

# Mendocino Coast Hospital Seismic Status and State Rural Hospital Grant Program

*Mendocino Coast Health Care District Board Meeting– May 23, 2024*

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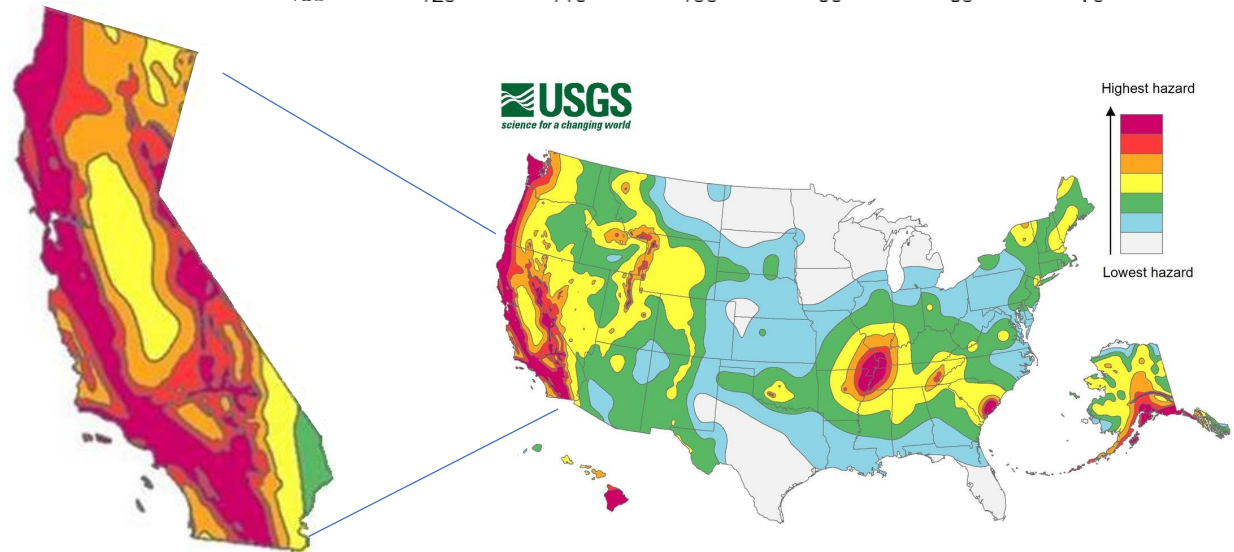
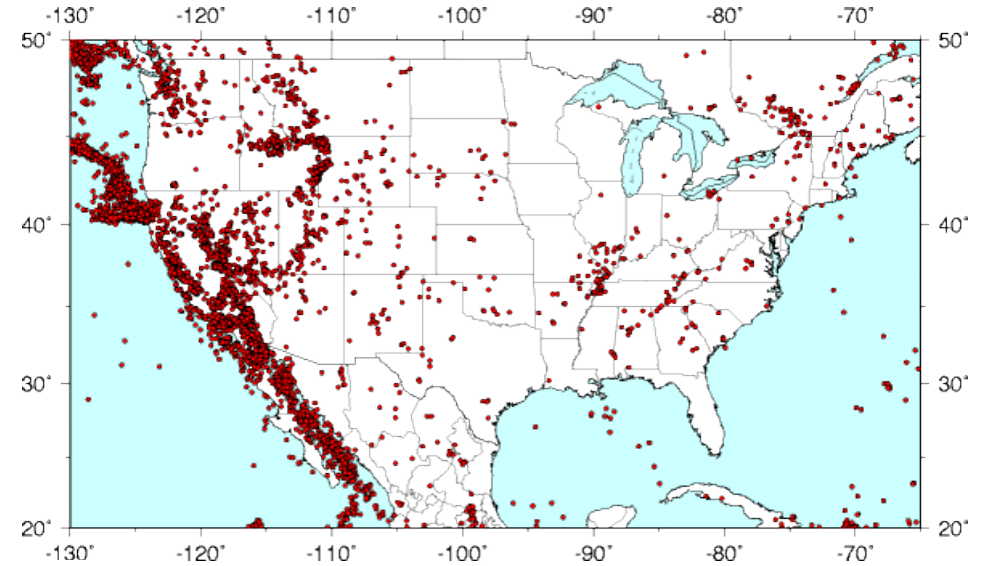
# Today's Presentation



- Overview of California's Hospital Facilities Seismic Safety Act and post-Northridge Requirements for acute care facilities
- Mendocino Coast Hospital Seismic Performance Status
- Opportunities for state funding for building analysis and retrofit planning

# Building on Shaky Ground

- California in total has higher seismic risk than most US states.
- All regions of the state are at risk for earthquakes.
- The most earthquake prone regions in the state are also the most heavily populated.



# 1971 Sylmar Quake – a “call to action”

Sylmar 1971 was the first in a series of late 20<sup>th</sup> Century earthquakes that reminded Californians of risks to access to care, as many vulnerable hospital buildings were rendered unusable for years.

