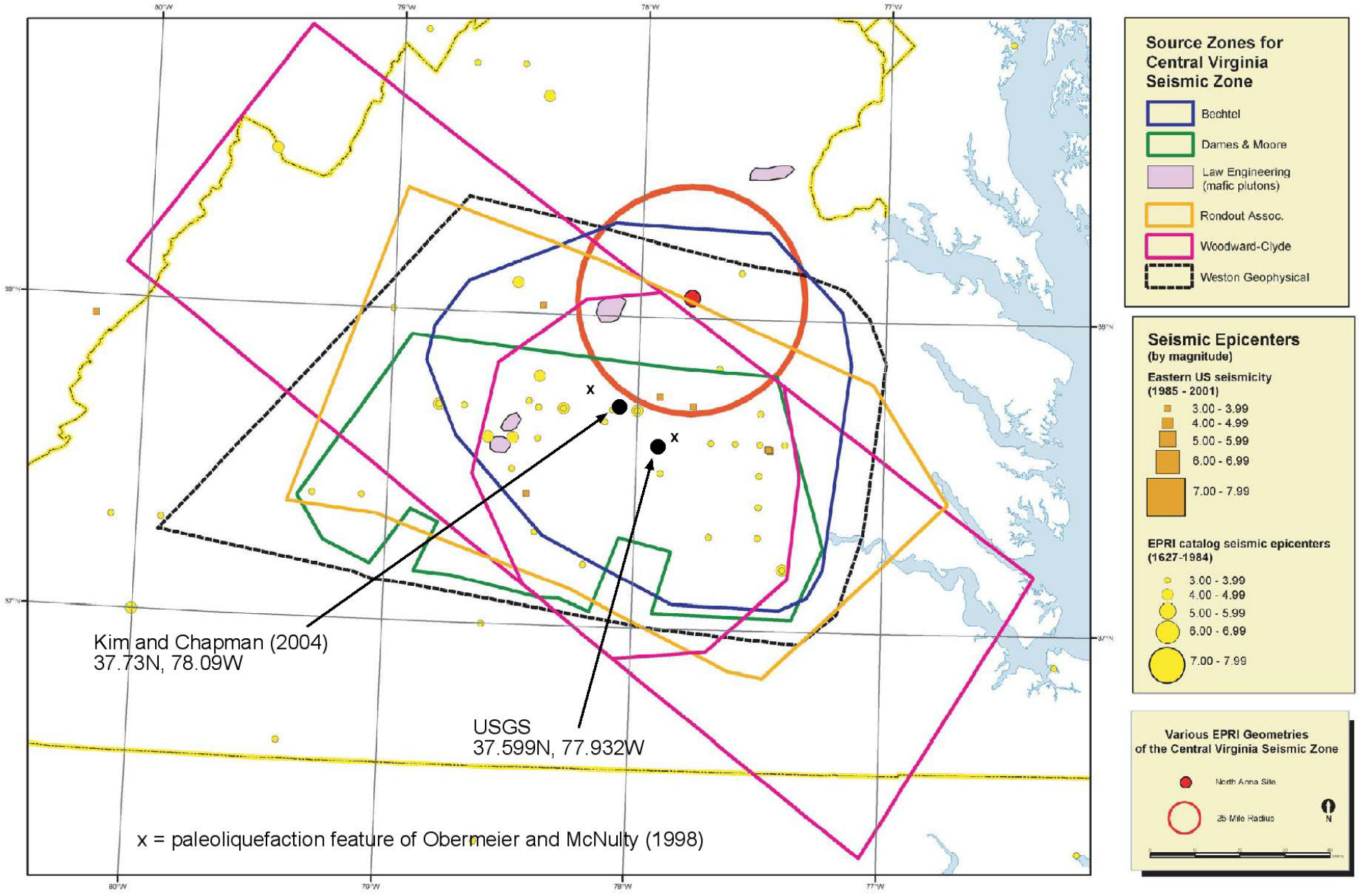
## Table 2.5-5 Summary of Bechtel Seismic Sources

