FEMA’s graduated data vision is shifting from a binary floodplain concept, in where you are either in it or out, to a concept that accounts for both hazard and risk. This approach is based on using our best available data and modeling techniques to develop a 2D probabilistic surface that would help floodplain managers balance the hazards and risk. The probabilistic approach consists of running Monte Carlo like simulations on base 2D H&H models to establish a spatially varied flood hazard probability map, using hazard as a representation of flow depths and velocities. This map is then used to establish and manage existing risk and develop plans to mitigate future risks. This presentation will illustrate the benefits of probabilistic analysis through the practical use of graduated hazard and risk examples.