SEES: Science, Engineering, and Education for Sustainability

…to catalyze well-integrated interdisciplinary research in hazards-related science & engineering in order to improve understanding of natural hazards and technological hazards linked to natural phenomena, mitigate their effects, and to better prepare for, respond to, and recover from disasters

advance understanding of fundamental processes associated with specific natural hazards and technological hazards linked to natural phenomena, and their interactions

better understand causes, interdependences, impacts and cumulative effects of hazards on individuals, the natural and built environment, and society as a whole

improve capabilities for forecasting or predicting hazards, mitigating their effects, and enhancing capacity to respond to and recover from resultant disasters

…should cross the boundaries of:

> atmospheric and geospace, earth, and ocean sciences - GEO
>
> computer and information science - CISE
>
> cyberinfrastructure - OCI
>
> engineering - ENG
>
> mathematics and statistics - MPS
>
> social, economic, and behavioral sciences - SBE

Attributes of Hazards SEES research:

> Integration across disciplines
>
> Broadly applicable/transferable
>
> Partnerships
>
> Education and workforce development

Each proposal:

3 PI's
3 distinct disciplines

The goal: "…to effectively prevent hazards from becoming disasters."
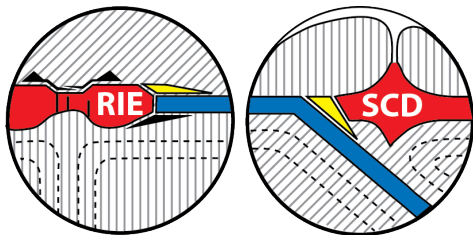
Two tracks: Type 1:   to forge new/emerging interdisciplinary teams – exploratory research, networking activities (up to $300K, 2 yrs)

Type 2:   to do major new integrated hazards research – theoretical, field, laboratory, and/or modeling activities (up to $3M, 4 yrs)

Anticipated budget: $23.75M for FY 2013

Deadline: February 4, 2013

=   The science plan mentions research to address geohazards…
- rift-related earthquakes
- volcanic eruptions and gas emissions
- exploration+development of geothermal systems
- *aquifer characterization and management*
- *petroleum development*