

A Disaster-Resistant University

Building Resilience at UC Berkeley

Sarah Nathe

SAFER PROGRAM

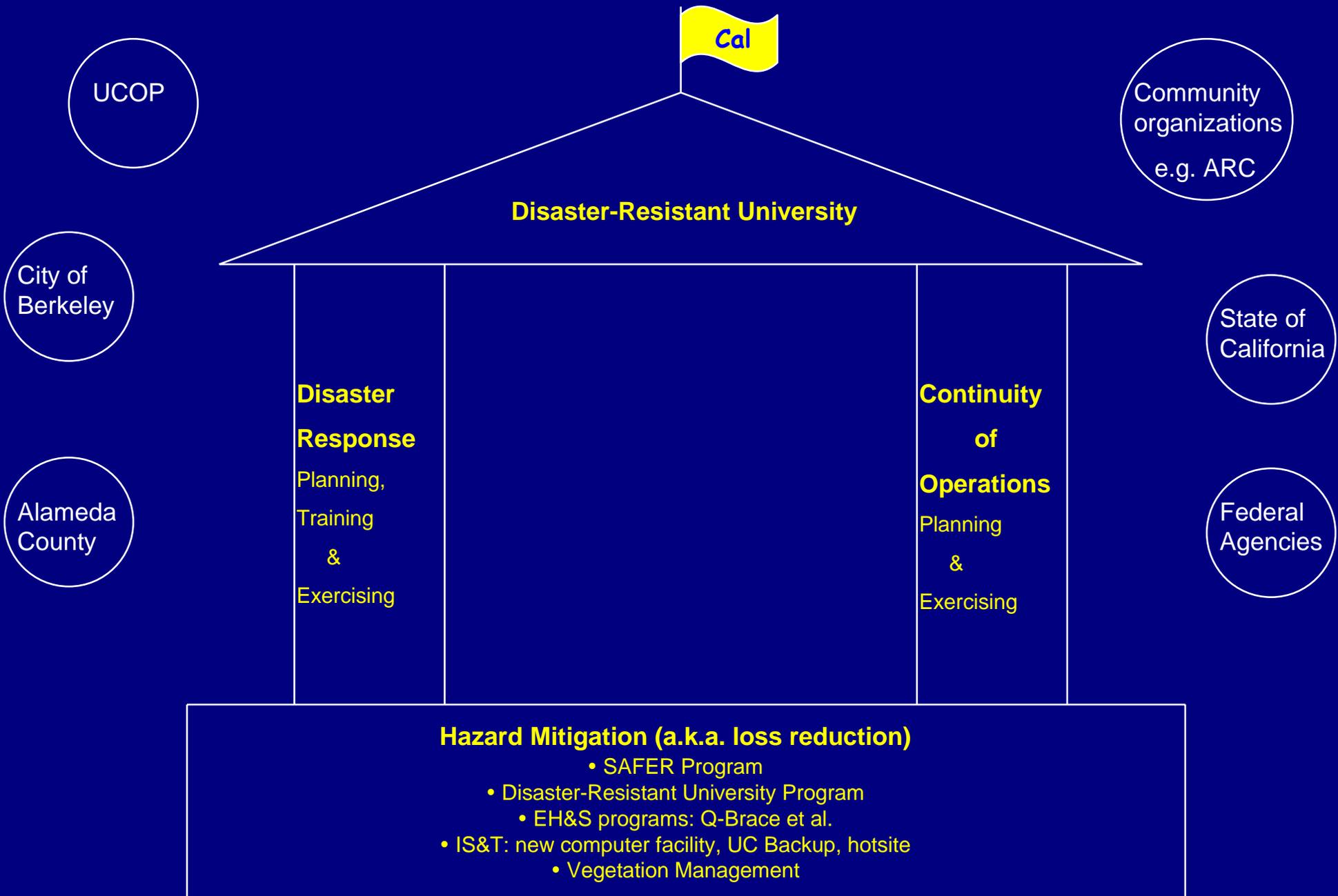
University of California, Berkeley

Goals for UCB Disaster Resistance

- Prevent life loss and injury from structural, nonstructural and utilities failures in an earthquake.
- Protect assets.
- Sustain operations after a disaster, or resume instruction and research within 30 days of a major disaster.
- Be a resource for local community.

