

Recommended NEHRP Factors  
 $F_A$ , Peninsular Range Curves  
 Amplification (2 to 10 Hz)

WUS

Category	Median, $\sigma_{ln}$	Median, $\sigma_{ln}$	Median, $\sigma_{ln}$	Median, $\sigma_{ln}$	Median, $\sigma_{ln}$	Median, $\sigma_{ln}$	Median, $\sigma_{ln}$
A*	0.78, 0.09	0.78, 0.09	0.78, 0.09	0.78, 0.09	0.78, 0.09	0.77, 0.09	0.77, 0.09
B	1, --	1, --	1, --	1, --	1, --	1, --	1, --
BC	1.40, 0.04	1.40, 0.04	1.41, 0.04	1.41, 0.04	1.41, 0.04	1.41, 0.04	1.41, 0.05
C	1.54, 0.12	1.52, 0.13	1.49, 0.16	1.44, 0.18	1.41, 0.20	1.36, 0.23	1.25, 0.26
D	2.16, 0.17	1.94, 0.22	1.62, 0.28	1.31, 0.33	1.18, 0.35	1.01, 0.37	0.80, 0.38
E**	1.63, 0.31	1.06, 0.34	0.70, 0.35	0.51, 0.33	0.44, 0.33	0.38, 0.32	0.31, 0.31
B PGA(g)	0.05	0.10	0.20	0.30	0.40	0.50	0.75

CEUS

Category	Median, $\sigma_{ln}$	Median, $\sigma_{ln}$	Median, $\sigma_{ln}$	Median, $\sigma_{ln}$	Median, $\sigma_{ln}$	Median, $\sigma_{ln}$	Median, $\sigma_{ln}$
A*	0.78, 0.09	0.78, 0.09	0.78, 0.09	0.78, 0.09	0.78, 0.09	0.77, 0.09	0.77, 0.09
B	1, --	1, --	1, --	1, --	1, --	1, --	1, --
BC	1.36, 0.12	1.36, 0.11	1.36, 0.11	1.36, 0.11	1.36, 0.10	1.36, 0.10	1.36, 0.10
C	1.37, 0.13	1.35, 0.13	1.31, 0.15	1.28, 0.17	1.25, 0.18	1.21, 0.20	1.13, 0.23
D	1.77, 0.14	1.62, 0.17	1.39, 0.22	1.22, 0.26	1.08, 0.30	1.01, 0.33	0.78, 0.38
E**	1.43, 0.32	1.02, 0.38	0.65, 0.43	0.49, 0.45	0.40, 0.46	0.33, 0.45	0.25, 0.45
B PGA(g)	0.05	0.10	0.20	0.30	0.40	0.50	0.75

\* Category A uses only Peninsular Range rock G/Gmax and hysteretic damping curves, factors same for WUS and CEUS.

\*\* Category E uses a combination of Vucetic and Dobry (1981) (Cohesive soils) and EPRI (cohesionless soils) G/Gmax and hysteretic damping curves.

Recommended NEHRP Factors  
F<sub>A</sub>, EPRI Curves  
Amplification (2 to 10 Hz)

WUS

Category	Median, $\sigma_{ln}$	Median, $\sigma_{ln}$	Median, $\sigma_{ln}$	Median, $\sigma_{ln}$	Median, $\sigma_{ln}$	Median, $\sigma_{ln}$	Median, $\sigma_{ln}$
A*	0.78, 0.09	0.78, 0.09	0.78, 0.09	0.78, 0.09	0.78, 0.09	0.77, 0.09	0.77, 0.09
B	1, --	1, --	1, --	1, --	1, --	1, --	1, --
BC	1.40, 0.04	1.41, 0.09	1.42, 0.05	1.38, 0.08	1.35, 0.09	1.30, 0.12	1.22, 0.16
C	1.58, 0.12	1.56, 0.13	1.49, 0.16	1.38, 0.19	1.31, 0.23	1.21, 0.27	1.04, 0.29
D	1.89, 0.23	1.42, 0.27	1.08, 0.32	0.84, 0.35	0.75, 0.35	0.61, 0.35	0.51, 0.36
E**	1.63, 0.31	1.06, 0.34	0.70, 0.35	0.51, 0.33	0.44, 0.33	0.38, 0.32	0.31, 0.31
B PGA(g)	0.05	0.10	0.20	0.30	0.40	0.50	0.75

