

RECLAMATION

Managing Water in the West

Scoping Summary Report

Development of Lower Basin Shortage Guidelines and Coordinated Management Strategies for Lake Powell and Lake Mead, Particularly Under Low Reservoir Conditions



**U.S. Department of the Interior
Bureau of Reclamation
Upper and Lower Colorado Regions**

March 2006

Mission Statements

The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian Tribes and our commitments to island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

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Scoping Summary Report Executive Summary March 2006

The level of detail presented in this document is appropriate for a scoping report. The Bureau of Reclamation will analyze and refine the information presented in this report through the remaining steps of the National Environmental Policy Act process.

On May 2, 2005, in a letter to the to the seven governors of the Colorado River Basin States, the Secretary of the Department of the Interior (Secretary) directed the Bureau of Reclamation (Reclamation) to develop specific Colorado River Lower Basin shortage guidelines and coordinated reservoir management strategies to address operations of Lake Powell and Lake Mead under low reservoir conditions (see Appendix A). It was anticipated that, among other potential elements, these strategies would identify those circumstances under which the Secretary would reduce the annual amount of water available for consumptive use from Lake Mead to the Lower Division states (Arizona, California, and Nevada) below the 7.5 million acre-feet (maf) apportionment (a “Shortage”) pursuant to Article II(B)(3) of the Supreme Court Decree in *Arizona v. California*.

Reclamation issued a Federal Register (FR) notice on June 15, 2005 (70 FR 34794-34795), Appendix B, which solicited public input on the content, format, mechanism, and analyses to be considered during the development of proposed shortage guidelines and reservoir management strategies. A series of public meetings were held, and the level of public interest and comment was high. The outcome of this process was a decision by the Department of the Interior (Department) to begin a formal National Environmental Policy Act process and preparation of an Environmental Impact Statement (EIS).

On September 30, 2005, Reclamation published a Notice of Intent (NOI) (70 FR 57322-57323), Appendix C, to prepare an EIS and described the proposed Action as having two elements: 1) adoption of specific Lower Basin shortage guidelines, and 2) coordinated reservoir management strategies to address operations of Lakes Mead and Powell under low reservoir conditions.

The NOI also initiated a public scoping process to solicit input on the scope of specific shortage guidelines and coordinated reservoir management strategies and the issues and alternatives to be considered and analyzed in the preparation of the EIS. As part of this process, four public scoping meetings were held throughout the Colorado River Basin, and Reclamation received a number of written comments. Four sets of comments were also received following the closing of the comment period and are being considered in this Scoping Summary Report. These include comments received from the initial government-to-government consultations with Indian Tribal Governments, the Basin States’ Preliminary Proposal Regarding Colorado River Interim Operations, and two supplemental comment letters submitted by Environmental Defense and the Defenders of Wildlife.

Comments received during the scoping process identified a broad range of concerns regarding the availability and reliability of Colorado River water supplies. While many of the concerns were related to reservoir operations during drought and under low reservoir conditions, there were other comments that expressed a need to consider other water supply, water management, and operational strategies or programs that could improve the availability and reliability of Colorado River water supplies. After thorough consideration of the issues and comments received to date, Reclamation anticipates that the elements of the proposed Action will include:

- 1) Adoption of guidelines that will identify those circumstances under which the Secretary would reduce the annual amount of water available for consumptive use from Lake Mead to the Lower Division states (Arizona, California, and Nevada) below 7.5 maf (a “Shortage”) pursuant to Article II(B)(3) of the Supreme Court Decree in *Arizona v. California*.
- 2) Adoption of guidelines for the coordinated operation of Lake Powell and Lake Mead that are designed to provide improved operation of the two reservoirs, particularly under low reservoir conditions.
- 3) Adoption of guidelines for the storage and delivery of water in Lake Mead to increase the flexibility to meet water use needs from Lake Mead, particularly under low reservoir conditions. These guidelines are anticipated to address the storage and delivery of non-system water, exchanges, and water conserved by extraordinary measures.
- 4) Modification of the substance and term of the existing Interim Surplus Guidelines, published in the FR on January 25, 2001 (66 FR 7772-7782), from 2016 to coincide with the proposed new guidelines described above.

The Secretary proposes that these guidelines will be interim in nature and will extend through 2025. Adoption of new guidelines along with modification of existing operational guidelines for a consistent interim period will provide the opportunity to gain valuable experience for operating the reservoirs under the modified operations and should improve the basis for making additional future operations decisions, whether during the interim period or thereafter.

Reclamation will consider the information and comments received during the scoping process in the development of the alternatives to be considered and evaluated in the EIS. Reclamation will develop this broad range of alternatives and coordinate these activities with the Cooperating Agencies (listed below), the Basin States, Indian Tribes, key stakeholders, and other interested parties. Reclamation’s goal is to develop a sufficient number of alternatives that will permit the evaluation of the full range of operational elements being considered under the proposed Action. This will enable Reclamation to identify the water supply management and operational strategies that provide the greatest benefit and that best meet the purpose and need of the proposed Action.

Five federal agencies are participating in this EIS process as Cooperating Agencies, which include the Bureau of Indian Affairs, the National Park Service, the U.S. Fish and Wildlife Service, the Western Area Power Administration, and the U.S. Section of the

International Boundary and Water Commission. The Cooperating Agencies are expected to assist in the development and evaluation of alternatives and in the preparation of the EIS. Reclamation will consult with and obtain the comments of these agencies due to their jurisdiction by law or special expertise with respect to any environmental impact that may result from the proposed Action.

Section 1.0 Introduction and Background

1.1 Description of the Proposed Action

The Bureau of Reclamation (Reclamation) acting on behalf of the Secretary of the Department of the Interior (Secretary) proposes to take action to adopt specific Colorado River Lower Basin shortage guidelines and coordinated reservoir management strategies to address operations of Lake Powell and Lake Mead, particularly under low reservoir conditions. This proposed Action will provide a greater degree of certainty to all water users and managers in the Colorado River Basin by providing more detailed guidelines for the operation of Lake Powell and Lake Mead and by allowing water users in the Lower Basin to know when, and by how much, water deliveries will be reduced during drought and low reservoir conditions. In addition, this proposed Action is designed to delay the onset and magnitude of shortages and will maximize the protection afforded to water supply, hydropower production, recreation and environmental benefits by water storage in Lakes Powell and Mead.

Reclamation has determined that the proposed adoption of specific Colorado River Lower Basin shortage guidelines and coordinated reservoir management strategies is a major federal action with the potential to significantly affect the quality of the human environment, and therefore, in compliance with the National Environmental Policy Act (NEPA) of 1969, as amended, is preparing an Environmental Impact Statement (EIS) to assess the potential environmental impacts associated with the proposed Action. One of the activities associated with preparation of an EIS is the solicitation and review of public, tribal, and agency input as a component of the identification and analysis of alternatives and potential environmental impacts. This process of determining the key environmental issues to be addressed in the EIS document is termed “scoping.”

1.2 Purpose of This Report

This Scoping Summary Report provides a summary of the comments received and the issues raised during the scoping process and describes the current assessment of the proposed scope of the environmental analysis to be included in the EIS. The Department is publishing this Scoping Summary Report as a voluntary effort to assist in public understanding of this important document.

The level of detail presented in this document is appropriate for a scoping report. Reclamation will analyze and refine the information presented in this report through the remaining steps of the NEPA process.

1.3 Background

The Secretary is vested with the responsibility of managing the mainstream waters of the lower Colorado River pursuant to applicable federal law. This responsibility is carried out consistent with the Law of the River.¹ The Colorado River Basin Project Act of 1968 (CRBPA) directed the Secretary to adopt criteria for coordinated long-range operation of reservoirs on the Colorado River in order to comply with and carry out the provisions of the Colorado River Compact of 1922 (Compact), the Colorado River Storage Project Act of 1956 (CRSP), the Boulder Canyon Project Act of 1928 and the United States-Mexico Water Treaty of 1944. These criteria are commonly collectively referred to as the Long Range Operating Criteria (LROC). The Secretary sponsors a formal review of the LROC every five years.

The Secretary establishes an Annual Operating Plan (AOP) each year for the Colorado River reservoirs. The AOP describes how Reclamation will manage the reservoirs over a 12-month period, consistent with the LROC, applicable Federal laws, the United States-Mexico Water Treaty of 1944, interstate compacts, the 1964 Supreme Court Decree in *Arizona v. California* (Decree), and other documents relating to the use of the waters of the Colorado River. Further, as part of the AOP process, the Secretary makes annual determinations on the extent to which the reasonable beneficial use requirements of mainstream users in Arizona, California and Nevada (the Lower Division states) can be met. Reclamation consults annually with the Colorado River Basin States, Indian Tribes, and other interested parties in the development of the AOP.

In 2001, the Department of the Interior (Department) adopted Interim Surplus Guidelines (66 FR 7772-7782) that are used by the Secretary in making annual determinations regarding Normal and Surplus conditions for the operation of Lake Mead. Since adoption, these Guidelines have, among other operational and management benefits, provided the Department and entities in Arizona, California, and Nevada that rely on the Colorado River greater predictability in identifying when Colorado River water in excess of 7.5 million acre-feet (maf) will be available for use within these three states. A Normal year is a year in which annual pumping and release from Lake Mead will be sufficient to satisfy 7.5 maf of consumptive use in accordance with the Decree. A Surplus year is a year in which water is available for pumping or release from Lake Mead to satisfy greater than 7.5 maf of consumptive use, pursuant to Article II(B)(2) of the Decree after consideration of relevant factors, including the factors listed in the LROC. Surplus water is available to agencies that have contracted with the Secretary for delivery of Surplus water, for use when their water need exceeds their basic entitlement, and when the excess need cannot be met within the basic apportionment of their state subject to availability.

¹ The treaties, compacts, decrees, statutes, regulations, contracts and other legal documents and agreements applicable to the allocation, appropriation, development, exportation and management of the waters of the Colorado River Basin are often referred to as the “Law of the River.” There is no single, universally-agreed upon definition of the “Law of the River,” but it is useful as a shorthand reference to describe this longstanding and complex body of legal agreements governing the Colorado River.

At this time, the Department does not have detailed guidelines in place that define the circumstances under which the Secretary would reduce the annual amount of water available for consumptive use from Lake Mead to the three Lower Division states below 7.5 maf pursuant to Article II(B)(3) of the Decree. Nor are there guidelines in place to enable the Secretary to manage the competing interests of Lake Powell and Lake Mead under low reservoir conditions. As a consequence of this, water users who rely on the Colorado River in these states are not currently able to identify particular reservoir conditions under which the Secretary would reduce the annual amount of water available for consumptive use from Lake Mead to the Lower Division states below 7.5 maf. Nor are these water users able to identify the frequency or magnitude of any potential future annual reductions in their water deliveries.

The adoption of specific Colorado River Lower Basin shortage guidelines and coordinated reservoir management strategies to address operations of Lake Powell and Lake Mead, particularly under low reservoir conditions, will enable the water users that rely on the Colorado River to better plan for periods of less than Normal water deliveries. Additionally, these management strategies are also expected to facilitate conservation of reservoir storage, thereby minimizing the adverse effects of long-term drought or low-reservoir conditions in the Colorado River Basin.

1.4 Lead and Cooperating Agencies

Reclamation is the Lead Agency in preparing the proposed EIS. Five Cooperating Agencies are also participating in this EIS process which include the Bureau of Indian Affairs, the National Park Service, the U.S. Fish and Wildlife Service, the Western Area Power Administration, and the U.S. Section of the International Boundary and Water Commission. Reclamation will consult with and obtain the comments of these agencies due to their jurisdiction by law or special expertise with respect to any environmental impact that may result from the proposed Action.

