beach and river banks.

Structural alternatives which we believe should be examined in order to minimize the impact of operations on the downstream natural resources of the Grand Canyon National Park and the Glen Canyon National Recreation Area should include construction of a re-regulatory structure (afterbay) below Glen Canyon Dam; bank stabilization and revetment works; facilities to transport or redistribute sediment in the canyon; fish hatcheries for warm and cold water fishes and channel restructuring and shaping.

The above non-structural and structural alternatives are not intended to be all inclusive, but rather to demonstrate that implementable, reasonable alternatives to fundamentally and inexorably changing the existing power plant operation at Glen Canyon Dam do exist and merit full consideration. Trade-offs among the structural and non-structural alternatives must be carefully weighted and compared and the social economic and environmental impacts associated with the trade-offs must be rationally quantified and compared.

A member of my staff was present at the March 12, 1990 Public Scoping Meeting for the GCEIS held in Salt Lake City, Utah. We have received various accounts of the comments offered at that and the other Public Scoping Meetings. We are prompted to offer several additional comments on GCEIS Scope in response to the testimony of others. The Interior Department is being urged to by some to expand the geographic scope of the EIS to the entire Colorado River Basin and to expand its institutional scope to accomplish a merger of this EIS effort with the Western Area Power Administration's EIS on the CRSP integrated projects power resource.

We respectfully suggest that these EIS scope expansion proposals are misguided, imprudent, and most assuredly outside of the carefully-articulated bounds which Secretary Lujan established in his July 27, 1990 News Release for the Scope for the Glen Canyon Environmental Impact Statement. Further, we believe that any such expansion would not only be detrimental to the outcome of this effort but would jeopardize and undermine the articulated focus of determining those specific options that could be implemented, consistent with existing law, to minimize the impact of operations on the downstream natural resources of the Grand Canyon National Park and the Glen Canyon National Recreation Area. Other separate and appropriate forums, such as within Western Area Power

Roland Robison  
April 17, 1990  
Page 4

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Administration's distinctly different and separate EIS, exist and will be fully utilized to address such issues.

Further, from our reading of the background paper provided by the Bureau of Reclamation Public Scoping meeting process, it would seem that the primary conflicts arising from the operation of Glen Canyon Dam and Power Plant arise from within-the-month fluctuations and minimum flow levels of the river within the Canyon, which are undeniably power operation-based considerations. Accordingly, the Scope of this EIS should concentrate on those factors rather than on monthly or annual release schedules. This point is intimately tied to the primary purpose of the Glen Canyon Unit being for conservation of storage and the crucial role of Lake Powell in providing the necessary regulation of the flows of the Colorado River to meet the Article III(d) obligation of the Colorado River Compact. This is an important distinction that must be carefully observed during the preparation of the Environmental Impact Statement.

In your November 2, 1989 news release, you stated that "[t]he Environmental Impact Statement will examine both the existing operational criteria of the Glen Canyon Dam as well as alternative environmental criteria that would be used to develop future operating plans ...." This is in contrast to the first sentence of the October 27, 1989 Federal Register Notice of Intent to prepare a draft environmental impact statement (Vol. 55, No. 37) which speaks to the "Development of environmental criteria ...". There would seem to be a contradiction in these two documents as to whether there is presently in existence an environmental criteria or not, in that the examination of "alternative environmental criteria" necessarily presupposes that there is such a criteria. We are unaware of such environmental criteria in written document form. Reclamation has not yet addressed what was meant by this wording, and we would appreciate clarification of this matter.

We have been closely involved with the preparation of the comments of the Governor's Representatives of the Colorado River Basin States for Colorado River operations on the scope of this EIS and fully concur with the statements made therein.

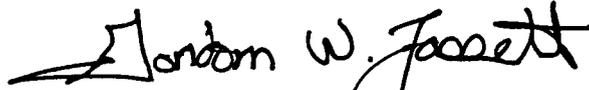
In conclusion, we urge that conservation storage which is the paramount purpose of the Glen Canyon Unit of the Colorado River Storage Project be accorded its full appropriate consideration in this EIS. We urge that Reclamation, in its evaluation of alternatives fully recognize and consider the many benefits that have accrued to the United States due to the construction and completion of the Glen Canyon Dam.

Roland Robison  
April 17, 1990  
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Thank you for the opportunity to provide these comments during the Public Scoping portion of the Glen Canyon Dam Environmental Impact Statement Process.

With best regards,



Gordon W. Fassett  
State Engineer

GWF/JWS/js

# STATE OF COLORADO

COLORADO WATER CONSERVATION BOARD  
Department of Natural Resources  
721 State Centennial Building  
1313 Sherman Street  
Denver, Colorado 80203  
Phone: (303) 866-3441



Roy Romer  
Governor  
J. William McDonald  
David W. Walker  
Deputy Director

May 3, 1990

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Mr. Rick Gold, Assistant Regional Director  
Glen Canyon Dam Environmental  
Impact Statement  
U.S. Bureau of Reclamation  
P.O. Box 11568  
Salt Lake City, Utah 84147

Dear Mr. Gold:

This letter is submitted on behalf of the seven Colorado River Basin states' governors' representatives for Colorado River reservoir operations (States' Representatives) and the Upper Colorado River Commission (Commission). The purpose of this letter is to provide comments on the scope of the Glen Canyon Dam Environmental Impact Statement (EIS).