Elements of Resilience

- Understand Risk—significant hazards
- Disaster Response—planning, training and exercising
- Hazard Mitigation Initiatives—reducing potential losses
- Continuity of Operations—planning, exercising

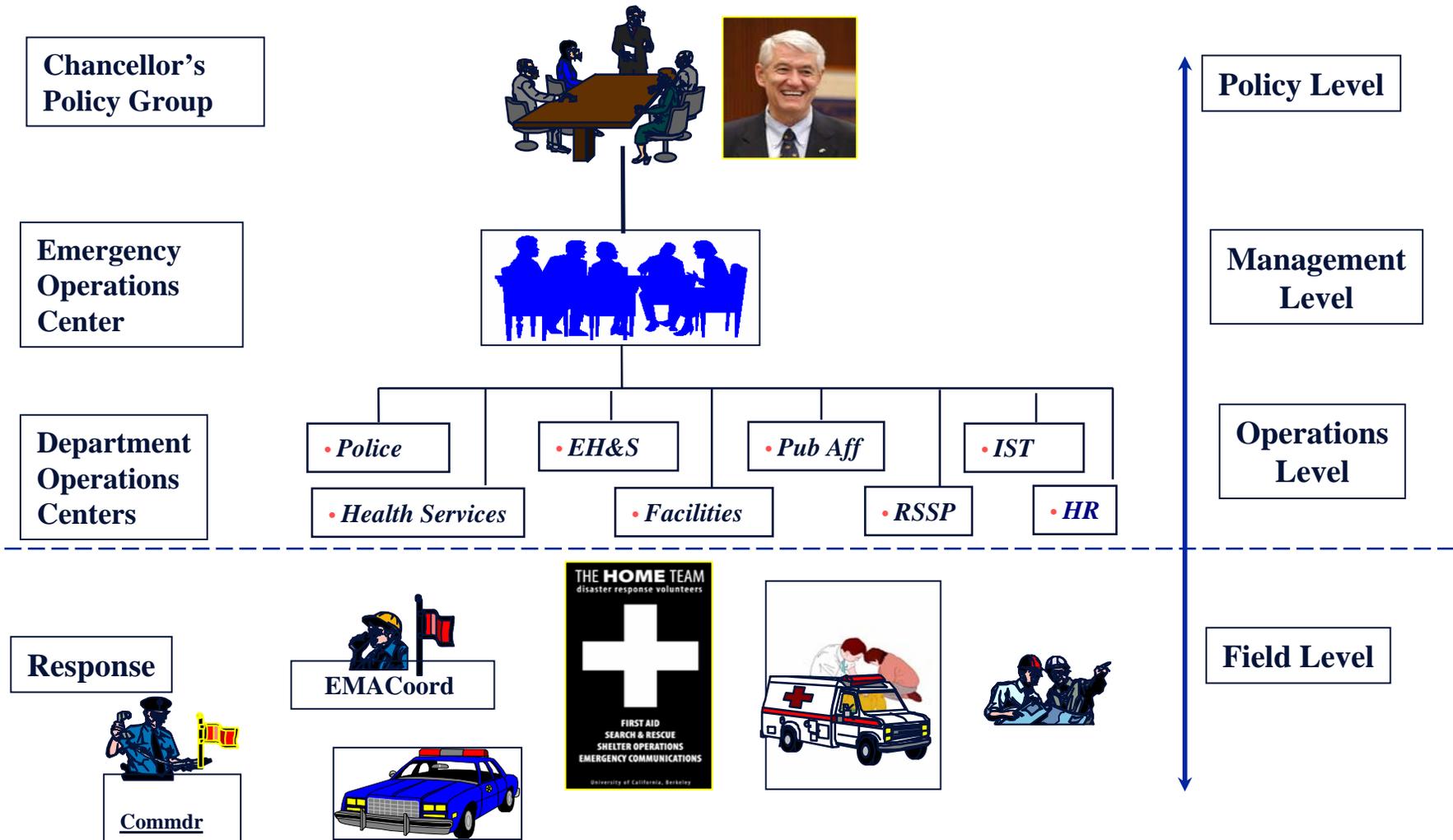


Risks for UC Berkeley

- Earthquake
- Eco/animal rights terrorism
- Civil disturbance
- Wildfire
- Building fire
- Power failure
- Active shooter