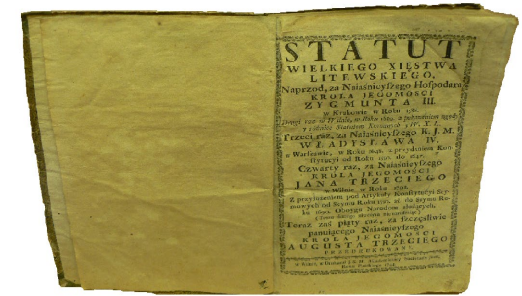


## Results of the 1971 Sylmar Earthquake On Hospital Buildings



# Alfred E. Alquist Hospital Seismic Safety Act (Statutes of 1972)

*“ ... that hospitals, that house patients who have less than the capacity of normally healthy persons to protect themselves, and that **must be reasonably capable of providing services to the public after a disaster**, shall be designed and constructed to resist, insofar as practical the forces generated by earthquakes, gravity, and winds.*





# Hospital Functionality

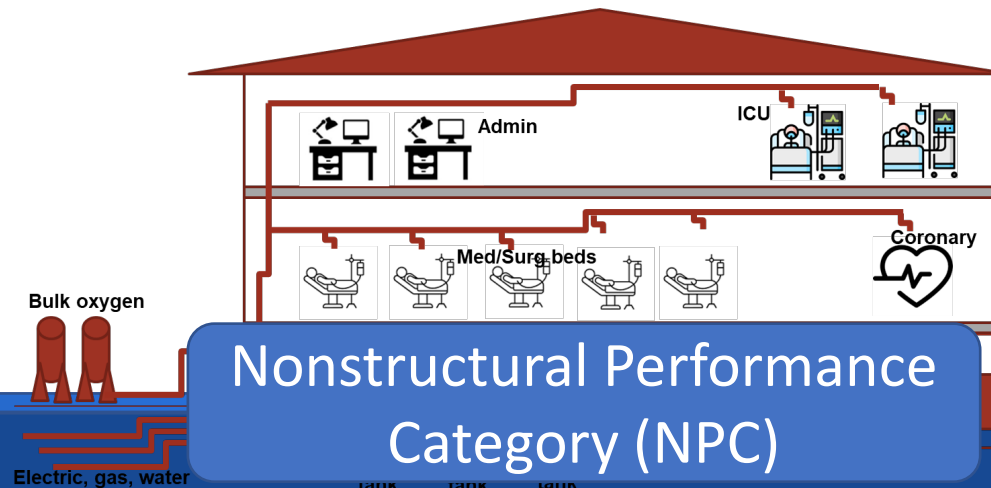
## STRUCTURAL

Beams, Columns, Shear Walls, Slabs, Foundations



## NONSTRUCTURAL

Cladding, Partitions, Ceilings, Equipment, Pipes, Furnishings, Contents, Elevators, Stairs, etc



## STAFF


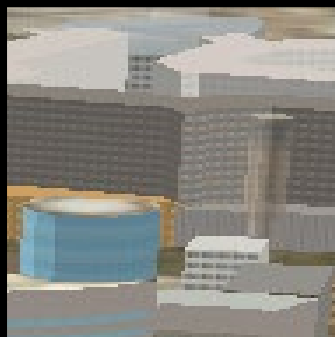

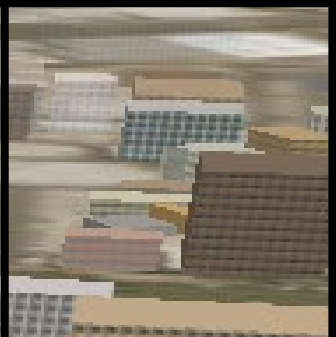
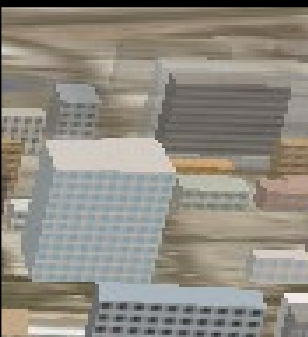
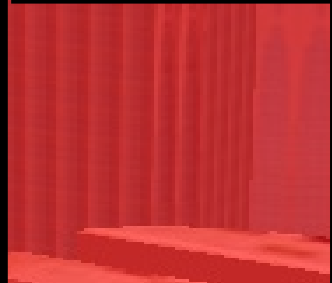