Secretary Lujan's July 27, 1989, news release announcing the EIS, and subsequent notices in the Federal Register, indicate the EIS is to address impacts "on the downstream environmental and ecological resources of the Glen Canyon National Recreation Area and the Grand Canyon National Park." The States' Representatives and the Commission agree that the geographical scope of the EIS should be limited to that portion of the Colorado River directly affected by the power operations at Glen Canyon Dam. Expanding beyond this geographical scope (as some have suggested) appears to have marginal benefits at best and would necessitate a longer and more drawn out process, unnecessarily introduce a vast number of tangential issues and concerns, and encumber the process with additional complex legal and institutional issues.

As is illustrated by Reclamation's March, 1990, "Background Paper" on the EIS, impacts on the downstream environmental and ecological resources of the Glen Canyon National Recreational Area and the Grand Canyon National Park arise primarily from within-the-month fluctuations in power plant operations. Consequently, the States' Representatives and the Commission believe this should be the focus of the EIS.

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Mr. Rick Gold  
May 3, 1990  
Page two

In contrast, monthly and annual release schedules are distinct from power operations and are governed primarily by interstate compact requirements and the Colorado River Basin Project Act of 1968. Should the EIS examine any aspect of annual reservoir operations, then water conservation storage in Lake Powell must be held inviolate.

With respect to the analysis of alternatives, current power operations (i.e., existing minimum and maximum flows and existing ramp rates) and other human activities which are presently affecting the natural environment of Glen and Grand Canyons should logically be defined as the "no action" alternative. We believe it imperative that a full range of both structural and non-structural alternatives to the "no action" alternative then be examined, subject to the condition that all alternatives must be in compliance with interstate compact requirements and the Colorado River Basin Project Act of 1968.

The non-structural alternatives examined should include not only changes in within-the-month fluctuations in power operations, but also changes in the current institutional and management arrangements for other human activities that may be adversely affecting the downstream environmental and ecological resources of Glen and Grand Canyons (e.g., regulations concerning the trout fishery; permitting practices for recreational boating and for camping on beaches; dispersion of rafters in the Grand Canyon; vegetation management on beaches; etc.). A full range of structural measures should be examined. This includes a reregulation structure below Glen Canyon Dam, which structure has the potential to minimize impacts on environmental and recreational resources without sacrificing the economics of power generation and repayment revenues to the federal treasury.

As we believe is required by NEPA, evaluation of the "no action," structural, and non-structural alternatives must consider economic and social, as well as environmental, impacts. In view of the multiple benefits which Glen Canyon Dam provides to diverse beneficiaries, the EIS must, therefore, analyze tradeoffs between the various alternatives and weigh and compare their benefits and costs. Since the Secretary's ultimate decisions will be dependent upon an understanding of these tradeoffs, this is a critical aspect of the EIS.

In closing, we would like to comment on two items concerning the overall scope of the EIS. First, some have suggested that the EIS should examine all aspects of the operation of the Colorado River Storage Project, not just operations at Glen Canyon Dam. The States' Representatives and

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Mr. Rick Gold  
May 3, 1990  
Page three

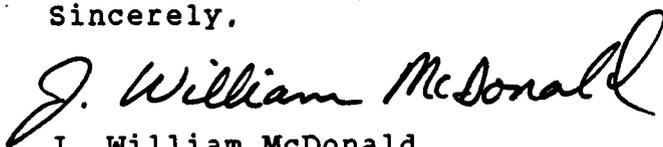
the Commission strongly disagree. The operation of the other Colorado River Storage Project storage units and of the participating projects has essentially no effect on the within-the-month fluctuations in power operations at Glen Canyon Dam. Furthermore, such an expansion of the scope of the EIS would inevitably delay its completion by many years. Given that persons of all points of view agree on the desirability of expeditiously completing the Glen Canyon Dam EIS, it would be counterproductive to extend the process further into the future.

Second, some have urged that the Glen Canyon Dam EIS and the Western Area Power Administration's EIS concerning the post-1989 power marketing criteria be merged. The States' Representatives and the Commission believe that these two efforts are distinct and separate and should remain so. There is certainly some relationship between the two and they should be carefully coordinated, but they deal with substantially different matters. Furthermore, to bring them together would again defeat the agreed upon need to expeditiously complete the Glen Canyon Dam EIS. Therefore, we urge Reclamation and Western to keep the two environmental impact statements separate.

We appreciate this opportunity to comment on the scope of the Glen Canyon Dam EIS. We again reiterate our support to ensure that the National Environmental Policy Act process is conducted expeditiously and that the conclusions in the EIS are scientifically sound.

Those listed below have asked me to sign this jointly drafted letter on their behalf, as well as my own.