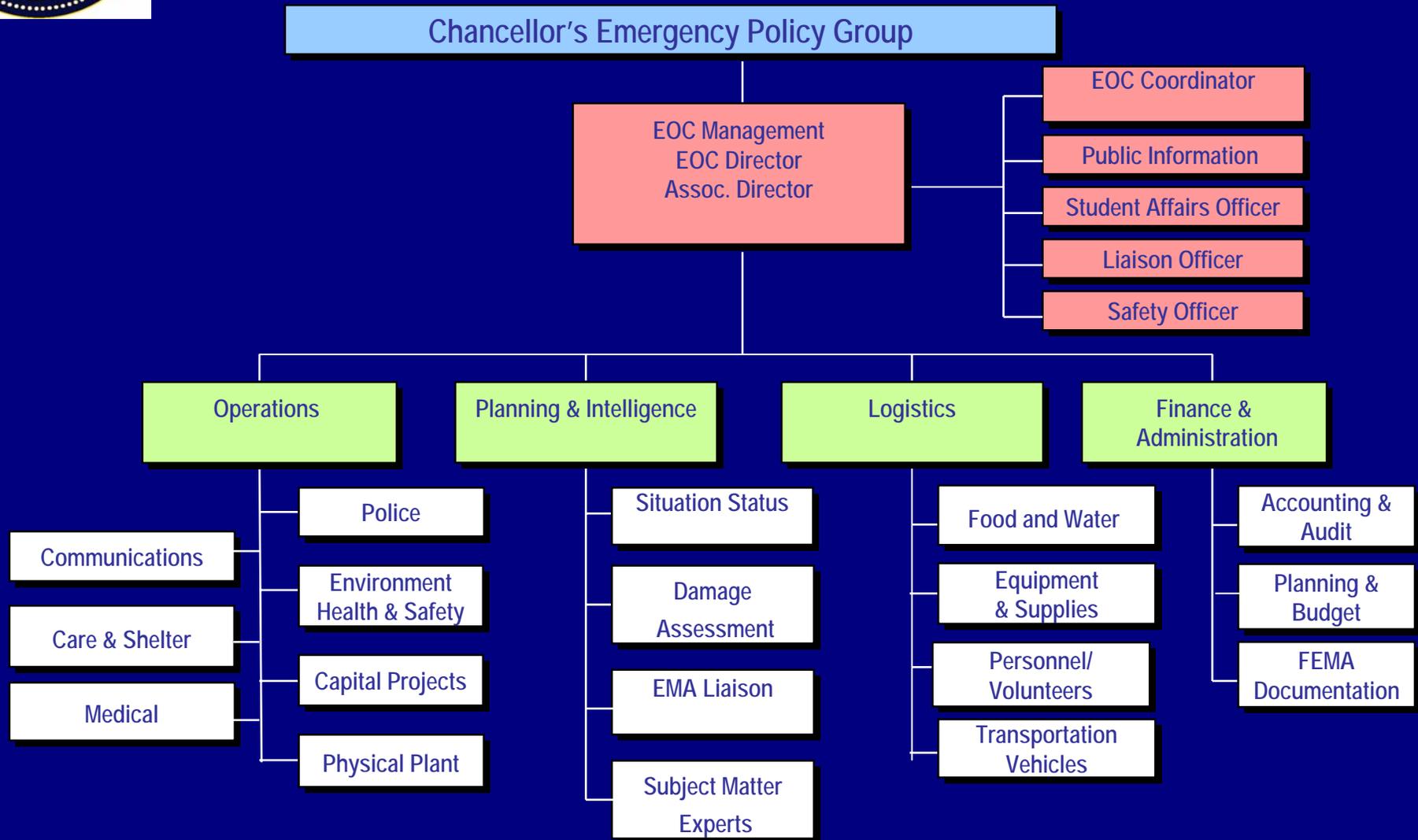


Campus Disaster Response Program





UC Berkeley Emergency Operations Center



Alerting & Warning System

When you hear campus warning sirens:

