

## **Fish Passage Construction Training**

1/13/22

Q&A for Construction training 2022 (Gabe Ng, Jacobs)

- **Q: Do you see failing substructure complexities such as meander bars and boulder clusters (that are developing plane bed conditions) happening primary after high flow events like the floods this year or are you seeing this during typical seasons?**
  - A: Once complexity features are installed, they tend to be more stable considering they are designed for a 100-year event. The goal of these substructure complexities is biomimicry of existing root wads or a tree with a root mass structure; something that is solid and not mobile until eventually is scours out and falls in. Because LWM is not recommended inside a structure we do not have that opportunity, so we are trying to build a feature that is going to last the length of the structure. WSDOT is working up better guidance on meander bars.
- **Q: Are details for the small wood/material included in the plans? How do you generally like to account for this in the estimate?**
  - A: We do have specs for slash. We are showing this in the plans. We are quantifying the slash as cubic yard or cubic foot which is pretty loose and difficult to measure. More guidance and plan examples are being developed.
- **Q: Are there other public trainings available?**
  - A: We provide Just-in-Time training for project offices and regions that are recorded and available to share. We are also working on refresher training for construction inspection and oversight that include lessons learned.
- **Q: Are you oversizing the bed material and making up the meanders bends within the culvert to maintain meanders? The comanager push back whenever they see immobile sediment.**
  - A: Meander bars are intended to mimicking stream banks, which is not supposed to be streambed material. There should be a balance between bank stability and habitat. There is ongoing discussions and research of incorporating organics, slash or mobile wood to these banks and continued discussion with co-managers.
- **Q: Do we have information on existing projects that record what happens to the mobile wood material down the road? There are many projects that are on private property and I am receiving several questions.**
  - A: We are not tracking this data specifically. There may be monitoring data on certain sites.

- **Q: Are we moving toward sizing a structure so that 100 yr doesn't touch the walls?**
  - A: It really depends on the objectives we are trying to meet for the system as well as other restoration needs on each particular project.
- **Q: So can we get rid of the rootwad on those features if they aren't going to be in the channel?**
  - A: Rootwad do help with stability although currently not included in the stability calculator.
- **Q: We've had some discussions about the logic of including the culvert length in the Fox and Bolton calculation. Since there is no wood actually in the crossing, this can result in overloading wood upstream and downstream to meet the total. (How do we solve this?)**
  - A: F&B is a target but could also place LWM outside the grading limits. Or use LWM for ballast.
- **Q: Will the new layering / washing in spec you mentioned also be part of the 2023 Standard specs?**
  - A: Unfortunately this did not make it in the 2023 spec book update. We are hoping for 2024.
- **Q: Is placing a fabric layer acceptable before our bedding material....?**
  - A: No fabric under the stream