

**Oregon Solutions Team**  
**Technical Advisory Committee (TAC)**  
**Columbia River Levee Repair and Accreditation Project**  
**Draft Meeting Notes**

Oregon Solutions Project Website  
<http://orsolutions.org/osproject/MCDD>

November 17, 2014 – Smith Memorial Union, Portland State University

**Old Business:**

- The TAC reviewed the meeting notes from the October 20 meeting. It was recommended that the phrase “hydrologic modeling” be replaced with “geotechnical modeling.” With that change, the notes were approved.
- As requested, the US Army Corps of Engineers (Corps) provided its §205 report which was subsequently posted to the OST web site and is now available for TAC member reference.
- Other old business topics listed on the agenda are addressed in the Meeting/Discussion Summary below.

**Meeting / Discussion Summary**

Levee Engineering Assessment Methodology:

- The OST requested the TAC review the Levee Engineering Assessment and advise whether it is technically sound. In other words, are the assumptions, methodology, and conclusions technically sound and dependable, given their charge of looking at the 100-year flood level assessment?
- This question was deferred at the last meeting due to an editorial error in the report. That error was subsequently corrected.
- After discussing the report, the TAC members either affirmatively supported or had no objections to the report’s assumptions, methodology, or conclusions.
- There was, however, one issue upon which the TAC requests clarification from FEMA:
  - In modeling the 1% chance flood for PEN 1, Cornforth assumed failure of the external MCDD levee (which is currently certified and accredited) in order to test the loading on the cross levee between PEN 2 and MCDD. How would the MCDD levee breach if it was certified and accredited to protect against that event? Alternatively, if the districts are consolidated and the external levees are certified and accredited, is there a need to expend funds to certify the cross levees?
  - The question to be answered is whether it is appropriate to assume failure of a currently accredited levee. The question has been referred to FEMA who is assessing it and will get back to the TAC.

Modeling Next Steps:

- The TAC previously recommended that the authorized design elevation for the Corps RIP program be modeled, a recommendation that the OST subsequently accepted. Mike Meyer (Cornforth Consultants) explained that this more severe flood level will normally be 3 to 5 feet higher than the 1% annual chance event that was previously modeled.
- The authorized design elevation for both PEN 1 and 2 used by the Corps is the flood of 1876. PEN 1 has a freeboard of 3 feet and PEN 2 has a freeboard of 2 feet. Mr. Meyer also noted that, in the previous

**DRAFT** as of December 10, 2014

engineering assessment, that used the 1% annual chance event, anticipated flood levels did not rise to the point where they would place a load on the PEN 1 flood walls. Modeling the Corps' authorized design elevation will result in the flood wall being loaded and a structural analysis will be conducted to understand the structural integrity of the flood wall.

- The modeling assignment was provided to Cornforth, and Mr. Meyer provided a scope of work that includes:
  - Assess stability, seepage, and the effects of encroachments for the Corps RIP program design flood.
  - Prepare a summary report that reviews and compares the findings for the initial 1% flood levee assessment and this new effort.
  - Continue to attend TAC and OST meetings.
- This new modeling task is expected to be completed in 6 to 8 weeks.
- Sara Morrissey (MCDD) also recommended that Cornforth's scope of work include a task to do 'reverse engineering' to model the level of protection offered by the existing PEN 1 and PEN 2 levee systems. The TAC agreed to recommend this additional modeling. Upon approval of this recommendation by the OST, MCDD will develop a scope of work and issue a task order to Cornforth.
- *Coordination with the Communications and Outreach Committee:* Given the sensitivity regarding encroachment effects, the TAC recommends that the Communications and Outreach Committee develop a program to inform PEN 1 and PEN 2 residents of the reasons for the modeling and how the modeling information will be used.
- *Coordination for environmental permitting and ecological objectives:*
  - The TAC discussed how and when to engage with local, state, and federal regulatory agencies regarding the permit requirements for alternatives developed for OST consideration.
  - Christine Svetkovich (DEQ) suggested the TAC be strategic in its approach to regulatory agencies to ensure the most effective use of their time.
  - Next steps:
    - Request presentations at the next TAC meeting from the regulatory agencies to identify the species (fish, plant, birds, and/or wildlife) under protection within the general project area.
    - Prepare a letter, cosigned by Mayor Hales and Commissioner Bailey requesting the participation of the relevant regulatory agencies in TAC and OST discussions. Those to be contacted include:
      - State: Department of State Lands, Water Resource Department; Department of Environmental Quality; and Department of Fish and Wildlife.
      - Federal: National Marine Fisheries Service and Fish and Wildlife Service.
      - Local: Bureau of Environmental Services.
  - ***POST MEETING NOTE:*** *The Bureau of Environmental Services convenes a Permit Streamlining Review Team consisting of federal, state, and local regulators each month to review city projects at the conceptual stage of design for environmental requirements. The intent of the review is to provide project managers of actions they need to incorporate into their designs in order to obtain required permits. The TAC may wish to use this team to review alternatives to the railway embankment issue. Liz contacted the team coordinator, who offered his support to review of alternatives by the Streamlining Team.*
- *Level of Protection Case Studies:*

