

**Western States Seismic Policy Council**

**2017 Policy Recommendation Implementation Survey**

WSSPC requests response to this survey to establish the status of adoption and implementation of each adopted policy recommendation in every member state, province, and territory as of December, 2017. The survey was emailed to all members (Emergency Management and Geological Survey Directors and Seismic Commission Liaisons) and Representatives (State Earthquake Program contacts).

Please respond by January 5, 2018. The 2017 survey results will be tabulated and published on the WSSPC website.

The survey questions are based upon the facilitation and communication section of the policy recommendations, in the full policy recommendation versions that include the Facilitation and Communication, Assessment, and History sections.

The survey may be answered quickly by answering Yes, No, or N/A (Not Applicable), but detailed comments of your state’s progress on implementing the policies is appreciated.

The last policy survey was conducted in 2015 and the results are posted at <http://www.wsspc.org/public-policy/recommendation-survey/> .

Policies:

The policies are organized by category rather than in numerical order.

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| **POLICY CATEGORIES** |
| **Category** | **Policy Number** |
| Risk Reduction Strategies  | 15-2 |
| Hazard Identification and Assessment  | 15-1, 15-3 |
| Earthquake Monitoring and Early Warning  | 17-3, 17-7 |
| Building Codes  | 15-4, 17-4, 16-4 |
| School Building Safety  | 16-10, 17-8 |
| Lifelines  | 16-11, 16-12 |
| Tsunami  | 17-1, 16-1 |
| Post-Event Management  | 16-3, 13-6 |

Continue to take the 2017 Survey…

**Risk Reduction Strategies**

**Policy Recommendation 15-2: Developing Earthquake and Tsunami Risk-Reduction Strategies**

WSSPC strongly encourages states and local governments to form public-private partnerships to develop and continually update long-term, comprehensive statewide and community-level earthquake and tsunami risk-reduction strategies as part of an all-hazards plan to reduce injury, loss of life, property damage and economic disruption from earthquakes and tsunamis.

1. *Has your agency sent this policy recommendation to all identified policy and decision makers (elected officials, heads of key departments, such as emergency managers, building officials and planners, and chairs of the State Seismic Safety Commission and Boards)?*

**Yes:**

**No:**

**N/A:**

**Comments:**

1. *Please describe your state, province, or territory’s efforts forming public/private partnerships to develop earthquake and tsunami risk reduction strategies.*

**Hazard Identification and Assessment**

**Policy Recommendation 15-1: Earthquake and Tsunami Planning Scenarios**

WSSPC recommends that each member state, province, and territory establish an active program to produce Earthquake and/or Tsunami Planning Scenarios for areas with high risk and vulnerability. WSSPC also recommends that state and federal agencies and potential private partners support the production of these Planning Scenarios through their funding resources and in-kind services.

1. *Has your agency developed and published any new earthquake and tsunami planning scenarios since 2015?*

**Yes:**

**No:**

**N/A:**

**Comments:**

1. *If yes, please describe.*

**Hazard Identification and Assessment**

**Policy Recommendation 15-3: Definitions of Recency of Surface Faulting for the Basin and Range Province**

WSSPC recommends that each state in the Basin and Range physiographic province (BRP), through consultation with state and federal geological surveys and other earthquake-hazard experts, define scientifically and societally relevant categories for recency of surface faulting (generally earthquake magnitude ≥M 6.5).

Examples of categories that are applicable for much of the BRP include the following:

Latest Pleistocene-Holocene fault – a fault whose movement in the past 15 ka has been large enough to break the ground surface.

Late Quaternary fault – a fault whose movement in the past 130 ka has been large enough to break the ground surface.

Quaternary fault – a fault whose movement in the past 2.6 Ma (Cohen and Gibbard, 2010) has been large enough to break the ground surface.

WSSPC further recommends that in the absence of information to the contrary, all Quaternary faults be considered Latest Pleistocene-Holocene active unless there are adequate data to confidently assign them to a Late Quaternary or Quaternary activity class.

