99 paragraph 6: What is the significance of the 1200 foot elevation? Because it is below the 90th percentile, it would be expected that there would be a greater than 10% probability of water levels being higher than it. What is the point of this discussion? Further, if there is a change in the percentages from 22% to 16%, this raises the question of why the 90% line still does not change over time.

100 Page 3.3-27, Figure 3.3-14
Please change the color pattern on the figure data lines to the same as used in the other figures.

101 Page 3.3-29, Figure 3.3-16
Why does this Figure use a different scale than 3.3-15? Since they are dealing with the same concept and are within the same range of values, please use the same scale.

102 Page 3.3.4.4.4
What is important to note is not only the decrease in probabilities that a certain level will be maintained, but also that it happens much sooner under the more liberal surplus alternatives. This actually increases the number of years of risk, which increases the opportunity to have it happen. This increase, as well as the numerical changes, should be documented in this section.

103 Page 3.3-31, Table 3.3-8
Please explain how the figures for 2050 rise for all but the no action alternative.

104 Page 3.3-32, 3.3.4.5
A general comment on this section is appropriate. The discussion of the modeling and analysis in this section is not as clear as it is in other sections, especially the previous one on lake elevations. We understand that this type of analysis can be difficult to put into comprehensible terms, but as this is critical to the understanding of the effects, we believe another effort should be made to revise this section.

105 paragraph 2: Please note in which tables this information appears. There are many tables and graphs in this section. It may also be useful for the reader if the seasonal differences in flow magnitudes are more fully explained.

106 Page 3.3-34, 3.3.4.5
paragraph 1: Please separate the portion of this paragraph dealing with the second type of analysis from the rest. It will be easier to locate. Since both of these use exceedence frequencies, please explain how they are different or what different results are highlighted. A form of exceedence frequency was used in the lake elevation portion of the analysis. How is this form different? At the least, the need to change to "less than or equal to" from "greater than or equal to" should be explained. This type of modeling may also benefit from having a longer explanation, with examples, in an attachment to the document. Further, because this is the method described first in the results, it should be mentioned first. Alternatively, the discussion of each method should be included with the needed results and explanation.

99: The 1,200 foot Lake Mead elevation represents the elevation where Lake Mead is essentially full and is also below the top of the raised spillway. This has been included in the FEIS. Figure 3.3-14 presents the percent of the traces that had elevations equal or higher than elevation 1,200. The 90th percentile line depicted on Figure 3.3-13 shows where the top decile of the modeled values lies. Both figures present specific statistics that are accurate and relevant.

100: The color pattern on Figure 3.3-14 has been changed as suggested.

101: The vertical scale is varied to focus the presentation of the results to the range of values observed under the respective modeled conditions.

102: Comment noted. The timing is clearly shown in Figures 3.3-14 through 3.3-16.

103: Table 3.3-8 provides a numeric summary of the data presented in Figure 3.3-14. Values in Table 3.3-8 all decrease between 2016 and 2050. Hydrologic fluctuations contribute to the minor variability of charted values near 2050 in Figure 3.3-14.

104: Additional explanation has been added to Section 3.3.and Section 3.4 with respect to the interpretation of the figures in these sections and the meaning of the analysis results.

105: Subsections 3.3.4.5.1 through 3.3.4.5.4 refer to individual tables and graphs. The paragraph discussed in the comment is a general description of the analysis in these subsections.

106: This paragraph has been divided into two, with the cumulative distribution function discussed first, in order to parallel subsequent text.

Page 3.3-34, 3.3.4.5.1

107 paragraph 2: Please provide a definition for "mean monthly flow" data in the Glossary. Is this the average flow per month, or the average total flow for month? It also might be useful in this section to expand on the statement that there are hourly, daily, weekly, monthly and seasonal changes in flows released, as well as attenuation in these changes downstream from the release points. It might also be useful to reiterate that the 400,000 af in change in point of diversion transfers are included in some alternative analyses and not in others. The justification for this should have already been made.

107: A definition for the term "mean monthly flow" has been added to the glossary. In the FEIS, all alternatives included the tranfers.

Pages 3.3-35 to 3.3- 36, Figures 3.3-18

108 At the scales used in these figures, it is difficult to assess any changes to flows that result from the different alternatives, except at a recognizable break point. Perhaps scales could be changed to allow the tracks to be seen more clearly.

108: There is relatively little difference in the magnitude (Y-axis) of the mean monthly flow values and excess flows under the baseline and surplus alternatives. Figure 3.3-18a through Figure 3.3-18d and the other similar figures depict this. There are some differences in the frequency (X-axis) of excess flows in the winter season as represented by January for modeled year 2015 as depicted by Figure 3.3-18a. However, the differences in the frequency (X-axis) of excess flows in the other seasons are minimal to none, as depicted by Figure 3.3-18b through Figure 3.3-18d. In the FEIS the size of the data markers have been reduced and the size of the graphs were increased.

Page 3.3-37, 3.3.4.5.1

109 paragraph 1: This paragraph is a prime example of where more information and analysis of the results of modeling should be provided to the reader. The numbers generated from the models should be provided. There is no defined connection that the high flows in the figures are flood flows, so the statements about the changes in flood flow releases does not appear to be supported. There should also be a discussion of where the magnitude of flood flows is shown, and how these do not decline even if there is a decrease in the flood probability.

109: Flows greater than 20,000 cfs are typically due to flood control relases, not downstream demands. This has been noted in Section 3.3.1.2 and 3.3.4.5.1.

110 Table 3.3-13 appears to be related to the second form of analysis, not the first since it contains more exceedence levels than mentioned were present in the text. This confuses the reader. There are other issues as well. This is where an understanding of what the "mean monthly flow" is essential. The other analysis looked at four months, none of which correspond to this. The highest flows shown here, the maximums, are significantly higher than anything shown in Figures 3.3-18a-d. There is no explanation of what the flows in the table mean, why minimum flows higher for the liberal alternatives than the baseline after 2015 when there are no surplus criteria, and why the maximum flows go up when flood releases have decreased due to lower lake elevations.

110: The introductory text has been modified to include the additional percentiles (Section 3.3.4.5). The maximums may not occur during the four months shown in the figures. Hydrologic fluctuations contribute to the minor differences in the maximums.

Page 3.3-38, 3.3.4.5.2

111 paragraph 1: Since the 4.4 Plan cannot be accomplished without the surplus criteria being in place, the argument in this paragraph is not supportable. Further, this question should have been addressed much earlier in the DEIS.

111: Section 1.4.1 discusses the relation between the California Colorado River Water Use Plan and interim surplus criteria.

112 paragraph 3: The Flood Control Alternative should be modeled as are the Six States, California and Shortage Protection alternatives if is to be considered a valid alternative for the purpose and need of the action.

112: In the FEIS, the Flood Control Alternative includes implementation of the California Colorado River Water Use Plan. See response to Comment 37-11 for additional discussion.

Pages 3.3-39 to 3.3-40, Figures 33.19a-d

113 We have the same comments on these figures, and the analysis in the text that we had for the preceding section on the Hoover to Parker reach.

113: See response to Comment No. 57-108.