ACTN (34.46, -118.18) : 2 in 50 : 5Hz

2% in 50 yrs AFE

Ground Motion (g)

Annual Frequency of Exceedance

UCERF3
UCERF2 [UC3/UC2 = 0.96]
NSHMP CA [UC3/NSHMP = 0.96]

Logic Tree GM Distr.

Summed Weights

Logic Tree Nodes

UNIFORM TAPERED
U2 SEIS U3 SEIS
Mmax=7.9 Mmax=7.3
FM 3.1 FM 3.2
ELL B H&B 08
M5+ 6.5 M5+ 7.9
ABM GEOL

Logic Tree Tornado

Ground Motion (g)
AC01 (34.42, −118.10) : 2in50 : 5Hz

2% in 50 yrs AFE
Big Sur (36.25, -121.75) : 2in50 : 5Hz

Ground Motion (g)

Annual Frequency of Exceedance

2% in 50 yrs AFE

Logic Tree GM Distr.

Logic Tree Tornado

Summed Weights

Ground Motion (g)

Logic Tree Nodes

Ground Motion (g)
Bakersfield (35.35, −119.00) : 2in50 : 5Hz

2% in 50 yrs AFE

Annual Frequency of Exceedance

Ground Motion (g)

Logic Tree GM Distr.

Logic Tree Nodes

U3 SEIS
M5+ 6.5
Mmax=7.3
H&B 08
TAPERED
FM 3.1

U2 SEIS
M5+ 7.9
Mmax=7.9
ABM
ELL B
UNIFORM
FM 3.2
Brawley (33.00, −115.55) : 2in50 : 5Hz

2% in 50 yrs AFE

Annual Frequency of Exceedance

Ground Motion (g)

Ground Motion (g) vs. Annual Frequency of Exceedance

Logic Tree GM Distr.

Logic Tree Tornado

Summed Weights

Ground Motion (g)

Logic Tree Nodes

ZENGBB
ELL B
FM 3.2
M5+ 6.5
TAPERED
U3 SEIS
Mmax=7.3
ABM
H&B 08
FM 3.1
M5+ 7.9
UNIFORM
U2 SEIS
Mmax=7.9

Brawley (33.00, −115.55) : 2in50 : 5Hz
Ground Motion (g)

2% in 50 yrs AFE

Annual Frequency of Exceedance

Logic Tree GM Distr.

Logic Tree Tornado

Logic Tree Nodes

Summed Weights

Ground Motion (g)

Ground Motion (g)

BKBU (34.56, -117.73) : 2in50 : 5Hz
2% in 50 yrs AFE

Annual Frequency of Exceedance

Ground Motion (g)

Logic Tree GM Distr.

Logic Tree Tornado

Ground Motion (g)

Summed Weights

Logic Tree Nodes

Brookings (42.05, −124.25) : 2in50 : 5Hz
Carson City (39.15, -119.75) : 2in50 : 5Hz

2% in 50 yrs AFE

Annual Frequency of Exceedance

Ground Motion (g)

UCERF3
UCERF2 [UC3/UC2 = 0.64]
NSHMP CA [UC3/NSHMP = 1.26]

Logic Tree GM Distr.

Logic Tree Tornado

Logic Tree Nodes

NEOK
SHAW CSD
M5+ 6.5
U3 SEIS
Mmax=7.3
UNIFORM
FM 3.1

Ground Motion (g)

Summed Weights

Ground Motion (g)

0.2
0.15
0.1
0.05
0
1.2
1.4
1.6
1.8
2
2.2

1.3
1.4
1.5
1.6

ABM
ELL B
M5+ 7.9
U2 SEIS
Mmax=7.9
TAPERED
FM 3.2
Coalinga (36.15, −120.40) : 2in50 : 5Hz

Annual Frequency of Exceedance

Logic Tree GM Distr.