1.5 Public Involvement and the Scoping Process

Scoping is the phase in the NEPA process whereby the initial range of issues to be analyzed in the EIS is determined. This phase occurs as early in the process as possible and is an open process intended to obtain the views of the public, agencies, tribes and other interested parties regarding the scope of the study.

For this project, Reclamation held two series of public meetings to obtain input from the public regarding the scope of the study. The initial series of public meetings was held in July 2005 (see Federal Register (FR) notice of June 15, 2005, Appendix B). The purpose of this first series of meetings was to solicit input from the public regarding the content, format, mechanism, and analysis to be considered during the development of the proposed shortage guidelines and reservoir management strategies. The outcome of this initial public input process was a decision by the Department to begin a formal NEPA process and preparation of an EIS. The second series of public meetings was held in November 2005 (see FR notice of September 30, 2005, Appendix C). The purpose of

this second series of meetings was to solicit comments from the public on the scope of specific shortage guidelines and other coordinated reservoir management strategies and the issues and alternatives that should be considered and analyzed in the EIS. A discussion of the Public Scoping Meetings is provided in Section 2.0.

1.6 Organization of This Report

This report includes an introduction and background discussion (Section 1), an overview of the public participation and scoping process (Section 2), an overview of the method used to catalog, review and evaluate the comments received (Section 3), a summary of the number and nature of comments received (Section 4), a listing and discussion of the issues that were raised by certain comments that were determined to be beyond the proposed scope of the environmental assessment required for the proposed Action (Section 5), and a section that describes the proposed scope of the EIS (Section 6).

As noted in Section 1.5, Reclamation conducted two series of public meetings for this project. The results of and public input received in the initial series of meetings are summarized in a memorandum dated September 7, 2005, a copy of which is provided in Appendix D.

Further, the comments and issues raised in the initial series of public meetings are considered, evaluated, and analyzed jointly with the comments received in the second series of meetings. The results of the preliminary evaluation of all of the comments received are discussed in Section 4. Reclamation will consider the input received to date as it prepares this EIS.

This report also provides the following supporting information, included as appendices to this report:

- A. The Secretary's Letter to the Seven Colorado River Basin States on May 2, 2005
- B. June 15, 2005, Federal Register Notice
- C. September 30, 2005, Federal Register Notice
- D. Memorandum – Summary of Preliminary Public Input for the Development of Management Strategies for Lake Powell and Lake Mead, Including Lower Basin Shortage Guidelines, Under Low Reservoir Conditions, September, 2005
- E. Public Involvement Plan
- F. Notices of Public Meetings – News Releases
- G. November 1, 2005, Salt Lake City, Utah Public Meeting Documents
- H. November 2, 2005, Denver, Colorado Public Meeting Documents
- I. November 3, 2005, Phoenix, Arizona Public Meeting Documents
- J. November 8, 2005, Henderson, Nevada Public Meeting Documents
- K. Public Meeting Presentation
- L. Methodology for Categorizing/Cataloging Public Comments
- M. January 19, 2006, Las Vegas, Nevada Tribal Consultation Meeting Documents
- N. January 27, 2006, Phoenix, Nevada Tribal Consultation Meeting Documents
- O. February 16, 2006, Phoenix, Arizona Tribal Consultation Meeting Transcripts

- P. Tribal Consultation Meeting Presentation
- Q. February 3, 2006, Proposal from Colorado River Basin States
- R. February 1, 2006, Environmental Defense Letter
- S. February 21, 2006, Defenders of Wildlife Letter
- T. List of Commentors Sorted by Commentor Type
- U. Summary of Comments – Comment Database
- V. Summary of Issues Raised in Comments – Grouped by Resource/Issue Area
- W. Copies of Unique Comments
- X. Preliminary EIS Table of Contents
- Y. News Articles

2.0 Public Participation Process

Reclamation is committed to providing opportunities for the public, stakeholders and other interested parties to engage in meaningful participation through the EIS process. To achieve this goal, a Public Involvement Plan was developed and will be used and updated throughout this process (see Appendix E). The objectives of this Public Involvement Plan are to meet the public participation requirements set forth in NEPA for an EIS, identify interested parties or stakeholders, and secure public input that will provide information and facilitate the decisions needed to define, formulate, analyze, compare, and recommend for adoption specific Colorado River Lower Basin shortage guidelines and coordinated reservoir management strategies to address operations of Lake Powell and Lake Mead, particularly under low reservoir conditions. Further, by enlisting an outreach approach that is truly inclusive, a wide variety of citizens, tribal governments, and state and local agencies are engaged in this process and are expected to provide valuable input on the proposed Action and all alternatives to be considered and analyzed.

2.1 Public Notification

The public scoping process for the proposed Project was designed to solicit input from the public; from federal, state, and local agencies; and from other interested parties concerning the scope of specific shortage guidelines and other coordinated management strategies and the issues and alternatives that should be considered and analyzed in the preparation of the EIS. It should be noted that before issuing a Notice of Intent (NOI) in September 2005 (see Appendix C), Reclamation held a series of meetings pursuant to the FR notice published on June 15, 2005 (see Appendix B). As part of this process, Reclamation also held two public meetings that were used to exchange information regarding the project and that provided the public an opportunity to present their comments. These public meetings were attended by individuals and groups interested in the management of the Colorado River water supplies, the operation of the facilities that are used in the management of these supplies, and other aspects of the proposed Action.

Reclamation published in the FR on September 30, 2006 (70 FR 34794-34795), Appendix C, a notice to solicit comments from the public and Reclamation's intent to hold four meetings to receive additional oral or written comments from the public relative to the proposed Action.

Reclamation also issued news releases on September 30, 2005, and on October 28, 2005, that were published in various upper and lower Colorado River Basin community newspapers. These two news releases also provided notice of Reclamation's intention to hold four meetings to receive additional oral or written comments from the public relative

to the proposed Action and EIS. Copies of these two news releases are provided in Appendix F.

Reclamation also published the above notices on its website at the following address:

<http://www.usbr.gov/lc/region/programs/strategies.html>

Reclamation will use this website to distribute and make available pertinent documents and other related information to the public.

2.2 Public Meetings

Reclamation conducted two sets of public meetings to solicit input from the public. The first set of public meetings were conducted at the times and locations noted in Table 2-1. The second set of meetings consisted of four Public Scoping Meetings and were conducted at the times and locations noted in Table 2-2. The public meetings and public comment process resulted in moderate participation by a cross section of interested stakeholders, including local business communities and special interest and environmental groups, as well as federal, state, and local agencies. According to the sign-in sheets from the six public meetings, a total of 134 individuals attended the meetings. Copies of the sign-in sheets from the two July 2005 public meetings are provided in Appendix D. Copies of the sign-in sheets from the four November 2005 Public Scoping Meetings are provided in Appendices G, H, I and J.

**Table 2-1
July 2005, Public Meeting Attendance**

Meeting Date/Time	Location	Number of Attendees
Tuesday July 26, 2005 10 a.m. to 12 noon	Henderson Convention Center, Grand Ballroom, 200 South Water Street, Henderson, Nevada.	46
Thursday July 28, 2005 10 a.m. to 12 noon	Hilton Salt Lake City Center, Topaz Room, 255 South West Temple, Salt Lake City, Utah	33

**Table 2-2
November 2005, Public Scoping Meeting Attendance**

Meeting Date/Time	Location	Number of Attendees
Tuesday November 1, 2005 6 p.m. to 8 p.m.	Hilton Salt Lake City Center, Topaz Room, 255 South West Temple, Salt Lake City, Utah	7
Wednesday November 2, 2005 6 p.m. to 8 p.m.	Adam's Mark Hotel, Tower Court D, 1550 Court Place, Denver, Colorado	18
Thursday November 3, 2005 6 p.m. to 8 p.m.	Arizona Department of Water Resources, 3 rd Floor, Conference Rooms A&B, 500 North Third Street, Phoenix, Arizona	23
Tuesday November 8, 2005 6 p.m. to 8 p.m.	Henderson Convention Center, Grand Ballroom, 200 South Water Street, Henderson, Nevada	7

Reclamation staff provided a presentation to the attendees at each of the four meetings with the following outline:

- ◆ Welcome and Introductions
- ◆ Purpose of Meeting
- ◆ Background on proposed study
- ◆ Objectives of the study
- ◆ Process Schedule
- ◆ Information on Issues/Processes

A copy of the presentation is provided in Appendix K. The presentation was followed by a question and answer period.

The meeting attendees were invited to also submit their comments and suggestions in writing to one of the following addresses:

Lower Colorado Region	Upper Colorado Region
Regional Director Bureau of Reclamation Lower Colorado Region Attention: BCOO-1000 P.O. Box 61470 Boulder City, Nevada 89006-1470 Faxogram: (702) 293-8156 Email: strategies@lc.usbr.gov	Regional Director Bureau of Reclamation Upper Colorado Region Attention: UC-402 125 South State Street Salt Lake City, Utah 84318-1147 Faxogram: (801) 524-3858 Email: strategies@uc.usbr.gov

During the course of the public meetings, members of the public were invited to provide oral comments. These oral comments were recorded by a Court Reporter that was retained by Reclamation and that was present at each of the four meetings. The Court Reporter used computerized stenotype machines and Computer Aided Transcription to create a record of the oral comments. These transcripts reflect the verbatim comments provided by the commentors in the different Public Scoping Meetings. A copy of the transcripts from each of the four November 2005 meetings is presented in Appendices G, H, I, and J, respectively.

2.3 Comment Period

Reclamation provided a 62-day comment period consistent with the Public Notice issued on September 30, 2005.

2.4 Newspaper and Other Printed Media

Local and regional newspapers and other media sources have printed articles in the past two to three years presenting information to the public on the Colorado River Basin drought and water supply conditions as well as the recent proposed Action. Appendix Y presents 15 newspaper articles from different newspapers published throughout the Colorado River Basin that provide a representational range of information presented by the news media.

3.0 Comment Review and Analysis

This section describes the processes used to receive, catalog, and evaluate the context of the public comments. All written comments received were processed consistent with the following set of protocols to ensure consistency and accuracy of handling and disposition.

3.1 Comment Receipt and Cataloging

Comments were received by Reclamation's Upper and Lower Basin Regional Offices, and screened to identify duplicate copies of letters received from the same commentor.² Following this initial screening, the comment letters were assigned a code and source identification and entered into a database.

Appendix L provides a description of the methodology used to categorize the comment letters and comments received. Appendix U provides a listing of the commentors who submitted comment letters. This list of commentors is sorted by commentor type and is listed according to the source identification assigned to the different commentor groups.

Also, as previously noted, two sets of comments correlating to the two separate public input processes conducted by Reclamation were recorded. The first set of comments relate to public meetings held in July 2005 and hereinafter are collectively referred to as Group 1 Comments. The second set of comments relate to the public meetings held in November 2005 and are hereinafter collectively referred to as Group 2 Comments.

As previously noted in Subsection 1.6, the Group 1 and 2 Comments are considered, evaluated, and analyzed jointly within this report.

3.2 Data Entry of Individual Comments

Following initial cataloging, each comment letter was evaluated and the specific comments provided therein were identified. When more than one issue was presented within any given comment letter, an additional numeric code was used to define the order in which the comments/issues were presented within the letter. For example, the second comment/issue raised within the third letter received from a local agency would be assigned the following code "L-0003.2."

Individual comment summaries were then entered into a sortable and searchable database to facilitate subsequent efficient summarization and retrieval of specific comments

² The word "commentor" is a commonly used term in the NEPA process and EIS preparation process and generally refers to any person, agency, or other entity that provides written or oral comments or input relative to the content, process, scope, or analysis of the NEPA/EIS process.

related to specific issues. It should be noted that several hundred form letters (identical comment letters) were received. While each commentor and respective comments were considered, the identical form letters were grouped to minimize the number of database entries.