Sincerely,



J. William McDonald  
Colorado

C09447

Upper Colorado River  
Commissioners:

Jack F. Ross, Chairman  
United States  
James S. Lochhead, Colorado  
Philip B. Mutz, New Mexico  
D. Larry Anderson, Utah  
Gordon W. Fassett, Wyoming

Colorado River Basin States'  
Representatives:

N.W. Plummer, Arizona  
Gerald R. Zimmerman, California  
J. William McDonald, Colorado  
Philip B. Mutz, New Mexico  
Jack L. Stonehocker, Nevada  
D. Larry Anderson, Utah  
Gordon W. Fassett, Wyoming



State of Utah  
DEPARTMENT OF NATURAL RESOURCES

Norman H. Bangertter  
Governor  
Dee C. Hansen  
Executive Director

1636 West North Temple, Suite 316  
Salt Lake City, Utah 84116-3193  
801-538-7200  
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March 30, 1990

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Subs. Control

Mr. Wayne Cook UC-400  
Glen Canyon Dam-Environmental Impact Statement  
P. O. Box 11568  
Salt Lake City, Utah 84147

Mr. Cook:

Development of the environmental impact statement (EIS) for the operation of Glen Canyon Dam is unique because it was not prompted by proposed changes or modifications to the existing operation of the dam or power plant. Further, it provides an opportunity for individuals and organizations not closely associated with traditional water and power interests to influence the decision-making process. Prior to presenting our more specific recommendations for scoping this study, we feel compelled to caution against allowing this process to be used to expand the geographic boundaries of the study beyond the evaluation of the downstream impacts of the operation of Glen Canyon Dam. It is imperative that the Bureau complete the study as expeditiously as possible, and any effort by special interest groups to tie this EIS to any other ongoing or contemplated EIS should be rejected.

The operation of Glen Canyon Dam is critical to the development and management of Utah's allocation of Colorado River water because: (1) it affects the quantity of water available to the Upper Basin states in any given year, and (2) it affects the funding available for design and construction of CRSP participating projects.

The construction of Glen Canyon Dam was necessitated by Article III(d) of the Colorado River Compact, which required the delivery of 75,000,000 acre-feet of water at Lee Ferry for every period of ten consecutive years. The storage behind the dam allows maximization of Upper Basin water use while insuring Compact-required deliveries to the Lower Basin. We firmly believe that both law and equity demand that conservation storage be given the highest priorities in the operation of Glen Canyon Dam.

Revenues derived from generation of hydroelectric power are used to repay a portion of the costs of development of irrigation projects. Section 7 of the Colorado River Storage Project Act (Public Law 84-485) requires that the power facilities be operated "... so as to produce the greatest practicable amount of power and energy that can be sold at firm power and energy rates..." The Act has also been interpreted to require power rates be set such that the revenues will be sufficient to cover all project costs within the established repayment schedule.

Wayne Cook  
March 30, 1990  
Page 2

It is apparent from the background paper prepared by the Bureau of Reclamation that nearly all of the suggested changes in operation of the dam are non-structural and will result in decreased power revenues. The impact of those decreased power revenues must be evaluated and the power rate increase required under each alternative quantified so the Western Area Power Administration and its customers will have a clear picture of their repayment obligations. We feel that in addition to the alternatives already identified by the Bureau of Reclamation, the EIS must also contain evaluations of structural alternatives that will reduce the impacts on the power revenues. Equity, too, should be an important factor in the development of a recommended plan. A fair share of the costs of any changes in operation should be borne by the beneficiaries of such changes (i.e., recreationists, fishermen, the public in general power users).

It is obvious from the background paper that the preponderance of conflicts among uses arises from within-the-month fluctuations and minimum flow levels, which have traditionally been based on power considerations. We recommend that the EIS concentrate on these factors rather than on monthly or annual release schedules, since a process already exists for systematic development of annual operating plans. (This process is defined in the Operating Criteria.)

[As an aside, there appears to be a desire on the part of some interests to mandate (either legislatively or administratively) 'interim flows' (e.g., a minimum release rate and/or limits on fluctuation) until such time as the EIS is completed and a recommended plan of operation is adopted. Such a proposal should be viewed with extreme caution, since: (1) all environmental uses are not benefited by increasing the minimum release rate, in fact, some uses may be adversely affected; (2) placing restrictions on releases may hamper collection of necessary research data; and (3) there is a strong likelihood that the assumed benefits of such flow restrictions would not offset the significant decreases in power revenues that would result.]

In conclusion, we believe some parameters in the study must be accepted as "givens", and conservation storage is one of these. Finally, we feel that alternatives based on modifications of the status quo must contain adequate provisions for equitable treatment of all those affected by the changes.

Thank you,

  
Dee C. Hansen, P.E.  
Executive Director

J. BENNETT JOHNSTON, LOUISIANA, CHAIRMAN

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# United States Senate

COMMITTEE ON  
ENERGY AND NATURAL RESOURCES

WASHINGTON, DC 20510-6150

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March 26, 1990

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Rolland Robison, Director  
Upper Colorado Regional Office  
Bureau of Reclamation  
U.S. Department of the Interior  
P.O. Box 11568  
Salt Lake City, Utah 84147

Dear Mr. Robison,

I am writing to share my views on the Department of the Interior's Glen Canyon Dam environmental impact statement.

I would like to begin with an anecdote that seems to me to offer some insight into the roots of this situation. Years ago, Floyd Dominy, then the Commissioner of Reclamation, took David Brower on a tour of Glen Canyon Dam. According to John McPhee, who was there to record the scene, as the trio rode an elevator down into the heart of the dam, Dominy explained Glen Canyon and, indeed, the Bureau of Reclamation of that time, with this statement: "People talk about the environment, We're doing something about it." Commissioner Dominy was right, of course, and his vision of the environment set the table for us today.