Logic Tree Tornado

Ground Motion (g)

Summed Weights

Ground Motion (g)

UCERF3
UCERF2 [UC3/UC2 = 1.02]
NSHMP CA [UC3/NSHMP = 1.03]

2% in 50 yrs AFE
Century City (34.05, -118.40): 2in50 : 5Hz

2% in 50 yrs AFE

Annual Frequency of Exceedance

Ground Motion (g)

UCERF3
UCERF2 [UC3/UC2 = 1.06]
NSHMP CA [UC3/NSHMP = 1.07]

Logic Tree GM Distr.

Ground Motion (g)

Logic Tree Tornado

Logic Tree Nodes

UNIFORM TAPERED
Mmax=7.9 Mmax=7.3
FM 3.2 FM 3.1
U2 SEIS U3 SEIS
ELL B H&B 08
M5+ 7.9 M5+ 6.5
GEO ABM

Century City (34.05, -118.40) : 2in50 : 5Hz

Ground Motion (g)

Summed Weights

0.2
0.15
0.1
0.05
0.0

1.6 1.8 2 2.2 2.4 2.6 2.8
Ground Motion (g)
Concord (37.95, -122.00) : 2in50 : 5Hz

Annual Frequency of Exceedance

2% in 50 yrs AFE

Logic Tree GM Distr.

Logic Tree Tornado

ZENGBB
ELL B SQL
M5+ 6.5
FM 3.1
TAPERED
U3 SEIS
U2 SEIS
Mmax=7.9

Summed Weights

Ground Motion (g)

Logic Tree Nodes

2.1 2.2 2.3 2.4 2.5 2.6 2.7

Ground Motion (g)
Cucamonga (34.20, -117.55) : 2 in 50 : 5 Hz

Logic Tree GM Distr.

logic Tree Nodes

- H&B 08
- ZENGGB
- M5+6.5
- U2 SEIS
- Mmax=7.9
- UNIFORM
- FM 3.1

Logic Tree Tornado

- ELL B
- ABM
- M5+ 7.9
- U3 SEIS
- Mmax=7.3
- TAPERED
- FM 3.2

Ground Motion (g)

Annual Frequency of Exceedance

2% in 50 yrs AFE
Diablo Canyon (35.20, -120.85) : 2in50 : 5Hz

2% in 50 yrs AFE

Ground Motion (g)

Annual Frequency of Exceedance

UCERF3
UCERF2 [UC3/UC2 = 0.83]
NSHMP CA [UC3/NSHMP = 0.85]

Logic Tree GM Distr.

Logic Tree Tornado

ABM
ELL B
M5+ 6.5
FM 3.1
Mmax=7.6
TAPERED
U2 SEIS

ABM
ELL B
M5+ 7.9
FM 3.2
Mmax=7.9
UNIFORM
U3 SEIS

Diablo Canyon (35.20, -120.85) : 2in50 : 5Hz
Death Valley (36.35, -116.85) : 2in50 : 5Hz

2% in 50 yrs AFE

Logic Tree GM Distr.

Logic Tree Tornado

UCERF3
UCERF2 [UC3/UC2 = 0.54]
NSHMP CA [UC3/NSHMP = 0.56]
Eureka (40.80, -124.20) : 2in50 : 5Hz

Annual Frequency of Exceedance

Ground Motion (g)

UCERF3
UCERF2 [UC3/UC2 = 1.00]
NSHMP CA [UC3/NSHMP = 1.02]

Logic Tree GM Distr.

Ground Motion (g)

Eureka (40.80, -124.20) : 2in50 : 5Hz

Logic Tree Tornado

Ground Motion (g)

ABM
EL B
M5+ 6.5
Mmax=7.9
TAPERED
U3 SEIS
FM 3.1

GEOL
H&B 08
M5+ 7.9
Mmax=7.3
UNIFORM
U2 SEIS
FM 3.2
Ground Motion (g)

Annual Frequency of Exceedance

UCERF3
UCERF2 [UC3/UC2 = 1.21]
NSHMP CA [UC3/NSHMP = 1.22]

2% in 50 yrs AFE

Logic Tree GM Distr.