CEUS

Category	Median, $\sigma_{ln}$	Median, $\sigma_{ln}$	Median, $\sigma_{ln}$	Median, $\sigma_{ln}$	Median, $\sigma_{ln}$	Median, $\sigma_{ln}$	Median, $\sigma_{ln}$
A*	0.78, 0.09	0.78, 0.09	0.78, 0.09	0.78, 0.09	0.78, 0.09	0.77, 0.09	0.77, 0.09
B	1, --	1, --	1, --	1, --	1, --	1, --	1, --
BC	1.36, 0.11	1.37, 0.10	1.37, 0.09	1.36, 0.09	1.34, 0.11	1.30, 0.12	1.23, 0.15
C	1.37, 0.13	1.35, 0.14	1.31, 0.16	1.26, 0.19	1.20, 0.21	1.13, 0.23	1.01, 0.28
D	1.52, 0.20	1.29, 0.24	0.93, 0.29	0.78, 0.33	0.67, 0.37	0.62, 0.40	0.46, 0.42
E**	1.43, 0.32	1.02, 0.38	0.65, 0.43	0.49, 0.45	0.40, 0.46	0.33, 0.45	0.25, 0.45
B PGA(g)	0.05	0.10	0.20	0.30	0.40	0.50	0.75

\* Category A uses only Peninsular Range rock G/Gmax and hysteretic damping curves, factors same for WUS and CEUS.

\*\* Category E uses a combination of Vucetic and Dobry (1981) (Cohesive soils) and EPRI (cohesionless soils) G/Gmax and hysteretic damping curves.

Recommended NEHRP Factors  
F<sub>V</sub>, Peninsular Range Curves  
Amplification (0.5 to 2.5 Hz)

WUS

Category	Median, $\sigma_{ln}$	Median, $\sigma_{ln}$	Median, $\sigma_{ln}$	Median, $\sigma_{ln}$	Median, $\sigma_{ln}$	Median, $\sigma_{ln}$	Median, $\sigma_{ln}$
A*	0.91, 0.09	0.91, 0.09	0.91, 0.09	0.91, 0.09	0.91, 0.09	0.91, 0.09	0.91, 0.09
B	1, --	1, --	1, --	1, --	1, --	1, --	1, --
BC	1.33, 0.09	1.34, 0.09	1.35, 0.09	1.36, 0.09	1.36, 0.09	1.37, 0.09	1.39, 0.10
C	1.74, 0.06	1.75, 0.06	1.77, 0.06	1.78, 0.06	1.79, 0.07	1.85, 0.05	1.84, 0.05
D	2.60, 0.10	2.57, 0.08	2.45, 0.07	2.29, 0.09	2.19, 0.10	2.08, 0.14	1.85, 0.18
E**	3.27, 0.17	2.52, 0.26	1.89, 0.34	1.45, 0.41	1.26, 0.43	1.08, 0.45	0.86, 0.43
B PGA(g)	0.05	0.10	0.20	0.30	0.40	0.50	0.75