Glen Canyon Dam is representative of many Federal dams throughout the West and the Nation. Conceived and constructed in an era that emphasized development, these projects must adapt to a new era in which the public demands that environmental protection be recognized as the equal and essential partner to economic development.

As Reclamation's last grand achievement, Glen Canyon says much about the past and the Bureau's traditional approach to the West. The conduct of this environmental review and planning process will speak just as clearly about the Bureau's future.

A fundamental step in your efforts to define the scope of the EIS will come when you identify the Secretary's discretion with regard to dam operations. Some have argued that the Secretary's discretion is limited and that, under the Colorado River Storage Project Act, certain project purposes must be served ahead of others. Although attractive in its simplicity, this argument is wrong.

A careful review of all applicable law reveals that the Secretary's hands are not tied. No feature of the Law of the River elevates one project purpose over others. No feature of the Law of the River limits the Secretary's responsibilities under the Endangered Species Act or Clean Water Act or otherwise subordinates the Secretary's environmental obligations.

Glen Canyon's benefits are substantial and undeniable. The dam has served the region well, facilitating interstate water allocation, flood control, recreation, and power production.

Yet these gains were achieved at the expense of the Colorado River and Grand Canyon environment, hurting fish, wildlife and their habitats.

The Department of the Interior has a responsibility to strike a fair balance at this dam to ensure that the Grand Canyon environment and those who rely on it, including the whitewater rafting industry, are not shortchanged. This environmental review process offers the Department the opportunity to identify the features of that balance in a public, open, and accountable forum. I commend you on your aggressive public involvement efforts.

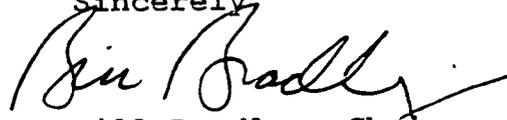
I urge the Department to use science to its best advantage. No one will gain ultimately from a poorly conceived or executed study. Let the needs of careful analysis drive your schedule. Permit your study team to analyze all reasonable variations in release patterns.

If, during the course of your study, it appears that reasonable interim measures can be taken to benefit the downstream environment, I urge the Secretary to do so. The Secretary's responsibility to the Grand Canyon environment does not begin with the conclusion of the EIS. That responsibility rests on the Secretary's shoulders now and, plainly, he has the discretion to fulfill it.

The Congress has acted repeatedly to protect the Grand Canyon. I have no doubt that the Congress will act again if it appears that the environmental review process is inadequate or manipulated, or if the study results appear unfairly biased.

You may be assured that the Subcommittee on Water and Power will maintain the most exacting oversight of your study.

Sincerely,



Bill Bradley, Chairman  
Subcommittee on Water and Power

BB/tcj



BENNETT JOHNSTON, LOUISIANA, CHAIRMAN

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# United States Senate

COMMITTEE ON  
ENERGY AND NATURAL RESOURCES

WASHINGTON, DC 20510-6150

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FRANK M. CUSHING, STAFF DIRECTOR FOR THE MINORITY  
GARY G. ELLSWORTH, CHIEF COUNSEL FOR THE MINORITY

April 2, 1990

The Honorable Manuel Lujan, Jr.  
Secretary  
United States Department of the Interior  
6151 Main Interior Building  
Washington, D.C. 20240

Dear Secretary Lujan,

We are writing to apprise you of the importance we attach to the Department of the Interior's Glen Canyon Dam environmental impact statement.

To begin, we wish to compliment you on your decision to initiate the environmental review process. The National Environmental Policy Act and Council on Environmental Quality's regulations offer a useful and appropriate mechanism to evaluate the Federal Government's options at Glen Canyon Dam.

We recognize that the EIS process will, in this case, be extremely complex and challenging. Accordingly, we urge the Department to dedicate to this undertaking resources commensurate with the effort's significance and scope.

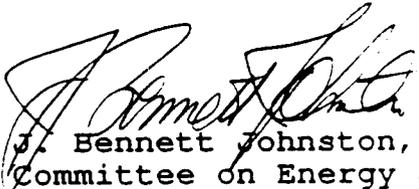
Mr. Secretary, it would be difficult to overstate the value of the Grand Canyon to the American people or the importance of protecting it from human-caused, avoidable damage. The Congress is responsible for establishment of Grand Canyon National Park and construction of Glen Canyon Dam. We did not authorize the latter to degrade the former. No law or policy diminishes the Secretary's substantial responsibilities toward Grand Canyon National Park or the Colorado River environment.

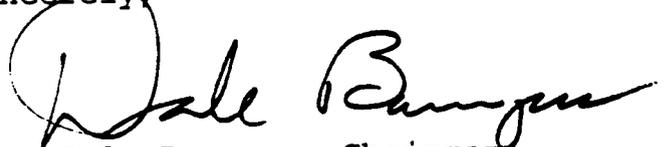
We urge you to consider carefully all reasonable means to protect the Grand Canyon, an extraordinary feature of this Nation's rich natural heritage. We offer our assistance, should Congressional action be necessary.