3.3 Data Analysis and Summarization

After being entered into the database, the comments were further sorted by the following resource and/or issue areas to assess and summarize the concerns related to the proposed study.

- Format/Mechanism
- Agriculture Resources
- Cultural Resources
- Groundwater
- Land Use / Planning
- Public Services
- Reservoir Management
- Transboundary Impacts
- Utilities / Service Systems
- Water Quality
- Water Use
- Alternatives
- Content
- Biological Resources
- Energy / Power Production
- Hydrology
- Population / Housing
- Recreation
- Socio-economics
- Transportation / Traffic
- Water Supply / Quantity
- Water Rights
- Miscellaneous

This approach facilitated a comprehensive identification of the range of issues that were raised in the comment letters with respect to the proposed Action. Results from this analysis are summarized in the following sections of this report.

4.0 Evaluation of Public Comments

As previously noted, Reclamation issued several notices and held public meetings to encourage public input with respect to the proposed Action and EIS. In the initial series of meetings, Reclamation sought public input relative to the content, format, mechanism, and analysis to be considered during the development of the proposed guidelines and strategies.

Based on several factors, including the comments received during the initial series of meetings held pursuant to the FR notice published on June 15, 2005 (see Appendix B), Reclamation determined that it would utilize a public process pursuant to NEPA for the development of specific Colorado River Lower Basin shortage guidelines and coordinated reservoir management strategies to address operations of Lake Powell and Lake Mead, particularly under low reservoir conditions. It further determined that it would be beneficial to conduct additional public scoping meetings to solicit further public input with regard to the scope of the studies and analyses to be undertaken, as well as the issues and alternatives to be considered in the EIS. Therefore, Reclamation issued additional notices regarding its intent to prepare an EIS and notice to solicit comments and hold public scoping meetings (see Appendix C, FR notice published on September 30, 2005). The comments from the two public input processes conducted thus far (Group 1 and Group 2 comments) have been merged and analyzed to assess the entire range of issues identified in the comment letters.

The following summary provides a general overview of the number of comments by issue. Some comments concerned more than one subject; therefore, some comments have been included in more than one quantitative issue summary although they were counted only once for the total comments category in Subsection 4.1.

Each individual commentor submitted one or more scoping comment letters, each containing one or more individual comments that were categorized by subject. The most frequently raised issues for a given resource area are summarized below. No ranking of importance is implied within the presentation order of these most frequently raised issues.

4.1 Overview and Number of Commentors and Comments

A total of 1,153 written comment letters were received and these letters contained some 5,340 comments. Some 924 (approximately 80 percent) of the 1,153 letters received consisted of form letters. The form letters represent comment letters that were essentially identical in form and content. There were two different form letters. The first form letter was repeated 15 times and the second form letter was repeated 909 times. As a consequence of the large number of form letters, only 231 of the 1,153 comment letters received were considered unique. Also, of the 5,340 comments received, only some 278 comments were considered unique because many of the comments in the different letters

are repeated or raise the same issue. Appendix W presents copies of the 231 unique written comment letters.

Table 4-1 provides a summary of the number of comment letters and comments by commentor type. The commentor types represent the different interest groups that submitted comment letters and include businesses; federal, state and local agencies; special interest groups; and individuals.

**Table 4-1
Breakdown of Comment Letters and Comments Received by Commentor Type**

Comment / Factor	Commentor Type							Total
	Meeting Series	Business	Federal Agency	Special Interest / Environmental Group	Individual	Local Agency / Water District	State Agency	
Total Number of Written Comment Letters Received	Group 1	3	5	14	1,054	8	4	1,088
	Group 2	2	1	13	27	17	5	65
	Total	5	6	27	1,081	25	9	1,153
Total Number of Comments Provided Within Comment Letters	Group 1	5	32	72	4,897	27	32	5,065
	Group 2	7	23	45	56	110	34	275
	Total	12	55	117	4,953	137	66	5,340
Number of Unique Comment Letters Received	Group 1	3	5	14	132	8	4	166
	Group 2	2	1	13	27	17	5	65
	Total	5	6	27	159	25	9	231
Number of Unique Comments ¹	Group 1	4	32	37	38	19	25	154
	Group 2	7	19	21	17	52	33	149
	Total	9	50	58	50	69	54	278

Notes:

1. The total number of unique comments is not equal to the numeric sum of the unique comment in Group 1 and 2 because some of the comments are repeated between the two groups.

4.2 General Assessment of Issues Raised in Comments

As noted in Table 4-1, Reclamation received comment letters from a wide range of interest groups that included businesses; federal, state and local agencies; special interest groups; and individuals. These letters included some 5,340 comments. To facilitate the assessment of comments, those comments with common themes or that raised similar issues or questions were organized and combined. As a result, only some 278 unique comments were identified.

In terms of comment content, some comments raised several issues and concerned more than one subject. For example, several comments requested “*consideration and evaluation of the transfer of Lake Powell and Lake Mead storage to groundwater aquifers.*” Such an action would likely result in less water being stored in one or both reservoirs and the development and employment of numerous groundwater basins in order to achieve an equivalent amount of storage capacity. This alternative reservoir operation and water management scenario would, at a minimum, need to consider and include analysis of resource factors or issues such as groundwater, hydrology, recreation, reservoir management, water supply/quantity, and water rights. Therefore, the comment

- “consider/evaluate transfer of Lake Powell and Lake Mead storage to groundwater aquifers,” involves at least six different subject matters that may need to be considered and analyzed in the proposed study. Other comments similarly raised several issues and concerned more than one subject.

Consistent with the above, the issues raised in the different comments have been organized in the categories noted in Section 3.3. The number of issues raised in each comment category is summarized in Table 4-2.

Table 4-2
Summary of Number of Comments Raised in Each Issue Category

Commenter Type	Group 1	Group 2	Total
Format / Mechanism	1,941	55	1,996
Content	4,036	177	4,184
Agriculture Resources	18	32	50
Biological Resources	1,039	36	1,075
Cultural Resources	23	4	27
Energy / Power Production	10	32	42
Groundwater	958	12	970
Hydrology	3,032	142	3,174
Land Use / Planning	11	38	49
Mitigation/Monitoring	1	8	9
Population / Housing	11	9	20
Public Services	18	36	54
Recreation	1,035	25	1,060
Reservoir Management	3,047	117	3,164
Socio-economics	3,042	161	3,203
Transboundary Impacts	16	62	78
Transportation / Traffic	10	1	11
Water Supply / Quantity	3,057	161	3,218
Water Quality	964	38	1,002
Water Rights	2,970	108	3,078
Alternatives	1	16	17
Miscellaneous	21	13	34

4.2.1 Format/Mechanism

Reclamation solicited comments and suggestions from the public on the Format and Mechanism of the proposed strategies to address the coordinated operations of Lake Powell and Lake Mead and also possible shortage guidelines. The Format is intended to address the body of rules that would encapsulate the criteria. Mechanism relates to the process method that the guidelines or shortage criteria would be incorporated into the body of laws, treaties, compacts, agreements, and rules that govern the operations and management of the Colorado River which are commonly referred to as the Law of the River.

A large number of comment letters suggested that the preferred method for development and evaluation of the proposed shortage guidelines and reservoir management strategies is through an EIS. The comments noted that all reasonable alternatives need to be

considered, analyzed and included in the EIS to provide a proper advisory document. A need for the type of public process provided through a NEPA process was expressed in many comments. It is generally believed that this type of process will provide the many interested parties an opportunity to review and comment on the alternatives and analyses that will be considered in the EIS. The entities that requested to be consulted in this process included federal agencies, the Basin States, Indian Tribes, Non-governmental Organizations (NGOs), municipalities, electrical utilities and associations, and other interested parties.

Several comments suggested that water supply problems could be resolved by updating the Colorado River Compact of 1922 (Compact). The underlying theme of these comments was that the Colorado River is oversubscribed and that the allocations provided by the Compact need to be revised to reflect the river's supply limitations and changing societal demands. In contrast, other comments noted that the guidelines and strategies developed through this process will need to be consistent with the Law of the River, which means that the Compact should not be re-opened.

The number of comments that suggested that the guidelines be interim versus those that suggested that the guidelines be permanent were approximately even. Several of the comments that preferred interim guidelines indicated that the interim period, along with flexible guidelines, are needed to permit adjustment to the guidelines as experience is gained and conditions change.

Many comments suggested that a basin-wide approach was needed for development of solutions to the water supply challenges presented by the drought conditions. The comments also suggested that the potential impacts to both the Upper and Lower Basin users needed to be evaluated in the EIS and that both direct and indirect impacts need to be considered.

Several comments recommended the adoption of the proposed guidelines be in the form of guidelines as opposed to formal federal regulations and that this type of criterion could best be adopted through incorporation into the LROC and AOP processes.

The complete list of comments that relate to Format/Mechanism aspects of the proposed Action is presented in Appendix V, Table V-3.

4.2.2 Content

Reclamation solicited comments and suggestions from the public on alternatives or the content of possible alternatives that may be considered. Content relates to the provisions or rules to be included in a specific alternative. These provisions or rules would be used to enact an action or series of actions needed to render the desired result(s). For example, in the case of the previously adopted Interim Surplus Guidelines, the annual declaration of Surplus conditions and Surplus releases are predicated on a trigger system that is tied to certain Lake Mead water levels and projected inflow conditions. As such, the principal contents or rules of the Interim Surplus Conditions consist of the Lake Mead water level triggers and projected inflows.

Over 4,100 comments were received that referenced elements that could be included in an alternative. Many of these comments were either identical, or raised the same issue, or repeated the same theme and therefore, there are only some 158 unique comments.

In terms of actual alternatives that were offered, there were only three proposals submitted. These are discussed in Section 4.4.

Some of the general elements that the comment letters suggest be included in the alternatives include the following:

- The decommissioning of Glen Canyon Dam (and associated draining of Lake Powell),
- A sustainable sediment management program for Lake Powell and Lake Mead,
- The transfer of Lake Powell and Lake Mead storage to groundwater aquifers,
- Updating the Compact to reflect the Colorado River's supply limitations and changing societal demands,
- The restoration of natural flows through Glen and Grand Canyons,
- Protection of cultural resources in Glen Canyon,
- More aggressive water conservation now to minimize drought impacts in future years,
- Guidelines that provide priority to water supply over hydrogeneration,
- Guidelines that require Mexico and Nevada to share in shortages with Arizona,
- Aggressive tamarisk eradication efforts to conserve water,
- Assumption that Yuma Desalting Plant will be operated at full capacity in future years,
- Stricter management of new housing development as a means to manage water needs,
- Use of ocean desalination water to make up shortages,
- Alternative pricing schedules for agricultural water that do not include subsidies and encourage conservation, and
- Alternative that includes interstate water leasing and inter/intra-basin water transfers and exchanges.

In addition, there were some comments that were more specific in terms of what they wanted the guidelines to specify. For example, several comment letters recommended limiting the maximum Lake Mead delivery reduction (Shortage) to 600 thousand acre-feet per year (kaf/year). Another example is a recommendation that the Shortage determination be based on the protection of the minimum power pool water surface elevations at lakes Powell and Mead. And yet another example is the recommendation to provide a requirement for a minimum 8.23 maf/year objective release from Lake Powell.

The complete list of comments that relate to the content of the possible alternatives is presented in Appendix V, Table V-2.

4.2.3 Agricultural Resources

A total of 50 comments (18 from Group 1 and 32 from Group 2) were received relating to agricultural issues. However, only some 26 of these comments are considered to be unique comments.

Encouraging water conservation measures was a common theme as was recommending the evaluation of a long-term land fallowing program. Adjusting the pricing schedule for agricultural water by removing the subsidies currently provided was offered as a strategy to encourage more efficient water use. One comment letter suggested assessing agricultural water users a surcharge that could be used to fund infrastructure improvements geared towards conservation and enhanced efficiency (e.g. converting ditches to pipelines).

