Executive Summary of Critical Issues
Topic – Draining of Lake Powell

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CAP Position Summary
Lake Powell is an important component of water supply, power production, and recreational benefit in the Colorado River basin. CAP opposes efforts by environmental interests and others to drain Lake Powell.

Summary of Issue
Lake Powell is formed by Glen Canyon Dam. Glen Canyon Dam is the most prominent feature of the Colorado River Storage Project and was constructed between 1956 and 1963. Lake Powell reached full capacity for the first time in June 1980. When full, Lake Powell stores over 24 million acre-feet of water, slightly less than Lake Mead. Glen Canyon Dam's powerplant operates at an installed capacity of 1,288 megawatts and produces enough power to meet the annual needs of about 400,000 households. The U.S. Bureau of Reclamation operates Glen Canyon Dam.

Glen Canyon Dam was constructed primarily to assist the Upper Basin in meeting its long-term water supply commitments to the Lower Basin under the 1922 Colorado River Compact (Compact) while allowing the Upper Basin to develop and use its Colorado River apportionment. Article III(d) of the Compact provides that the Upper Basin states will not cause the flow of the Colorado River at Lee's Ferry to be depleted below an aggregate of 75 million acre-feet for any consecutive 10-year period. Construction of Glen Canyon Dam allowed the development of long range operating criteria for the Colorado River system that provide for either a "minimum objective release" of 8,230,000 acre-feet annually from Glen Canyon Dam or an annual release strategy that avoids spills and equalizes storage with Lake Mead. Since the filling of Lake Powell in 1980, releases from Glen Canyon Dam have been made to avoid spills and to equalize storage with Lake Mead in most years. Average annual inflow to Lake Powell is about 12 million acre-feet.

Without Lake Powell, the flow of the Colorado River at Lee's Ferry would be largely unregulated. During a series of drought years, a drawdown of Lake Mead would be accelerated as Lower Basin demands and Mexican Treaty obligations are met. This, in turn, would accelerate and worsen Lower Basin shortages, starting first with CAP. In a series of average or better years, flows would eventually fill the Lower Basin reservoirs and be

bypassed. Since these bypasses or spills would be more than the current Lower Basin diversion capacity, water would eventually flow into Mexico and be lost to beneficial consumptive use in the United States. Without Lake Powell, the Colorado River system would have much less storage capacity. Therefore, less water could be stored during average or better years for use during droughts.

The current conditions clearly demonstrate the importance of Lake Powell storage to provide a reliable water supply. In late 1999, at the start of the current drought, both Lake Powell and Lake Mead were essentially full, as much as allowed by flood control plans. Since then, Lake Powell storage has dropped by more than 10 million acre-feet (maf) and Lake Mead by more than 12 maf. Lake Mead had less than 13 maf of storage remaining as of July 2007. Without Lake Powell, Lake Mead would have 10 maf less or only about 3 maf in storage. Shortages would have been assessed to Arizona and Nevada water users beginning in 2003.

Other Considerations

While not specific to CAP, there are other compelling issues that should be considered with regard to draining Lake Powell.

1. Feasibility. Completely draining Lake Powell would not be a simple matter. Assuming that releases would be held to non-damaging levels in the Lower Basin during the draining operation, and assuming average inflows during that time, draining the lake down to its "dead storage" pool would probably take many years. Once at that level, it would not be physically possible to empty Lake Powell's "dead storage" pool since the original river diversion tunnels were plugged when the dam was completed. Without actually removing the dam itself, a means would need to be found to drain the remaining water and then open the original river diversion plugs to allow the river to flow freely past the dam. If this were not done, spring runoff would temporarily increase water levels behind the dam until it was allowed to drain again and a free flowing river would not exist. In summary, draining the lake's dead storage pool and opening the diversion plugs would be very difficult and very costly. The cost of actually removing the dam itself would be enormous.

2. Cost. The Colorado River Storage Project Act requires that power from Glen Canyon Dam be sold at rates that will repay the dam's construction costs over a 50 year period. Repayment of the initial construction cost is not yet complete. If Lake Powell were drained, no power would be produced; therefore, repayment of construction costs would stop and the remaining construction costs would be a public expense. Also, the cost of actually removing the dam or opening the

diversion plugs as well as restoring the river corridor would be at public expense.

3. Loss of recreation. It is estimated that about three million recreationists visit Lake Powell each year producing about $500 million in annual revenues. They include houseboaters, water-skiers, fishermen, rafters, and sightseers. This industry would be lost if Lake Powell were drained. It is also estimated that over 60,000 people now raft through the Grand Canyon each year, while before the dam, only about 2,000 people did so.