



1. Architectural foundations can preserve life most effectively. By avoiding masonry buildings, using steel to reinforce structures, and using diagonally fitted cross supports, buildings are less likely to collapse and kill those nearby and within.
2. Government forces are the leaders of the efforts to minimize casualties. The City of Seattle along with King County, FEMA, and the national govt. work together to execute the pre-established Disaster Readiness and Response plan. Many city organizations are contracted for various areas of focus following a disaster of this magnitude.
3. The WA state government's primary means of addressing the earthquake is ordering research and then not allocating the budget to do what the research suggests. This is largely a cost-saving measure to make it look like the problem is being addressed when it is not.



## Secondary Research Annotated Works-Cited

### Henry Davis

Ministry of Civil Defence & Emergency Management. *TEPHRA Community Resilience: Case Studies from the Canterbury Earthquakes*. TEPHRA Community Resilience: Case Studies from the Canterbury Earthquakes, Ministry of Civil Defence & Emergency Management, 2012. This article summarises community experiences as told by community members themselves in the aftermath of the Christchurch Earthquake in New Zealand in 2012. The goal of these stories of resilience is to inform policy and practice and lead to meaningful integration of community action into emergency response, as the cornerstone of community resilience in disasters.

United States, Congress, Naval Postgraduate School, et al. *"As Things Fall Apart: Adaptive Strategies During a Catastrophe."* As Things Fall Apart: Adaptive Strategies During a Catastrophe, Naval Postgraduate School, 2013. The purpose of this paper is to summarize the results of a constructed dialogue on catastrophic planning between selected regional planners from the United States and leading emergency management leaders from New Zealand. The purpose of the discussions planned for this conference is to examine collectively the limits in existing regional catastrophic plans by focusing on when, how, and under what conditions the plans' fundamental assumptions may fail or prove insufficient.

Wellington Region Emergency Management Office. *Community Resilience Strategy*. Community Resilience Strategy, Wellington Region Emergency Management Office, 2012. This is a paper released by the Wellington Region Emergency Management Office to define the philosophy and framework for community engagement to enhance resilience in disaster-prone regions. The three core concepts that make up this framework are "building capacity, increasing connectedness and fostering cooperation" which will eventually become a "Communicate & Cooperate" model of Emergency Management in practice.

Knight, Sharon. *"Culturally Responsive Emergency Management (CREM)."* 15 May 2014. Dr. Knight provides guidance for integrating culturally diverse communities into preparedness and response through a practical list of steps to get started including a reference and resource guide and a primer for understanding and integrating diversity, cultural competency, and language assistance

### Krish Swami

Doughton, Sandi, and Daniel Gilbert. *"7 Things You Need to Know about Buildings That Could Kill in a Major Earthquake."* The Seattle Times, The Seattle Times Company, 16 May 2016, [www.seattletimes.com/seattle-news/times-watchdog/7-things-you-need-to-know-about-buildings-that-could-kill-in-a-major-earthquake/](http://www.seattletimes.com/seattle-news/times-watchdog/7-things-you-need-to-know-about-buildings-that-could-kill-in-a-major-earthquake/). Unreinforced masonry building that just won't last. Weak structural design and foundation. Buildings are

being ignored due to the lack of funding. Retrofitted doesn't mean earthquake proof.

Gilbert, Daniel, and Sandi Doughton. *"Washington's 30-Year Earthquake Drill for the 'Big One': Order Studies. Ignore Them. Repeat."* The Seattle Times, The Seattle Times Company, 29 Jan. 2017, [www.seattletimes.com/seattle-news/northwest/washington-30-year-earthquake-drill-for-big-one-order-studies-ignore-them-repeat/](http://www.seattletimes.com/seattle-news/northwest/washington-30-year-earthquake-drill-for-big-one-order-studies-ignore-them-repeat/). Governor accepts, through the scientific studies, that resources have to be coordinated towards the megaquake but the state has no budget, staff or regulatory authority and has therefore ignored actions that would reduce the threats to public safety. The focus, due to the lack of funding, is on the state's ability to respond after the quake has happened and not before. There is no work being done in upgrading schools or protecting coastal communities from tsunamis.

Schulz, Kathryn. *"The Earthquake That Will Devastate the Pacific Northwest."* The New Yorker, The New Yorker, 9 Aug. 2017, [www.newyorker.com/magazine/2015/07/20/the-really-big-one](http://www.newyorker.com/magazine/2015/07/20/the-really-big-one). Fifteen per cent of Seattle is built on liquefiable land, including seventeen day-care centers and the homes of some thirty-four thousand five hundred people. The earthquake will set off up to 30,000 landslides In comparison to Japan's early-warning system, which automatically performs a variety of life saving functions, the Pacific Northwest is limited to dogs barking.

*"Seismic Neglect: A Seattle Times Special Report."* Edited by James Neff, The Seattle Times, The Seattle Times Company, 14 May 2016, [projects.seattletimes.com/2016/seismic-neglect/](http://projects.seattletimes.com/2016/seismic-neglect/). Geologists have discovered more than two dozens faults across Washington that put 5.4 million people in danger. (A 42% increase from 3.8 million in 1990). Projected M 9.0 Cascadia quake could displace 915,000 people, kill 14,600 people and cause \$81 billion in damages. Considering the situation, after many studies, Washington should focus more on the problem at hand yet it lags nearly all other quake-prone states in policies to reduce the risk. There are no seismic-safety laws for schools, hospitals and other vulnerable buildings, according to a policy analysis this year

### Peter Franko-Filipasic

*"Earthquake Facts & Earthquake Fantasy."* U.S. Geological Survey, National Earthquake Hazards Reduction Program (NEHRP), [earthquake.usgs.gov/learn/topics/megaqk\\_facts\\_fantasy.php](http://earthquake.usgs.gov/learn/topics/megaqk_facts_fantasy.php). There is no scientifically plausible way of predicting the occurrence of a particular earthquake. The greatest risk in an earthquake is the severity of the shaking it causes to manmade and natural structures and the contents within these that may fail or fall and injure or kill people.

