G-3

GORDON

1ST REPLY COMMENTS
(WITH REPLY FROM GAINES)

Reply #1

Comments on Draft Comparison Studies Report
August 20, 2002
Dave Gordon

Please see the notes made on Steve's comments dated 8 Aug 02.

1. Page 1-1, It seems like a version of Section 1.1 (Purpose) should be included in the main report. This Section gives some background and outlines why we analyzed this data. Noted - will consider
2. Page 1-1, 1st pp, 2nd sentence: Long sentence, difficult to follow. noted, no change
3. Page 1-6, 1st pp, last sentence: confusing sentence about thalweg position. noted
4. Page 1.7, 1st sentence: Was the model discharge available for each WES model? Q scale was in published reports, actual Q for verification was not generally provided for all models considered (some were unpublished studies)
5. Page 2-1: Mention that the typical top of bank elevation is about +30 feet LWRP. add sentence at end para.
6. Page 2-1, 1st pp: The sentence, "The advantage …" is confusing. ?? no change
7. Page 2-4, top of page: Also mention the WES Kate Aubrey model. WES model not considered for predictive case which is subject of this page/para.
8. Page 2-6, 1st pp, last sentence: Model data was not usually collected along these survey lines. maybe clarify, the WES models appeared to use those ranges because that is where prototype data were available.
9. Page 2-6, 2nd pp. I don't understand the last sentence. model to prototype ratios require values at prototype scale and values a model scale (without conversion to prototype scale). For example, there are no model data for bathymetry in mm or in.
10. Page 2-6, 3rd pp: ref to Section 3.2 not found & add "Lower" Mississippi River in last sentence. Noted, no change proposed. Don't see need because of reference to Memphis and this is just to give a general location. Miss. River is the name of the river and no further description seems warranted for this para.
11. Page 2-8, 2nd & 3rd pp: Remove these paragraphs. We eventually did not use this paragraph to extract our final data sets. Some (the KA and NM 1997 info- not used) were analyzed using this technique. Need to reword to discuss problems with channel.ma, but I think the tool should be included. Channel.ma, if corrected properly, can be used to great advantage for future analysis of model results.
12. Page 2-9, Fig 2-3: Remove for above reasons. see previous
13. Page 2-10, 1st pp & Fig 2-4: Remove for above reasons. see previous and these were used in analysis of WES models.
14. Page 2-11, 2nd pp, last sentence: replace successful with accurately sentence removed - may be moved to evaluation report as a conclusion. accurately implies quantitative here, successfully better describes the general nature of this comment.
15. Page 2-13 – 15: Omit CF discussion. I still don't understand the need for it. I also do not understand the explanation in the write-up. It's very confusing. CF technique is a standard technique and additional references may help in understanding this. This technique should be included in the discussions because it provides a description of an additional analysis approach. These pages do not add appreciably to the length of the report and removal of these sections would take

more effort in rewriting the document because the differences and MSE are discussed in parallel with the CF. Plan to leave it in. This was OK with Steve per his comments after we had discussed above..

16. Page 2-16, 1st pp: Give a more detailed explanation of what the MSE represents. do we need to add a reference here. There are texts that do a pretty good job of describing this.
17. Page 2-17, 2nd pp, 2nd sentence: error in wording "…and to reach weighted…" add calculate after to
18. Page 2-19, 1st sentence: What is meant by "the sign"? pos. or negative.
19. Page 2-19, 2nd pp: What is meant by "goodness of fit"? see comment #16
20. Page 2-19, 3rd pp: Change sentence to: "Figure 2-6 describes how three model results relate to the prototype **on a range by range basis**." done
21. Page 2-22, Table 2-4: Explain why the mean area values of both the 75 and 76 surveys differ greatly between the MM and WES model calculations. This table requires more explanation in the write-up. Add'l description added to clarify.
22. Page 2-24, 1st pp: Before the 1st sentence, insert the following sentence: "The 0 foot LWRP elevation used for the morphologic calculations in this analysis represents the extreme low flow channel where extreme variability occurs in both the prototype and the model~~."~~." covered in subsequent para. - immediately following this one. In the last sentence, change "This bias results…" to "An exaggeration in the difference calculations results…" change bias to exaggerate
23. Page 2-25, 3rd pp: "…periodically the calculation…" "Sometimes only a limited…" ?? did not find ???
24. Page 2-30: Agree with Steve that most of this truncation section could be removed. The 2nd and 3rd pps on page 2-30 along with pages 2-31 through 2-41 could be removed. Pages 2-42 & 43 should be kept. A simple explanation using Figure 2-8 to describe the incorrect values that would occur with this section should suffice. Most of this is now in appendix A. 2 para. describe truncation effects and omission of some model study results because of its effects.
25. Page 2-43: Add sentences: "However, a few of the studies used in the analysis contained a few truncated sections. These sections were subsequently removed form the analysis. The range-by-range plots indicate these sections by breaks in the plot lines." did we do this? by last check, I don't recall omitting any sections? Only Salt Lake figure seems to indicate this, but the para. plots count sections 1-last with no breaks?
26. Page 3-2, last pp: remove 1st sentence Add Kate-Aubrey before micromodels
27. Page 3-4: Figures are referenced incorrectly, should be Figures 3-4 and 3-5. Done (Combine this sentence with the one before) Noted
28. Page 3-11, Table 3-1: Out of order compared to graph order. noted and should be swapped From looking at the graphs, I disagree with some of your assessments. Thalweg – Model (not reproduced between R20 & 30) Prototype (more variable R21 to 24 & R32 to 35) noted; Width – Prototype (especially R23 –25 & R39 - 41) noted; Width/Depth – Prototype (large variability R24 – 25 & R39 – 41) noted; Area – Model (area too low throughout reach except much higher R27 – 28 and much lower R32 – 41) noted, will add higher R27-28, but not much higher because 76 P has about same area as model at R33. different opinions noted and considered.

