

**D-6**

**GORDON**

**COMMENTS TO GAINES (v. 17)**

9/4/02

Reply to MVS comments on Ver 17  
Andy Gaines 31 August 2002

Comment:

1. Last page of Ch.2 - goodness of fit described/defined
2. Last page of Ch.2 - Do not know what portions from the comparison report is mentioned. Added reference to other report - Gaines, Gordon, and Maynard (2002), but don't see that insertion of intro material would add to this section.
3. pg 3-1- add of
4. pg 3-2 - adversely - suggestion noted but no change; these techniques all affect reproduction of flow patterns and bed configuration, some of them however have negative affects. I agree that there is an affect, however, you even state only some of them are negative. Therefore, adversely implies that all the affects are negative.
5. pg 3-2 delineated possible - changed
6. bottom pg. 3-4 - inconsequential - deleted. However, the comments on top of 3-5 are noted. Thalweg position is a factor of US boundary conditions which are also affected by a restricted thalweg. The restriction being talked about in the preceding para.s refers to the influence produced confining the channel within more or less fixed banks. Placement of training structures further reduces thalweg freedom to move -- they are placed in the river to shift the main thread of the channel to a desired alignment and to restrict width in order to increase depth. These restrictions are further influenced by the use of vertical distortion, slope exaggeration, and roughness distortions in the model. More detail on the specific influences can be provided regarding the effects of each of these if warranted/desired. The meandering thalweg in the Wolf channel does not dispute these conclusions because the small (relative to the MS) channel is more restricted thalweg movement. This results from a much lower width-depth ratio in the prototype Wolf. If structures had somehow been placed in the Wolf channel, more restriction in thalweg positional freedom would have resulted. I'm confused here. This topic seems to come up repeatedly throughout the report. How do we deal with this?
7. pg 3-7 - strike Thalweg position ..... sentence
8. Comment on figures 3-2, 3-3, 3-4 pg 3-7 - These figures refer to hypothetical alignment and not any specific condition. Descriptions of these figures have been modified to indicate that they are hypothetical, not actual. In general, the position and response of the thalweg is depicted in these figures and associated discussions, not the upstream or downstream boundary conditions. Figure titles have also been modified to show Hypothetical .... I don't even agree with these figures being labeled hypothetical. They should be removed because they have no relevance to what actually may occur.

- ~~9.8.~~ pg 3-12 - B/y of WES models is not available for +20 as used in the micromodel values shown in this para. The only numbers available for the WES models are at 0 LWRP. However at this water level, the B/y relationship between model and prototype are the same as shown (5 in MM to 50 in Prototype). The MM B/y values are 1/10 that of the prototype (Prot. B/y= MM B/y \*10) while WES B/y values are about 4/10 that of the prototype (Prot. B/y = WES B/y \*2.5). Please state this for comparative purposes
- ~~10.9.~~ pg. 3-12 - cross circulation - brief explanation added
- ~~11.10.~~ pg. 3-12 - next to last para. inconsequential - Strike sentence
- ~~12.11.~~ pg. 3-13 - para. deleted. I am now clear on what occurs with the rails. I don't think the paragraph should be deleted. Please clarify that the rails adjusted the datum.
- ~~13.12.~~ pg 3-17 - para after eq. (2). Discussion will be added regarding distortion in bends.
- ~~14.13.~~ pg. 3-18 - sect. 3.2.4: change section title to Performance Categories -- this section is heavily modified. Refer to re-write to make additional comments. Where is the rewrite?
- ~~15.14.~~ pg. 3-27 ref to 6-4 omitted.
- ~~16.15.~~ pg. 3-28 "on" added
- ~~17.16.~~ pg 3-29 - non-porous not added. This para. is talking about the framework which involved both experimenting with solid and porous structures. Ok – but the experiments also investigated a loose bed. (also change flag to flat)
- ~~18.17.~~ pg 3-30 - added fixed bed flume. Last sentence not added -- use of controlled is speculative. Bed response is modified by use of porous dikes, but talking about specific details of scour depth and lateral extent is not quantifiable. This can be added to individual opinion. You can change the wording if you don't like the word controlled. We need to mention here that the models use a porous structure in an attempt to deal with these problems.
- ~~19.18.~~ pg 4-1 General section moved to beginning of viewpoints sections.
- ~~20.19.~~ pg 4-2 - Please verify table 4-1 listing of published MM investigations. There are probably more now. If so, these could be added at the bottom of the table. Paragraph before this table - 16 model studies published. Remove Big Creek, it was not published. Add Ballard's Island (Illinois River), 1:3600, 15:1, Side Channel Enhancement.

20. chapter 4 - heavily redone. See following specific noted on comments What do you mean here

22.21. pg 4-18 Need Vicksburg Front case study from MVS -- I have flow visualization, but nothing on basic model . section 4.3 wording changed in 1st and 2nd para. OK

23.22. pg. 4-19, 20, 21 & 22 - sections suggested for moving to main report noted. The way these para read, they are more geared toward proponent's section. I put these paragraphs into the sections where are thought they would fit. Who is making the decisions on what to put into the main body? Should we not be given the same opportunity to submit our thoughts as you have? Maybe Steve would agree. Maybe not. We'll never know until he sees it. I thought this was a joint report. For the most part, St. Louis has just been a reviewer of what has already been written. Should we just write three separate reports? If not, let's make it a team report!

24.23. pg bottom of 4-22 and 4-23, 25, & 26 - case study references eliminated per suggestion.