

SEISMIC SAFETY INITIATIVES SURVEY

The Commission, seeking to add to the insights gained in the 1996 survey of businesses and governments, polled those same audiences to learn more about their state of seismic safety awareness. Two separate questionnaires were sent: one to business organizations (appendix B) and one to cities and counties (appendix C).

The businesses were selected on the basis of their membership in or support of the Association of Contingency Planners. The presumption was that such businesses would be the most likely to have policies and procedures in place to deal with catastrophes and would also be the most likely to share their insights. A total of 52 businesses received the questionnaire; 15, or 29 percent, responded. All the businesses are located within Seismic Hazard Zone 3.

Each questionnaire was quantified to a maximum score of 80 points, with total scores categorized into one of four types: Highly Aggressive (61-80 points), Aggressive (41-60), Attentive (21-40), and Minimal (up to 20).

Organizations that participated in the survey included:

Autolive ASP	6,000 employees
Bear River Mutual	52 employees
Bergen Brunswig	70 employees
Deseret First C U	110 employees
First Security	2,000 employees
Franklin Quest	2,500 employees
IHC	22,000 employees
Novell	1,500 employees
Questar	1,800 employees
St. Mark's Hospital	1,200 employees
SPS Technologies	200 employees
Thiokol Corporation	3,400 employees
Utah Valley State	2,000 employees
Workers Compensation	335 employees
Zions Bancorporation	6,000 employees

The other questionnaire went to all 29 counties (11 responses for 38 percent) and all cities in Utah with a population of more than 1,000 (112 cities, with 25, or 22 percent,

response).

Counties that responded included:

Beaver	Zone 2B
Box Elder	Zone 2B/3
Cache	Zone 3
Duchesne	Zone 1/2B
Grand	Zone 1
Salt Lake	Zone 3
San Juan	Zone 1/2B
Sanpete	Zone 2B/3
Utah	Zone 2B/3
Wayne	Zone 1/2B
Weber	Zone 3

Cities that responded included:

Beaver	Zone 2B
Blanding	Zone 1
Enterprise	Zone 2B
Gunnison	Zone 3
Heber City	Zone 3
LaVerkin	Zone 2B
Logan	Zone 3
Manti	Zone 3
Midway	Zone 3
Monticello	Zone 2B
Naples	Zone 1
North Ogden	Zone 3
Panguitch	Zone 2B
Park City	Zone 3
Payson	Zone 3
Plain City	Zone 3
Providence	Zone 3
Provo	Zone 3
Richmond	Zone 3
Salt Lake City	Zone 3
Smithfield	Zone 3
South Ogden	Zone 3
Spanish Fork	Zone 3
Syracuse	Zone 3

The organizations fell into the following Initiative Ranking categories (percentages are rounded to the next whole number, so some categories may not total exactly 100 percent): Highly Aggressive (8 of 15, or 53 percent), Aggressive (4 of 15, or 27 percent), Attentive (2

or 15, or 13 percent), Minimal (1 of 15, or 7 percent)

Although two of the state's largest employers rank as Highly Aggressive, fully half of the organizations in that category have fewer than 400 employees, indicating that the size of the organization is not a factor in whether it focuses on seismic safety issues.

The responses:

- **Question 1** (5 points) on policies and procedures in place: All organizations had some form of policies and procedures in place for disasters; 73 percent (11 of 15) addressed the issue of seismic safety specifically in their plans.
- **Question 2** (5 points) on whether seismic safety issues were discussed by employee councils or management teams: Four (27 percent) said they had never discussed these issues in any forum; 2 (13 percent) were making efforts to establish some way to bring these issues to the employees on a consistent basis, and 9 (60 percent) had discussed the issues with employees on at least an annual basis.
- **Question 3** (10 points) on the organization's own rating (from 1 — unaware, to 10 — fully informed) of its knowledge of earthquake risk factors: 73 percent rated themselves as more than adequately informed (11 of 15).
- **Question 4** (5 points) on whether the organization was aware of training in earthquake safety for its safety and security personnel: 80 percent (12 of 15) were aware of such training, and 60 percent (9 of 15) provided that type of training in-house and on a regular basis.
- **Question 5** (10 points) on whether training was provided on a regular basis for safety and security people: 40 percent (6 of 15) sent their personnel to annual training, and 33 percent (5 of 15) provided it in-house; 13 percent (2 of 15) provided some training on occasion, and another 13 percent (2 of 15) made such training available more often than annually.
- **Question 6** (10 points) on whether other personnel in the organization knew about special training, who received it, and how often: 60 percent (9 of 15) reported having some process in place to keep every one else in the organization, including upper management, informed on a regular basis as to who the seismic safety experts within the organization were.
- **Question 7** (5 points) on whether the organization had ever retrofitted or upgraded any of its physical structures to meet earthquake code: 60 percent (9 of 15) reported that they had made some effort in the past four years to upgrade or retrofit one or more of their. More than a quarter of the respondents (27 percent, or 4 of 15) said their structures were all new so upgrading or retrofitting was not an issue.
- **Question 8** (5 points) on whether there was a perception that some of the buildings needed to be upgraded or retrofitted: 47 percent (7 of 15) said they were aware of some needs, and 40 percent (6 of 15) said there was no need.
- **Question 9** (5 points) on whether the organization had given any priority to retrofitting or upgrading needs: 60 percent (9 of 15) said the question did not apply. 20 percent gave their needs a high priority and 20 percent gave them a low priority.
- **Question 10** (10 points) on frequency of the review process for policy and procedures: 80 percent (12 of 15) said they reviewed their disaster plans on at least an annual basis, 7 percent (1 of 15) did it on a quarterly basis, and 13 percent (2 of 15) did not have a review process.
- **Question 11** (10 points) on involvement of management in the review process: 33 percent (5 of 15) involved upper management, 53 percent (8 of 15) involved to the middle-management level, and 13 percent (2 of 15) had no process.

