Process of weighting equations

- How well does the equation fit the empirical data?
- Does the equation contain physically plausible parameters (e.g., hanging wall term, normal and reverse faulting terms, directivity)?
- How much do we trust the data applied to the equation to characterize future earthquake ground motions in California, Pacific NW, and Intermountain West?

- How similar are the equations? Do they consider different geometrical spreading terms, soil amplification, etc.?
- Should we weight older equations that also fit the data? Can we reject the previous equations using empirical data? At what confidence level?
- Should we apply equal weighting to all equations?