Hon. Manuel Lujan, Jr.  
April 2, 1990  
Page 2

The Committee on Energy and Natural Resources and the Subcommittee on Public Lands, National Parks and Forests will follow your efforts with interest and concern.

Sincerely,

  
J. Bennett Johnston, Chairman  
Committee on Energy and  
Natural Resources

  
Dale Bumpers, Chairman  
Subcommittee on Public  
Lands, National Parks and  
Forests



**Department Of Energy**

Western Area Power Administration  
P.O. Box 11606  
Salt Lake City, Utah 84147

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Mr. Roland Robison  
Regional Director  
U.S. Bureau of Reclamation  
P.O. Box 11568  
Salt Lake City, UT 84147

Dear Mr. Robison:

For the record, Western Area Power Administration (Western) is submitting the enclosed written comment on the scope of the Glen Canyon Dam Environmental Impact Statement (EIS). The written comment reflects the oral comments made by Western at the Salt Lake City Area and Washington, D.C., public scoping meetings.

Western appreciates the opportunity to comment on behalf of the agency and its power customers, and we look forward to assisting the Bureau of Reclamation throughout development of the Glen Canyon Dam EIS.

Sincerely,

*Lloyd Greiner*  
Lloyd Greiner  
Area Manager

Enclosure

C09449

WESTERN AREA POWER ADMINISTRATION

WRITTEN COMMENT FOR BUREAU OF RECLAMATION SCOPING MEETING  
FOR THE GLEN CANYON DAM ENVIRONMENTAL IMPACT STATEMENT

The following comments on the scope of the Department of the Interior's (Interior) environmental impact statement (EIS) on Glen Canyon Dam are submitted for the record.

Western Area Power Administration (Western) would like to offer a perspective on the issues that it wants Interior to address in its EIS. This perspective may help Interior in its future deliberations on the scope of the EIS and the decisions that will need to be made relative to dam operations or other management alternatives.

The area downstream from Glen Canyon Dam cannot be returned to its predam condition. However, we have frequently noted that many of the changes in the canyon due to the dam have had positive environmental consequences; for example, habitat to support a blue-ribbon trout fishery was created.

Nevertheless, media articles, such as "They're Killing the Canyon" appearing in Headwaters, a publication of Friends of the River, invoke a canyon environment laid bare of its natural resources by dam operations--bare rock stripped clean of vegetation and animal life, the total absence of fish, and camping beaches completely obliterated. Dam operations are not killing the canyon. People who fish for trout or raft down the river know that life is abundant in the canyon. Even the Phase I Glen Canyon Environmental Studies (GCES) report acknowledged that dam operations have permitted the establishment of new zones of vegetation and an associated increase in wildlife. What is at stake are the preservation and management of particular environmental and recreational resources such as trout, beaches, endangered species, and recreational amenities, and the preservation of economic resources such as the hydropower produced at Glen Canyon Dam.

We agree with Jim Ruch of the Grand Canyon Trust that it is all too easy to characterize these concerns as "Power or the Environment." The issues are much narrower than that. Hydropower has certain environmental advantages of its own, compared to thermal power generated by burning coal and other fossil fuels; and these advantages must be considered and compared to the value of certain improvements in particular environmental and recreational amenities. We also stress that this does not necessarily imply a strict trade-off among competing uses and resources. Western believes that there is a definite potential for "win-win" situations, if extreme positions are avoided. The ultimate goal of this EIS process is to identify and implement those management alternatives which create "win-win" situations.

Finally, we believe it is unfortunate and inappropriate that almost all the environmental work that has taken place on the river environment of the Grand Canyon has focused solely on changing the operations of Glen Canyon Dam. Insufficient attention has been paid to addressing other potential management solutions to perceived negative environmental effects. Western requests that

Interior fully consider other innovative resource management alternatives for correcting environmental problems below the dam in addition to alternatives requiring modification of dam operations.

If, based on the EIS process, Interior decides to change operations at Glen Canyon Dam and Powerplant, there could be long-term effects on power production. These could include lower amounts of marketable capacity, lower amounts of on-peak energy, and greater amounts of off-peak energy. Power customers would be required to replace this hydropower resource with more expensive thermal generation. Greater reliance on fossil fuels could cause increased environmental impacts due to increased emissions and air pollution, the effects of mining, and the effects of transporting fuels over long distances. Another related concern for both Western and the Bureau of Reclamation is the continued financial vitality of the Basin Fund and its ability to meet repayment obligations as the value of the CRSP hydroproduct is changed.

Specific issues and proposed lines of inquiry regarding solutions to those issues follow.

Beach Management - Beach management is both an environmental and an economic issue. From an environmental standpoint, the availability of beaches directly relates to the accessibility of the canyon by people and the quality of their experiences. As was pointed out in the Phase I final report for GCES, camping beaches were scarce even before construction of Glen Canyon Dam. More beaches in particular locations and of relatively large size can better accommodate rafters and reduce congestion. This is also an economic issue in that the \$12 million per year commercial rafting industry has a direct interest in the availability of beaches to accommodate paying customers. There are two main considerations in the beach management issue: first, the number of beaches suitable for camping by groups up to 20 or 30 people; second, the location and spacing of those beaches relative to the daily travel distance undertaken during a rafting trip.