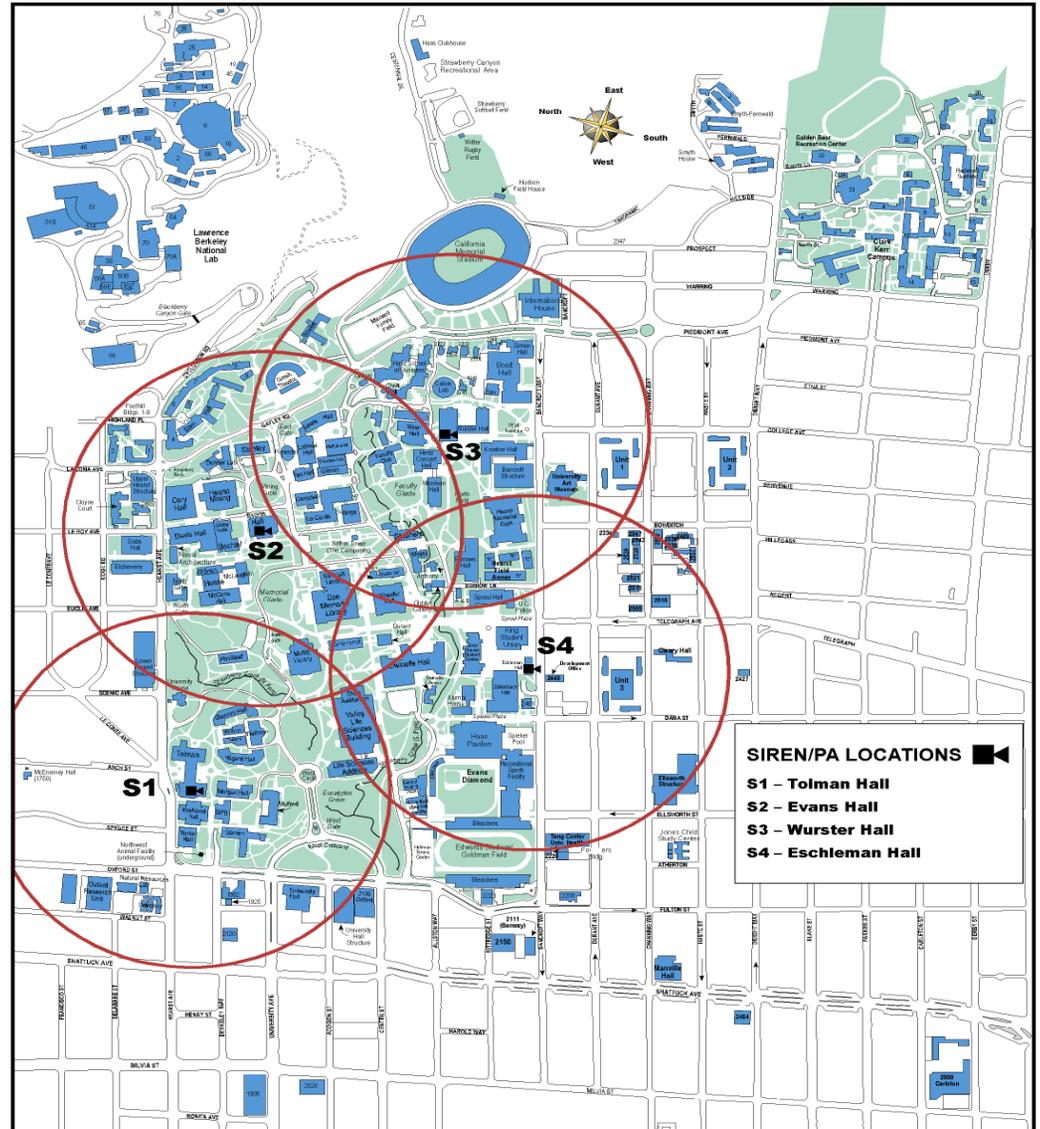
- 1. Shelter** Go inside.
- 2. Shut** Shut all doors and windows
Call 1-800-705-9998
or
<http://emergency.berkeley.edu>
or
Tune to KALX 90.7 FM
- 3. Listen**