Many comments letters expressed a concern that agricultural and crop production would be severely impacted and asked that these impacts be considered and evaluated in the EIS. Similarly, several comment letters expressed concerns regarding the likelihood that the subject guidelines would trigger efforts to reallocate water between agriculture and municipal uses. The underlying concern of these types of comments was that these types of relocations would have the potential to significantly impact agriculture in the western states. In contrast, there were also numerous comments that recommended the temporary fallowing of agricultural lands as a means to manage the short-term effects of potential Colorado River water delivery reductions.

The complete list of comments that relate to agriculture is presented in Appendix V, Table V-4.

4.2.4 Biological Resources

A total of 1,075 comments (1,039 from Group 1 and 36 from Group 2) were received on the topic of biological resources. However, only some 35 of these comments are considered to be unique comments.

Approximately 95 percent of the comments that were received on the topic of biological resources concerned two issues: 1) decommissioning of Glen Canyon Dam, and 2) restoration of the natural flows through the Glen and Grand Canyons. These comments had little to no relevance on the proposed Action but rather were more focused on the desire to restore the natural biological systems and ecosystem of the river in order to provide improved habitat for native fish and bird species.

Other similar comments expressed concerns that some of the proposed Actions would reduce the instream flows and or significantly affect the water levels of the reservoirs the consequence of this being potential impacts to the habitat and species that depend on these systems. The types of projects that were cited as being a concern included; water transfers and exchanges, aggressive water conservation, operation of the Yuma Desalting Plant, tamarisk eradication efforts, amongst others. In some cases, the comments expressed that there may be positive effects that could result from the actions, such as more surface water becoming available through tamarisk eradication efforts. However, other comments pointed out potential negative effects, such as the potential adverse effects that a reduction in instream flows might have due to transfers and exchanges of water rights, changes in the points of diversion of some water, and a general reduction in

Lake Mead releases associated with a Shortage declaration. The additional suggestion provided by many of these comments was that there would be a need to evaluate the potential impacts to riparian vegetation, fish and wildlife habitats in the affected systems.

The complete list of comments that relate to biological resources is presented in Appendix V, Table V-5.

4.2.5 Cultural Resources

A total of 27 comments (23 from Group 1 and 4 from Group 2) were received on the topic of cultural resources. However, only three of these comments are considered to be unique comments.

The primary issue raised in the comment letters regarded the protection of cultural resources in Glen Canyon. In order to do this, several comment letters suggested discontinuing storage of water at Lake Powell. They point out that these cultural resources are at risk of damage due to the ongoing fluctuations of lake levels and that there is a need to consider the effects of this and other related programs on these cultural resources.

Assessing the impacts of any guidelines or strategies on Native American cultural resources was the third comment presented. Several Indian Tribes asked that Reclamation evaluate any and all effects that may result from water reductions to the Indian Tribes.

The complete list of comments that relate to cultural resources is presented in Appendix V, Table V-6.

4.2.6 Energy/Power Production

A total of 42 comments (10 from Group 1 and 32 from Group 2) were received on the topic of energy/power production. However, only 27 of these comments are considered to be unique comments.

Comments received on the topic of energy/power production ranged from giving greater consideration to power production in the proposed guidelines to giving little to no priority to power production in the management of Lake Powell and Lake Mead. Most of the comment letters received from entities that have a vested interest in the power that is generated from Glen Canyon Dam and Hoover Dam suggested that there should be some consideration given to either protection or maximization of power production within the new guidelines. On the contrary, other comment letters suggested that water supply (amongst other) management factors have a higher priority within the Law of the River and therefore, power production should not be a factor when determining annual water releases from Glen Canyon and Hoover dams, particularly under low reservoir conditions. However, even though there were differences in opinions, almost all comments asked for an evaluation of potential impacts to power production and power users.

There were also some commentors that advocated for replacing hydroelectric power generation with wind and solar power. The basis for their comments was that lost energy production capacity from Glen Canyon and Hoover dams could be offset by energy production from these alternative sources.

The complete list of comments that relate to energy and power is presented in Appendix V, Table V-7.

4.2.7 Groundwater

A total of 970 comments (958 from Group 1 and 12 from Group 2) were received on the topic of groundwater resources. However, only 13 of these comments are considered to be unique comments.

The role of groundwater basins and groundwater storage was the focal point of comments that were received on the topic of groundwater resources. The comments fell into three general categories as follows:

1. Those that suggest that Lake Powell, and perhaps Lake Mead, may no longer be needed if all of the water was stored in groundwater basins;
2. Those that suggest that the water supplies of the Colorado River Basin could be more effectively managed and conserved through increased conjunctive use of surface, groundwater, and other sources of supply; and
3. Those that express a concern of potential impacts to groundwater supplies as users transition to or place a greater burden on groundwater supplies during Shortages or under future increased water demand conditions.

Some comment letters cite that one of the benefits of water storage in groundwater aquifers is the water conserved by minimizing the evaporation that would otherwise occur from water stored in Lake Powell and Lake Mead. Utilizing the aquifers as storage of Surplus water in times of excess precipitation or river flows was another comment received. Water could then be withdrawn as conditions necessitate.

The complete list of comments that relate to groundwater resources is presented in Appendix V, Table V-8.

4.2.8 Hydrology

A total of 3,174 comments (3,032 from Group 1 and 142 from Group 2) were received on the topic of hydrology. However, only some 113 of these comments are considered to be unique comments.

Comments received on the topic of hydrology primarily dealt with water deliveries, river flows, and storage, if the Glen Canyon Dam was decommissioned, if all or a portion of the surface storage was shifted to groundwater aquifers, or if the Compact was updated and amended. Many comment letters also noted the concern that hydrologic conditions could also be potentially affected by limiting releases from Lake Powell, reducing Lake Mead releases and deliveries to the Lower Division states, returning treated wastewater to the river in order to augment supplies, implementing water conservation methods, and other similar actions. A large group of comments also suggest that the water supplies of the Colorado River are oversubscribed. They further suggest that climate changes have reduced the Normal or average yield of the basin and therefore, a re-evaluation of the basin's Normal flow estimates and perhaps a re-allocation of the supplies may be needed. These are just a few examples of the potential conditions and issues that the comment letters suggest will need to be evaluated during the environmental review process.

The complete list of comments that relate to hydrology is presented in Appendix V, Table V-9.

4.2.9 Land Use

A total of 49 comments (11 from Group 1 and 38 from Group 2) were received on the topic of land use. However, only some 28 of these comments are considered to be unique comments.

Most of the comments that were received on the topic of land use related to potential water supply reductions and related impacts to urban and agricultural land use. Other similar concerns related to intra- and inter-state sale, lease, transfer, trade or exchange of water within the Basin and their impacts to urban and agricultural land use.

Some comment letters also expressed concern regarding how new housing developments would impact current water needs. A few of these comment letters suggest that future water shortages could be minimized by limiting new housing development within the Basin States.

A few comment letters suggested that water conservation and new land use designations can also be used to delay or minimize the effect of water shortages. For example, requiring artificial grass to be used instead of turf, limiting the construction of new golf courses, limiting population and housing growth in certain areas, were all mentioned as land use management methods that could be used to reduce water needs.

The complete list of comments that relate to land use is presented in Appendix V, Table V-10.

4.2.10 Mitigation and Monitoring

A total of nine comments (one from Group 1 and eight from Group 2) were received on the topic of mitigation and monitoring. These comments generally were concerned with the long-term effects of the potential actions and suggested that some level of monitoring would be needed to avoid potential adverse impacts. For example, the potential impacts to groundwater water quality resulting from increased off-stream storage and perhaps third party impacts associated with new land fallowing programs would need to be monitored to develop and implement some type of mitigation that would serve to avoid or minimize impacts.

One comment letter stated the need to develop monitoring and accounting systems to evaluate impacts of shortages. Another similar comment requested an evaluation of the consistency and potential impacts of the proposed Action with those of other established programs (i.e. LCRMSCP, Adaptive Management Program, etc.).

The complete list of comments that relate to mitigation and monitoring is presented in Appendix V, Table V-11.

4.2.11 Population and Housing

A total of 20 comments (11 from Group 1 and 9 from Group 2) were received on the topic of population. However, only some 14 of these comments are considered to be unique comments.

The majority of comments received on this topic suggested managing or limiting population growth and new housing development in certain areas as a means for managing water needs in the Colorado River Basin. The related concern is that expected population growth in the basin will place a higher burden on already limited water supplies and that further population increases may result in more frequent and severe water supply shortages.

One comment letter suggested a potential flaw in the water supply planning process in areas like Arizona where there is a requirement to demonstrate a 100-year assured water supply as a condition of land development approvals. Specifically, the comment letter notes that in many cases these assured water supplies are based on water deliveries from the Colorado River. If these deliveries are subject to Shortage reductions, then the assured water supplies are not entirely reliable. The comment letter suggests that the jurisdictional agencies need to reconsider the approval of new land developments based on the limited reliability of Colorado River water supplies. On a related subject, one comment letter suggests that new development be limited to that which the local supplies can sustain and that more local supplies need to be developed in order to reduce reliance on Colorado River water supplies.

The complete list of comments that relate to population or housing is presented in Appendix V, Table V-12.

4.2.12 Public Services

A total of 54 comments (18 from Group 1 and 36 from Group 2) were received on the topic of public service/utilities. However, only some 36 of these comments are considered to be unique comments.

There were two general public service related groups of comments that were received on this topic area, water and electricity service. Water service related comments were expressed from numerous municipalities (cities) and tribal communities. Specifically, they are concerned how a potential reduction in Colorado River water deliveries to them may affect their ability to provide and maintain water service to their customers. Similarly, electric service related comments were expressed by many municipalities (cities), tribal communities, and electric management entities. They expressed concerns regarding the potential loss of power generating capacity at Hoover and Glen Canyon Dam and the effect on their ability to provide and maintain electric service to their customers.

The complete list of comments that relate to public services is presented in Appendix V, Table V-13.

4.2.13 Recreation

A total of 1,060 comments (1,035 from Group 1 and 25 from Group 2) were received on the topic of recreation. However, only some 19 of these comments are considered to be unique comments.

The majority of comments received on the topic of recreation related to the effects of the proposed Action on recreation or recreation related businesses within the mainstem reservoirs and different river reaches. For example, the proponents of the alternatives

that consider the decommissioning of Glen Canyon Dam, restoring natural flows through the Glen and Grand Canyons, or transferring Lake Powell and Lake Mead storage to groundwater aquifers suggest that such actions will have a positive effect on recreation as recreationists will have a greater appreciation of a natural Colorado River system as opposed to the current system of dams and reservoirs.

Other comment letters suggest that the new guidelines include provisions that would help to maximize the water surface levels of Lake Mead and Lake Powell. The concern is that low water surface elevations severely threaten recreational activities at both reservoirs as well as throughout the different park units along the river. This may impact the communities that currently rely on recreation, the marinas and businesses, and concessionaires at the affected parks/recreation facilities. Generally, it was suggested that the EIS consider any potential impacts to all facets of recreation on Lake Mead and Lake Powell as well as to the different park units along the river.

The complete list of comments that relate recreation is presented in Appendix V, Table V-14.

4.2.14 Reservoir Management

A total of 3,164 comments (3,047 from Group 1 and 117 from Group 2) were received on the topic of reservoir management. However, only some 99 of these comments are considered to be unique comments.

Approximately 94 percent of the comments received on the topic of reservoir management included suggestions for the decommissioning of Glen Canyon Dam, transferring all or a portion of the Lake Powell and Lake Mead storage to groundwater basins, and development of a sustainable sediment management program for Lake Powell and Lake Mead. Other common themes presented in the comments included the restoration of the natural flows of the river within Glen and Grand Canyons to restore the riparian habitat and protect the cultural resources; maximizing lake levels to protect power production, managing the reservoir water levels to protect marinas, managing the Lake Mead water levels to protect Southern Nevada Water Agency's (SNWA) drinking water supply and intake capacity, and maintaining the effectiveness of these primary reservoirs for flood management. Identifying reservoir operation strategies that may yield opportunities to improve fish and wildlife management and recreation was also suggested.