# Structural Performance Categories

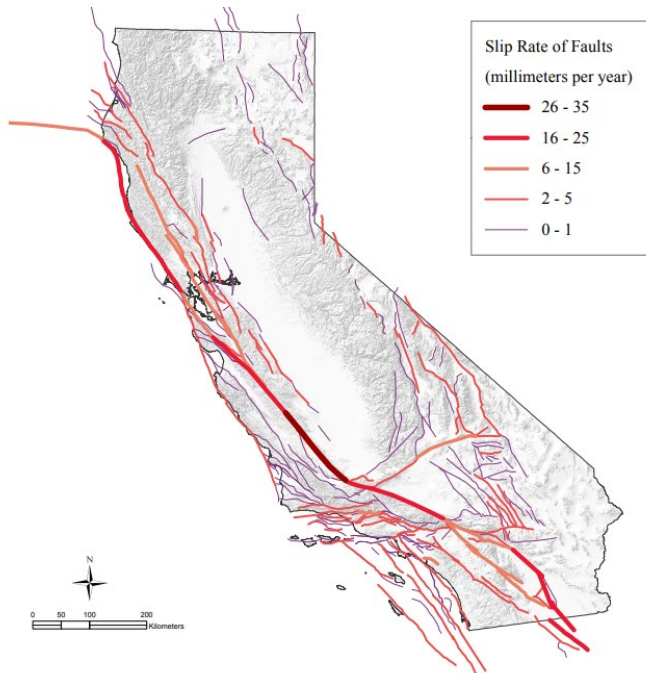


Significant Risk of Collapse in a Major EQ  
Low Risk of Collapse in a Major EQ

Reasonably Capable of Providing Services to the Public after a Major EQ

				
<b>SPC1</b>	<b>SPC2</b>	<b>SPC3</b>	<b>SPC4</b>	<b>SPC5</b>
				
			<b>SPC4D</b>	

# *SPC-2 Buildings do not significantly jeopardize life, but may not be repairable or functional following strong ground motion*



- SPC-2 buildings are not “hospital grade” buildings.
  - National building standards require hospital buildings be constructed with a seismic importance factor of 1.5 instead of 1.0. Hospital buildings are considered “essential” buildings by the National Model Code (ICC)
- SPC-2 buildings are considered life-safe only, meaning they have a reduced probability of collapse. They may still have structural deficiencies.
- SPC-2 buildings may be damaged, possibly beyond repair, and may not be capable of providing services to the public after a major seismic event

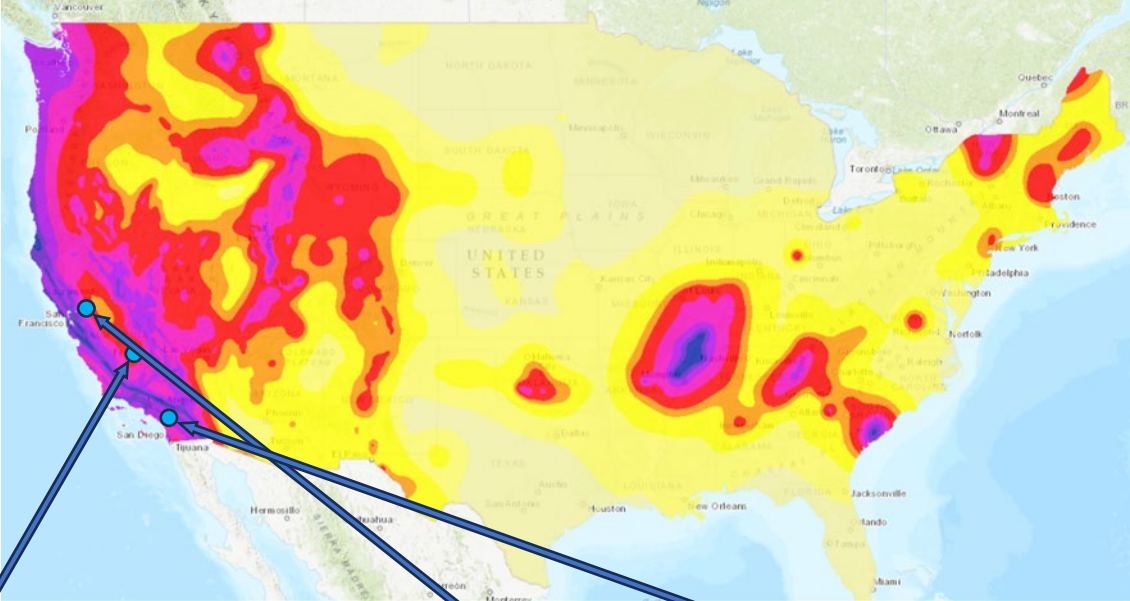
Definition in the Regulations: CCR Part 1, Chapter 6, Table 2.5.3



# Hospital Resiliency – SPC Structural Performance Category

Primary building structures able to resist anticipated ground motion from forces specific for each building's exact location.

