

## **WSDOT PHD / FHD Workshop**

1/18/22

### **Q&A for PHD/FHD template (Julie Heilman, WSDOT; Heather Pittman, WSDOT; Shaun Bevan, HDR)**

- Q: Is there a summary of changes document?
  - A: There will be. We will include that when we send out the Q&A notes. The point of this conversation was to go over the changes; we have a comparison document, but this is using the Word “compare documents” tool. We will bullet out the primary changes that we went over today.
- Q: What exactly is the reference elevation for the maintenance clearance in that MHO exhibit? mid-point of bench?
  - A: It’s the highest streambed elevation within the hydraulic width. The guidance document explains this as well.
- Q: Does WSDOT have a standard for what they consider a stable model (ie, change in WSE <0.001 over a set time), or is that up to the modeler to determine?
  - A: This is up to the modeler. Document it in the PHD / FHD since there isn’t detailed guidance for modeling. If there are concerns, this can be discussed with HQ HYD.
- Q: Have we removed the redundancy of requiring the same figures to be both in the body of the report and the appendices?
  - A: There are a few in both locations; a profile and some section view are located in both.
- Q: Do you want hydrology in Appendix H?
  - A: If it’s regression equations method, this is easy to document in the text, but if it’s MGSFlood or otherwise, it would be preferred to add this information in an additional appendix such as Appendix M.
- Q: Where is the link to Updated Hydraulics Manual 2021?
  - A: We don’t have this link yet; in this meeting invite, the information is attached, but this isn’t posted to a website yet.
- Q: In the vertical clearance summary table, would it be possible to add an additional recommendation for other consideration, such as wood/debris loading and passage?
  - A: This would be tacked into the aggradation section. The author would explain what the freeboard requirement is, and why it is more than 3 feet, for example. This would be part of the MHO, not maintenance.
- Q: I might have missed this but is Velocity Ratio still being presented in the PHD for confined bridge design and stream simulation design?
  - A: No, this is removed. This is only present for unconfined streams. The information is still present so it could be calculated if desired.
- Q: In the past the Bridge Office has resisted scour countermeasures being included with new structure designs because doing so automatically codes the new structure as scour critical. Their preference was to revise the foundation design so it would not be scour critical. Has that philosophy changed? Who makes the final determination if scour countermeasures are allowable?
  - A: When scour countermeasures are used, this is for the approach roadway and walls that could be a shallow foundation. This does not change the bridge design. There is

some information in the bridge scour memo that relates this information, as well as the hydraulic manual. There will be an updated scour memo that goes out with the bridge manual based on the comments we are receiving.

- Q: Did you remind teams already the need for a geomorph, fish bio, and hydraulic engineer to author PHDs?
  - A: We reminded people of this during the training. The intent is that all three of these perspectives should be present in the PHDs.
- Q: In the summary table, it asks if the gradation is coarser than existing. Is this significantly coarser (>20%) or coarser at all? For example, say existing D50 is 2.5 in. If proposed D50 is 2.7 in is this considered coarser than existing in the summary table?
  - A: The intent is to fall in line with the 20 percent guideline in the WAC. It is a flag for further discussion. There are situations with finer material, and the streambed sediment specification would not be able to fall in line with that. It is intended as a flag for further discussion.

#### **Q&A for schedule tracking spreadsheet (Gabe Ng, Jacobs)**

- Q: For PHDs where WSDOT is the author, who will be updating this spreadsheet?
  - A: The PHD author will update the spreadsheet.
- Q: How are yellow cells used? Can you provide an example?
  - A: Yellow cells are requesting input from the PHD author.
- Q: Any suggestion on taking [hydraulics and hydrology] training in 2022? There appears no training scheduled in 2022.
  - A: The fish passage hydraulics training is online, linked [here](#). We have a plan to go through and update the 2020 trainings based on these updated templates. We will send this to everyone that has a certification already.
- Q: Did you mention a column for DB vs DBB? Also FRAs?
  - A: There is a plan for heading updates that includes FRAs.

#### **Q&A for field complexity form (Cade Roler, WSDOT; Elizabeth McGovern, WSDOT)**

- Q: What are the thresholds that push a project into high or moderate complexity for stream grading extent and channel realignment?
  - A: We spent time talking with the tribes about this. This is part of the field visit and meant to be a discussion, and a consensus process during that site visit. For realignment for example, moving the channel slightly would be low complexity. Those with significant realignments, as an example with hundreds of feet of new channel, would be high complexity. Using numbers at this time was not possible, but we hope in the future to move towards consensus on using numbers for field complexity. It is intended as a discussion tool.
- Q: There is a lot of additional information needed pre-Site Visit #3 now, including some preliminary design info. Does this influence the expected scheduling of Site visit #3? I.e. it can no longer happen at the very beginning of the project?
  - A: We have been doing some site visits pretty early in the process still. Site Visit 2 has to be complete and it helps to have survey, but we are just sharing the information that we

do have and then following up once additional information is available. Look at the form with the caveat that some of these answers might change as design progresses.

- Q: Can you provide this form as a fillable PDF with form fields?
  - A: We are still working on this form, it is pretty new, but this is something we can look into in the future.
- Q: I thought I heard Cade say something about a situation when a PHD is not required but would still be done for info during the design phase? In what situation would a PHD not be required?
  - A: PHD is still required for all sites. We don't have a PHD Light template yet, so at this time use the same PHD template for all crossings.
- Q: What are the determining factors for sending out the PHD to services?
  - A: This process does not impact necessary coordination with services.
- Q: Where do complicated real estate issues come into play on this?
  - A: Some of these elements aren't just hydraulic out there that we need to be looking at; other issues could bump it into a higher complexity site. Certain roadway geometrics or other parameters could drive what occurs during the design of the site, and it is important to bring these up early.