Logic Tree Tornado

M5+ 5.5
Mmax=7.3
H&B 08
U2 SEIS
ABM
FM 3.2
UNIFORM

M5+ 7.9
Mmax=7.9
ELL B
U3 SEIS
GEOL
FM 3.1
TAPERED

Fresno (36.75, -119.75): 2in50: 5Hz
GLBT (33.96, -117.38) : 2in50 : 5Hz

2% in 50 yrs AFE

Ground Motion (g)

Annual Frequency of Exceedance

Logic Tree GM Distr.

Logic Tree Nodes

Logic Tree Tornado

Ground Motion (g)

Summed Weights

Ground Motion (g)
2% in 50 yrs AFE

Logic Tree GM Distr.

Logic Tree Tornado

GOPH (33.90, -117.36) : 2in50 : 5Hz
Irvine (33.65, −117.80) : 2 in 50 : 5 Hz

2% in 50 yrs AFE

Logic Tree GM Distr.

Logic Tree Tornado

Ground Motion (g)

Summed Weights

Logic Tree Nodes

M5+ 6.5
SHAW 09m
NEOK
U2 SEIS
TAPERED
FM 3.2
Mmax=7.9

M5+ 7.9
ELL B
ABM
U3 SEIS
UNIFORM
FM 3.1
Mmax=7.3

Ground Motion (g)

Ground Motion (g)
GV03 (34.28, -117.23) : 2 in 50 : 5 Hz

Annual Frequency of Exceedance

2% in 50 yrs AFE

Logic Tree GM Distr.

Logic Tree Tornado

Summed Weights

Logic Tree Nodes

Ground Motion (g)
LMAT (33.79, -117.40) : 2\textit{in}50 : 5Hz

2\% in 50 yrs AFE

Graph of Annual Frequency of Exceedance vs. Ground Motion (g)

Logic Tree GM Distr.

Logic Tree Tornado

Logic Tree Nodes

- SHAW CSD
- ABM
- M5+ 6.5
- U3 SEIS
- TAPERED
- Mmax=7.9
- FM 3.1
- ELL B
- GEOL
- M5+ 7.9
- U2 SEIS
- UNIFORM
- Mmax=7.3
- FM 3.2
LBUT2 (34.59, −117.81) : 2in50 : 5Hz

Annual Frequency of Exceedance

- UCERF3
- UCERF2 [UC3/UC2 = 0.99]
- NSHMP CA [UC3/NSHMP = 0.99]

Logic Tree GM Distr.

Logic Tree Nodes

- ABM
- ELL B
- M5+ 6.5
- U3 SEIS
- TAPERED
- Mmax=7.9
- FM 3.2
- GEOL
- SHAW CSD
- M5+ 7.9
- U2 SEIS
- UNIFORM
- Mmax=7.3
- FM 3.1

Summed Weights

Ground Motion (g)

Ground Motion (g)
Long Beach (33.80, -118.20) : 2in50 : 5Hz

2% in 50 yrs AFE

Annual Frequency of Exceedance

Ground Motion (g)

Annual Frequency of Exceedance

Ground Motion (g)

Logic Tree GM Distr.

Summed Weights

Logic Tree Tornado

Logic Tree Nodes

Ground Motion (g)

Ground Motion (g)
Malibu West (34.05, -118.95) : 2in50 : 5Hz

Annual Frequency of Exceedance

2% in 50 yrs AFE

Ground Motion (g)

UCERF3
UCERF2 [UC3/UC2 = 0.67]
NSHMP CA [UC3/NSHMP = 0.68]

Logic Tree GM Distr.

Summed Weights

Logic Tree Nodes

UNIFORM TAPERED
Mmax=7.6 Mmax=7.9
FM 3.2
FM 3.1
ELL B
Mmax=7.9
TAPERED

Logic Tree Tornado

GEOL
U3 SEIS
M5+ 6.5
FM 3.2
SHAW 09m
Mmax=7.6
UNIFORM

Ground Motion (g)
2% in 50 yrs AFE

Ground Motion (g)

Annual Frequency of Exceedance

Logic Tree GM Distr.