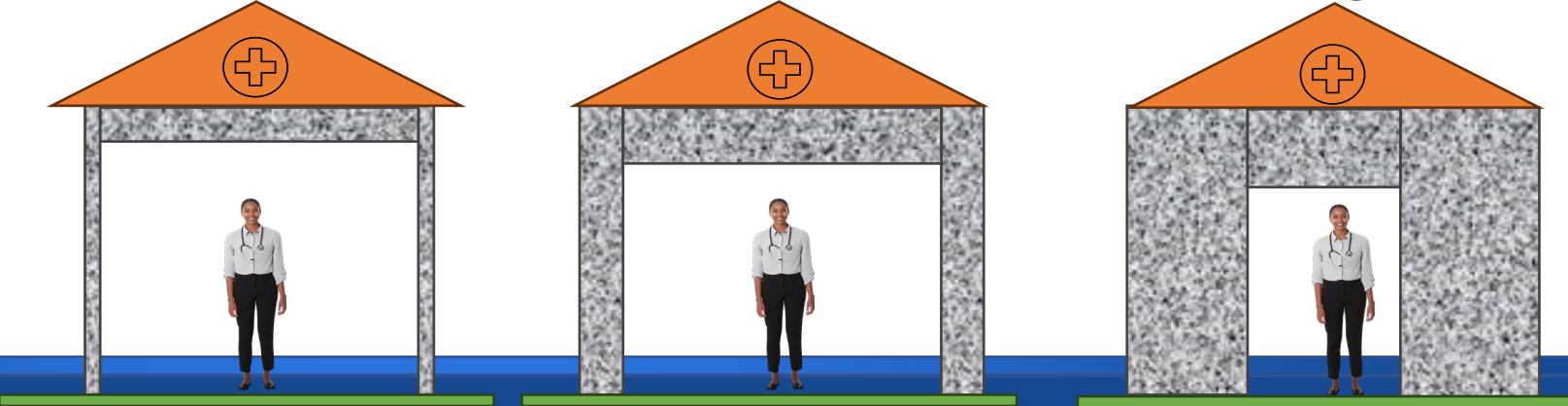
A hospital building only needs to demonstrate resiliency for the conditions on the ground upon which the building sits. Each site is unique, so requirements for each building are different.



**Fresno**

**Napa**

**Los Angeles**

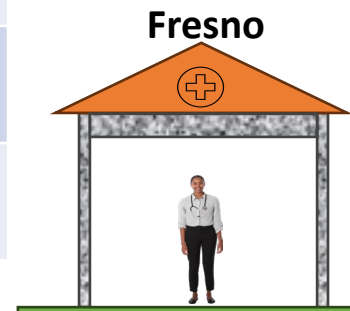


# Mendocino Coast/Fort Bragg - Medium Risk Location

Name	$S_s^1$
Providence St. Joseph (Eureka) ( <b>MAX</b> )	2.831
LAC/Olive View-UCLA (Los Angeles)	2.653
Providence Queen of the Valley (Napa)	1.955
<b>Mendocino Coast Hospital</b>	<b>1.5</b>
Community Regional MC (Fresno)	0.6
Colorado River MC (Needles) ( <b>MIN</b> )	0.214



Less active than Napa



More active than Fresno

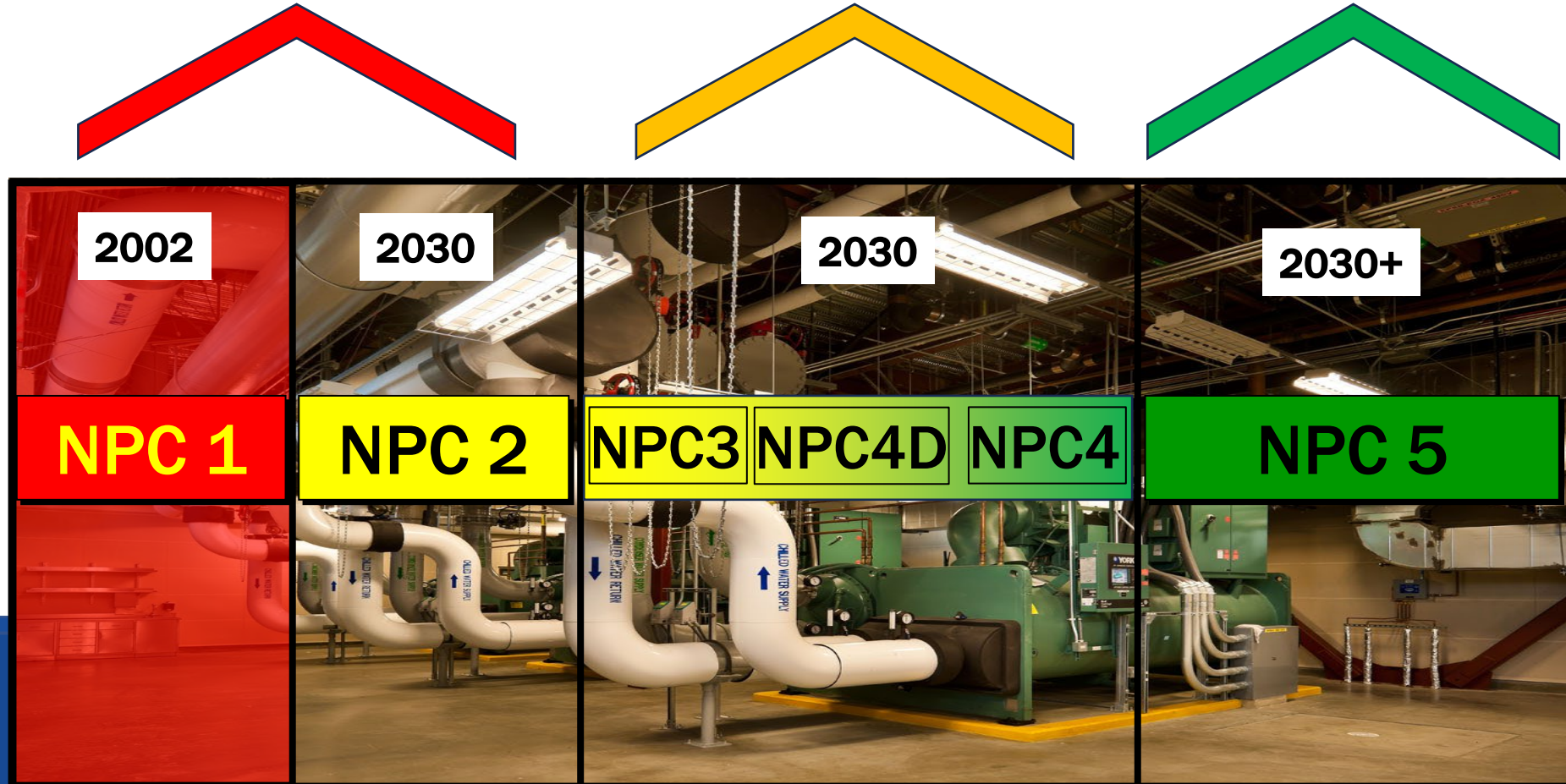
1.  $S_s$  Risk-Targeted Maximum Considered Earthquake (MCER) ground motion parameter for 0.2 s spectral response acceleration (5% of critical damping), site class B