Reducing the fluctuation of releases from the dam may have the yet unproven effect of slowing or halting beach degradation. However, changing dam releases will not increase the number, size, and location of camping beaches. Therefore, Interior should evaluate beach management alternatives through:

1. Continued research within the GCES on the effects of wind and people on the stability of beaches above the 33,100 cubic feet per second water line. Management options to address these factors should be identified.
2. Evaluating augmentation of existing beaches, the development of new beaches, and the reinforcement of existing beaches with natural materials. We believe that the vast majority of people are most interested in the availability and quality, rather than the naturalness, of beaches. Such availability and quality can be best assured through an active beach management program that relies on direct action to improve the accessibility of the river to rafters rather than indirect and inefficient adjustments to dam releases.

3. If studies show that adequate materials are not available within the canyon to support beach augmentation, the feasibility of importing sediment into the Grand Canyon system should be considered. Specifically, Interior should assess the feasibility and cost of dredging sediment from Lake Powell and transporting it to the river or specific sites for use in beach construction and stabilization.
4. The National Park Service should reevaluate its river access permitting system, especially the number and timing of permits, because overuse of beaches can also contribute to their degradation. Interior should specifically request the Park Service to address this as a "cooperating agency" duty under section 1501.6(b)(3) of the Council on Environmental Quality's procedural regulations for implementation of the National Environmental Policy Act.

Trout Fishery - The blue-ribbon trout fishery that exists below Glen Canyon Dam is a product of the dam's existence, but that is not the issue. Neither is the issue the survival of the fishery, for it is doing quite well. What seems to concern anglers are observations of fish stranding and potential impacts on spawning due to low flows. Again, there are other management options to address these issues. We recommend that Interior address the following trout management alternatives:

1. All trout species do not spawn at the same time. Therefore, the number of species affects the length of the spawning season. Stocking only one species of trout instead of several, thereby creating a dominant species, would limit the period during which dam operations might need to be modified to accommodate spawning. In concert with this recommendation, the chosen species should be evaluated to determine water release requirements to support its spawning habits, the depth at which it spawns (i.e., a deeper spawning species is not as affected by sudden changes in water levels), and its desirability as a sport fish. Interior should request that the U.S. Fish and Wildlife Service with the assistance of the Arizona Department of Game and Fish address the feasibility of this trout management option.
2. The Fish and Wildlife Service should also conduct studies to determine if stranding of trout or exposure of trout-spawning areas significantly affect the overall trout population. If so, can stocking a certain trout species or stocking more fish compensate for the loss? They should also study the current aggressive stocking program to ensure that both catch and fish size are being optimized.

Endangered Fish Species - We recognize that American society, through Federal legislation, has placed an unlimited value on the preservation and reclamation of endangered species. Western acknowledges that objective and wants to support actively the recovery of endangered fish species below Glen Canyon Dam much as it is supporting the recovery of the Colorado squawfish, humpback chub, razorback sucker, and bonytail chub through the Upper Colorado Recovery Implementation Program for Endangered Fish Species. Towards this end, we recommend that Interior engage in the following:

1. Continue supporting, with continued financial support from power revenues, the scientific investigation of the humpback chub and other native fish

species within the Colorado River Basin with the objective of assessing and undertaking those management decisions which will assure the long-term survival of those species.

2. Initiate an active monitoring program for certain exotic species, particularly striped bass, which have the potential for severely degrading or destroying the breeding population of endangered fish species.
3. Evaluate the impact of human activities along the shoreline (e.g., swimming, wading) on the habitat and survival of the humpback chub in the lower part of the Lower Colorado River.
4. Acknowledge populations of endangered fish species in other areas of the Upper Colorado River Basin and determine if these other populations are significant enough to support delisting of some species under the Endangered Species Act.

Angler Safety - Western is sensitive to the issue of angler safety with regard to changes in river levels during the day. While anglers may prefer mitigating the rate of change in the river level by reducing ramping rates, there are other ways to address safety. Western recommends that Interior:

1. Work with the National Park Service to increase angler awareness of the potential changes in river levels in the stretch of the river supporting the trout fishery. This could be supplemented with periodic surveys of angler attitudes and concerns over fluctuating flows.
2. Post warning signs along the river advising anglers of potential changes in river levels. Encourage anglers to use the toll-free hotline the Bureau of Reclamation maintains to provide water release schedules when planning trips to the river.
3. Explore the feasibility of installing a visually unobtrusive radio-controlled annunciator system in the canyon that would warn of rapid changes in river levels.

Angler Access - We understand that there is some difficulty for boats in navigating the Colorado River during low flows to reach the trout fishing stretch of the river. Main channels could be easily marked for navigation. Water flows could be redirected or channels dredged to provide navigable access.

Rafter Safety - One area in which Western finds it difficult to provide recommendations is in the area of rafter safety. Studies should assess the actual accident rate compared to the number of rafts and the relationship between accidents and river levels. We commend Reclamation for making water release information available on its toll-free hotline. As we understand it, rafting guides are concerned with river levels relative to white water rapids. It is unlikely that a consistent release level exists that would ensure a maximum degree of safety at every rapid between the dam and Lake Mead. There are inherent risks to this activity that are impossible to mitigate, and a certain amount of risk is what makes rafting so exciting.

