



**Probabilistic Flood Hazard Assessments for Nuclear Facilities:
Perspectives on Probabilistic Flood Hazard Assessment**

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**Risk Management
Addressing Uncertainties**

Traditional

- Design basis accident conservatisms
- Defense-in-depth
- Margins

Probabilistic Risk Assessment (PRA)

- What can go wrong?
- How likely are the scenarios?
- What are the consequences?
- What are the contributors?



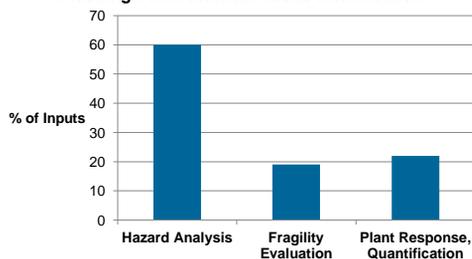
Concepts from "Uncertainty"
G. Apostolakis, 2010

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**Flooding Probabilistic Risk Analysis (PRA)
Survey Results**

Flooding PRA Technical Needs Identification

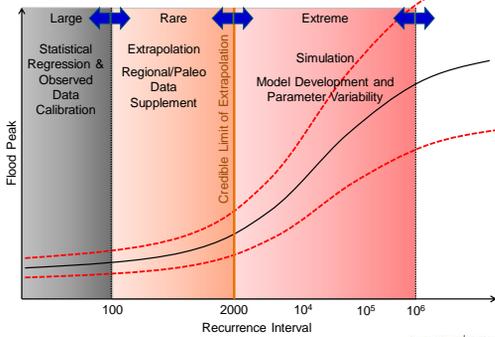


EPR2 External Flooding Project
Industry Expert Panel 2012 Survey

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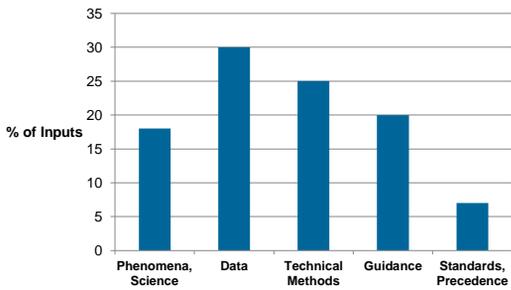
Probabilistic Characterization of Flooding and Uncertainties



Nathan and Weinmann, 2001 - Estimation of Large to Extreme Floods: Books VI
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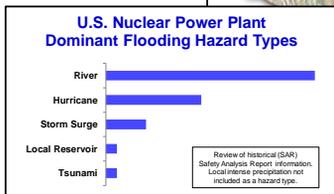
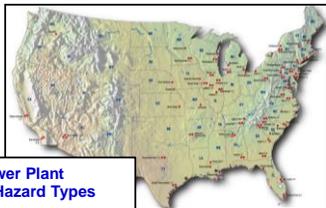
Probabilistic Flooding Hazard Assessment (PFHA) Survey Results

PFHA Technical Needs Identification



EPR I External Flooding Project Industry Expert Panel 2012 Survey
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Flooding Hazard Types for U.S. Sites



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