# Non-Structural Performance Categories

Significant risk to life in a major EQ

Equipment and systems critical to patient care may not function in a major EQ

Reasonably capable of providing services to the public after a major EQ



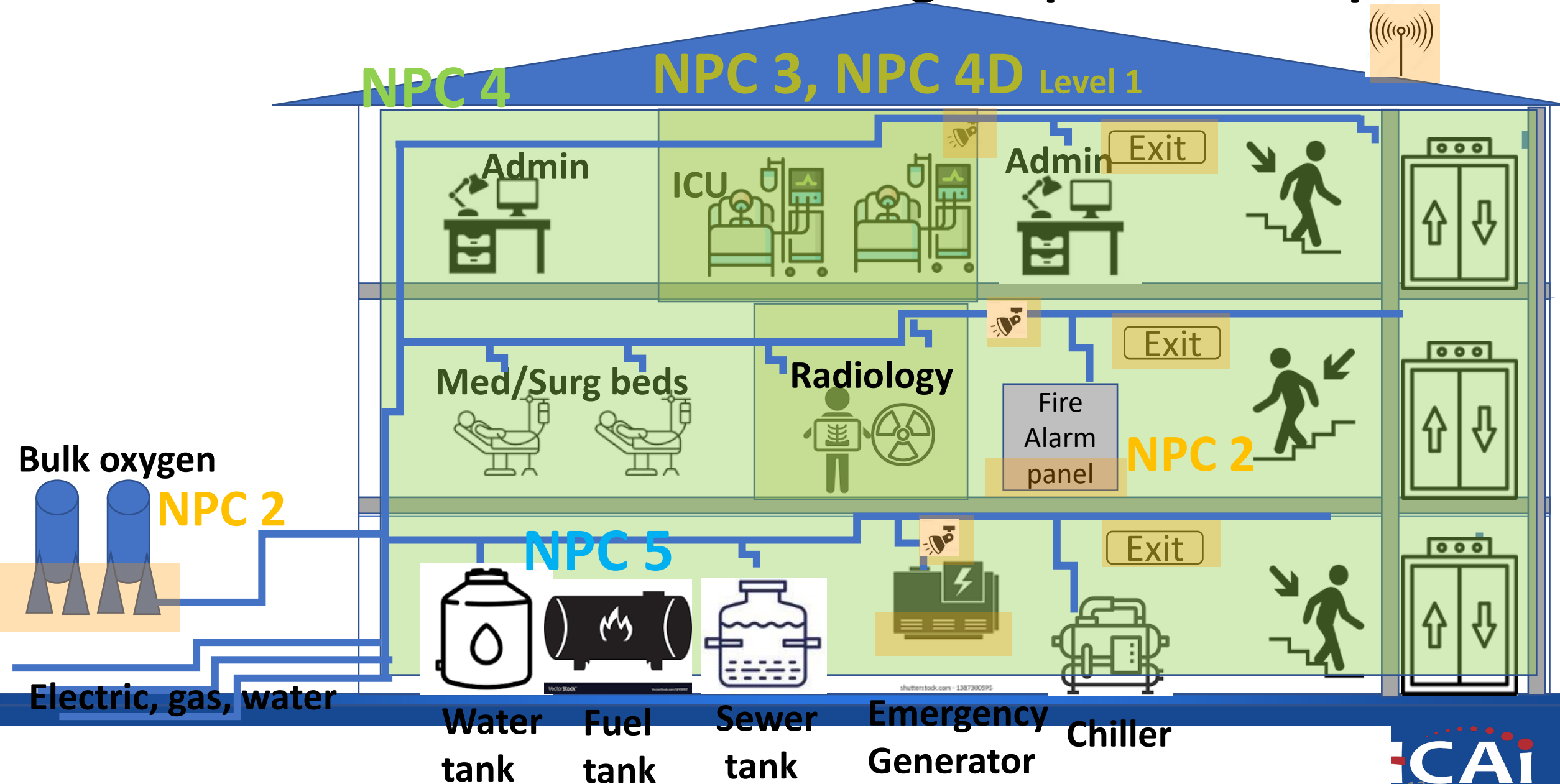


# Hospital Resiliency - NPC

Interior conditions safe from falling objects and broken utilities, (NPC-2 thru NPC-4) and 72 hours of independent resources for water, fuel, waste storage (NPC-5).



# Nonstructural Perf. Cat. Building Simplified Example



Descriptions here are simplified/reduced, please see 2022 CAC Chapter 6 Table 11.1 for further details