Logic Tree Tornado

Ground Motion (g)

Summed Weights

Logic Tree Nodes

M5+ 6.5
H&B 08
U2 SEIS
NEOK
Mmax=7.9
FM 3.2
TAPERED

M5+ 7.9
ELL B
U3 SEIS
ABM
Mmax=7.3
FM 3.1
UNIFORM

LPER (33.89, −117.16) : 2in50 : 5Hz
Monterey (36.60, -121.90) : 2in50 : 5Hz

Annual Frequency of Exceedance

2% in 50 yrs AFE

Logic Tree GM Distr.

UCERF3
UCERF2 [UC3/UC2 = 0.93]
NSHMP CA [UC3/NSHMP = 0.94]

Logic Tree Tornado

U3 SEIS
M5+ 6.5
ABM
SHAW 09m
FM 3.1
TAPERED
Mmax=7.6

U2 SEIS
M5+ 7.9
GEOL
ELL B
FM 3.2
UNIFORM
Mmax=7.9
MKBD (33.88, -117.39) : 2in50 : 5Hz

Annual Frequency of Exceedance

2% in 50 yrs AFE

Logic Tree GM Distr.

Logic Tree Tornado

Summed Weights

Logic Tree Nodes

Ground Motion (g)

Ground Motion (g)

UCERF3
UCERF2
[UC3/UC2 = 1.02]
NSHMP CA
[UC3/NSHMP = 1.03]
Morgan Hill (37.15, −121.65) : 2in50 : 5Hz

2% in 50 yrs AFE

UCERF3
UCERF2 [UC3/UC2 = 0.94]
NSHMP CA [UC3/NSHMP = 0.93]

Logic Tree GM Distr.

Logic Tree Tornado

Summed Weights

Logic Tree Nodes
MRVY (33.93, -117.17) : 2 in 50 : 5 Hz

2% in 50 yrs AFE

Ground Motion (g)

Annual Frequency of Exceedance

Logic Tree GM Distr.

Logic Tree Tornado

Summed Weights

Logic Tree Nodes

H&E 08 NEOK
U2 SEIS M5+ 6.5
TAPERED M5+ 7.9
FM 3.1 UNIFORM
Mmax=7.3 FM 3.2
Mmax=7.9

Ground Motion (g)

Ground Motion (g)
2% in 50 yrs AFE

Logic Tree GM Distr.

Logic Tree Tornado

Logic Tree Nodes

Ground Motion (g)

Summed Weights

Ground Motion (g)

Annual Frequency of Exceedance

Ground Motion (g)

UCERF3
UCERF2 [UC3/UC2 = 0.90]
NSHMP CA [UC3/NSHMP = 0.90]
Oakland (37.80, -122.25) : 2in50 : 5Hz

2% in 50 yrs AFE

UCERF3
UCERF2 [UC3/UC2 = 0.83]
NSHMP CA [UC3/NSHMP = 0.83]

Ground Motion (g)

Annual Frequency of Exceedance

Logic Tree GM Distr.

Logic Tree Tornado

Summed Weights

Logic Tree Nodes

- ELL B
- M5+ 6.5
- U2 SEIS
- TAPERED
- ABM
- Mmax=7.9
- FM 3.1

H&B 08
M5+ 7.9
U3 SEIS
UNIFORM
GEOL
Mmax=7.3
FM 3.2

Ground Motion (g)

Ground Motion (g)
$10^{-10} \times 10^{-8} \times 10^{-6}$

2% in 50 yrs AFE

Logic Tree GM Distr.

Logic Tree Tornado

PACI2 (34.39, −118.05) : 2in50 : 5Hz
Palmdale (34.50, −118.00) : 2in50 : 5Hz

2% in 50 yrs AFE

Annual Frequency of Exceedance

Ground Motion (g)

UCERF3
UCERF2 [UC3/UC2 = 0.94]
NSHMP CA [UC3/NSHMP = 0.93]

Logic Tree GM Distr.
Summed Weights

Logic Tree Tornado
Logic Tree Nodes

Ground Motion (g)
Palm Springs (33.85, -116.55) : 2in50 : 5Hz

2% in 50 yrs AFE

Logic Tree GM Distr.