CEUS

Category	Median, $\sigma_{ln}$	Median, $\sigma_{ln}$	Median, $\sigma_{ln}$	Median, $\sigma_{ln}$	Median, $\sigma_{ln}$	Median, $\sigma_{ln}$	Median, $\sigma_{ln}$
A*	0.91, 0.09	0.91, 0.09	0.91, 0.09	0.91, 0.09	0.91, 0.09	0.91, 0.09	0.91, 0.09
B	1, --	1, --	1, --	1, --	1, --	1, --	1, --
BC	1.38, 0.13	1.38, 0.13	1.39, 0.13	1.39, 0.13	1.40, 0.14	1.41, 0.14	1.42, 0.14
C	1.59, 0.09	1.59, 0.09	1.60, 0.09	1.60, 0.09	1.61, 0.08	1.61, 0.08	1.62, 0.07
D	2.29, 0.09	2.24, 0.08	2.15, 0.08	2.07, 0.09	1.98, 0.11	1.89, 0.12	1.75, 0.16
E**	2.95, 0.16	2.56, 0.22	1.99, 0.32	1.64, 0.38	1.43, 0.42	1.24, 0.46	0.97, 0.50
B PGA(g)	0.05	0.10	0.20	0.30	0.40	0.50	0.75

\* Category A uses only Peninsular Range rock G/Gmax and hysteretic damping curves, factors same for WUS and CEUS.

\*\* Category E uses a combination of Vucetic and Dobry (1981) (Cohesive soils) and EPRI (cohesionless soils) G/Gmax and hysteretic damping curves.

Recommended NEHRP Factors  
F<sub>v</sub>, EPRI Curves  
Amplification (0.5 to 2.5 Hz)

WUS

Category	Median, $\sigma_{ln}$	Median, $\sigma_{ln}$	Median, $\sigma_{ln}$	Median, $\sigma_{ln}$	Median, $\sigma_{ln}$	Median, $\sigma_{ln}$	Median, $\sigma_{ln}$
A*	0.91, 0.09	0.91, 0.09	0.91, 0.09	0.91, 0.09	0.91, 0.09	0.91, 0.09	0.91, 0.09
B	1, --	1, --	1, --	1, --	1, --	1, --	1, --
BC	1.34 0.09	1.35 0.09	1.38, 0.10	1.43, 0.11	1.45, 0.11	1.47, 0.12	1.49, 0.12
C	1.76 0.06	1.78, 0.06	1.81, 0.06	1.81, 0.06	1.82, 0.06	1.86, 0.06	1.77, 0.08
D	2.59 0.08	2.31 0.09	2.07, 0.16	1.89, 0.22	1.74, 0.24	1.51, 0.29	1.30, 0.31
E**	3.27, 0.17	2.52, 0.26	1.89, 0.34	1.45, 0.41	1.26, 0.43	1.08, 0.45	0.86, 0.43
B PGA(g)	0.05	0.10	0.20	0.30	0.40	0.50	0.75

CEUS

Category	Median, $\sigma_{ln}$	Median, $\sigma_{ln}$	Median, $\sigma_{ln}$	Median, $\sigma_{ln}$	Median, $\sigma_{ln}$	Median, $\sigma_{ln}$	Median, $\sigma_{ln}$
A*	0.91, 0.09	0.91, 0.09	0.91, 0.09	0.91, 0.09	0.91, 0.09	0.91, 0.09	0.91, 0.09
B	1, --	1, --	1, --	1, --	1, --	1, --	1, --
BC	1.38, 0.13	1.39, 0.13	1.42, 0.14	1.44, 0.15	1.47, 0.16	1.49, 0.16	1.52, 0.16
C	1.59, 0.09	1.60, 0.08	1.60, 0.08	1.62, 0.08	1.62, 0.07	1.62, 0.07	1.61, 0.07
D	2.23, 0.09	2.13, 0.09	1.84, 0.15	1.71, 0.20	1.60, 0.23	1.60, 0.26	1.34, 0.32
E**	2.95, 0.16	2.56, 0.22	1.99, 0.32	1.64, 0.38	1.43, 0.42	1.24, 0.46	0.97, 0.50
B PGA(g)	0.05	0.10	0.20	0.30	0.40	0.50	0.75

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\*\* Category E uses a combination of Vucetic and Dobry (1981) (Cohesive soils) and EPRI (cohesionless soils) G/Gmax and hysteretic damping curves.