SCHEDULED SIREN TESTING:
1ST WEDNESDAY OF THE MONTH AT NOON



University of California, Berkeley Siren/PA Locations



Annual training and exercising

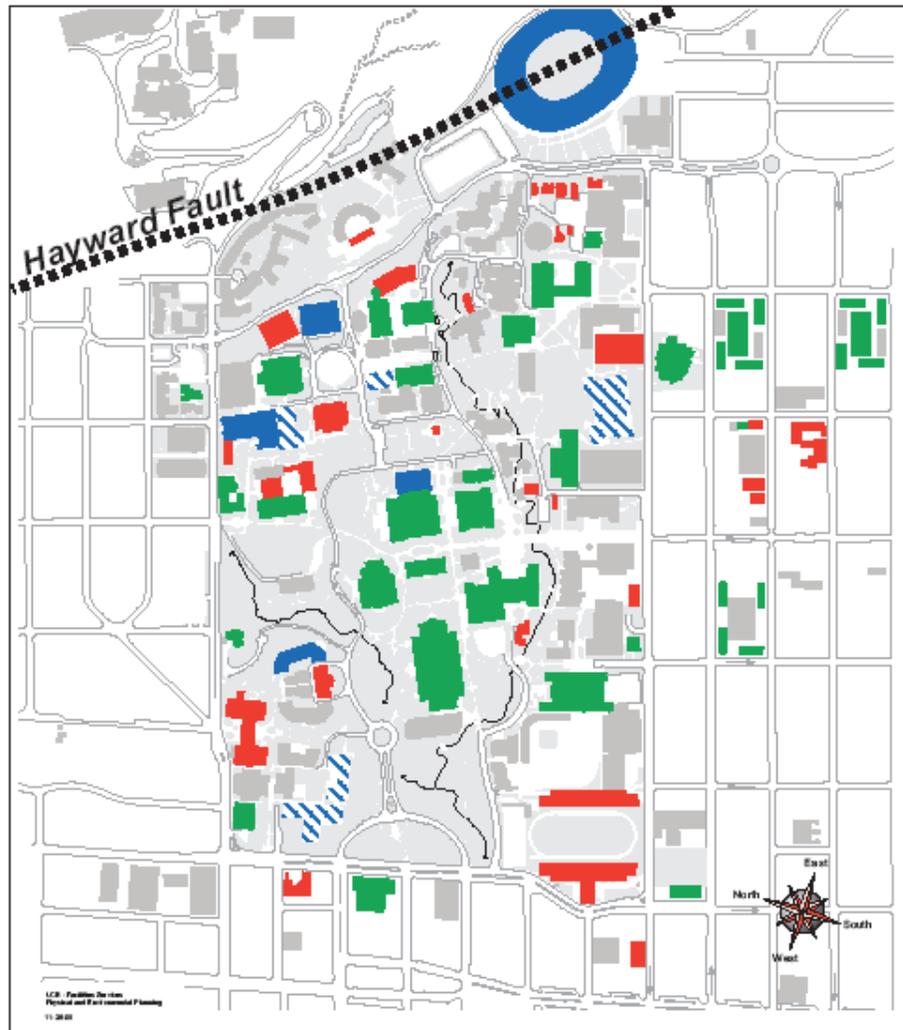


Hazard Mitigation

Seismic Action plan for Facilities Enhancement and Renewal

- Comprehensive Building Survey, Summer 1997:
 - 27 % of total space poor or very poor
- Creation of SAFER Program, Fall 1997
- Commitment of capital budget to seismic safety:
 - Estimated \$1.2 billion over 20-30 years
- Of the square footage identified as poor or very poor, 30% remains.

SAFER Accomplishments Buildings Retrofit or Replaced



Completed
buildings

Buildings in
process

Still in planning
stage

The Disaster-Resistant University Program Projects

- Strengthening buildings
- Developed:
 - Comerio loss estimation study of UCB
 - Strategic risk management plan for UCB
 - Guidelines for other research universities
 - Comerio/PEER nonstructural loss reduction studies of UCB buildings; new details
- 2005 funding for web-based business resumption planning tool

EH&S Programs

- Q-Brace Program—nonstructural hazards (contents) loss reduction.
 - Since 1999, \$ 273,000 in matching funds (from Chancellor) generated \$556,000 worth of work.
 - New technical assistance (engineer) for labs
 - New state-of-the-art details:
<http://www.ehs.berkeley.edu/qbrace/qbrace.guid.07.pdf>
- Lab and shop inspections
- Fire Marshal code enforcement
- Post-disaster building inspection protocol:
<http://ocp.berkeley.edu/node/50>