Some comment letters also provided specific recommendations on possible guidelines, or component thereof, for management of the reservoirs. The suggested criterion included; specific limitations on the releases from Lake Powell and Lake Mead, specific water surface elevations to be used as triggers for a Shortage declaration, specific values for minimum objective releases from Lake Powell, specific reservoir equalization criteria, amongst other. Other similar but more general suggestions included re-evaluation of how the active storage in the Upper Basin is calculated, development of alternatives to the 602(a) criteria, and ensuring that any guidelines developed in this regard are consistent with the Law of the River.

Lastly, some comment letters also suggested a need for the new reservoir management guidelines to be consistent with other existing programs and environmental commitments

such as the Lower Colorado River Multi-species Conservation Plan, the Interim Surplus Guidelines, Glen Canyon Adaptive Management Program, amongst others. In some cases the comments referred to the Biological Assessments and Biological Opinions developed for these other programs and the requirement to adhere to the reservoir operation strategies stated therein.

The complete list of comments that relate to reservoir management is presented in Appendix V, Table V-15.

4.2.15 Socio-Economics

A total of 3,203 comments (3,042 from Group 1 and 161 from Group 2) were received on the topic of socio-economics. However, only some 139 of these comments are considered to be unique comments.

Almost all of the comments received on the topic of socio-economics raised the issue of fiscal ramifications or social impacts associated with the different alternatives that may be considered in the EIS. Because the population and economy of the Basin States is so heavily dependent on the Colorado River water supplies, almost any new action has the potential to result in some direct or indirect effect to some portion of the population or their economies. Some comment letters made very general statements relating to this while others were more specific. For example, some comment letters expressed concern that the decommissioning of Glen Canyon Dam has a high potential to result in such great socio-economic impacts throughout the basin that such an alternative cannot be considered. Similarly, the socio-economic impacts associated with actions such as the restoration of the natural flows through the Glen and Grand canyons, transferring storage from lakes Powell and Mead to groundwater aquifers and even the smallest reduction in deliveries to one or more states need to be considered in the EIS. Other acceptable programs such as water conservation, construction of more storage capacity, and other water augmentation options represent examples of potential activities that the comment letters suggest will also need to be analyzed to ascertain the potential socio-economic impacts of these potential new or expanded activities.

The complete list of comments that relate to socio-economics is presented in Appendix V, Table V-16.

4.2.16 Transboundary Issues

A total of 78 comments (16 from Group 1 and 62 from Group 2) were received on the topic of transboundary impacts. However, only some 33 of these comments are considered to be unique comments.

A large number of the comments received on the topic of transboundary issues relate to the U.S.-Mexico Water Treaty of 1944 (Treaty) and how Mexico's Colorado River water deliveries stipulated in the Treaty might be addressed in or affected by this process. Several of the comment letters suggested that Mexico should share in any and all shortages. Other comment letters expressed concerns regarding the potential impacts to Mexico or the Colorado River Delta that could result from a Shortage declaration.

In some instances, the comment letters identified issues or potential transboundary effects that would need to be addressed or evaluated in the EIS, such as water quality, water

supply salinity, operation of the Yuma Desalting Plant, and potential reductions to the bypass flows, amongst others.

The complete list of comments that relate to transboundary issues is presented in Appendix V, Table V-17.

4.2.17 Transportation/Traffic

A total of 11 comments (ten from Group 1 and one from Group 2) were received on the topic of transportation / traffic. However, only some ten of these comments are considered to be unique comments.

Comments received on the topic of Transportation and Traffic mostly focused on boat and watercraft issues. Many of the comment letters expressed concern with regard to the potential impacts that the proposed Action might have on boating, navigation and boat safety, both within the reservoirs and different river reaches. Some letters requested that consideration be given to eliminating boating on Lake Mead to prevent fuel spills that can imperil the quality of the water supply. Another comment letter justified a recommendation to eliminate house boats on Lake Powell by citing the high cost of fuel and the high cost of navigating a house boat from one end of Lake Powell to the other.

The complete list of comments that relate to transportation is presented in Appendix V, Table V-18.

4.2.18 Water Supply / Water Quantity

A total of 3,218 comments (3,057 from Group 1 and 161 from Group 2) were received on the topic of water supply and water quantity. However, only some 141 of these comments are considered to be unique comments.

A large number of comments received on this proposed Action fall under this category. From suggesting aggressive water conservation efforts, forbearance agreements, water supply augmentation proposals, groundwater and offstream storage options, proportional sharing or market-based shortage strategies, varying release schedules, re-evaluation of actual flows and water user allocations, impacts to treaty obligations, to power production and tribal concerns – all relate back to water supply and have been raised as issues to consider during the development of alternatives and environmental impact review process.

The complete list of comments that relate to water supply or water quality is presented in Appendix V, Table V-19.

4.2.19 Water Quality

A total of 1,002 comments (964 from Group 1 and 38 from Group 2) were received on the topic of water quality. However, only some 35 of these comments are considered to be unique comments.

Most of the comments received on the topic of water quality had a few recurring themes including; addressing general water quality concerns throughout the system, sediment management, salinity effects and management options, operation of the Yuma Desalting Plant, potential water supply augmentation projects including returning wastewater to the system, cloud seeding, tamarisk eradication, and ocean desalination. In all these

comments, there was a general suggestion that the EIS consider potential impacts to water quality that may result from the different alternatives.

The complete list of comments that relate to water quality is presented in Appendix V, Table V-20.

4.2.20 Water Rights

A total of 3,078 comments (2,970 from Group 1 and 108 from Group 2) were received on the topic of water rights. However, only some 86 of these comments are considered to be unique comments.

Most of the comments received on the topic of water rights raised the concerns that the proposed Action has the potential to affect the water rights of different parties. For example, the existing distribution of water entitlements between the Upper and Lower Basin and between the different states, is made possible, in part, by the storage that is provided by Lake Powell. Therefore, the decommissioning of Glen Canyon Dam, as suggested in some comment letters, might have significant effects on the water rights of many and this needs to be considered in the EIS. Similarly, utilizing groundwater aquifers to replace storage from Lakes Mead and Powell would have not only surface water rights implications but also groundwater rights implications. Some other comments suggested the redistribution of Colorado River water rights to provide an entitlement for instream uses.

A few comment letters addressed the need to develop guidelines that would facilitate a market based system that would provide the basis for intra- and interstate transfers, leasing arrangements, water rights sales, trades, and other forms of water exchanges. These types of transactions are believed to form part of the solution to managing or mitigating future impacts related to shortages.

A common concern expressed by some comment letters is the need to develop guidelines that provide the highest level of protection possible to entitlement holders with senior water rights. On the contrary, some comment letters suggested that shortages should be shared by all at the same proportional levels of their entitlements. Other comments had varying suggestions on how the shortages should be allocated to or shared by Mexico, Arizona and Nevada.

A fair number of comments suggested that there is a need, and perhaps a legal requirement, to augment the water supplies of the Colorado River system in order to adequately provide for and protect the water rights of existing entitlement holders.

In all the comments received on the topic of water rights, there was a general suggestion that the EIS consider potential impacts to water rights that may result from the different alternatives to be considered.

The complete list of comments that relate to water rights is presented in Appendix V, Table V-21.

4.2.21 Miscellaneous

A total of 34 comments (21 from Group 1 and 13 from Group 2) were received in this category. However, only some 23 of these comments are considered to be unique comments.

The miscellaneous comments received varied widely and addressed such issues as; coordination and consultation with different interest groups, demonstration of support for other comments submitted, and requests for information on the environmental impact review process.

The complete list of comments that fall under the miscellaneous category is presented in Appendix V, Table V-22.

4.2.22 Alternatives

A total of 17 comments (one from Group 1 and 16 from Group 2) were received regarding the development of the alternatives. However, only three of these comments are considered to be unique comments. These comments included a specific alternative proposal submitted by a group of NGOs which they refer to as the “Conservation Before Shortage” proposal. However, there was one comment letter that opposed this alternative and suggested that it not be considered in the proposed EIS due to several misrepresentations contained therein. Another set of recommendations that were provided by another NGO was contained in a report entitled “One Dam Solution.” While not an alternative in itself, the recommendations provided therein are addressed in the various other resource issues summarized hereinbefore. A third set of recommendations for inclusion in an alternative were received from the State of Arizona. This set of recommendations included very specific recommendations for the development of the shortage and coordinated reservoir operation guidelines.

Lastly, a fourth set of recommendations was submitted jointly by the Seven Colorado River Basin States. These recommendations were received after the closing of the comment period and were therefore evaluated separately as discussed below in Section 4.3.

The complete list of comments that relate to alternatives development is presented in Appendix V, Table V-23.

4.3 Comments Received After the Comment Period

The official comment period for this Scoping Summary Report extended from September 30, 2005 to November 30, 2005, a period of 62 days. For this scoping process, four sets of comments were received following the closing of the comment period as noted below. These comments are not included in the previous evaluation of comments as summarized in Section 4.2. However, these comments will be considered in the development of alternatives, scoping of the EIS, and determination of the range of analyses to be conducted. Reclamation will continue to receive public input during this process. Reclamation also plans to issue public notices, through issuance of FR notices, at different points in the process as new pertinent information is developed and when documents are available for public review and comment.

4.3.1 Consultations With Indian Tribal Governments

Consistent with the requirements of Executive Order 13175 regarding “Consultation and Coordination With Indian Tribal Governments,” Reclamation invited Indian Tribal Governments to participate in government-to-government consultations relevant to the proposed Action. Executive Order 13175 requires agencies to engage in meaningful consultation and collaboration with tribal officials in the development of Federal policies that have may have tribal implications. In this respect, Reclamation has already conducted three meetings to inform the tribal representatives about the proposed Action and the study process. The notices and meetings were also used to solicit input and comments from tribal representatives regarding the proposed Action, its potential impacts on any trust assets, tribal health and safety, traditional cultural properties, historic properties, sacred sites, or any other issues or resources of tribal concern that may associated with the proposed Action. The times and locations of the three meetings are noted in Table 4-3.

**Table 4-3
Tribal Consultation Meeting Attendance**

Meeting Date/Time	Location	Number of Attendees
10:00 am, Thursday January 19, 2006	McCarran International Airport Mezzanine Meeting Rooms 4 and 5 5757 Wayne Newton Blvd. Las Vegas, NV	7
10:00 am, Friday January 27, 2006	400 North Fifth Street Conference Rooms A and B Phoenix, AZ	14
9:30 am, Thursday February 16, 2006	Courtyard Marriott Hotel 2101 East Camelback Road, Phoenix, AZ	8

The invitees to the January 19, 2006, Las Vegas, Nevada meeting consisted of representatives of member tribes of the Ten Tribes Partnership. The members of the Ten Tribes Partnership include the following Colorado River Basin Indian Tribes:

- Chemehuevi Indian Tribe
- Cocopah Indian Community
- Colorado River Indian Tribes
- Fort Mojave Indian Tribe
- Jicarilla Apache Tribe
- Northern Ute Tribe
- Navajo Nation
- Quechan Indian Tribe of the Fort Yuma Reservation
- Southern Ute Indian Tribe
- Ute Mountain Ute Indian Tribe

The invitees to the January 27, 2006, Phoenix, Arizona meeting consisted of representatives from Indian Tribes that have rights to or an interest in the Central Arizona Project (CAP) water supply. The invited Indian Tribes included the following:

- Ak Chin
- Mojave-Apache
- Gila River Indian Community
- Pasqua-Yaqui
- Salt River Pima- Maricopa Indian Community
- San Carlos Apache
- Tohono O’odham
- Tonto Apache
- Yavapai-Prescott

The invitees to the February 16, 2006, Phoenix, Arizona meeting also consisted of representatives of member tribes of the Ten Tribes Partnership.

