Communication, Education, and Outreach
SCEC5 Approach & CEO PC Discussion

Mark Benthien
SCEC CEO Staff & Consultants

Mark Benthien
Associate Director for CEO

Sharon Sandow
Asst. Director Strategic Partnerships

John Marquis
Webmaster / Digital Products Manager

Jason Ballmann
Communications Manager

Gabriela Noriega
Experiential Learning & Career Advancement Manager

Ines Pearce
ECA Sector-Based Committees Liaison

Michele Wood
SCEC/ECA Evaluation

April Kelcy
ECA Speakers Bureau Chair

Jozi Pearson
UseIT Supervisor
SCEC CEO Planning Committee

Tim Sellnow
Chair & Advisory Council Rep.
Focus Area: Public Education and Preparedness
University of Central Florida

Kate Long
Vice Chair
Focus Area: Public Education and Preparedness
CalOES (Retired)

TBD
SCEC Planning Committee Rep.
Focus Area: Implementation Interface

Tim Dawson
SCEC Board Rep.
Focus Area: Implementation Interface
California Geological Survey

Danielle Sumy
Focus Area: K-14 Earthquake Education Initiative
IRIS

Sally McGill
Focus Area: Experiential Learning and Career Advancement
CSU San Bernardino
SCEC5 CEO Long-Term Outcomes

- Improved application of earthquake science in policy and practice
- Reduced loss of life, property, and recovery time
- Increased science literacy
- Increased diversity, retention, and career success in the scientific workforce
SCEC5 CEO Focus Areas

Knowledge Implementation
- Engagement of Practicing Professionals
- Engagement with Public and Private Decision Makers

Public Education & Preparedness
- National and Global Preparedness Drills and Resources
- Earthquake Country Alliance
- SCEC Public Relations and Risk Communication

K-14 EQ Education Initiative
- Quake Heroes Film and Toolkit
- Quake Catcher Network
- Educator Professional Development

Experiential Learning & Career Advancement
- SCEC Internship Programs
- Career Advancement / Transitions Program
SCEC5 CEO Strategy

• SCEC5 Theme: *Partner Globally, Prepare Locally*

• Evidence-based, Outcome-oriented program design
  • Engage social science & geoscience education researchers, others
  • Activities will apply established models
    (Communicating Actionable Risk, Collective Impact, etc.)
  • Evaluation results will be presented and published
SCEC5 CEO Evaluation Components

- Comprehensive Logic Model for all major activities, by focus area

- Data Collection System
  - Possibly an internal SurveyMonkey process

- Output Metrics Report
  - 1-page display of 2-3 essential metrics for each activity with yearly targets (milestones), with an appendix deliverable list (updated quarterly)

- Outcomes Report
  - Evidence-based narrative: annual summary of qualitative and quantitative outcomes
## CEO Logic Model

<table>
<thead>
<tr>
<th>Programs</th>
<th>Key Activities</th>
<th>Outputs Actual (Target)</th>
<th>Short-Term Outcomes (Anticipated and Observed)</th>
<th>Mid-Term Outcomes (Anticipated and Observed)</th>
<th>Long-Term Outcomes (Anticipated)</th>
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</thead>
<tbody>
<tr>
<td>Knowledge Transfer w/ Practicing Professionals</td>
<td>- Trainings and workshops with practicing engineers, and others; partner with CGS, SEAOC, ASCE, etc.</td>
<td></td>
<td>Practice engineers attending SCEC annual meeting</td>
<td>Increase awareness of SCEC science among technical audiences</td>
<td>Improve coordination between EQ science and technical audiences</td>
</tr>
<tr>
<td></td>
<td>- Workshops, webinars, online and printed materials</td>
<td>Practice engineers, etc. in the ECA</td>
<td>Policies proposed or other actions implemented</td>
<td>Results of policies and actions documented; best practices published for others to adopt</td>
<td>Improved application of earthquake science in policy and practice</td>
</tr>
<tr>
<td>Knowledge Implementation</td>
<td>Decision makers participating in activities</td>
<td></td>
<td></td>
<td></td>
<td>Reduced loss of life, property, recovery time</td>
</tr>
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</table>

| National and Global Preparedness Drills and Resources | Marketing/participant engagement | National participants | Increase knowledge about earthquake safety; increase discussion of drill | Increase preparedness and mitigation actions | Reduced loss of life, property, recovery time |
| | Conducting the drills | Global participants | | | |
| | Education and training | | | | |
| | Regional coordination | | | | |
| Earthquake Country Alliance | Program planning | ECA Associates | Establish and maintain partnerships with key stakeholders throughout the state | Provide leadership and statewide coordination of for public education and preparedness activities | |
| | Public education | Participants of functional and sector-based committees | | | |
| | Statewide coordination | | | | |