29. Page 3-12: I don't understand "0.50 probability level" this refers to the 0.5 on the cumulative frequency axis or the 50th percentile (middle).
30. Page 3-15, 1st pp: ref to sections 3.3 & 3.4 not found should be 2.1.5 and 3.1.5
31. Page 3-20, 3rd pp: red to section 3.3 not found should be 1.2
32. Page 3-33, Table 3-3: Slightly different assessment: Width – Prototype (R29 – 54 & R65 – 79) don't see much difference here; Width/Depth – Model (low R25 – 34) noted Prototype (large variability throughout) noted - make large variability, esp. R20-40; Area – Prototype (R46-60 & R66-74) noted
33. Page 3-34, Table 3-5: See prototype assessment from Table 3-3 noted not sure what is meant ??? is meaning about model being the same?? as in Tab 3-3, the model results are clearly different.
34. Tables 3-4 & 3-6: The vagueness of assessment using the CF (as compared to Tables 3-3 & 3-6) suggests that the CF does not add anything different. noted
35. Table 3-6: Area **slightly** over … noted, but not changed. CF interpretation is different that parameter plots, because the plots are cumulativeand this area-CF graph has about the same area (between the lines on the CF plots) between the P as the 1:8000 model does below the P. Therefore, can't say slightly unless both are called slightly.
36. Page 3-35: ref to section 2.4.2 not found struck
37. Page 3-36: ref to section 3.4.2 not foundcorrected to be 3.1.2
38. Page 3-36, 2nd pp: I thought the whole reason for using the KA reach was that the predictive capability of the large models could also be studied. No, the WES recommended plan was not constructed in it's entirety to date. Current conditions do not reflect the WES recommended plan.
39. Page 3-36: Need to discuss the obvious differences within the problem reach between the 1998 and 2001 surveys. 2001 struck from report because of large dredging effort in 1999. Additional descriptions and 3 figures should help this section.
40. Page 3-46, Table 3-7: Assessment of Width and Width/Depth ratio need to be reversed. Tab. 3-7 Looks OK.
41. Page 3-47, 1st pp: Why discuss how CF is computed in the summary? ref. to CF struck
42. Page 3-47, 2nd pp: I don't understand this? Why are you singling out the 1:16000 model for over predicting area and width when the other two models under predict area and width by approximately the same factors? The statements that are made here about flow patterns and velocity distribution are not backed up by the data as far as I can see. This should probably be in the MVM assessment. Para. struck. will include in MVM assessment as deemed appropriate.
43. Section 4 should probably be in main report noted. team can consider.
44. Tables 4-1 to 4-5: Add average values of MSE for each model type Noted, MSE seems to provide little information. Each model must be considered on its own.
45. Table 4-2: Check the area MSE for Wolf Island. 0.456 seems abnormally high compared to the other models. These were checked at length earlier (recall when these were questioned at our meeting in May or June. The bathymetry shows large differences in white areas just downstream of the head of the island and around the bend- this causes the higher MSE values compared to the other models.

46. Figures 4-4 & 4-5: Check numbers. Alternating high and low values look suspect. checked already and OK.

47. Figures 4-1 to 4-5: need bold line separating model types. noted for consideration

~~48.~~Talk to me about y-axis scales on the range graphs.?? steve state preference for using an absolute scale (0 to maximum); however, this would take quite a lot of work and I prefer to be able to distinguish between the lines. Their relative magnitude is what I'm looking for and not their absolute magnitude. Is this what you are talking about?