1. *Have these definitions of surface faulting in the Basin & Range Province been communicated to policy makers?*

**Yes:**

**No:**

**N/A:**

**Comments:**

1. *Have these definitions been adopted by your state, province, or territory?*

**Yes:**

**No:**

**N/A:**

**Comments:**

**Earthquake Monitoring and Early Warning**

**Policy Recommendation 17-3: Earthquake Monitoring Networks**

WSSPC supports the continued expansion and modernization of earthquake monitoring networks as envisioned and articulated by the Advanced National Seismic System (ANSS), with emphasis on expanded strong-motion monitoring in areas prone to large earthquakes and in urban areas, including selected engineered structures; increased regional broadband seismograph instrumentation; increased geodetic instrumentation; and earthquake early warning capabilities. The resulting data will provide better understanding of future ground shaking potential, tsunami generation potential, more rapid information for emergency response, and insights for the improved design of more earthquake and tsunami-resistant construction.

1. *Has your state, province, or territory been able to expand its seismic monitoring capabilities in partnership with the United States Geological Survey or the Geological Survey of Canada?*

**Yes:**

**No:**

**N/A:**

**Comments:**

1. *If yes, how many stations and what type (for example: broadband seismograph, instrumentation of engineered structures or geodetic instrumentation) of instrumentation have you been able to install?*

**Earthquake Monitoring and Early Warning**

**Policy Recommendation 17-7: Earthquake Early Warning Systems**

WSSPC recommends the research, development, and implementation of earthquake early warning systems in those states or regions with high seismic risk and a seismic network that can, or can be enhanced to, support an early warning capability. These national and regional-specific systems should include outreach, education, training, management, and ongoing maintenance of the systems.

*a) Has your state, province or territory established a state-level working group on earthquake early warning?*

**Yes:**

**No:**

**N/A:**

**Comments:**

*b) Is earthquake early warning being considered in your state, province, or territory?*

**Yes:**

**No:**

**N/A:**

**Comments:**

**Building Codes**

**Policy Recommendation 15-4: Identification and Mitigation of Non-Ductile Concrete Buildings**

WSSPC recommends that states, provinces, territories or communities with moderate and high seismicity consider creating programs to identify non-ductile concrete buildings and develop plans and policies that will effectively reduce the risks in their jurisdictions.

1. *Has your state, province or territory identified, prioritized, or inventoried its non-ductile concrete buildings?*

**Yes:**

**No:**

**N/A:**

**Comments:**

1. *If yes, please describe your state, province, or territory efforts to reduce risks from non-ductile concrete buildings and how the costs are being borne (e.g. retrofits, replacing buildings, risk disclosure, etc.)*

**Building Codes**

**Policy Recommendation 17-4: *Identification and Mitigation of Unreinforced Masonry Structures***

Unreinforced masonry bearing-wall structures represent one of the greatest life-safety threats and economic burdens to the public during damaging earthquakes. WSSPC recommends that each state, province or territory adopt a program to identify the extent of risk that unreinforced masonry structures represent in their communities and develop recommendations that will effectively address the reduction of this risk.

1. Has your *state, province, or territory adopted a program to identify the risk from unreinforced masonry buildings?*

**Yes:**

**No:**

**N/A:**

**Comments:**

1. *If yes, is the program voluntary or mandatory? Please describe.*

**Building Codes**

**Policy Recommendation 16-4: Seismic Provisions in the 2015 International Building Codes**

WSSPC endorses the prompt adoption and enforcement of the seismic provisions of the 2015 International Existing Building Code, the 2015 International Building Code, and the 2015 International Residential Code (and the 2015 National Building Code of Canada, where applicable) as minimum standards by states, territories, provinces and/or local jurisdictions. Further, WSSPC discourages modifications or amendments that would weaken the Code or its required inspections. WSSPC also encourages Code organizations to continue the development and refinement of building codes and consensus standards to remain substantially equivalent to the National Earthquake Hazards Reduction Program (NEHRP) Recommended Seismic Provisions for New Buildings and Other Structures (FEMA 1050) and encourage authorities having jurisdictions to focus on seismic education, purpose, incentives, lifelines and the business/industry and residential sectors.