| Public Education & Preparedness | SCEC Public Relations and Risk Communication | Press releases and media events | Articles about SCEC Science | Increase SCEC media coverage | Increase science literacy |
| | | SCEC.org | Social Media followers | | |
| | | Media trainings | Non-English language SMEs | | |
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<td>* Quake Heroes (Toolkit)</td>
<td>* Provide science and preparedness resources</td>
<td># toolkits distributed</td>
<td>Increase awareness of EEW, seismology concepts, seven steps to earthquake safety</td>
<td>Increase EQ readiness</td>
<td>Increased science literacy</td>
</tr>
<tr>
<td>* Quake Catcher Network (with IRIS)</td>
<td>* Recruit participating organizations</td>
<td></td>
<td>Bring and real EQ data for public good into classrooms</td>
<td>Pave way for next generation science standards, contributes to NGSS</td>
<td>Increased diversity, retention, and career success in the science workforce</td>
</tr>
<tr>
<td>* Educator Workshops (w/ CGS, IRIS, etc.)</td>
<td>* Conduct educator workshops</td>
<td>Participating organizations</td>
<td>Teachers obtain high quality, current materials to use</td>
<td>Build community among teachers for teaching science, strengthening SCEC relationships</td>
<td></td>
</tr>
<tr>
<td>K-14 EQ Education Initi.</td>
<td>* Develop materials</td>
<td>Educator workshops</td>
<td></td>
<td></td>
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<tr>
<td>* SCEC Internship Programs</td>
<td>* Recruit, place, and evaluate UseIT, SURE, InSight, and CEO interns</td>
<td>Undergraduate interns, Women interns, Under-rep. minority interns, Mentors</td>
<td>Increase knowledge of EQ/computer science, communication/marketing skills</td>
<td>Improve career readiness, Building connections to SCEC w future professionals</td>
<td>Increased diversity, retention, and career success in the science workforce</td>
</tr>
<tr>
<td>Experiential Learning &amp; Career Advancement</td>
<td>* Career advancement, transition advice</td>
<td>Grad students on SCEC awards</td>
<td>Increase readiness for career advancement at all points of career</td>
<td>Increase tenure rates for earthquake scientists, including among women and underrepresented minorities</td>
<td>Improved application of earthquake science in policy and practice</td>
</tr>
<tr>
<td></td>
<td>* Leadership opportunities for emerging experts</td>
<td>Early career research presentations supported</td>
<td></td>
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SCEC5 CEO Evaluation Components

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CEO Evaluation Audiences

- **NSF and USGS (Funders)**
- **The SCEC Advisory Council (Individuals external to SCEC)**
- **SCEC Board of Directors (representatives of SCEC Core Institutions)**
- **SCEC scientists, students, ECA Associates, ShakeOut partners (CEO stakeholders)**
- **CEO Planning Committee (members of the SCEC Community representing CEO Focus Areas)**
### SCEC5 CEO Evaluation Results

<table>
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<tr>
<th>Goal</th>
<th>When</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop long term outcome measures and anticipated milestones</td>
<td>Year 1</td>
</tr>
<tr>
<td>Publish evaluation framework and engage more researchers in</td>
<td>Year 2</td>
</tr>
<tr>
<td>publishing results based on analysis of CEO datasets</td>
<td></td>
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<tr>
<td>Coordinate publication (by CEO staff and by other researchers) of</td>
<td>Year 3</td>
</tr>
<tr>
<td>initial results of major projects along with a mid-term report</td>
<td></td>
</tr>
<tr>
<td>Prepare data and reports and identify funding for a major external</td>
<td>Year 4</td>
</tr>
<tr>
<td>evaluation (in anticipation of the “SCEC6” proposal)</td>
<td></td>
</tr>
<tr>
<td>Publish additional results of major projects and prepare final report</td>
<td>Year 5</td>
</tr>
<tr>
<td>based on long-term outcome evaluation</td>
<td></td>
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</tbody>
</table>
Other CEO Planning Committee Discussion

• Gather data about self-protective actions during earthquakes
  • Design survey for after earthquakes, particularly in ShakeOut regions
  • Work with USGS to add additional aspects to "Did You Feel It"
    • other self-protective actions
    • questions about ShakeOut participation
• Rebuild/update Wallace Creek Interpretative Trail
• New California Geological Survey Simplified Geologic and Fault Maps coming soon
Other CEO Planning Committee Discussion

- Post-Earthquake Response
  - Discussion of how to support scientists’ mental health when responding to earthquakes, including how to be sensitive with people who have experienced losses
  - Raise awareness of California Post-Earthquake Clearinghouse data sharing and available tools, as an option in addition to SCEC’s response.scec.org website.
  - Offer Disaster Service Worker certification training again at SCEC Annual Meetings.