

ERRATA
PEER Report No. 2013-07

**Update of the Chiou and Youngs NGA Ground Motion
Model for Average Horizontal Component of Peak
Ground Motion and Response Spectra**

July 10, 2013

1. Pages 36 and 37:

The revised GMPE formulation for median ground motions is given by Equation (3.11)

$$\begin{aligned}
 \ln(y_{refij}) = & c_1 \\
 & + \left\{ c_{1a} + \frac{c_{1c}}{\cosh(2 \cdot \max(\mathbf{M}_i - 4.5, 0))} \right\} F_{Rvi} \\
 & + \left\{ c_{1b} + \frac{c_{1d}}{\cosh(2 \cdot \max(\mathbf{M}_i - 4.5, 0))} \right\} F_{NMi} \\
 & + \left\{ c_7 + \frac{c_{7b}}{\cosh(2 \cdot \max(\mathbf{M}_i - 4.5, 0))} \right\} \Delta Z_{TORi} \\
 & + \left\{ c_{11} + \frac{c_{11b}}{\cosh(2 \cdot \max(\mathbf{M}_i - 4.5, 0))} \right\} (\cos \delta_i)^2 \\
 & + c_2 (\mathbf{M}_i - 6) + \frac{c_2 - c_3}{c_n} \ln(1 + e^{c_n (c_M - \mathbf{M}_i)}) \\
 & + c_4 \ln(R_{RUPij} + c_5 \cosh(c_6 \cdot \max(\mathbf{M}_i - c_{HM}, 0))) \\
 & \quad + (c_{4a} - c_4) \ln(\sqrt{R_{RUPij}^2 + c_{RB}^2}) \\
 & \quad + \left\{ c_{\gamma 1} + \frac{c_{\gamma 2}}{\cosh(\max(\mathbf{M}_i - c_{\gamma 3}, 0))} \right\} R_{RUPij} \\
 & + c_8 \max\left(1 - \frac{\max(R_{RUPij} - 40, 0)}{30}, 0\right) \min\left(\frac{\max(\mathbf{M}_i - 5.5, 0)}{0.8}, 1\right) e^{-c_{8a} (\mathbf{M}_i - c_{8b})^2} \Delta DPP_{ij} \quad (3.11) \\
 & + c_9 F_{HWij} \cos \delta_i \left\{ c_{9a} + (1 - c_{9a}) \tanh\left(\frac{R_{Xij}}{c_{9b}}\right) \right\} \left\{ 1 - \frac{\sqrt{R_{JBij}^2 + Z_{TORi}^2}}{R_{RUPij} + 1} \right\}
 \end{aligned}$$

, and by Equation (3.12)

$$\begin{aligned}
\ln(y_{ij}) = & \ln(y_{ref_{ij}}) + \phi_1 \cdot \min\left(\ln\left(\frac{V_{S30j}}{1130}\right), 0\right) \\
& + \phi_2 \left(e^{\phi_3(\min(V_{S30}, 1130) - 360)} - e^{\phi_3(1130 - 360)} \right) \ln\left(\frac{y_{ref_{ij}} e^{\eta_i} + \phi_4}{\phi_4}\right) \\
& + \phi_5 \left(1 - e^{-\Delta Z_{1.0j} / \phi_6} \right) + \eta_i
\end{aligned} \tag{3.12}$$

2. Page 75: Replace line 4 by

$\gamma_{\text{Jp-It}}$: multiplicative adjustment factor for Japanese and Italian data.
 γ for Japan and Italy = $\gamma(\mathbf{M})$ for California multiplied by $\gamma_{\text{Jp-It}}$.

3. Page 76, Table A.1:

Last row of column 3 (γ_{wn} for T=10sec) should be 0.000.