Stockton, Nick. *"Earthquakes Don't Kill People, Buildings Do."* Wired, Conde Nast, 6 June 2017, [www.wired.com](http://www.wired.com).



## Secondary Research Annotated Works-Cited

com/2015/04/earthquakes-dont-kill-people-buildings/. Earthquake-resistant buildings should be on bedrock (not sloppy sediment). Tie skyscrapers together so they won't be easily knocked over. Use steel, or something similarly strong, to reinforce concrete buildings. If these steps are implemented, there is a much larger chance of withstanding a quake.

Tegna. "Why you need to be prepared: These are the 3 big earthquake threats." KING, NBC, 26 July 2017, www.king5.com/news/local/disaster/why-you-need-to-be-prepared-these-are-the-3-big-earthquake-threats/457421137 The experts say few are ready. And being ready means being able to support yourself, your loved ones, your neighborhood for 2 weeks. Because after a region-wide event, it could take that long for help to come from the rest of the country and world.

United States. City of Seattle. Office of Emergency Management. *Seattle Disaster Response and Recovery Plan*. By Barb Graff. N.p., 28 Sept. 2012. Web. <<http://www.seattle.gov/Documents/Departments/Emergency/PlansOEM/SDRRP/Final%20SDRRP%20V11-13-12.pdf>>. Various disaster relief groups will come together to target the emergency relief efforts. The SPD, SPL, SDOT, Seattle Health all have important roles to play as community forums, quarantine enforcement, road clearance and restoration.

### Stella Ding

Beville, Ry. "Coping with Disaster and Preparing for the Future: An On-the-Ground View of Japan's Earthquake Recovery Effort." Brookings, 28 July 2016, www.brookings.edu/opinions/coping-with-disaster-and-preparing-for-the-future-an-on-the-ground-view-of-japans-earthquake-recovery-effort/. Although some official reports indicate that less than 50% of the populace heeded the tsunami warnings, a corner notes that many of the victims were wearing multiple layers of clothing in preparation for potentially cold conditions in evacuation shelters, and had their emergency backpacks on. There is also a greater sense of cooperation and fraternity in those provincial towns and cities than in the urban centers that support most of Japan's population. Although assessment of local conditions and the timely distribution of emergency supplies can be improved, the government response deserve more praise. The presence of the Self Defense Forces combined with police forces from all over Japan, helped calm fears in many shelters that houses and businesses would be looted. They also rebuilt roads and bridges that allowed medical and supply team to reach shelters. For future preparation, it is pointed out that preparedness at the local level is especially important when considering the likely inability of the central government to respond immediately to the major disaster. Also, dealing with too many foreign media outlets that provide irresponsible content can be challenging. Access to vital information and

communication channels is therefore essential. Farley, Glenn. "Cascadia Rising Drill Offers Sobering Assessment of Future Disaster Response." KING 5, TEGNA, 24 July 2017, www.king5.com/news/local/disaster/cascadia-rising-drill-offers-sobering-assessment-of-future-disaster-response/458379584. Cascadia Rising drill involves 23,000 military and civilian personnel. The preview to what Washington faces was seen in March 2011 Tohoku earthquake in Japan. In the FEMA estimate, Washington state would suffer 8440 fatalities, 12114 injuries in the initial earthquake and tsunami. But exposure, disease, dehydration starvation, or aftershocks. The National Guard are preparing to deal with 1,274,327 people needing mass feeding and water, 507,701 damaged homes and residential building, and 410,127 people needing emergency shelter.

Komo Staff. *Emergency Crews Practice Life-Saving Techniques for When Disaster Strikes*. KOMO News, 11 June 2016, komonews.com/news/local/emergency-crews-practice-life-saving-techniques-for-when-disaster-strikes. Local firefighters and other emergency responders practiced how they would save lives if a natural disaster struck the Pacific Northwest in June 2016. It is said they will practice with helicopters and dogs for the real life rescue scenario.

Zaré, M, and S Ghaychi Afrouz. "Crisis Management of Tohoku; Japan Earthquake and Tsunami, 11 March 2011." Iranian Journal of Public Health, Tehran University of Medical Sciences, 2012, www.ncbi.nlm.nih.gov/pmc/articles/PMC3469005/. Overall Japan was well prepared for large-scale disasters like the 2011 Earthquake. Immediately after the event, the government held National Committee for Emergency Management, headed by Prime Minister. The government issued a warning for the tsunami 3 minutes after the earthquake. All ministries and departments such as Foreign Ministry, Ministry of Transport and Ministry of Health were quick to respond. The people behave properly and follow the commands cautiously. The "social capital" in this country had a significant role in recovery after the incident as people's high respect to roles and moral values and their solidarity prevent them from influx for aid and looting and motivate them to consider the public benefits instead of self-interests.