The counties and cities questionnaire also had a maximum of 80 points, though with different questions.

Only one county (9 percent of the total

responding) ranks in the Highly Aggressive category (61-80 points), and it is in Seismic Zone 2B/3. In the Aggressive category are three counties (27 percent); two are in Zone 3 and one in Zone 2B/3. Four counties (36 percent) are in the Attentive category; one in Zone 3, two in Zone 1, and one in Zone 1/2B. The Minimal category contains the final three (27 percent); one is in Zone 1/2B, one in Zone 2B, and one in Zone 2B/3.

Because of the distribution of counties throughout the categories, the survey indicated that the Seismic Zone did not play a significant role in any county's Initiative Ranking.

The responses:

- **Question 1** (5 points) on ordinances, codes, or planning: 73 percent (8 of 11) listed the Uniform Building Code (UBC) 1997 version as their guideline; 54 percent (7 of 11) listed the UBC and local planning or initiatives; and 27 percent (3 of 11) listed no ordinances, codes, or planning for seismic safety.
- **Question 2** (10 points) on whether the county commission discussed seismic safety issues: 9 percent (1 of 11) said it was discussed annually; 18 percent (2 of 11) said it was occasionally discussed; and 73 percent (8 of 11) said it was never discussed.
- **Question 3** (5 points) on whether building permits had been modified or denied in the because of earthquake safety issues in the last four years: 45 percent (5 of 11) said it had happened; 55 percent (6 of 11) said it had never happened.
- **Question 4** (10 points) on building inspector knowledge of earthquake hazard issues: 73 percent (8 of 11) ranked themselves 5 or higher on a 10-point scale (1 = no knowledge); 27 percent (3 of 11) ranked themselves lower than 5.
- **Question 5** (5 points) on their knowledge of seismic safety training available for their building inspectors: 45 percent (5 of 11)

knew of or participated in at least two methods of training; 18 percent (2 of 11) knew of a course; 37 percent (4 of 11) had no knowledge of training available.

- **Question 6** (5 points) on the number of public/government buildings retrofitted or upgraded in the past four years: 91 percent (10 of 11) had no knowledge of or said no such work had been done; 9 percent (1 of 11) said there had been at least one incidence of that occurring.
- **Question 7** (5 points) on knowledge of public/government buildings that were in need of retrofit or upgrade to meet seismic standards: 55 percent (6 of 11) had no knowledge of such a need or indicated that no need existed within their counties; 45 percent (5 of 11) said they were aware of at least a few buildings that were in need.
- **Question 8** (10 points) on what priority ranking on a scale of 1 - 10 (1 = no priority) they would give the need for retrofit or upgrade: 18 percent (2 of 11) ranked the priority at 5 or higher; 82 percent (9 of 11) put the priority at lower than 5.
- **Question 9** (5 points) on whether they thought building permits issued in the past four years were in compliance with existing codes (on a scale of 1 - 10, 1 = non-compliance): 82 percent (9 of 11) put themselves at a 5 or higher; 18 percent (2 of 11) said they didn't know.
- **Question 10** (5 points) on instances where work had to be interrupted or was otherwise affected because of seismic safety issues: 9 percent (1 of 11) said it had happened at least once; 18 percent (2 of 11) said they didn't know if it had happened; 73 percent (8 of 11) said it had never happened.
- **Question 11** (10 points) on whether there was a review process for seismic safety policies and procedures: 9 percent (1 of 11) had annual discussions; 27 percent (3 of 11)

reviewed the policies at least occasionally; and 64 percent (7 of 11) either had no review process or didn't know of any.

- **Question 12** (10 points) on whether anyone in authority participated in the review process: 64 percent (7 of 11) said they either had no process, didn't know of a process, or reviewed the policies at the building inspector level; 36 percent (4 of 11) said the process involved county officials or elected officials.