| Source | Description | Distance[a] (km) | Distance[a] (mi) | Pa[b] | $M_{max}$ ($m_b$) and Wts.[c] | Smoothing Options and Wts.[d] | Contributed to 99% of EPRI Hazard[e] | New Information to Suggest Change in Source: Geometry?[f] | New Information to Suggest Change in Source: $M_{max}$?[g] | New Information to Suggest Change in Source: RI?[h] |
|---|---|---|---|---|---|---|---|---|---|---|
| **Sources within 200 mi (320 km)** | | | | | | | | | | |
| E | Central Virginia | 0 | 0 | 0.35 | 5.4 [0.10]<br>5.7 [0.40]<br>6.0 [0.40]<br>6.6 [0.10] | 1 [0.33]<br>2 [0.34]<br>4 [0.33] | Yes | No | No | No |
| BZ5 | S. Appalachians | 0 | 0 | 1.00 | 5.7 [0.10]<br>6.0 [0.40]<br>6.3 [0.40]<br>6.6 [0.10] | 1 [0.33]<br>2 [0.34]<br>3 [0.33] | Yes | No | No | No |
| 24 | Bristol Trends | 61 | 38 | 0.25 | 5.7 [0.10]<br>6.0 [0.40]<br>6.3 [0.40]<br>6.6 [0.10] | 1 [0.33]<br>2 [0.34]<br>4 [0.33] | Yes | No | No | No |
| BZ4 | Atlantic Coastal Region | 144 | 90 | 1.00 | 6.6 [0.10]<br>6.8 [0.40]<br>7.1 [0.40]<br>7.4 [0.10] | 1 [0.33]<br>2 [0.34]<br>3 [0.33] | Yes | No | No | No |
| 17 | Stafford fault zone | 0 | 0 | 0.10 | 5.4 [0.10]<br>5.7 [0.40]<br>6.0 [0.40]<br>6.6 [0.10] | 1 [0.33]<br>2 [0.34]<br>4 [0.33] | No | No | No | No |
| 13 | Eastern Mesozoic Basins | 5 | 3 | 0.10 | 5.4 [0.10]<br>5.7 [0.40]<br>6.0 [0.40]<br>6.6 [0.10] | 1 [0.33]<br>2 [0.34]<br>4 [0.33] | No | No | No | No |
| 25 | NY-Alabama Lineament | 189 | 118 | 0.30 | 5.4 [0.10]<br>5.7 [0.40]<br>6.0 [0.40]<br>6.6 [0.10] | 1 [0.33]<br>2 [0.34]<br>4 [0.33] | No | No | No | No |
| 23 | Lebanon Trend | 211 | 131 | 0.05 | 5.4 [0.10]<br>5.7 [0.40]<br>6.0 [0.40]<br>6.6 [0.10] | 1 [0.33]<br>2 [0.34]<br>4 [0.33] | No | No | No | No |
| 19 | Giles County | 221 | 137 | 0.35 | 5.7 [0.10]<br>6.0 [0.40]<br>6.3 [0.40]<br>6.6 [0.10] | 1 [0.33]<br>2 [0.34]<br>4 [0.33] | No | No | No | No |

# Locations of Dec. 9, 2003 Earthquake (mb 4.5) and Paleoliquefaction Features



## Table 2.5-11 Comparison of EPRI Characterizations of the Central Virginia Seismic Zone

| EPRI Team | Source | Description | Distance[a] | | Pa[b] | $M_{max}$ ($m_b$) and Wts.[c] | Largest $M_{max}$ Value Considered by EPRI Team | | Contributed to 99% of EPRI Hazard[d] |
|---|---|---|---|---|---|---|---|---|---|
| | | | km | mi | | | $m_b$ | M[e] | |
| Bechtel | E | Central Virginia | 0 | 0 | 0.35 | 5.4 [0.10]<br>5.7 [0.40]<br>6.0 [0.40]<br>6.6 [0.10] | 6.6 | 6.49 | Yes |
| Dames & Moore | 40 | Central VA Seismic Zone | 24 | 15 | 1.00 | 6.6 [0.80]<br>7.2 [0.20] | 7.2 | 7.51 | Yes |
| Law Engineering[f] | na | na | na | na | na | na | na | na | na |
| Rondout | 29 | Central VA | 0 | 0 | 1.00 | 6.6 [0.30]<br>6.8 [0.60]<br>7.0 [0.10] | 7.0 | 7.16 | Yes |
| Weston | 22 | Central VA Seismic Zone | 0 | 0 | 0.82 | 5.4 [0.19]<br>6.0 [0.65]<br>6.6 [0.16] | 6.6 | 6.49 | Yes |
| Woodward-Clyde Consultants | 26 | Central VA Gravity Saddle | 4 | 3 | 0.434 | 5.4 [0.33]<br>6.5 [0.34]<br>7.0 [0.33] | 7.0 | 7.16 | Yes |