*Has your state, province, or territory adopted seismic provisions that meet or exceed those provisions in the 2015 International Building Code, International Existing Building Code and International Residential Code?*

**Yes:**

**No:**

**N/A:**

**Comments:**

**School Building Safety**

**Policy Recommendation 16-10: Joint Policy for the Evaluation and Seismic Remediation of School Buildings**

The Western States Seismic Policy Council, with the support of the Earthquake Engineering Research Institute, recommends that each member state, province and territory establish as a goal that all school buildings be seismically resilient. Seismically vulnerable school buildings should be retrofitted or replaced by new earthquake resilient school buildings as an important part of a nationwide school earthquake resiliency goal.

1. *Has the policy recommendation been distributed to policy and decision makers, elected officials, school districts, parent/teacher associations, teacher unions, school administrators, building departments or elected leaders?*

**Yes:**

**No:**

**N/A:**

**Comments:**

1. *Has your state, province, or territory or school districts within your state, province, or territory adopted a seismic retrofit plan for school buildings?*

**Yes:**

**No:**

**N/A:**

**Comments:**

**School Building Safety**

**Policy Recommendation 17-8: *Seismic Design and Construction of New Schools***

WSSPC recommends that each member state, province, and territory establish and fund an active program to improve the seismic safety of new schools by selectively increasing the current design and construction requirements for buildings and non-structural components, providing rigorous plan reviews and inspections and by establishing minimum regional seismic design categories for new schools. WSSPC also recommends that appropriate responsible local and federal entities provide dedicated financial support for the establishment of a program that improves the seismic safety of new schools.

1. *Has the policy recommendation been sent to all identified policy and decision makers, (elected officials), heads of key departments such as emergency managers, building officials and planners and chairs of the State Seismic Commissions and Boards?*

**Yes:**

**No:**

**N/A:**

**Comments:**

1. *Has your state adopted elevated seismically designed standards for school facilities?*

**Yes:**

**No:**

**N/A:**

**Comments:**

**Lifelines**

**Policy Recommendation 16-11: Reliability of Lifeline Services**

WSSPC encourages utility regulatory bodies and utility service providers to implement best practices and seismic design in the construction and maintenance of their infrastructure in order to assure satisfactory performance in future earthquakes.

1. *Has your state, province, or territory encouraged agencies and regulators to develop guidelines addressing the seismic resilience of critical infrastructure?*

**Yes:**

**No:**

**N/A:**

**Comments:**

1. *Have public and private lifeline operators utilized available seismic design and performance guidelines in the construction, operation and rehabilitation of their facilities?*

**Yes:**

**No:**

**N/A:**

**Comments:**

**Lifelines**

**Policy Recommendation 16-12: Earthquake Actuated Automatic Gas Shutoff Devices**

WSSPC recommends that each state, province or territory that is considering implementing requirements for installing earthquake-actuated automatic gas shutoff devices in industrial, commercial and/or residential applications assure that shutoff valves meet the provisions of the most currently available revision of ANSI/ASCE/SEI Standard 25 (Earthquake-Actuated Automatic Gas Shutoff Devices) and be installed in conformance with the manufacturer’s installation instructions. The cost versus benefit of turning gas on after an event or the analysis of false activation is left to the authority having jurisdiction. The policy only advocates that if a decision is made to proceed with earthquake actuated automatic gas shutoff devices that the current standard be utilized.

*Has your* *state, province, or territory considered implementing a requirement for installing automatic gas shutoff devices in industrial, commercial and/or residential applications that meets the provisions of the most currently available revision of ANSI/ASCE/SEI Standard 25 (Earthquake-Actuated Automatic Gas Shutoff Devices)?*

**Yes:**

**No:**

**N/A:**

**Comments:**

**Tsunami**

**Policy Recommendation 17-1: *Improving Tsunami Public Education and Warning Procedures for Distant and Local Sources***

WSSPC recommends expanding the efforts by NOAA, the USGS, FEMA, and WSSPC members to enhance public education programs about potential impacts from local tsunamis and the need to evacuate threatened areas immediately after strong or sustained ground shaking; prioritizing those efforts, which have an immediate and direct impact on life-safety for locally-generated tsunamis, over deep-sea tsunami detection systems that have no benefit for local warnings. WSSPC also recommends robust, effective, and fully maintained implementation of the tsunami detection system by NOAA, as long as it is not at the expense of community-level tsunami preparedness, mitigation, and recovery planning.

