

Comment # Label	NPS Original Commenter	Original NPS Comment	UDWRe March 31, 2017 Response	Additional NPS Comment	Additional NPS Comment Reviewer	UDWRe Updated Response
NPSCmt51	ELJ - NPS Glen Canyon National Recreation Area	The NPS requests that global climate change be analyzed for cumulative impacts to surface water as global climate change (regional drought) would have a cumulative impact on surface water levels when considered with additional water withdrawals from Lake Powell.	Please see the Extended Narrative document for the response to NPS Comment No. 51.	OK, NPS to review and provide any additional comments in the impact analysis portion of the EIS.	E. Janicki	Please see the revised attached Narrative Response document for the response to comment NPS No. 51.
NPSCmt59	ELJ - NPS Glen Canyon National Recreation Area	The NPS requests the following additional topics for inclusion in the cumulative impacts analysis: infestation of non-native mussels in Lake Powell, potential future water pipeline project (Central Arizona Water Pipeline Project, Bureau of Reclamation lead), global climate change/regional drought conditions, ongoing Utah or Arizona Departments of Transportation road work, GLCA Off-road Vehicle Management Plan, South Central Communication Fier Optic project/ROW (US 89)	Please see the Extended Narrative document for the response to NPS Comment No. 59.	OK, NPS to review and provide any additional comments in the impact analysis portion of the EIS.	E. Janicki	Please see the revised attached Narrative Response document for the response to comment NPS No. 59.
NPSCmt114	MW	Based on NPS calculations, diversion to the LPP may account for 1-2 ft drop in head at Lake Powell, which could dramatically affect hydropower production. This in turn, may trigger basinwide drought contingency plans that release water from other upstream reservoirs to maintain minimum pool elevations in Lake Powell. Thus, the effects of diversion through the LPP could potentially affect reservoir elevations at, and releases from, Flaming Gorge, Navajo, and Aspinall. Please ensure analyses models extended drought conditions and reports the effects to Lake Powell elevations and the frequency and duration that Lake Powell is at or below minimum power pool. Per NPS comments dated July 5, 2012; we encourage additional analyses that include possible severe future hydrologic conditions within the Colorado River watershed (extremely low inflow and low lake level conditions.) NPS Comment Disposition - The modeling, analysis, and discussion of the effects of the LPP withdrawals on LP elevations is incomplete. The current modeling effort only evaluated 3 years of LPP withdrawals with the 2007 Interim Guidelines in effect (modeled LPP depletions began in 2024, the 2007 Interim Guideline expire in 2026). LPP depletions in 2024 were only 15,468 AF (and not much greater by 2026); full build-out (86,249 AF) was not until 2048/2049. So, the LPP at full build-out, under the current operating regime (i.e., the 2007 Interim Guideline), was never modeled or analyzed. BOR report states that the effects of the LPP will be greatest at full build-out. Recent modeling by Colorado West Slope water users suggested that small differences in LPP elevations in critical years could cause (or increase the frequency ad duration) LP to fall below minimum power pool elevation because either the inflow hydrology coupled with the antecedent reservoir content was insufficient to maintain LP elevations above minimum power pool in that year, or because a slightly lower elevation triggered a different Operating Tier under the Interim Guidelines and the subsequent releases under the new tier causes LP to drop below power pool. Thus, a 1-2 foot drop in LP elevation associated with the LPP withdrawals (esp. at full buildout) could trigger a different Operating Tier under the Interim Guidelines, cause LP to fall below minimum power pool when otherwise it may not have (or at least not for as long or as often) and thus trigger Drought Response at Upper Basin CRSPA reservoirs. [BOR held all demands (except reasonably foreseeable project) constant at 2015 levels in order to model just the effects of the LPP. If these (increasing) demands were included, the likelihood of LP falling below minimum power pool may be even greater, even without the LPP.]	Please see the Extended Narrative document for the response to NPS Comment No. 114.	The March 31, 2017 comment response resolves questions regarding the CRSS modeling assumptions on future depletions and 2007 Interim Guidelines operations. NPS asks for additional clarification on cumulative effects on upstream reservoirs under a 10 percentile scenario. NPS asks that the discussion on modeling uncertainties in the U.S. Bureau of Reclamation modeling attachment be included in the comment response.	E. Janicki	Please see the revised attached Narrative Response document for the response to comment NPS No. 114.

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NPSCmt115	MW	<p>Refer to the following Document: Attachment 4 PLP Lake Powell Pipeline Project, Responses to Participant Comments on PLP and Draft Study Reports</p> <p>NPS Comment Disposition - Comparing the effects of the LPP on annual and monthly mean flows (especially in the context of USGS gage accuracy), or annual flow duration curves is misleading. Just because annual flow duration curves are "nearly identical" with or without LPP, or because annual and monthly mean flows are within gage accuracy doesn't necessarily mean there is no effect on flow; rather, it may suggest that the wrong metrics are being used to evaluate the effects of the project. The condition, trend, abundance, and diversity of biotic resources (e.g., fisheries, aquatic macroinvertebrates, food web dynamics, riparian/wetland vegetation, available/useable habitat) and abiotic resources (e.g., thermal loading, channel and sediment dynamics, number or duration of zero-flow or low-flow days) are often determined by daily flow, not annual or monthly mean flows. Table 4-3 and figure 4-6 (Study Report 18) show that there is consistently less water in the system (in terms of monthly mean flow) March through June (and generally more in the remaining months) with the LPP than without. If these patterns hold, they would likely be more pronounced for daily flows. What are the effects of these consistent, and presumably long-term, changes in flow patterns? The USGS gage data for the Virgin River near St. George, UT, (Appendix 1, Page 1; Study 18), states that there is "[N]o flow at time in some years." Here too, the duration and frequency of no-flow (and even extreme low-flow) events are not adequately reflected or captured by annual and monthly means, and annual flow duration curves; nor should they be ignored because of gage accuracy. From the data and analyses provided, it is not possible to determine if the project would alter the frequency or duration of no-flow or extreme low flow event.</p>	Please see the Extended Narrative document for the response to NPS Comment No. 115.	NPS requests additional metrics (e.g., 10-day, 30-day, and 90-day low flows) be added to the Virgin River flow effects section. NPS would like the evaluation to include an assessment on magnitude, timing, and duration of flow effects.	E. Janicki	Please see the revised attached Narrative Response document for the response to comment NPS No. 115.