# Nonstructural Performance





# Nonstructural (NPC) Deadlines in California

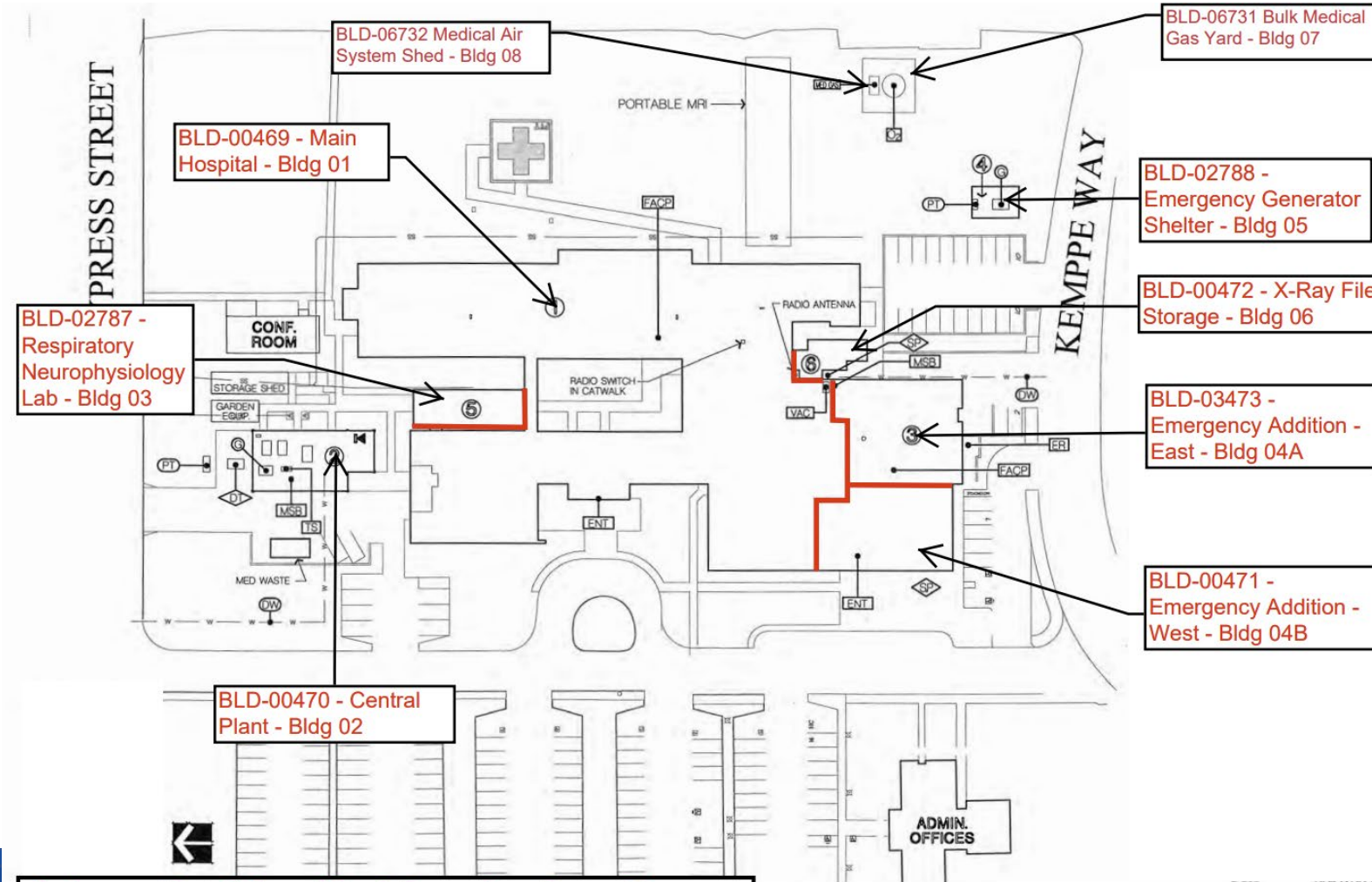
- For any hospital building intended for GAC use after January 1, 2030:
  - **By January 1, 2024**, submit to the Office a complete nonstructural evaluation (NPC 4D / NPC 4 and NPC 5) for each building. **MET**
  - **By January 1, 2026**, submit to the Office construction documents ready for review by the Office.
  - **By January 1, 2028**, obtain a building permit to begin construction.
  - **By January 1, 2030**, the GAC building shall achieve NPC-5 rating