For the record, we are submitting graphs comparing flows at Lee's Ferry with and without the dam. Although it is evident from these graphs that there are considerable weekly fluctuations in releases, they demonstrate that dam operations tend to provide more flows in dry years during the prime rafting months of May through October and dampen the severity of flows during very wet years. Within the required 8.23 million-acre-foot (MAF) annual release to satisfy Colorado River Compact deliveries to the Lower Basin States and the normal summer operations, white-water rafting concessionaires, and private rafting parties are guaranteed a consistent operation. In those years of greater than 8.23 MAF release, the daily fluctuations are reduced. Thus, the dam has provided, and continues to provide, significant free benefits to white-water rafters. We suggest that the correct trade-off for these benefits is laying the responsibility for a safe rafting experience on the commercial and private entities using the river. While improved portage around rapids may relieve the fears associated with the worst rapids, experience and education of commercial river companies, river guides, and private parties are the best means of ensuring safety for river runners.

Western will continue to emphasize the need to determine the costs and benefits of any alternatives that are identified through this EIS process. We are currently assessing the effect of modified flows on power generation and cost, and we are working to determine the value of fishing and recreational benefits. We will closely examine proposals to extend current economic studies to assess theoretical benefits such as option value, bequeath value, or existence value.

We will insist that if operational or other changes are proposed, then who or what benefits from those changes and who pays for them must be clearly defined. Environmental and recreational interests are calling for a "balancing" of the resource interests in the canyon. This "balancing" must include a clear understanding of where those costs and benefits will end and, particularly, if new beneficiaries will pay for those new benefits.

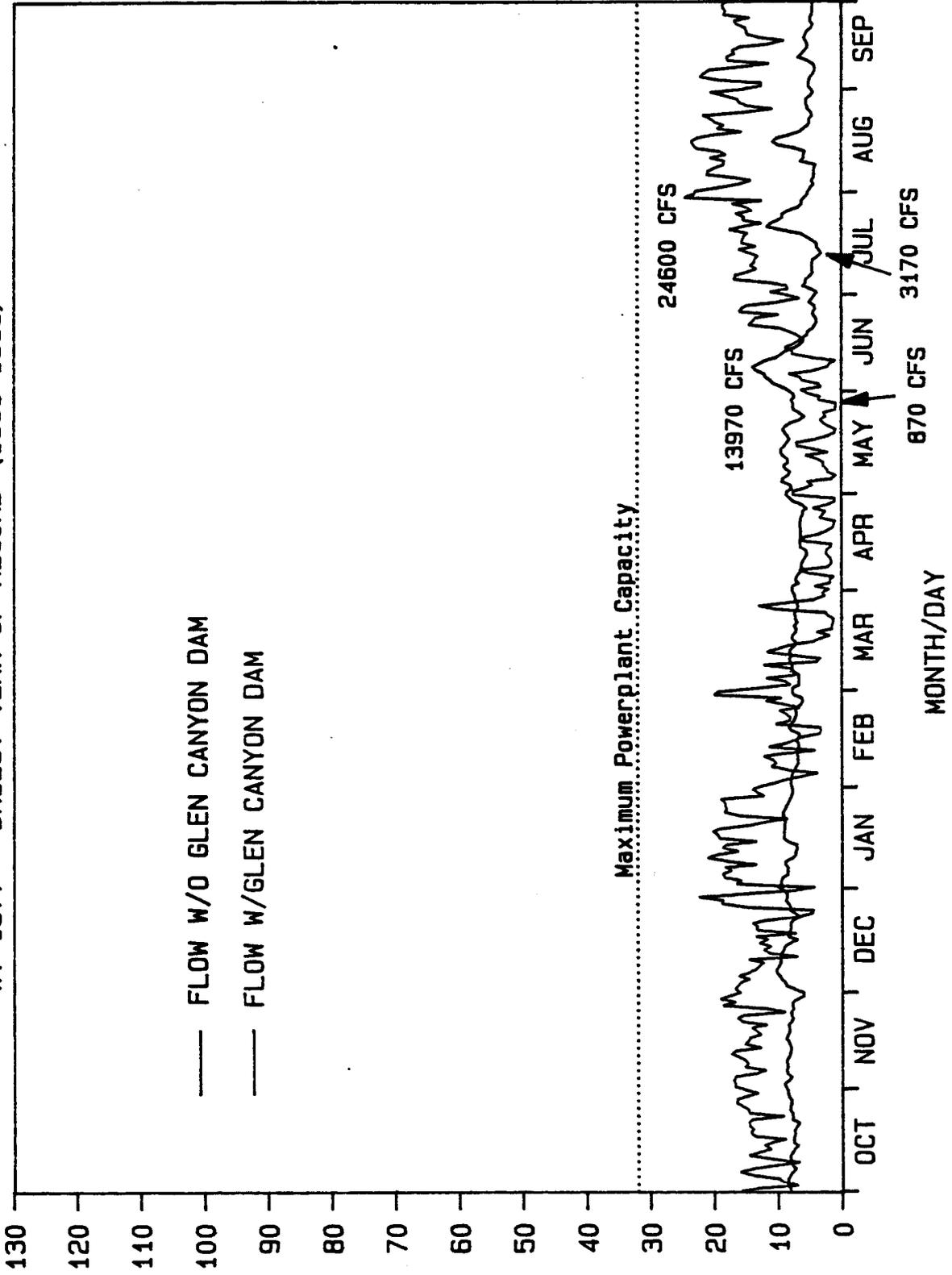
Finally, if changes in dam operations are proposed, it must be clearly stated whether those changes are a permanent solution or only a Band-Aid on a long-term problem. For example, if flows are more restricted to reduce the perceived negative impact on beaches without provision for new sediment input, beach degradation will only be delayed.