Information Technology Programs

- Warren Hall—the new facility and its capacities.
Server farm.
- UCBackup for data protection:
<http://ist.berkeley.edu/ucbackup>
- Hotsite
 - Payroll
 - Remote site applications: mutual agreements with other UCs for additional critical apps, e.g., student records, accounts receivable, financial aid
- PeopleLocator to track students, faculty, staff:
<http://peoplelocator.berkeley.edu>

Vegetation Management



1991



Chaparral Hill – from Grizzly Peak Blvd



2001-2005

11,050 trees removed
85 acres treated
\$385,000 + \$102,000 PG&E

2006 – 2009 (Projected)

23,000 trees for removal
110 acres for treatment
\$822,000 (\$576K FEMA)

Continuity Planning

OVERVIEW

- **Continuity Planning** — putting elements in place that will allow for operations to continue or start quickly following an unplanned interruption
- **FOCUS** of C.P. at UCB — teaching, research, public service
- **GOAL** — to resume teaching, research and necessary support services within 30 days of an interruption
 - closure longer than 30 days could lead to: loss of faculty, students, preëminence

STRATEGIC OUTCOMES of C.P. –

- Heightened awareness
- Heightened preparedness

SPECIFIC OUTCOMES of C.P. –

- The (departmental) business resumption plan
 - *“How can we do our work in a changed environment?”*
- List of action items
 - *“What should we do NOW or SOON in order to make that possible?”*
- HR guidance for post-disaster:
<http://hrweb.berkeley.edu>
- Vehicle for annual tabletop exercises

