

Interagency Steering Committee on Performance and Risk Assessment Community of Practice Annual Technical Exchange Meeting, October 19 and 20, 2016

(Theme: Risk-Informed Decisions Using Probabilistic Risk Assessments)

Dibakar (Dib) Goswami and Cheryl Whalen Nuclear Waste Program, WA State Dept. of Ecology

# WA State's Perspectives on the Use of Probabilistic Risk Assessments (PRA)

- Content
- Current State of Knowledge
- WA State Regulation : WAC 173-340-708 (11)
- Future Path forward



## WA State's Perspectives .. (continued)

Current State of Knowledge: Issues

- Deterministic vs. probabilistic analysis: Credibility of assessment and acceptance
- Challenges in accounting for uncertainty and variability: Hanford case studies using multiple CSM/models, source to outcome continuum
- Temporal and spatial resolution of multiple approach (e.g. uncertainties associated with inputs, CSMs, parametrization alternatives)
- Lack of case studies/examples (e.g. limited evaluation of toxicity data)
- Lessons learned from limited examples ... (Canadian examples, European examples, etc.): Inconclusive/incompleteness?
- Others: Confined to a "small group;" lack of knowledgeable staff/expertise within the regulatory entities and outside, etc.



## WA State's Perspectives .. (continued)

• WA State's Laws: WAC 173-340-708 (11) Probabilistic risk assessment: Probabilistic risk assessment methods may be used under this chapter only on an informational basis for evaluating alternative remedies. Such methods shall not be used to replace cleanup standards and remediation levels derived using deterministic methods under this chapter until the department has adopted rules describing adequate technical protocols and policies for the use of probabilistic risk assessment under this chapter.



## Future Expectations / Path forward

- Issues identified by the regulatory agencies (e.g. recommendation by EPA as per EPA/100/R-14/004 July 2014)
- Stakeholders and Tribal Nations' expectations vs PRA
- Options for training and mentoring
- Communication!



### Conclusion

PRA needs to address multiple gaps before it is widely accepted as one of the decision-making tools in environmental cleanup and closure of a site.

