**Oregon Solutions Team**

**Technical Advisory SubCommittee (TASC)**

**Levee Ready Columbia**

***Draft* Meeting Notes**

Oregon Solutions TASC Website

<http://orsolutions.org/osproject/leveereadytasc>

October 19, 2015

**Attendance:**

*Steering Committee*: David Peters, Cheryl Grabham and Travis Ruybal.

TASC Members: Mike Moran, Nancy Hendrickson, Sara Morrissey, Colin Rowan, Eileen Argentina, Megan Neill, Jason McBain, Shanna Brownstein, Tom Braibish, Ken Willhite, Jim Fronk, Tim Couch, Doug Morgan, Mandy O’Hara, and Mike Eliason

*Facilitation Team*: Rick Mogren and Julia Babcock

*Other Attendees*: Martha Johnston, Kaitlin Lovell, Peter Stroud and Brad Hermiston

**Meeting Objectives:**

* To share updates from the Levee Ready Columbia program.
* To discuss and consider currently available as well as potential seismic modeling information that could benefit alternatives development.
* To review and develop a final recommendation for the Levee Environmental Condition Assessment (LECA)

**Brief Meeting Summary**

**Old Business**

* The TASC approved the notes from the August 19, 2015 conference call.

**Levee Ready Columbia Updates** Sara Morrissey, Levee Ready Columbia

* Budget and IGA Status
  + The Inter-Governmental Agreements (IGA’s) developed between partners providing financial assistance to Phase II are in the final editing stage and are scheduled to be approved before our November 23, 2015 Oregon Solutions team meeting.
* Contracting
  + The Joint Contracting Authority established and overseen by MCDD, SDIC, PEN 1 and 2 Board members will be the entity through which contracts are managed for assessment work in Phase II.
  + This authority does not extend for work on the Sauvie Island.
* Status of Encroachment Study
  + The current encroachment study is focused on buildings and does not include utilities at this time.
  + Survey work has been completed by CES NW and the results went to McKenzie to digitize cross sections and CAD files for Cornforth to conduct the analysis. So far the results have been positive. We expect to share the full results with the TASC at the November TASC meeting.
  + Utilities will be addressed at a later time, perhaps January.
* Status of Climate Change Work
  + The Oregon Solutions Team approved the TASC’s recommendation to move forward with the 2040 climate model which provides projections out to 2060.
  + Awaiting Joint Contracting Authority approval for work to start. MCDD will send out the final SOW. There will be quarterly updates provided from the USGS and USACE team to the TASC.
  + It has not yet been determined how information from the climate change work will be applied. In previous TASC meetings, we spoke about the need for climate change modeling in order to potentially factor in findings for future associated risks, alternatives development and to determine level of protection as well as respond to public inquiry. Sara is working with Oregon Solutions Team to develop a potential risk evaluation framework that will be shared in November.
* Status of Economic Inventory SOW
  + Making minor changes to clarify tasks for Metro and NERC to conduct work according to feedback provided by the Economic Subcommittee. No substantive changes are expected.
* Periodic Inspections; SDIC, MCDD and SIDIC
  + As part of staying in the Rehabilitation and Inspection Program, the SDIC, MCDD and SIDIC will all undergo USACE review in 2015 as part of their 5 year periodic inspections. Ratings are the same, but the eligibility status has changed slightly around the RIP program and inspections will reflect those changes.
  + For MCDD and SDIC the work will be done through two consultants who will walk the full length of the levees along the toe for the waterward, landward and along the centerline.
  + SIDIC will conduct a similar process with a contracting team.
* Sauvie Island Drainage Improvement Company Tim Couch, SIDIC
  + The certification for Sauvie Island levees is due to expire in 2017.
  + SIDIC is coordinating with the Corps for the Corps to conduct the needed inspections.
  + USACE is finalizing the Levee Engineering Assessment SOW and agreement with SIDIC and work is expected to be conducted over the next two years. No major issues are expected in the accreditation process.
* Status of Pen 1 Outfall Inspections Project Colin Rowan, Levee Ready Columbia
  + BES allowed MCDD to utilize their on-call contractor for inspections to clean pipes and conduct tv camera inspection of pipes.
  + 36 outfalls in PEN 1, 6 in PEN 2. A number of these are inactive; one goal of the work is to assess whether to decommission or not. Observe whether inactive or connected along Marine Drive. Brown & Caldwell is the contractor conducting the field work to inventory the outfalls and assess their function and performance.
  + The work is planned to start in early to mid-November, with recommendations to the Corps by the end of the calendar year.
  + Findings and conclusions are expected to be ready for TASC discussion in January, 2016.
* District Boundary Survey
  + The District Boundary in PEN 1 was set in 1917. It has not been resurveyed since.
  + The intent is to determine the PEN 1 boundary line, to understand what is inside or outside district, and how that may impact railroad embankment options.
  + The PEN 1 Board will likely request an easement where federal investment has been made on the railway embankment for operations and maintenance purposes.
  + West lake consulting is conducting the work to review all existing documentation and records and see if railroad ever provided an Operations and Maintenance agreement.