# Mendocino Coast Hospital Service Area

- District service area is isolated to the coast. Nearest hospitals to Ft. Bragg are the other side of Mendocino Mountains and National Forest isolates coastal communities from the rest of Mendocino County. include:
- AH Howard Memorial Hospital – 36 miles, ~1 hour drive
- AH Ukiah Valley Medical Center – 57 miles, ~1.5 hour drive



# Mendocino Coast Hospital Key Plan



Adventist Health Mendocino Coast  
Facility No. 10301

02/11/21

# Mendocino Coast Hospital Seismic Status

Building Number	Building Name	SPC Rating	NPC Rating	Acute Care Uses (2023 AB 1882 Services Report)
BLD-00469	Main Hospital	2	2	<ul style="list-style-type: none"> <li>• Nursing (medical/surgical, Intensive Care)</li> <li>• Surgery (OR's, Pre- &amp; Post, Sterile Supply/Reprocessing)</li> <li>• Imaging/Radiology</li> <li>• Pharmacy</li> <li>• Dietetic (Kitchen)</li> <li>• General Stores</li> <li>• Respiratory Care</li> </ul>
BLD-00470	Central Plant	2	2	<ul style="list-style-type: none"> <li>• Utility origination</li> </ul>
BLD-00471	Emergency Addition - West	4	2	<ul style="list-style-type: none"> <li>• Clinical Lab</li> </ul>
BLD-00472	X-Ray File Storage	5	4	<ul style="list-style-type: none"> <li>• Information Technology</li> </ul>
BLD-02787	Respiratory Neurophysiology Lab	4	2	<ul style="list-style-type: none"> <li>• Imaging/Radiology</li> </ul>
BLD-02788	Emergency Generator Shelter	4	3	<ul style="list-style-type: none"> <li>• Utility origination</li> </ul>
BLD-03473	Emergency Addition - East	4	2	<ul style="list-style-type: none"> <li>• Emergency</li> <li>• General Stores</li> </ul>
BLD-06731	Bulk Medical Gas Yard	n/a	2	<ul style="list-style-type: none"> <li>• Utility origination</li> </ul>
BLD-06732	Medical Air System Shed	5	4	<ul style="list-style-type: none"> <li>• Utility origination</li> </ul>



# Mendocino's SPC-2 Building Types

BLD Number	Building Name	Description
BLD-00469	Main Hospital	Wood, Commercial, Industrial – Single Story
BLD-00470	Central Plant	Wood, Light Frame – Single Story

**Wood structures have proven historically to be the least costly building type to retrofit**



## SEISMIC COMPLIANCE PLAN

HCAI Project No. SCR-2023-00018

Mendocino Coast Health Care District, Fort Bragg, California  
HCAI Facility No. 10301



Prepared for  
Mendocino Coast Health Care District

Prepared by  
Devenney Group Ltd., Architects  
6900 East Camelback Road, Suite 500  
Scottsdale, AZ 85251

Devenney Group Project. 18000.00  
December 6, 2023

# Mendocino Coast Seismic Compliance Plan

- Prepared by:
- Devenney Group Ltd. Architects
- Degenkolb Structural Engineers
- **HCAI Approved December 15, 2023**

# Compliance Schedule – SPC-4D & NPC-5

(All dates approximate)

Activity	Submission Dates	Approval/Completion Dates
Geotechnical Report & MTCAP Concept	July 1, 2024	September 30, 2024
MTCAP Project (Inspection & sampling)	October 1, 2024	June 30, 2025
MTCAP Results (MTCAR)	August 1, 2025	September 1, 2025
Retrofit Plans	September 1, 2025	March 31, 2026
Retrofit Construction	August 1, 2027	July 31, 2029
SPC-4D Certification	August 1, 2029	September 30, 2029
<u>NPC Schedule:</u>		
NPC-4 & NPC-5 Evaluations	January 1, 2024 (MET)	June 30, 2024
NPC-4 & NPC-5 Plans	January 1, 2026	December 31, 2027
NPC-4 & NPC-5 Construction	January 1, 2028	December 31, 2029