The Tool: <http://obr.berkeley.edu/BCPT.html>



THE Berkeley CONTINUITY PLANNING TOOL

to continue our
teaching, research, and service mission
through any disaster

Begin

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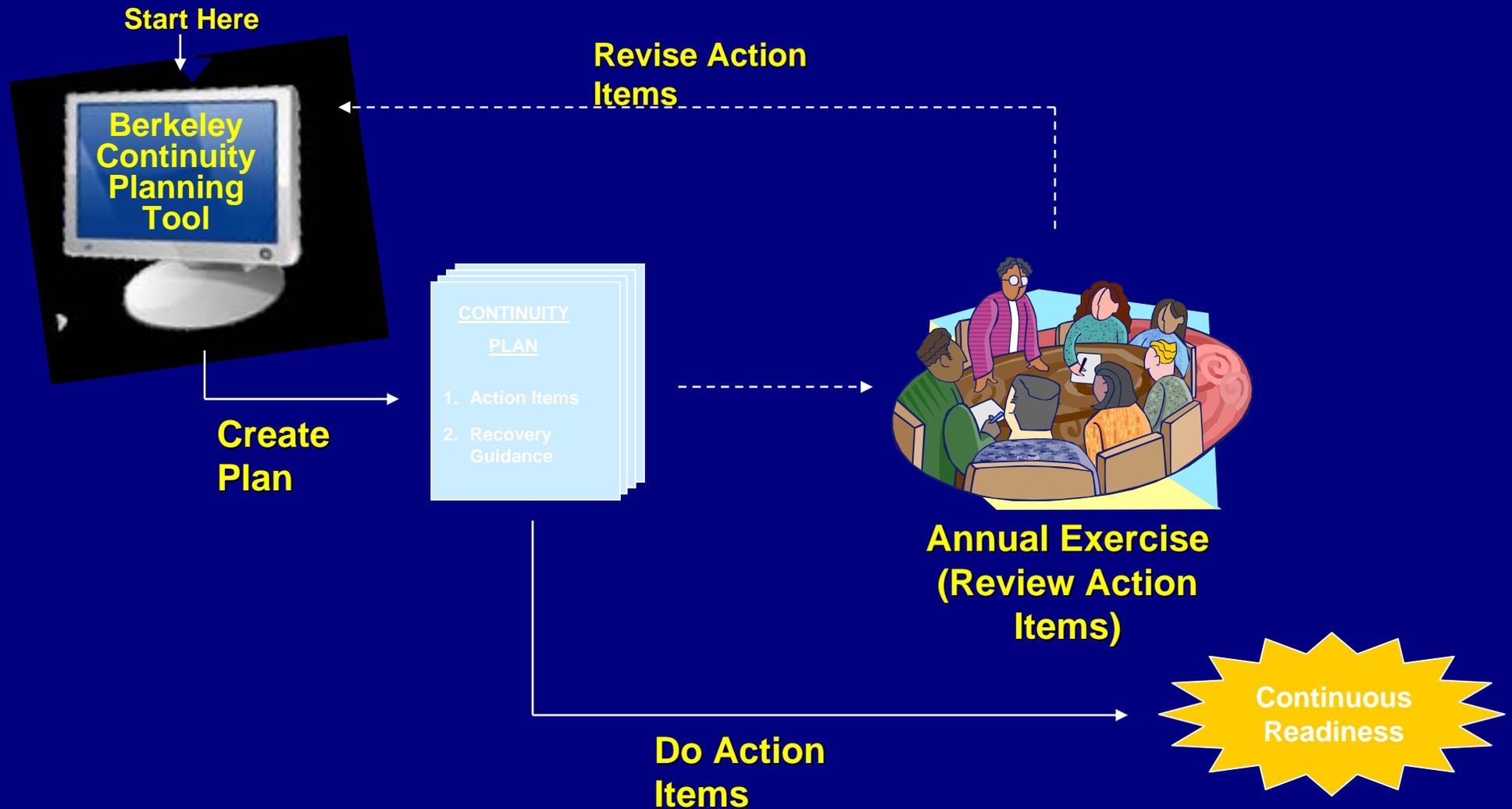
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Progress to Date

- Currently, 234 campus units (67% of total) are engaged in the planning effort: 102 units have completed their plans and 132 have plans in progress.
- There are 300-400 units on campus that should do continuity planning. We arbitrarily use 350 units as the base.

An ongoing process:



Legend:
Referral of Action Item



The outcome of continuity planning: ACTION ITEMS (mitigation or preparedness)

