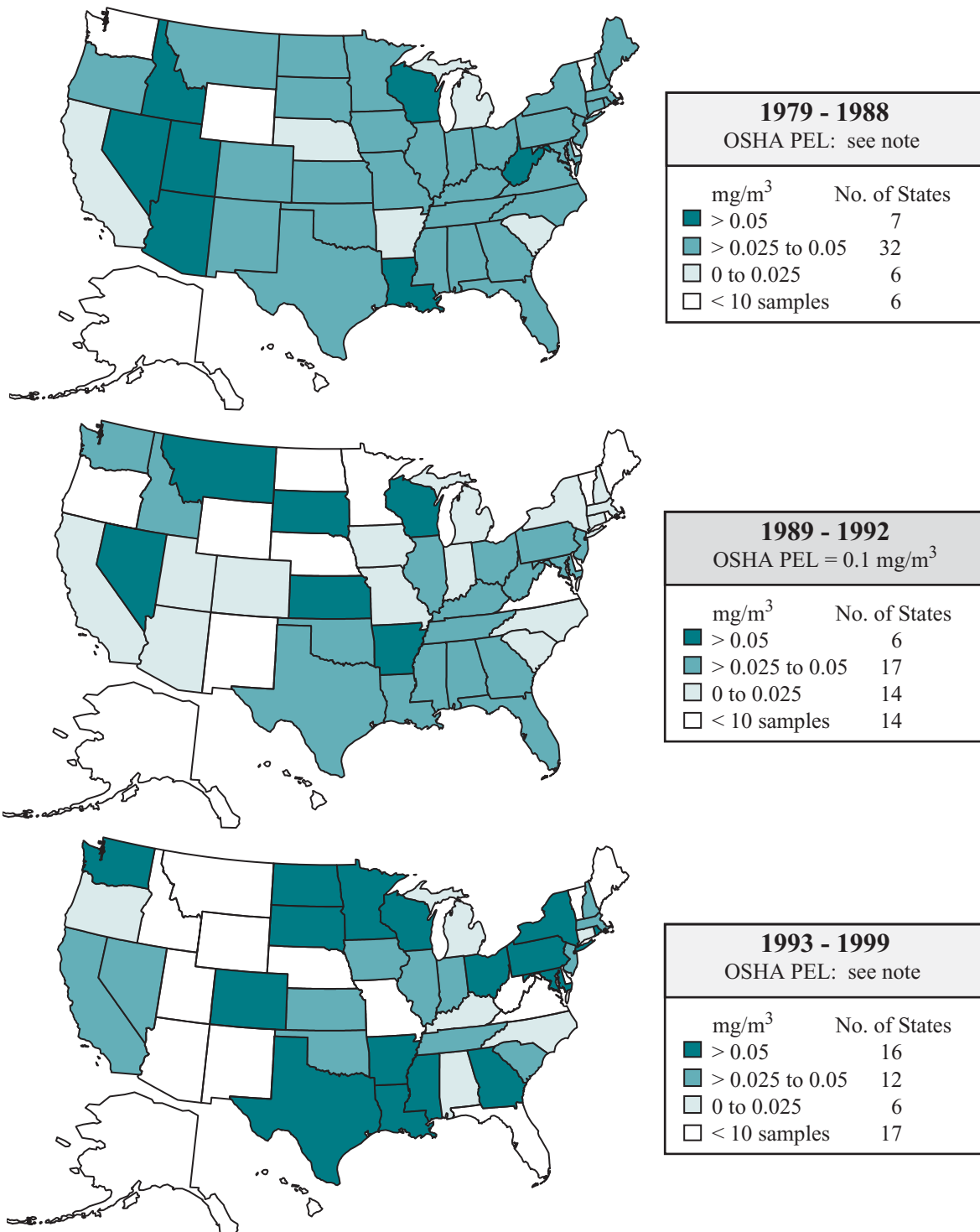


**Figure 3-9. Respirable quartz: Geometric mean exposures by state, OSHA samples, 1979-1999**



PEL - permissible exposure limit      REL - recommended exposure limit      mg/m<sup>3</sup> - milligrams per cubic meter  
 NOTE: Before March 1, 1989 and after March 22, 1993, the OSHA PEL is [(10 mg/m<sup>3</sup>) / (% quartz + 2)] for respirable dust containing at least 1 percent quartz. From March 1, 1989 to March 22, 1993, the OSHA PEL was 0.1 mg/m<sup>3</sup> for respirable quartz. The NIOSH REL is 0.05 mg/m<sup>3</sup>. See appendices for source description, methods, and agents.

SOURCE: Occupational Safety and Health Administration (OSHA) Integrated Management Information System.