An objective and open examination of all alternatives through this EIS process can and will result in protecting the environment of the Grand Canyon and will be consistent with the full utilization of the resources provided by the Colorado River. Western assures its full cooperation toward achieving that goal.

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# MEAN DAILY FLOW - COLORADO RIVER @ LEE'S FERRY

WY 1977 - DRIEST YEAR OF RECORD (1896-1988)



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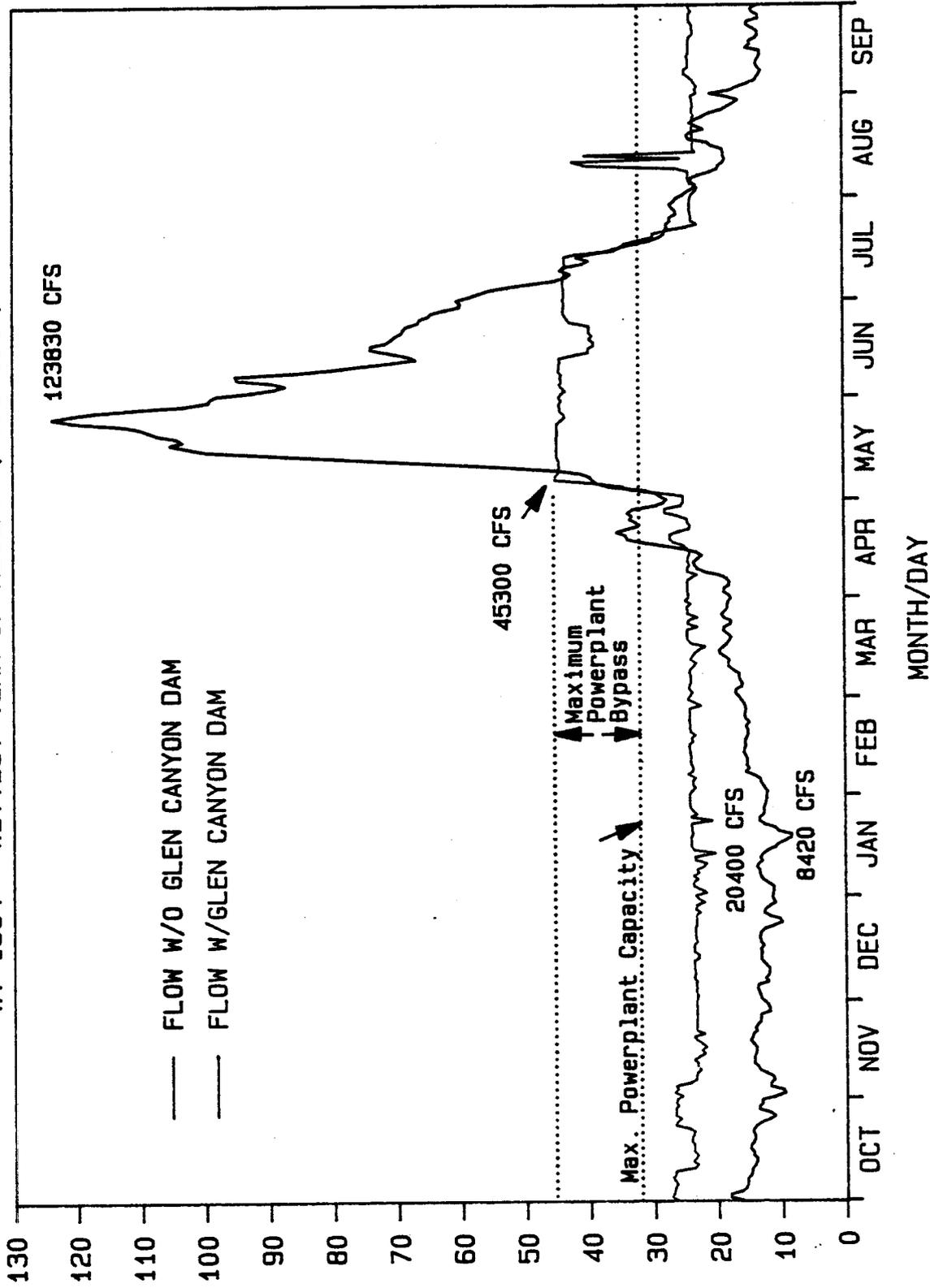
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MEAN DAILY FLOW - CFS (Thousands)

NOTE: GLEN CANYON FILLED IN 1980

# MEAN DAILY FLOW - COLORADO RIVER @ LEE'S FERRY

WY 1984 - WETTEST YEAR OF RECORD (1896-1988)



MEAN DAILY FLOW - CFS (Thousands)

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NOTE: GLEN CANYON FILLED IN 1980