**Seismic Modeling Opportunities**

* The issue of seismic risk to the levees was raised early in the OST process, but has not been acted on until now. At issue is how seismic activity could impact the levee system.
* The TASC members were asked to share whatever seismic modeling conducted by or for their organization that could be relevant to the levee engineering assessments. Responses below:
  + Consider guidance provided in the Oregon Resilience Plan which has some foundational maps to build analysis from.
  + DOGAMI also has conducted analyses and created tools to assess soil and seismic impacts.
  + Portland Water Bureau has conducted hydraulic modeling and has preliminary maps of liquefaction and landslide risk to water sources and infrastructure. It will be about another year before analyses are public and final.
  + ODOT oversaw seismic modeling for the Columbia River Crossing project, which has an impact area relative to the levee system. Specifically, lateral spread (embankment failure as a result of loss of strength in the liquefied soils) was found to be a likely high risk and, at a minimum, the work done for the CRC project would be a good starting point. Seismic analyses for the levee system will need to further analyze the soils encountered during the geotechnical explorations for the CRC to better understand risks associated with organic vs. inorganic materials.
  + Port of Portland has conducted a seismic evaluation of their assets. This assessment is currently under review within the Port. A report is expected to be released soon.
  + Bureau of Development Services does not conduct studies but has received good information around potential for seismic impacts through the USGS hazards maps. Lack of access to liquefaction and lateral spreading information.
  + Multnomah County, use DOGAMI for regional seismic hazards information.
  + TriMet has not yet conducted seismic studies.
  + The Corps will look at the risk of a seismic event occurs when water levels are near the top of the levee, a situation with an extremely low probability of occurrence. Mandy (MCDD) has a copy of an earlier summary of work by the Corps. The Corps is also doing seismic site-specific assessments on their dams and other facilities (such as the Moorings) that may yield information of use to the OST.
  + MCDD noted an Oregon State University study from 2001 that was endorsed by the Corps. MCDD conducted a seismic evaluation in 2001 under certain parameters and showed low probability of a high water event occurring concurrently with a major seismic event. Facilities have seismic information, such as transfer stations built in 80’s and 90’s. As facilities are upgraded facilities, seismic studies are planned.
    - To be clear, seismic modeling is not a requirement of NFIP. However, similar to climate change, seismic impacts may be a factor we want to model/analyze to understand the level of risks impacting investments in levee infrastructure. Also, want to discuss now in case we want to consider data collection as part of levee engineering assessment alongside geotechnical analysis.
    - Response to risk may not all be structural, could relate to evacuation and emergency planning, operations and maintenance, etc.
  + Metro has a disaster debris program in the early stages. Working through what could metro do in event of major shake.
  + BES has a treatment plant outside PEN 1 and is working on emergency plans around seismic modeling that could have relevant info.
* The Communications Subcommittee will need to develop appropriate narrative for public meetings around seismic and flood risk. Confirmation from neighborhood association that the anticipated impacts of seismic activity is a question on the minds of local residents.
* TASC preliminary options for moving forward:
  1. Convene a team from the TASC to conduct review of existing maps, reports and models to build basic understanding of potential risks to levee infrastructure and information gaps. Examples: CRC study, Port of Portland study, etc. Then come back to TASC and discuss whether further geotechnical investigations would be needed to provide critical information or not. This would include a follow-up to the OSU study mentioned by MCDD.
  2. Contract with an engineering consultant to gather this information.
  3. Engage with DOGAMI to conduct the study.
* Questions / issues to be considered:
  + Note risk of subsurface soil conditions and risk of liquification of soil under the levees.
  + Note likely response differences for those portions consisting of sea walls versus those consisting of levees.
  + Note that a severe seismic event may correspond with a tsunami. What would be the impact in Portland?
  + Martha noted a study approved in 1991 by the neighborhood association. Ensure this gets included with the review materials for any assessment.

**Levee Environmental Conditions Assessment (LECA)**

The TASC reviewed the final draft LECA and recommended it be forwarded to the Administrative Subcommittee for approval, pending these two additions:

* Include East Columbia Neighborhood Natural Resource Management Plan
* Include Port of Portland Environmental Management System

[**POST MEETING NOTE**: Those changes were made and the LECA was presented at the October 28 meeting of the Administrative Subcommittee. The subcommittee determined that, based on the relatively low cost, they could approve the SOW for award and did so.