Department of Health Care  
Access and Information



**Small and Rural Hospital  
Relief Program**

Program Introduction

# What is Small and Rural Hospital Relief Program?

- ***SRHRP provides technical assistance and reimbursement grants to qualified participants actively engaged in seismic improvement efforts***
- Created under SB 395 (2021, Caballero; HSC 130075 through 130079), provides 10% of excise tax revenue collected on the sale of electronic cigarette products.
- Program for small hospitals, rural hospitals and Critical Access Hospitals.





# SRHRP Mission



- “The mission of the Small and Rural Hospital Relief Program is to support and enhance the effort of small, rural and Critical Access hospitals to preserve access to general acute care for the communities they serve through provision of state grant funding and technical assistance to advance building seismic safety and resiliency. “

# Mendocino Coast is a Qualified SRHRP Participant

- **Mendocino Coast Hospital meets all three qualifications** and is already engaged with HCAI in technical assistance:
  - A small hospital (HSC §130076(d)(1))– fewer than 50 beds; **Mendocino Coast – 25 beds**, or,
  - A rural hospital (HSC §130076(d)(2)) – as defined by Medical Service Study Areas – **Rural Designated**; or,
  - A Critical Access Hospital (HSC §130046(d)(3))– **CMS CAH Designated**
- To qualify for grant funding, a hospital must also indicate that seismic compliance imposes a burden that could result in loss of services for a community.



## How Does it Work?

A hospital that has established eligibility and has a current approved seismic compliance may seek funding for a qualified scope of work.

Funding is granted as reimbursement for work completed or in progress. Sequential applications for specific phases allowed.



# Seismic Technical Assistance



- Explain process
- Help to identify seismic compliance scope
- Help coordinating and communicating various parties
- Provide recommendations on minimum required seismic scope. Ex: materials sampling – reduction in number of tests, minimizing NPC/SPC-4D scope
- Continued support during construction plan review
- Assistance with reimbursement grant applications
- Continued support during construction



# Eligible Project Types – Limited to Seismic Improvement

## 1) Evaluation & Predesign (Next Up)

- Retrofit feasibility studies
- Material Testing and Condition Assessment Program (MTCAP) and Reports (MTCAR)
- SPC 4D and NPC evaluation reports

## 2) Design phase activities

- SPC 4D, NPC Construction drawings (structural, arch, mech etc. )

## 3) Construction phase

# Material Testing and Condition Assessment Report



Identify and verify the properties and condition of the building. This phase includes minor construction that may include taking samples of concrete, steel, and masonry from the building, as well as opening up critical locations to observe its current structural condition.



# Eligible Projects – Durable Results



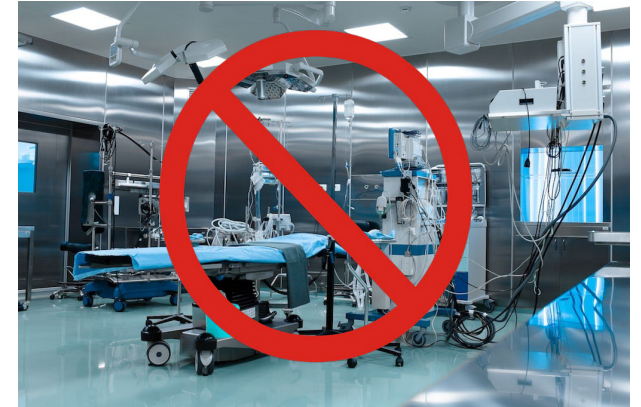
Evaluation and Predesign projects produce findings and conclusions that are not subject to change in California's triennial code cycles.

Regardless of when an actual retrofit project is undertaken, the results of studies done now may be relied upon to inform future design.

# Projects NOT Eligible for Grant Funding

Scope that is not seismic compliance related, but desired to be done at the same time with seismic project should be submitted to HCAI as a separate project and will not be included in the grant application.

SCU liaison will work with the facility to split non-seismic scope.





# What's Next?



- Fund current balance = \$6.2 million.
  - Expect grants to cover a percentage of budget per project scope.
- \$460,000 approved to date for building evaluations (Mee Memorial, King City and Kern Valley District, Lake Isabella)
- Mad River CH (Arcata) awarded \$625K for NPC 3 improvements May 2024
- 2023-24 Budget Act designated one-time additional funding of \$50 million, however those funds have not been received.



Department of Health Care  
Access and Information

Thank You!

Questions?

Please email

[SeismicComplianceUnit@hcai.ca.gov](mailto:SeismicComplianceUnit@hcai.ca.gov)