According to sign-in sheets from the meetings noted above, a total of 29 individuals attended the meetings. Appendices M and N contain copies of the sign-in sheets from the first two tribal consultation meetings. The second page of the transcript from the third tribal consultation meeting which is included in Appendix O provides a list of attendees at the third meeting.

Reclamation staff provided a presentation to the tribal governments representatives during the first two meetings. A copy of this presentation is included as Appendix P. The third meeting was a follow up to the second meeting and was used to update the attendees on the EIS process status and present additional information.

During the course of the public meetings, tribal representatives were invited to provide oral comments and ask questions. These oral comments were also recorded by court reporters that were retained by Reclamation and that were present at each of the two meetings. Transcripts that reflect the verbatim comments provided by the attendees at the January 19, 2006, January 27, 2006, and February 16, 2006 meetings are presented in Appendix M, Appendix N, and Appendix O, respectively.

An overview of the oral comments received during these three Tribal Government consultation meetings follows:

Overview of Comments Received in Las Vegas, Nevada Meeting – January 19, 2006

1. A higher priority should be given to Tribal Water rights when considering reductions in deliveries of Colorado River water.
2. Reclamation should be looking at and implement drought mitigation strategies by 2007.
3. Reclamation should include a process to educate non-Indians on Indian Water Rights that are allocated by treaties.
4. The priority of Indian Water Rights, which in many cases precede 1912, should be duly noted and considered in this study.
5. Recommend a forum that would include all stakeholders be used to develop an alternative that best meets the needs and addresses the interests of all.

6. Inquires whether the Secretary is committed to allocate money to projects that can be used to delay or mitigate the effects of the drought.
7. Would like to see a detailed breakdown of who is using Colorado River water and how much is being used.
8. The shortages should be limited to water rights holders that have lower priority rights than the Tribe's Senior Rights that predate 1922.
9. Request that the Government-to-Government consultation process be preserved throughout entire project process.
10. Notes that while water and power are important to the Tribes; having a river and having water flow through the river is also important.
11. Need to consider the effects of low river flows on the Tribe's ability to pump water from the river and also their ability to divert their entitlement through these pump systems at low river stages.

Overview of Comments Received in Phoenix, Arizona Meeting – January 27, 2006

1. Request that the San Carlos, Apache, and Yavapai tribes be put on the mailing list for all notices related to this project.
2. Update the name and reflect new Chairperson of the Pasqua-Yaqui tribe.
3. Recommends that Basin States and Indian Tribes work together on development of alternatives and that Secretary should not base decisions only on Basin States' recommendations.
4. Secretary and Reclamation should provide notices to all Tribes on all Colorado River operations related issues.
5. Analysis needs to consider and evaluate how alternatives may impact the 67,000 AF considered in the Gila River Indian Community water settlement.
6. Consider/evaluate the effect that Surplus deliveries have on all Colorado River water users and the availability of water during droughts.
7. Consider providing technical assistance to a Working Group made up of tribal representatives that would work to develop or evaluate alternatives, similar to Basin States Working Group.
8. Consider/evaluate how the reduced deliveries to the State of Arizona under the different alternatives would affect the water deliveries to the different tribes that receive water from the CAP.
9. The study should consider the effects to all Colorado River water users which includes Tribes and not just focus on needs of and impacts to cities and large irrigation districts
10. Consider the changing climatic conditions and the effect on the average water supply that may now be available from the Colorado River Basin.
11. Consider the drought and shortage provisions provided in the Ak-Chin's water settlement legislation.

12. Need to respect the water rights and entitlements afforded to the Tribes through different treaties, agreements, contracts, etc.
13. Concerned that Tribal interests and concerns will be superseded by the Basin States' recommendations and their proposed alternatives.
14. Recommend that a Workshop format be used for future consultations with the Tribes.
15. Request that a person involved in the technical evaluation of the different alternatives be available to the Tribes in future consultations.
16. Request consultation meetings at interim points between now and before the finalization of the alternatives and publishing of the EIS.
17. Request copies of the project related FR notices published on June 2005 and September 2005.
18. Request that Reclamation make a presentation on the Federal Government's perspective on the plan being developed by Arizona for addressing and mitigating future Colorado River reduced deliveries to instate users.
19. Inquires why the invitations to the Tribes for Government-to-Government consultations relative to this project were not sent to all of the 22 Arizona tribes.
20. Request that the Tribe's Attorney(s) be copied on all project related correspondence and notices when such has been designated by a Tribe.
21. Analysis should consider and evaluate impacts to all tribes that have water rights settlements and not just be limited to the impacts to only those tribes that have CAP entitlements.

Overview of Comments Received in Phoenix, Arizona Meeting – February 16, 2006

1. Expressed concern that Reclamation had not invited the Indian Tribes to participate in previous meetings between Reclamation and Basin States, i.e. reference to the Basin States' negotiations and working group meetings. Also, recommended that Reclamation invite the Indian Tribes to participate in future meetings between Reclamation and Basin States.
2. Expressed interest and concern on how the Basin State's proposal would fit into the overall NEPA process and the EIS.
3. Inquired whether Reclamation had its own alternative that would be considered in the EIS.
4. Expressed interest and concern as to whether the Basin States' proposal would automatically be accepted by Reclamation as the preferred alternative.
5. Inquired how the balancing between Lake Powell and Lake Mead is determined and what the Upper Basin's water delivery responsibilities were to the Lower Basin, i.e. minimum annual and 10-year average Lake Powell release requirements.

6. Inquired on the feasibility of storing more water in the Upper Basin reservoirs as a means to conserve water, i.e. by minimizing evaporation losses that normally occur in Lake Powell and Lake Mead.
7. Inquired whether there have been negotiations with Arizona on how they would take their lowest priority water for the CAP and whether there was a negotiated change in their policy.
8. Suggest that consideration be given to the role of groundwater in the Phoenix area in managing shortages and impacts to the cities.
9. Expressed interest and concern with regard to effects of a Shortage declaration and a reduction of deliveries on the pool of water that is available to the Secretary for settlement of Indian water rights and more particularly the pool that may come from non-Indian Agricultural priority water.
10. Inquired whether Agricultural would take the hit for shortages in Arizona.
11. Inquired on the economics relating to the potential Agricultural water user's change from surface water to groundwater supplies and the value of doing such in order to forestall a future shortage, considering alternate payback methods or other economic incentives.
12. Suggested that Colorado River water supply augmentation options may be less desirable than demand management options because in a demand management situation, one knows the water is there whereas with a water augmentation project such as cloud seeding, the supply is less tangible.
13. Expressed concern that water augmentation options that relied on groundwater development projects might not necessarily provide new or non-system water.
14. Inquired whether Reclamation was requesting additional comments from the Indian Tribes before the scoping report is issued.
15. Inquired whether Reclamation would have the alternatives available by early-May and would they be ready for presentation at the mid-year Colorado River Water Users Association board meeting that is scheduled for May (2006).
16. Requested that Reclamation consider and analyze how any of the alternatives fit within the concept of meeting Navajo Nation needs of water from the Colorado River and potential claims that the Navajo Nation may have.
17. Requested that Reclamation consider the Navajo Nation's Colorado River entitlements, rights and claims in both the Upper and Lower Basins.
18. Requested that Reclamation consider the Navajo Nation's unquantified water rights and how the proposed Action may affect these rights and their ability to meet their municipal water needs.
19. Expressed concern that each time Reclamation adopts a new action dealing with Colorado River management that the ability of the Federal Government to meet the needs of the Navajo Nation becomes more difficult and this increases the barrier to achieving future resolution on these issues.

20. Requested that Reclamation consider the initial letter submitted on August 31, 2005 which addressed the need to account for the outstanding water supply needs and claims of the Navajo Nation.
21. Suggested that another factor that could contribute to future shortages within the basin and perhaps the State of Arizona is the existence of the Navajo Nation's claim to additional water supplies.
22. Pointed out that the Navajo Nation is involved in ongoing discussions with the United States and the State of Arizona concerning its mainstem claims. However, further noted uncertainty regarding the long-range outlook for those negotiations.
23. Noted that the Navajo Nation's claims are essentially a claim to prior perfected rights that would be like the other Tribe's water rights that they would be senior water rights, and they are concerned how a shortage may affect these rights.
24. Noted an additional concern with regard to how a Shortage call or a curtailment in the Upper Basin to meet the past term Compact obligations may affect the Tribe's water rights and water supplies.

It should be noted that the government-to-government consultation process with the Indian Tribes is expected to continue throughout the EIS preparation process. Reclamation anticipates that it will continue to receive input from the Indian Tribes on this process and with respect to the EIS. Reclamation values this input and will consider the comments from the Indian Tribes in its development of the alternatives, evaluation of issues and potential impacts, and in the preparation of the EIS.

4.3.2 Basin States' Preliminary Proposal Regarding Colorado River Interim Operations

The Seven Basin States, Reclamation and others have consulted regularly over the last two years with regard to the development and evaluation of management strategies for the Colorado River system. Previously, individual entities within the Seven Basin States submitted oral and written comments to Reclamation regarding the process that would be used to develop and adopt these strategies as well comments on the analyses to be conducted as part of this EIS process. Through these ongoing consultations and related negotiations, the Seven Basin States prepared a preliminary set of recommendations that were submitted to the Secretary on February 3, 2006 (see Appendix Q). This set of recommendations, hereinafter referred to as the "*Basin States' Preliminary Proposal Regarding Colorado River Interim Operations*," outlines criteria and programs that the Seven Basin States recommend be included in the proposed Action and within the scope of the EIS.

A summary of the main points provided in the Basin States' Preliminary Proposal Regarding Colorado River Interim Operations follows:

1. The Basin States are still actively working on matters addressed in the Basin States' Proposal and anticipate further refinement of some of the elements provided therein.