Of the cities that responded to the survey, 36 percent (9 of 25) had populations less than 2,500; 20 percent (5 of 25) had populations between 2,500 and 5,000; 16 percent (4 of 25) had populations of between 5,000 and 10,000; 16 percent (4 of 25) had populations of between 10,000 and 25,000; and 12 percent (3 of 25) had population of more than 25,000.

In addition, 72 percent (18 of 25) of the cities responding are in Zone 3; 20 percent (5 of 25) are in Zone 2B; and 8 percent (2 of 25) are in Zone 1. That correlates fairly well with the overall averages, which show that 71 percent (80 of 112) of all the cities in Utah that received the survey are in Zone 3; 24 percent of them (27 of 112) are in Zone 2; and 4 percent (4 of 112) are in Zone 1.

Of the cities that responded, 28 percent (7 of 25) ranked as Highly Aggressive with Seismic Initiative scores of between 61 and 80. All of them are within Zone 3; three have populations of between 5,000 and 10,000; two have populations of between 10,000 and 25,000; and two had populations of more than 25,000.

In the Aggressive category, with Seismic Initiative scores of between 41 and 60, were 24 percent (6 of 25) of the responding cities. Again, all are within Zone 3; two have populations of between 2,500 and 5,000; one, between 5,000 and 10,000; two, between 10,000 and 25,000; and one, more than 25,000.

The same number — 24 percent (6 of 25) made up the Attentive category with Seismic

Initiative scores of between 21 and 40. Two are in Zone 1; two in Zone 2B; and two in Zone 3. Four have populations of between 1,000 and 2,500; and two, between 2,500 and 5,000.

The Minimal category also had 24 percent (6 of 25) with Seismic Initiative scores of 20 or lower. Three are in Zone 2B and are in Zone 3. Five have populations of between 1,000 and 2,500; one, between 2,500 and 5,000.

The Seismic Initiative scores of the cities seem to be affected by their population. The cities that ranked lowest on the scale were among the smallest; no city with a population of over 5,000 ranked less than Aggressive. Only three cities with populations of less than 10,000 ranked as Aggressive, and all three of the largest cities scored in the Aggressive or Highly Aggressive category.

The responses (the questionnaire was the same as the one used for the counties):

- **Question 1** (5 points): 76 percent (19 of 25) relied on the UBC; 52 percent (13 of 25) relied on the UBC and some local initiatives; 16 percent (4 of 25) had no ordinances; and 8 percent (2 of 25) had only local initiatives to follow.
- **Question 2** (10 points): 56 percent (14 of 25) either didn't know or didn't have any reviews or discussions at the city level on seismic hazards; 24 percent (6 of 25) discussed the issue at least occasionally; 20 percent (5 of 25) discussed the issue on at least an annual basis.
- **Question 3** (5 points): 40 percent (10 of 25) had denied some permits in the past four years; (48 percent (12 of 25) did not; 12 percent (3 of 25) didn't know.
- **Question 4** (10 points): 44 percent (11 of 25) rated themselves at 5 or higher on a scale of 1 - 10 (1 = no knowledge); 48 percent (12 of 25) rated themselves at less than 5; 8 percent (2 of 25) didn't know.

- **Question 5** (5 points): 40 percent (10 of 25) detailed specific training programs they knew of or had participated in; 32 percent (13 of 25) said they knew of some training programs available; 28 percent (7 of 12) knew of no training available.
- **Question 6** (5 points): 72 percent (18 of 25) said they either didn't know of an instance or had never declined or modified a permit because of seismic safety issues; 28 percent (7 of 25) said they had done so at least once in the past four years.
- **Question 7** (5 points): 80 percent (20 of 25) said they knew of some public/government buildings that needed seismic upgrades or retrofitting; 20 percent (5 of 25) said they either didn't know of any or said there were none.
- **Question 8** (10 points): 28 percent (7 of 25) rated the priority for upgrading or retrofitting public/government buildings at 5 or higher on a scale of 1 - 10 (1 = no priority); 72 percent put that priority at less than 5.
- **Question 9** (5 points): 68 percent (17 of 25) rated their compliance at 5 or higher on a scale of 1 - 10 (1 = non-compliant); 32 percent said they either didn't know or were at 0 on the scale.
- **Question 10** (5 points): 28 percent (7 of 25) said they had had to intervene in projects at least once in the past four years; 72 percent said they had no knowledge of it happening said it had not happened.
- **Question 11** (10 points): 12 percent (3 of 25) have periodic review at the city level; 28 percent (7 of 25) have occasional reviews; 60 percent (15 of 25) have no review process or did not know of any.
- **Question 12** (10 points): 56 (14 of 25) percent said they didn't know who was involved in the review process or didn't have a review; 44 percent (11 of 25) were able to

detail the people involved in the review process.