- Angela Carkner (MCDD) presented the results of her research regarding the levels of flood protection adopted by other communities.
- Her conclusion is that each city / district selects their level of protection based on a variety of political and engineering elements. Some values seem like they were determined arbitrarily while others are based on scientific evaluations. Each city / district has a different level of protection and little guidance exists on selecting the appropriate level of protection.
- Her case study report is posted to the OST website.
- *Additional flood level modeling:*
  - Given the conclusions from Angela’s presentation, Sarah suggested that the third round of modeling be based on a “reverse engineering” strategy to determine the highest level of protection, using the Corps’ factors of safety, provided by the levee system as it currently exists.
  - After discussion, the TAC agreed to forward this idea as a recommendation to the OST.
  - Once the result of that assessment is known, The OST could then determine what additional levels of protection, if any, they believe to be necessary.

#### Railway Embankment Subcommittee Formation:

- The OST approved the TAC recommendation to form a subcommittee to identify alternatives to the Railway embankment as a level.
- Previous volunteers for the committee includes Brock Nelson, Mike Meyer, David O’Langaigh, Jeremy Epps, Tom Braibish, Tom McCausland, Mandy O’Hara, Nancy Hendrickson, Liz Rutherford, Bill Ryan, and potentially Travis Ruyball. Doug Morgan agreed to participate as well.
- Julia will coordinate a meeting of this group prior to the next TAC meeting.

#### Recommendations and Next Steps

- **Railroad Embankment.** Railway embankment subcommittee will convene to identify levee alternatives to the railroad embankment. The intent is, upon approval by the OST, to use the subcommittee’s conclusions to craft a scope of work for additional analysis by a consulting firm. (ACTION: Julia to arrange the meeting).
- **Modeling of the Corps RIP Design Level Flood.** (ACTION: Cornforth).
- **FEMA Approval of Modeling Approach for Cross Levees.** (ACTION: Sara to follow up with FEMA).
- **Additional Modeling.** The TAC recommends a “reverse engineering” strategy to model the level of protection offered by the existing PEN 1 and PEN 2 levee systems. Upon approval of this recommendation by the OST, MCDD will develop a scope of work and issue a task order to Cornforth.
- **Engagement with Environmental Regulatory Agencies:**
  - Invite participation in the TAC by key federal, state, and local regulatory agencies (ACTION: Rick to draft letter of invitation).
  - Contact the Portland BES Permit Streamlining Team to determine if the use of that team is appropriate for analyzing levee options (ACTION: Liz Rutherford).
  - Coordinate a presentation for the next TAC meeting of those species residing within the levee system of which the TAC and OST should be aware as alternatives are developed (ACTION: Rick and Julia to coordinate for the presentation).
- **Next Meeting.** December 15, 2:00-5:00 p.m., location TBD.

## **Meeting Participants**

*Interim Steering Committee:* Mike Stuhr, Christine Svetkovich, and Travis Ruyball.

*TAC Members:* April Siebenaler, Bill Ryan, Brian Freeman, Brian Vincent, Brock Nelson, David O'Langaigh, James Heyen, Jason McBain, Jeff Boechler, Jeremy Appt, Lance Helwig, Mandy O'Hara, Mike Meyer, Nancy Hendrickson, Sara Morrissey, Sheila Holden, Steve Gaschler, Sunny Simpkins, Thomas Braibish and Thomas McCausland

*Facilitation Team:* Rick Mogren and Julia Babcock

*Other Attendees:* Jeff Tilt, Jeremy Hat, Jeremy Britton, Walter Valenta, Gary Kunz, Bob Dolphin, and John Nadig