2. Implementation of the operational and accounting procedures can be accomplished without modification to the Long Range Operating Criteria or other elements of the Law of the River.
3. Recommends that the Department of the Interior initiate consultation, as soon as possible, with U.S. Section of the International and Boundary Commission on the implementation of Treaty Shortages pursuant to the U.S.-Mexico Treaty of 1944.
4. The states are moving forward with a package of other actions that include implementation of a demonstration program for extraordinary conservation, system efficiency projects, an action plan for augmentation projects, and other similar programs that can be used to delay and mitigate the effects of the drought.
5. Provides recommendations on the allocation of Unused Basic Apportionment Water under Article II(B)(6) of the 1964 Decree in Arizona v. California.
6. Provides an operating strategy for the coordinated management of Lake Powell and Lake Mead whereby the Lake Powell annual release is adjusted, when the projected elevation of Lake Powell is below 3,575 feet or the projected elevation of Lake Mead is below 1,075 feet. The strategy also provides year by year Lake Powell equalization elevations through 2025.
7. Recommends that the Interim Surplus Guidelines be modified to reduce the water that would otherwise be delivered under a Partial Domestic Surplus condition and would extend the effective period of the modified Interim Surplus Guidelines through the end of 2025.
8. Recommends shortage guidelines based on a Lake Mead “Stepped-Shortage” strategy. The recommendations define the stepped reductions up to an annual reduction volume of 600 kaf and notes that increased reductions required below a Lake Mead water surface elevation of 1,025 feet would be determined through additional consultations and based on projected hydrology.
9. Recommends that Mexico proportionally share in the delivery reductions during Shortage Conditions and that the proportion of the shortage to be borne by Mexico be approximately 17 percent ($1.5 \text{ maf} / 9 \text{ maf} \times 100\% = 17\%$).
10. Proposes a Lake Mead Intentionally Created Surplus (ICS) Program that would;
 - a. Enable a User of Colorado River water to earn Extraordinary Conservation Storage Credits in Lake Mead,
 - b. Provides for up to 625 kaf/year of total ICS Credits to be earned by the water users,
 - c. Provides for a maximum cumulative amount of ICS credits of 2.1 maf,
 - d. Provides for the delivery of ICS credits from Lake Mead to the holder of the credits.
11. Recommends that the Secretary develop procedures that would permit Colorado River water contractors to purchase and fallow annual or permanent water rights on tributaries within the Lower Division states (Tributary Conservation) that

- increases the contribution of water to the Colorado River mainstem for diversion by the Contractor.
12. Recommends that the Secretary develop procedures that would permit a Colorado River Water Contractor to make contributions of capital to the Secretary for use in Secretarial projects designed to realize efficiencies that save water that would otherwise be lost to the system. In return, the Contractor(s) would receive a portion of the conserved water, for a temporary period of time. The water supply benefit to the Contractor would be in proportion to their contribution towards the total cost of the project.
 13. Recommends that the Secretary develop procedures that would allow non-Colorado River System water in a Lower Division state to be introduced into, conveyed through, and diverted from the system.
 14. Recommends that the Secretary develop procedures that would permit a Contractor in Arizona, California, or Nevada to secure additional water supply by funding the development of non-Colorado River System water supply in one Lower Division State for use in another State by exchange.
 15. While the proposal does not provide recommendations on required new or modifications to the existing Colorado River water accounting mechanisms, it does recommend that a description and evaluation of such new or modified accounting mechanisms be evaluated in Reclamation's current NEPA process.
 16. Recommends that the effective period for the proposed interim operations begin 30 days from the publication of the Secretary's Record of Decision in the FR and remain in effect through December 31, 2025.
 17. Includes a Draft Agreement whereby the Seven Basin States agree to support and bind themselves to the principles noted in the Basin States' Preliminary Proposal Regarding Colorado River Interim Operations.

4.3.3 Environmental Defense Supplemental Comment Letter

At the request of Environmental Defense and other NGOs, Reclamation met with and provided technical support to these NGOs over the last twelve months with regard to the NGOs' efforts in the development and evaluation of management strategies for the Colorado River system. Previously, Environmental Defense along with other NGOs submitted oral and written comments to Reclamation regarding the process that would be used to develop and adopt these strategies as well comments on the analyses to be conducted as part of the proposed NEPA process. In addition, these entities developed and submitted a recommended strategy referred to as "Conservation Before Shortage." Reclamation provided modeling support to Environmental Defense and other NGOs throughout their proposal development phase.

On February 1, 2006, Environmental Defense submitted a letter to Reclamation with a request that this letter and comments provided therein be accepted as a supplement to their previous comments (see Appendix R). A summary of the comments provided in this supplemental comment letter follows:

1. Expressed concern that Reclamation is considering initiation of multiple independent NEPA analyses on numerous proposals for Colorado River management and mechanisms related and unrelated to the subject project.
2. Analysis under NEPA needs to compare the impacts of all available options and approaches to managing the Colorado River system.
3. Postulates that the volume of ICS water will bear on the probabilities that water in reservoir storage will be within defined “bands” or “shortage trigger” elevations.
4. Encourages Reclamation to ensure that analysis of alternatives under the NEPA process is complete.

4.3.4 Defenders of Wildlife Supplemental Comment letter

On February 21, 2006, Defenders of Wildlife submitted a supplemental comment letter to Reclamation. The letter was submitted to identify concerns regarding the Basin States’ Preliminary Proposal Regarding Colorado River Interim Operations and how the proposal would be considered within the NEPA process and EIS. A summary of the comments provided in this letter follows:

1. Inclusion of all or part of the Basin States’ proposal as an alternative in the subject NEPA process will change the scope of Reclamation’s proposed Action as originally announced in the NOI issued on September 30, 2005.
2. Urges Reclamation to re-evaluate the scope of its proposed Action to ensure that its EIS encompasses the full suite of actions, alternatives and impacts as it considers the Basin States’ Preliminary Proposal Regarding Colorado River Interim Operations.
3. Suggests that - if all or part of the Basin States’ preliminary proposal are connected actions, or if Reclamation carries forward parts of their proposal that do not fall within the proposed Action described in the NOI issued on September 30, 2005, Reclamation must prepare one EIS and must rescope.
4. Suggests that delays caused by rescoping will be insignificant in comparison to delays triggered during the draft EIS comment period as a result of new actions or alternatives that are introduced during the draft EIS comment period rather than during the scoping period.

4.4 Alternatives Offered

An alternative referred to as the “Conservation Before Shortage” alternative has been offered by a group of NGOs that include; Defenders of Wildlife, Environmental Defense, National Wildlife Federation, Pacific Institute, Sierra Club and the Sonoran Institute. The alternative is founded on the rationale that shortage criteria should attempt to maximize the reliability and predictability of water deliveries to the Lower Division states by introducing increased flexibility into the management of river resources when Shortage conditions are imminent. The “Conservation Before Shortage” policy essentially consists of two sets of criteria tied to projected elevations at Lake Mead

proposed on January 1 of a given year, according to Reclamation's August 24-month study. These criteria consist of three "conservation triggers," which impose progressively increasing conservation goals as lake levels drop from 1100 feet to 1050 feet, and a "shortage trigger," which imposes involuntary shortages in the Lower Basin as are necessary to accomplish absolute protection of Lake Mead at a minimum elevation of 1000 feet. The details of this proposed alternative are described in Comment Letter No. G.003, Appendix W.

A second alternative was offered by the NGO known as "Living Rivers" and is reported to be supported by several other NGOs. This alternative, which is provided in the form of a report, is referred to as the "One-Dam Solution." The report does not provide information on how the proposal would meet the objectives of the proposed Action, that is – develop water supply management strategies to address reservoir operations during drought and low reservoir conditions. Rather, the report criticizes current management and operations of the Colorado River and questions the need for Glen Canyon Dam and the storage provided in Lake Powell. In summary, the commentor(s) request that Reclamation consider the following actions within the context of preparing an EIS for the subject project:

1. Pursue transfers of Lakes Powell and Mead storage to groundwater aquifers,
2. Develop sustainable sediment management programs for Lakes Powell and Mead,
3. Evaluate the costs and benefits of decommissioning Glen Canyon Dam and the restoration of natural flows through Glen and Grand Canyons, and
4. Identify new water allocation guidelines that reflect the amount of water that the Colorado River actually provides, how it should be distributed, and what amounts are needed to protect critical habitats and endangered/listed species.

The details of the "One-Dam Solution" report are provided in Comment Letter No. G.001, Appendix W.

A third set of recommendations, which may provide the bases for a third alternative, was submitted by the Seven Basin States and is outlined in their "*Basin States' Preliminary Proposal Regarding Colorado River Interim Operations*," submitted to the Secretary on February 3, 2006 (see Comment Letter No. S-2006, Appendix Q). This set of recommendations were previously summarized in Section 4.3.2.

5.0 Discussion of Comments Determined to be Outside the Scope of this Project or NEPA Process

In some cases, some of the issues raised in the comment letters have been determined to be beyond the scope of the proposed Action or EIS, and therefore, will not be addressed in the EIS. This is the case for the following issue as explained below.

5.1 Decommissioning of Glen Canyon Dam

Lake Powell and Glen Canyon Dam on the Colorado River have been designated parts of the nation's critical infrastructure. In particular, the ability to store water in Lake Powell during periods of higher flows enables the states of Utah, Colorado, Wyoming and New Mexico to utilize their apportionment of Colorado River water while meeting their obligations for water delivery to the states of Arizona, California and Nevada, particularly during periods of drought.

In addition, the hydropower generated by Glen Canyon Dam is a critical element in meeting the electricity demands in the southwestern states. Furthermore, hydropower revenues from Glen Canyon and other CRSP dams are an important part of the funding mechanism for numerous participating water supply projects and several important environmental initiatives including the Upper Colorado Basin and San Juan River Recovery Programs and the Glen Canyon Dam Adaptive Management Program.

Finally, Section 120 of Public Law 107-63, enacted November 5, 2001, and in subsequent years, "bars the use of funds appropriated for the Department of the Interior by any Act to study or implement any plan to drain Lake Powell or to reduce its water level below the range required for the operation of the Glen Canyon Dam." Consistent with this language, Reclamation will not consider the request to evaluate the feasibility of decommissioning Glen Canyon Dam.

6.0 Proposed Scope of the EIS

The preliminary scope of the EIS is discussed below. This preliminary scope has been determined after review and analysis of the comments and public input received to date. These comments, in addition to input and feedback that will be received during agency consultation and coordination, will help determine the final scope of the EIS.

6.1 Proposed Federal Action

Subsequent to the FR notice published on September 30, 2005 (Appendix C), the description of the proposed Action has been refined as a result of the scoping process to reflect, among others, three important considerations that were identified by commentors:

1. ***Importance of Encouraging Conservation of Water:*** Many comments focused on and stressed the importance of encouraging and utilizing water conservation as an important tool to better manage limited water supplies and therefore minimize the likelihood and severity of potential future shortages (see example in Appendix W, Comment Letter No. G-003, “Conservation Before Shortage” proposal submitted to the Department on July 18, 2005). Water conservation can occur through a number of approaches. The different approaches will be explored and discussed in the EIS including: extraordinary conservation, forbearance, financial incentives to maximize conservation, dry-year options, and associated storage and recovery methodologies and procedures to address conservation actions by particular parties.
2. ***Importance of Consideration of Reservoir Operations at all Operational Levels:*** Many comments urged the Department to consider and analyze management and operational guidelines for the full range of operational levels at Lake Powell and Lake Mead (see example in Appendix Q, Comment Letter No. S-2006, “Basin States’ Preliminary Proposal Regarding Colorado River Interim Operations” submitted to the Department on February 3, 2006). It was suggested that this approach is considered integral and prudent to the development of new low-reservoir operational guidelines, as the approach and management of these reservoirs at moderate and high elevations has a direct impact on the available water in storage, thereby affecting the likelihood and severity of potential future shortages.
3. ***Term of Operational Guidelines:*** Comments submitted to the Department urged the Department to consider adoption of interim, rather than permanent, operational guidelines (see examples in Appendix W, Comment Letter Nos. L-2002 through L-2006 submitted to the Department by several Arizona municipalities). In this manner, the Department would have the ability to use actual operating experience for a period of years, thereby facilitating a better understanding of the operational effect of the new guidelines; modifications would then be made, if necessary, during or preferably at the end of the interim

period. In particular, the Department was also urged to consider adopting additional operational guidelines for both low and higher reservoir elevations for a consistent period of years. At this time, it is important to note, the Department has detailed operational guidelines for declaration of Surplus conditions at higher elevations of Lake Mead through 2016, but does not have similar detailed operational guidelines for either Lake Powell or the lower operational levels of Lake Mead.

After thorough consideration of the comments and issues identified by commentors, the description of the proposed Action has been refined to address the broader range of issues found within the comments received to date. Specifically, the elements of the proposed Action include:

1. Adoption of guidelines that will identify those circumstances under which the Secretary would reduce the annual amount of water available for consumptive use from Lake Mead to the Lower Division states (Arizona, California, and Nevada) below 7.5 maf (a “Shortage”) pursuant to Article II(B)(3) of the Decree.
2. Adoption of guidelines for the coordinated operations of Lake Powell and Lake Mead that are designed to provide improved operation of the two reservoirs, particularly under low reservoir conditions.
3. Adoption of guidelines for the storage and delivery of water in Lake Mead to increase the flexibility to meet water use needs from Lake Mead, particularly under low reservoir conditions. These guidelines are anticipated to address the storage and delivery of non-system water, exchanges, and water conserved through extraordinary measures.
4. Modification of the substance and term of the existing Interim Surplus Guidelines, published in the FR on January 25, 2001 (66 FR 7772-7782), from 2016 to coincide with the proposed new guidelines described above.