Logic Tree Tornado

Ground Motion (g)

Summmed Weights

Logic Tree Nodes
Pasadena (34.15, -118.15) : 2 in 50 yrs AFE

Annual Frequency of Exceedance

Ground Motion (g)

2% in 50 yrs AFE

Logic Tree GM Distr.

Summed Weights

Logic Tree Tornado

Logic Tree Nodes

Mmax=7.9

Mmax=7.3

H&B 08

UNIFORM

FM 3.1

U3 SEIS

ABM

M5+ 7.9

M5+ 6.5

ELL B

TAPERED

FM 3.2

U2 SEIS

NEOK

Pasadena (34.15, -118.15) : 2 in 50 yrs : 5 Hz
PERR2 (33.79, -117.24) : 2in50 : 5Hz

2% in 50 yrs AFE
Annual Frequency of Exceedance

Ground Motion (g)

Logic Tree GM Distr.

Summed Weights

Logic Tree Nodes

Logic Tree Tornado

Mmax=7.3
Mmax=7.9
H&B 08
ELL B
ABM
NEOK
U3 SEIS
UNIFORM
TAPERED
FM 3.1
FM 3.2
M5+ 6.5
M5+ 7.9
U2 SEIS
Mmax=7.9

PERRM (33.80, -117.25) : 2in50 : 5Hz

2% in 50 yrs AFE
PIBU (34.65, -117.85) : 2in50 : 5Hz

Ground Motion (g)

Annual Frequency of Exceedance

2% in 50 yrs AFE

Logic Tree GM Distr.

Logic Tree Tornado

Summed Weights

Logic Tree Nodes

Ground Motion (g)
Reno (39.55, −119.80) : 2in50 : 5Hz
Redding (40.60, −122.40) : 2 in 50 : 5 Hz

2% in 50 yrs AFE

Ground Motion (g)

Annual Frequency of Exceedance

Logic Tree GM Distr.

Logic Tree Tornado

UCERF3

UCERF2 [UC3/UC2 = 2.06]

NSHMP CA [UC3/NSHMP = 2.29]

Summed Weights

Logic Tree Nodes

FM 3.2

TAPERED ELL B

Mmax = 7.3

NEOK

M5+ 6.5

ABM

H&B 08

UNIFORM

FM 3.1

U2 SEIS

M5+ 7.9

U3 SEIS
Riverside (33.95, −117.40) : 2in50 : 5Hz

2% in 50 yrs AFE

Logic Tree GM Distr.

Logic Tree Tornado

UCERF3
UCERF2 [UC3/UC2 = 1.02]
NSHMP CA [UC3/NSHMP = 1.02]
Sacramento (38.60, −121.50) : 2in50 : 5Hz

2% in 50 yrs AFE

Logic Tree GM Distr.

Logic Tree Tornado

Summed Weights

Ground Motion (g)

Ground Motion (g)

Logic Tree Nodes

Logic Tree GM Distr.
San Bernardino (34.10, -117.30) : 2in50 : 5Hz

2% in 50 yrs AFE
San Francisco (37.75, −122.40) : 2in50 : 5Hz

2% in 50 yrs AFE

Annual Frequency of Exceedance

Ground Motion (g)

Mock Diagram:

UCERF3
UCERF2 [UC3/UC2 = 0.93]
NSHMP CA [UC3/NSHMP = 0.93]

Logic Tree GM Distr.

SUMMED WEIGHTS

Ground Motion (g)

Logic Tree Nodes

Ground Motion (g)

Logic Tree Tornado

San Francisco (37.75, −122.40) : 2in50 : 5Hz
San Jose (37.35, -121.90) : 2in50 : 5Hz

Ground Motion (g)

Annual Frequency of Exceedance

2% in 50 yrs AFE

UCERF3
UCERF2 [UC3/UC2 = 1.06]
NSHMP CA [UC3/NSHMP = 1.07]

Logic Tree GM Distr.

