

COMMENT LETTER

RESPONSES

33

- 245
cont'd | occur historically? Please note that the Yuma clapper rail populations in Mexico are not protected under the U.S. ESA.
- 246 | Page 3.16-7, 3.16.5
paragraph 1: It should be noted that Mexico will divert any excess water of any category if it has the canal space to do so. It might be appropriate to explain how that water counts or does not count against their allocation.
- 247 | paragraph 4: It will be Mexico's ability to schedule its 200,000 af that will be adversely affected by the proposed actions since the probability of a Lake Mead water level requiring a flood control release that decreases with surplus criteria and future upstream depletions.
- 248 | Page 3.16-8, 3.16.5.1
paragraph 2: The date of 2005 for Upper Basin depletions to significantly affect Mexico's surplus flows does not appear to be correct. These depletions do not become sufficiently large until well after 2015.
- 249 | paragraph 3 and Tables 3.16-2 through 3.16-5: The maximum annual flow given of 8.4 maf does not appear to be logical given the constraints on flow releases over the next 50 years or of the amount of water so recorded in the past. There is not 8.4 maf surplus in the system in any one year, and releases of this magnitude would wipe out the infrastructure of the river. We are unclear as to what these data tell the reader and suggest additional explanation be provided.
- 250 | Page 3.16-12, Table 3.16-2
The information in this table relates to the previous comment. Additional explanation as to the source of the numbers in the table and what they represent is needed for the reader to understand the information provided. The basic question of how flows of these magnitude can occur with the reductions in available flood waters over time remains to be answered.
- 251 | Page 3.16-13, 3.16.6.1
paragraph 1: The reduction in historic river flows below the NIB is far more a factor of development of water resources in the United States than it is in what Mexico diverts every year. This should be put into perspective in this discussion. The mention of "potential magnitude" refers back to a concept that has not been adequately explained in this document and requires this explanation before it is useful.
- 252 | paragraph 2: It may be more correct to say that the establishment of marsh and riparian habitats below the NIB requires overbank flows that deposit sediment rather than scouring flows. Scouring flows deepen the channel, which drops the water table in the surrounding floodplain and has adverse effects to local marsh, backwater and riparian habitats. The elimination or reduction of even smaller level flows than can cause damage to structures may have a profound effect on riparian and marsh regeneration and should be considered here. This concept of the importance of lower "flood" levels has been discussed in relation to other parts of the DEIS.

245: The discussion of historical versus current habitat notes when non-native species such as salt cedar and shrimp were introduced. Occurrence of the Southwestern willow flycatcher in Mexico is noted in Section 3.16.6, as is the status of Yuma clapper rail.

246: Additional information has been added to the FEIS concerning Mexico's practice of diverting excess flows (such water does not count against their allocation).

247: As discussed in Section 3.4.4.5.2 of the FEIS, Mexico receives surplus deliveries 26% of the time for the interim surplus criteria period under baseline conditions, and 23% of the time under the preferred alternative (Basin States Alternative). As noted in Section 3.3.3.3, all alternatives and baseline used identical Upper Basin depletions.

248: As stated in the DEIS on page 3-16-8, paragraph 2, "the relatively high frequencies occurring in years 2001 through 2005 result from the current full reservoir conditions". After 2005, there is a gradually declining trend out to 2050 that is due to the increasing Upper Basin depletions.

249: Reclamation notes that in 1983 through 1987, excess flows at NIB were greater than 9 maf annually, with a maximum of 13.8 maf in 1984.

250: As discussed in Section 3.3.3.5, the range of possible future hydrologic inflows modeled includes the 1983-1987 historical inflows. Such events will cause flood control releases of similar magnitudes in the future.

251: The term "magnitude" has been added to the glossary of the FEIS to provide a definition for this term. See response to Comment 11-18 which addresses reductions in historic river flows below NIB.

252: Reclamation assessment has been revised to discuss these concepts.

COMMENT LETTER

RESPONSES

34

- 253 | paragraph 4: How can the magnitude of the annual flows not change if the frequency and amounts of flow decrease? The effects of interim surplus criteria are felt the most in the next few years and that effect has not been shown to be negligible (see table 3.16-1).
- 254 | Page 3.16-14, 3.16.6.2
The desert pupfish in the Cienega is now *Cyprinodon macularius* and the Quitobaquito form is *C. eremus*.
- 255 | Page 3.16-15, 3.16.6.2
paragraph 6: The potential for changes to inflow via the MODE because of salinity control operations should be addressed as part of the discussion of effects to the Cienega.
- 256 | Page 3.16-18, 3.16.6.2
paragraph 6: Please note that as of August, 2000, there is no recovery plan for the flycatcher.
- 257 | Page 3.16-19, 3.16.6.2
paragraph 3: Are there any records of flycatchers using the Colorado River, the delta or the Cienega during the breeding season? Is it reasonable to assume they do or do not breed in the area?
- 258 | Page 3.16-20, 3.16.6.2
paragraph 5: For a discussion of acreage changes in the last 20 years, more recent citations than 1976 and 1986 would be appropriate.
- 259 | Page 3.16-21, 3.16.6.2
paragraph 2: A map would be useful here.
- 260 | paragraph 3: Please note that the clapper rail is not listed by the United States in Mexico. It is listed by the Mexican government under its environmental statutes.
- 261 | Page 3.16-22, 3.16.6.2
paragraph 1: Please note here that crayfish are not native to the Colorado River. The portions of the paragraph on page 23 that relate to crayfish may be moved here for completeness.
- 262 | Page 3.16-23, 3.16.6.2
paragraph 1: Is the CFG Finne-Ramer unit the same as the Wister unit?
- 263 | paragraph 2: Data from 1999 estimated the clapper rail population in the Cienega at 6,400 individuals.

253: Excess flows to Mexico primarily result from flood control releases from Lake Mead. As shown in Figures 3.16-2 through 3.16-5 in the FEIS, the surplus alternatives have annual excess flow volumes over the same range as the volumes for the baseline conditions. The differences between the alternatives and baseline conditions are in the frequency of occurrence (or probability) of excess flow volumes of a particular magnitude (e.g. 2-3% for a volume of 4 maf in year 2005).

254: This information is included in the discussion for the desert pupfish in Section 3.16.6.2.1 of the FEIS.

255: Inflow to and salinity of the Cienega from MODE would not be affected by the interim surplus criteria.

256: The discussion of the status of the Southwestern willow flycatcher notes this.

257: Reclamation could only find documents of flycatchers being observed in Mexico before its breeding season, and believes it is not reasonable to assume they breed in the area.

258: The analysis for the FEIS focuses on acreages from a 1997 survey of floodplain vegetation in the Limotrophe Division, a 1999 study conducted by the University of Monterrey, University of Arizona, Environmental Defense Fund, and the Sonoran Institute, and a 1998 aerial survey of the Rio Hardy and Colorado rivers.

259: A map has been added to Section 3.16.

260: Comment noted.

261: Mention of when crayfish were introduced to the lower Colorado River and its role in extending the breeding range of the rail has been moved up.

262: No, they are two different areas in California.

263: This has been added to the discussion.