

F-5

MAYNORD

COMMENTS

Comments on Comparison Studies
8 Aug 02
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General Comments:

1. We need to do everything to reduce the length of this document. I believe the difference plots provide the best info and we should omit CF info to reduce length. There also seems to be a lot of info about truncation. I suggest omit and ref dissertation. I want people to read this document which is need for reducing.
2. I think up front we need to define and differentiate between similarity and similarity criteria. I think we are using similarity when we talk about how well the model parameters such as area, width, etc compare to the prototype. Similarity criteria deal with Froude number, distortion, Reynolds number, etc. If we are saying that variability in prototype data affects similarity, or how well we can show our model compares to the prototype, I agree with that concept. If we are saying that prototype variability allows us to relax similarity criteria, such as using greater distortion or Froude number exaggeration, then I completely disagree with that concept and it needs to be placed in individual opinions.
3. I suggest we list the factors that make the comparison of coal bed models and micromodels different. I consider the comparison apples and oranges primarily because the last step in the coal bed model was not variation in vertical scale and datum to match prototype data. The inclusion of the 1973 data is another complication.
4. We need to differentiate between spatial variability along a reach for a single survey compared to temporal variability at a cross-section between different surveys. Spatial variability is not a big issue because we know that rivers change area, width, etc in pools versus crossings etc. The temporal variability is what makes our life difficult and we must clearly differentiate between the two.

Specific Comments:

1. Page 1-1, line 1- ref to sec 2.4 seems out of place.
2. Page 1-1, 2nd pp- Sentence "If a prototype parameter varies ...". The prototype varies in response to many factors that are not reproduced in the micromodel or most other models as well such as different hydrographs, sediment load, temperature, etc. The model parameter should vary as much as the prototype only if all variables affecting that parameter are reproduced in the model. The last part of this sentence "the similarity criteria should be less stringent" is where I am concerned. If we adopt the above definitions of similarity and similarity criteria and remove the word criteria from the above sentence, then we are in agreement.
3. Page 1-3- I don't understand the last sentence of the first full pp.
4. Page 1-4- What is Gaines (1999)?
5. Page 1-4, 1st pp- "Based on published literature... " Remove 'the author speculated that the real'.
6. Page 1-4, 2nd pp- ref to Vernon-Harcourt section 2.4.2 needs changing.
7. Page 1-5- Since this is a report on micro models, I suggest we replace small scale with micro model.

8. Page 1-5- I think it is Struiksma not Strukisma.
9. Page 1-6- What is this ref to area elev that is in prep?
10. Page 1-7, 2nd pp- I would suggest rewording to something like 'Prototype reaches exhibiting a high degree of variability indicate reaches that are difficult to model while prototype reaches exhibiting a lesser degree of variability are generally easier to model.
11. Page 1-7, 2nd sentence- I don't understand this.
12. P 2-1, 1st pp- "The upper ref elev...". Why do we use the word "upper"?
13. P2-2, middle pp- Ref to 3.4.2 & 3.43 not found.
14. P2-2- What is Maynard et al (2001)?
15. Page 2-7- something wrong with text on Fig 2-2.
16. P 2-11, 2nd pp- Last sentence- "The current investigation ...". This is a conclusion that should be put in Conclusions.
17. Page 2-12- What is Gaines (1999)?
18. P 2-13- I think we should omit CF and weighted reach values and ref Gaines Dissertation.
19. P 2-19, 3rd pp- "Avg diff values and/or MSE values can ...". Remove "and/or MSE values".
20. Page 2-19, "Prototype Variability"- We need to differentiate between spatial variability along a reach for a single survey compared to temporal variability at a cross-section between different surveys. Spatial variability is not an issue because we know that rivers change area, width, etc in pools versus crossings etc. The temporal variability is what makes our life difficult and we must clearly differentiate between the two. Table 2-4 and any discussion of it should be clearly labeled in the former category of spatial variability.
21. P 2-23, 3rd pp- We should not include other models in statement about limit of +20 LWRP.
22. Page 2-25 1st pp- Table 2-4 does not show -10.
23. Page 2-28 to 2-43- Too much on truncation- omit and ref dissertation. We had some rule on when we eliminated results due to truncation. Is that rule given here or in Dissertation?
24. P 3-1, 1st pp- Remove sentence "Construction of the Micromodels ...". This is a capability I may not agree with.
25. P 3-7, 1st pp- ref to Section 2.4.3 not found. Also ref to sec 3.3 in next pp.
26. P 3-9, Fig 3-7- We must have blown this figure because bathymetry maps do not show this much difference. For example R-26 on Figure is 2000 ft in error. Not true in bathymetry maps.
27. Fig 3-18- The use of 1973 in the micromodel is one of the things that makes this comparison of the models an apple and orange comparison. 1973 was an anomalous event that significantly differs from the LRLR sequence agreed to in Rolla.
28. P 3-36- Reach plots rather than CF needed for plan conditions.
29. P 3-35- I suggest we start with a typical evaluation of the plan maps and assess the quality of the verification. I found little similarity in the model and prototype plan conditions. One major diff was there was no nav channel in model.
30. Table 3-9,3-10- Use arithmetic mean and omit CF and weighted.

31. P 3-36- ref to sec 3.4.2 not found
32. P 3-47, 1st pp- ref to section 3.3.5.1?
33. P 3-47, last sent of 1st pp- replace case studies with two Kate Aubrey models.
34. P 3-47- I don't understand last pp.
35. Table 3-10- Thalweg position is from an arbitrary line which makes % meaningless. Had we chosen the arbitrary line much further from the channel, the % would have been much less.
36. P 4-1- List factors that make comparison of coal bed and micromodel difficult.
37. P 4-12- I would prefer to leave conclusions out and put in our main report.
38. P 54, Figure B-7.16- backwards
39. P 53 Fig B-7.1a- range lines / numbers are not correct- all figures show 34 ranges.