The Department proposes that these guidelines will be interim in nature and will extend through 2025. Adoption of new guidelines along with modification of existing operational guidelines for a consistent interim period will provide the opportunity to gain valuable experience for operating the reservoir under the modified operations and should improve the basis for making additional future operational decisions, whether during the interim period or thereafter.

It is the intent of the Department to adopt and implement the above proposed Action in a manner that is consistent with applicable federal law, and further, in a manner that does not require any additional statutory authorization. In this regard, Reclamation proposes to implement the proposed Action consistent with the Compact, the Decree, and other provisions of applicable federal law. It is the intent of the Department that the proposed Action will be consistent with and provide implementing guidance that would be used each year by the Department in implementing the LROC.

6.2 Study Area

The geographic scope in which specific issues and potential effects associated with the proposed new or modified guidelines has not yet been defined. The geographic scope will

be defined following the development of the alternatives and after consideration of additional anticipated input and feedback that will be received during agency consultation and coordination and from additional public input.

6.3 Alternatives to Be Considered in the EIS

Reclamation will develop the alternatives to be considered and evaluated in the EIS by considering the information and comments received through the scoping process. It is anticipated that these alternatives will be developed with the assistance of the Cooperating Agencies and in consultation with the Basin States, Indian Tribes, key stakeholders, and other interested parties. Reclamation's goal is to develop a sufficient number of alternatives that will permit the evaluation of the range of operational elements being considered under the proposed Action. This will enable Reclamation to identify the water supply management and operational strategies that provide the greatest benefit and that best meet the purpose and need of the proposed Action.³

Each alternative is expected to contain a unique set of operational elements. While there are numerous variables that may be considered to create a large number of alternatives, there are four major elements of the proposed Action that need to be considered from a reservoir and river operations perspective as previously described in Section 6-1.

For the purposes of discussion within this Subsection and in Table 6-1, the four major elements have been abridged into the respective headings of: 1) Shortage Guidelines, 2) Coordinated Reservoir Operations, 3) Lake Mead Storage and Delivery of Conserved and Non-system Water, and 4) Interim Surplus Guidelines. For each of these four major elements, there are different strategies or options that can be developed to yield different possible outcomes. For example, for the first element (Shortage Guidelines), three of many possible options could be to develop and adopt Shortage Guidelines: 1) that apply shortages when Lake Mead has insufficient water to meet needs, 2) that would protect the minimum power pool elevation at Lake Mead, and 3) based on a stepped shortage strategy (reduced deliveries that correlate with predetermined Lake Mead water surface elevations). Similarly, for the three other major elements of the proposed Action, there are numerous different strategies or options that also relate to each respective element.

To facilitate the development of the alternatives, Reclamation has developed a matrix of possible options for each of the four major elements of the proposed Action (See Figure 6-1). A particular alternative would be comprised of one option from each of the four major elements. It is anticipated that other options will be identified during the development and refinement of alternatives for the EIS.

³ It should be noted that the mere inclusion of an action alternative in an agency's EIS does not indicate that the agency has concluded that the matter under consideration is within the legal jurisdiction of the agency. See e.g., 40 C.F.R. § 1502.14(c) ("Alternatives including the proposed action.")

**Figure 6-1
Matrix of Major Elements and Examples of Options that May be Considered in the Development of Alternatives**

		Major Elements of the Proposed Action Alternatives			
		1	2	3	4
		Shortage Guidelines	Coordinated Reservoir Operations	Lake Mead Storage and Delivery of Conserved and Non-System Water	Interim Surplus Guidelines
Strategies or Options for Each Element	A	Basin States Proposal (stepped shortages up to 600 kaf and then reconsult).	Absolute protection of minimum power pool elevation (3490') at Glen Canyon Dam	No Extraordinary Water Conservation and/or Water Augmentation Programs considered	No modification or extension and Interim Surplus Guidelines end in 2016
	B	CBS Proposal (step shortages capped at 600 kaf, and absolute protection of Lake Mead Elevation of 1,000')	Balance Contents (when combined storage in Lakes Powell and Mead is low, adjust releases from Lake Powell [within a specified range] to maintain equal storage in Lakes Powell and Mead)	Basin States proposal for Storage/Delivery Program with Lake Mead Storage Pool volume of up to 2.1 maf and Extraordinary Water Conservation and/or Water Augmentation Programs With Annual Yield of Up To 625 kaf/year	Extension of Interim Surplus Guidelines to 2026 with no modification
	C	No protection of critical elevations. Release full annual entitlement amounts until reach dead pool, then outflow = inflow.	Tiered Release (incrementally reduce the Lake Powell annual release when Lake Powell storage is low)	CBS proposal for conservation of different volumes of water tied to varying Lake Mead water levels prior to shortage	Basin States proposal for modification of Interim Surplus Guidelines and the modified guidelines are extended to 2025
	D	Probabilistic protection of minimum power pool elevation (1050') at Lake Mead (80P1050)	Basin States Proposal (combination of balance contents and tiered release - under low reservoir storage conditions, either reduce Lake Powell release or balance contents depending on projected Lake Mead and Lake Powell elevations)		
	E	Absolute protection of SNWA Intake (1000') at Lake Mead (80P1000)	Current Conditions (Lake Powell minimum objective release of 8.23 maf unless 602(a) storage criterion is met)		

Notes:

1. CBS refers to the "Conservation Before Shortage" proposal submitted by Environmental Defense, et. al.

Clearly, a large number of alternatives could be generated if all possible combinations were used. It is expected that a reasonable range of alternatives will be developed to address the broad range of comments and issues raised during the scoping process. Reclamation will develop this range of alternatives and coordinate with the Cooperating Agencies, Basin States, Indian Tribes, key stakeholders, and other interested parties in the refinement and selection of alternatives to be considered in the EIS.

6.4 Scope and Content of the EIS

The Department's current assessment of the scope of the EIS is discussed below. A detailed outline of the table of contents proposed for the EIS is included as Appendix X.

Chapter 1 of the EIS will present a general introduction and overview of the proposed Action including background information. The purpose and need for the proposed Action along with a discussion of related and ongoing actions will also be presented in this chapter.

Chapter 2 will provide a detailed description of the proposed Action, including study area and identification of the proposed Action components. A discussion of the alternatives will be presented along with a discussion on the methodology used to develop the alternatives and the screening/evaluation process that was applied for selection of alternatives according to the NEPA requirements for alternatives. The last part of Chapter 2 will include a summary of the impacts identified for the recommended alternative.

Chapter 3 will present the environmental setting and the environmental consequences of the different alternatives. This includes a description of the environmental baseline conditions and characteristics of the study region and Study Area as they relate to each resource. The chapter will also describe the process and assumptions used in the impact determinations. This will include descriptions of the river system operations under each of the alternatives and will compare and contrast these conditions to those under a predetermined baseline condition. Chapter 3 will also provide detailed descriptions of the different resource impact analysis and results thereof. For this EIS, the potential environmental resources and issues to considered/evaluated include: Water Supply, Water Quality, Reservoir and River Flow Issues, Aquatic Resources, Special-Status Species, Socioeconomics, Recreation, Energy Resources, Air Quality, Visual Resources, Cultural Resources, Indian Trust Assets, and Environmental Justice. This chapter may also include a discussion or summary of environmental commitments.

Chapters 4 will discuss other NEPA considerations. This chapter will also identify and discuss the potential cumulative environmental impacts of the proposed Action and alternatives and any proposed mitigation measures. The discussion will include a listing of the alternatives considered for the cumulative analysis. Unavoidable significant impacts of the proposed Action and alternatives, including the No Action Alternative, will be addressed. The methods of assessment, significance criteria, and regulatory setting of each resource will also be presented. Chapter 4 will also discuss other NEPA topics, such as the relationship between short-term uses of the environment and the maintenance and enhancement of long-term productivity.

Chapter 5 will cover the consultation and coordination process, including the scoping process conducted with the public and the consultation and coordination conducted with the Cooperating Agencies, Basin States, Indian Tribes, and other stakeholders.

It should be noted that the preliminary list of resources to be addressed in the EIS were identified and refined after considering issues raised during the scoping process. It is anticipated that further refinement of the preliminary list of resources to be addressed in the Final EIS may occur following the development of alternatives and as a result of additional input and feedback that may be received during agency consultation and coordination.

Appendices

- A. The Secretary’s Letter to the Seven Colorado River Basin States on May 2, 2005
- B. June 15, 2005, Federal Register Notice
- C. September 30, 2005, Federal Register Notice
- D. Memorandum – Summary of Preliminary Public Input for the Development of Management Strategies for Lake Powell and Lake Mead, Including Lower Basin Shortage Guidelines, Under Low Reservoir Conditions, September, 2005
- E. Public Involvement Plan
- F. Notices of Public Meetings – News Releases
 - F.1 September 30, 2005, News Release
 - F.2 October 28, 2005, News Release
- G. November 1, 2005, Salt Lake City, Utah Public Meeting Documents
 - G.1 Sign-In Sheet (1)
 - G.2 Transcript
- H. November 2, 2005, Denver, Colorado Public Meeting Documents
 - H.1 Sign-In Sheet (1)
 - H.2 Sign-In Sheet (2)
 - H.3 Transcript
- I. November 3, 2005, Phoenix, Arizona Public Meeting Documents
 - I.1 Sign-In Sheet (1)
 - I.2 Sign-In Sheet (2)
 - I.3 Sign-In Sheet (3)
 - I.4 Sign-In Sheet (4)
 - I.5 Transcript
- J. November 8, 2005, Henderson, Nevada Public Meeting Documents
 - J.1 Sign-In Sheet (1)
 - J.2 Sign-In Sheet (2)
 - J.3 Sign-In Sheet (3)
 - J.4 Transcript
- K. Public Meeting Presentation
- L. Methodology for Categorizing/Cataloging Comments
- M. January 19, 2006, Las Vegas, Nevada Tribal Consultation Meeting Documents
 - M.1 Request to Initiate Consultation
 - M.2 Sign-In Sheet (1)
 - M.3 Transcript

Appendices (Continued)

- N. January 27, 2006, Phoenix, Arizona Tribal Consultation Meeting Documents
 - N.1 Request to Initiate Consultation
 - N.2 Sign-In Sheet (1)
 - N.3 Sign-In Sheet (2)
 - N.4 Sign-In Sheet (3)
 - N.5 Transcript
- O. February 16, 2006, Phoenix, Arizona Tribal Consultation Meeting Transcript
- P. Tribal Consultation Meeting Presentation
- Q. February 3, 2006, Proposal from Colorado River Basin States
 - Q.1 Letter to the Secretary of the Interior
 - Q.2 Attachment A – Preliminary Proposal
 - Q.3 Attachment B – Draft Agreement
- R. February 1, 2006, Environmental Defense Letter
- S. February 21, 2006, Defenders of Wildlife Letter
- T. List of Commentors Sorted by Commentor Type
 - T.1 List of Commentors Sorted by Commentor Type and Code
 - T.2 List of Commentors Sorted by Commentor Type and Name
- U. Summary of Comments – Comment Database
- V. Summary of Issues Raised in Comments – Grouped by Resource/Issue Area
- W. Copies of Unique Comments
 - W.1 Business Comment Letters (B)
 - W.2 Federal Agency Comment Letters (F)
 - W.3 Special Interest Group/Non-Governmental Organization Comment Letters (G)
 - W.4 Individual Comment Letters (I)
 - W.5 Local Agency Comment Letters (L)
 - W.6 State Agency Comment Letters (S)
- X. Preliminary EIS Table of Contents
- Y. News Articles