*Has your state, province, or territory communicated to federal, state, and local stakeholders its position on support for enhanced educational efforts in communities at risk to local tsunami sources?*

**Yes:**

**No:**

**N/A:**

**Comments:**

**Tsunami**

**Policy Recommendation 16-1: Rapid and Effective Tsunami Identification and Response**

WSSPC recommends that each coastal state, province, and territory emergency management agency work with coastal jurisdictions to develop evacuation plans for both near- and distant-source tsunamis, and supplement these emergency plans with a preparedness education campaign focusing on instructions to evacuate based on ground shaking, that ensures all populated coastal areas in the WSSPC coastal states, territories and provinces are guided by at least one type of system, appropriate to local conditions. Strong coordination should also occur between and among federal partners, such as the U.S. Geological Survey, National Oceanic and Atmospheric Administration, etc. and state/academic institutions developing earthquake early warning system technologies, expanding upon the WSSPC Policy Recommendation on Earthquake Early Warning, to ensure appropriate community response to both earthquake and tsunami alerts.

*a) Has your state, province, or territory continued to support increased tsunami mitigation, preparedness, and response activities through improved planning, drills, and exercises?*

**Yes:**

**No:**

**N/A:**

**Comments:**

*b) Has your state, province or territory worked with NTHMP to support development of guidance on rapid identification and notification systems?*

**Yes:**

**No:**

**N/A:**

**Comments:**

*c) Has your state, province, or territory communicated this WSSPC adopted policy or forwarded Policy Recommendation 16-1 to NOAA, USGS, FEMA, state or local decision makers, or other organizations for budgetary and technical support?*

**Yes:**

**No:**

**N/A:**

**Comments:**

**Post-Event Management**

**Policy Recommendation 16-3: Post-Earthquake Technical Clearinghouses**

WSSPC recommends that each member state, province, and territory establish a plan for a post-earthquake technical clearinghouse to be activated if possible within 24 hours after each major earthquake within its jurisdiction. WSSPC also recommends that multijurisdictional agreements between and among WSSPC members and Federal agencies be in place that would allow for the establishment of a single comprehensive technical clearinghouse in the event of a large earthquake.

1. *Has your* *state, province, or territory established a plan for a post-earthquake clearinghouse?*

**Yes:**

**No:**

**N/A:**

**Comments:**

1. *Has your state, province, or territory established agreements (MOAs) with other state and federal agencies?*

**Yes:**

**No:**

**N/A:**

**Comments:**

**Post-Event Management**

**Policy Recommendation 13-6: Post-Earthquake Information Management System**

WSSPC supports the development of a national Post-Earthquake Information Management System. The Management System would provide permanent archiving of essential data related to natural and socioeconomic earthquake effects and the performance of the built environment from earthquake within the United States, and could be combined with similar data systems that assemble and archive data from other natural hazards events, or geosciences data repositories that archive physical and electronic data.

1. Has your *state, province, or territory communicated support to NEHRP agencies (or others) for the establishment of a national Post-Earthquake Information Management System?*

**Yes:**

**No:**

**N/A:**

**Comments:**

1. Has your *state, province, or territory provided written support for the establishment of a pilot or demonstration Post-Earthquake Information Management System?*

**Yes:**

**No:**

**N/A:**

**Comments:**

1. Has your *state, province, or territory established one or more local or regional partnerships and agreement for the purpose of assuring the collection of post-earthquake performance and damage information for long-term use?*

**Yes:**

**No:**

**N/A:**

**Comments:**