Logic Tree Tornado

NEOK
M5+ 6.5
UNIFORM
ELL B
U3 SEIS
FM 3.2
Mmax=7.3

ABM
M5+ 7.9
TAPERED
H&B 08
U2 SEIS
FM 3.1
Mmax=7.9

Logic Tree Nodes

Summed Weights

Ground Motion (g)

Ground Motion (g)
San Luis Obispo (35.30, −120.65) : 2in50 : 5Hz

2% in 50 yrs AFE

Logic Tree GM Distr.

Logic Tree Tornado

Summed Weights

Logic Tree Nodes

Ground Motion (g)

- UCERF3
- UCERF2 [UC3/UC2 = 1.07]
- NSHMP CA [UC3/NSHMP = 1.08]
San Mateo (37.55, −122.30) : 2in50 : 5Hz

2% in 50 yrs AFE

Ground Motion (g)

Annual Frequency of Exceedance

UCERF3
UCERF2 [UC3/UC2 = 0.95]
NSHMP CA [UC3/NSHMP = 0.95]

Logic Tree GM Distr.

Logic Tree Tornado

Logic Tree Nodes

H&B 08
ABM
M5+ 6.5
U3 SEIS
TAPERED
Mmax=7.9
FM 3.1
ELL B
GEOL
M5+ 7.9
U2 SEIS
UNIFORM
Mmax=7.3
FM 3.2

Ground Motion (g)

Ground Motion (g)
Santa Barbara (34.45, −119.70) : 2in50 : 5Hz

2% in 50 yrs AFE

Ground Motion (g)

Annual Frequency of Exceedance

Logic Tree GM Distr.

Logic Tree Tornado

UCERF3
UCERF2 [UC3/UC2 = 0.87]
NSHMP CA [UC3/NSHMP = 0.88]
San Onofre (33.40, -117.55) : 2in50 : 5Hz

2% in 50 yrs AFE

Logic Tree GM Distr.

Logic Tree Tornado

NEOK M5+ 6.5 ELL B
SHAW 09m UNIFORM
TAPERED FM 3.2
FM 3.1 UNIFORM
Mmax=7.3 Mmax=7.9
U2 SEIS U3 SEIS
Santa Cruz (36.95, -122.05) : 2in50 : 5Hz

Annual Frequency of Exceedance

2% in 50 yrs AFE

Logic Tree GM Distr.

Logic Tree Tornado
Santa Rosa (38.45, -122.70) : 2in50 : 5Hz

2% in 50 yrs AFE

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Santa Rosa (38.45, -122.70) : 2in50 : 5Hz

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Logic Tree GM Distr.

Logic Tree Tornado

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Logic Tree Nodes

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Ground Motion (g)

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Annual Frequency of Exceedance

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Ground Motion (g)

---

Logic Tree GM Distr.

Logic Tree Tornado

---

Logic Tree Nodes

---

Ground Motion (g)
SW01 (34.30, -117.34) : 2in50 : 5Hz

Annual Frequency of Exceedance

2% in 50 yrs AFE

Ground Motion (g)

Summed Weights

Logic Tree GM Distr.

Logic Tree Nodes

Logic Tree Tornado

- UCERF3
- UCERF2 [UC3/UC2 = 0.78]
- NSHMP CA [UC3/NSHMP = 0.78]
2% in 50 yrs AFE
Vallejo (38.10, −122.25) : 2in50 : 5Hz

Annual Frequency of Exceedance

Ground Motion (g)

2% in 50 yrs AFE

Logic Tree GM Distr.

Logic Tree Tornado

Summed Weights

Ground Motion (g)

Logic Tree Nodes

Ground Motion (g)
Ventura (34.30, −119.30) : 2in50 : 5Hz

2% in 50 yrs AFE

Annual Frequency of Exceedance

Ground Motion (g)

Logic Tree GM Distr.

Logic Tree Nodes

Mmax=7.9

U2 SEIS

FM 3.1

UNIFORM

Mmax=7.9

ELL B

ABM

U3 SEIS

FM 3.2

TAPERED

FM 3.1

H&B 08

ZENGGB

M5+ 6.5

M5+ 7.9

M5+ 7.3

Ground Motion (g)

Ground Motion (g)

Summed Weights

Ground Motion (g)