**Appendix: Example of a Hazard-Vulnerability Matrix** (adapted from Security Management Online: Security Management Online Hazard Vulnerability Analysis “Tool” as required by Joint Commission Standard EC 1.4 a.)http://www.securitymanagement.com/main.html. Accessed March 8, 2013.

***Directions***

1. Assure that all possible hazards for your facility are listed.

2. Score the likelihood of an event happening, the impact on population, and the impact on property.

3. Multiply the likelihood times the impact on the population, and then add impact on property for the Total Risk number.

4. Assure that the hazards with the highest risk number are addressed first.

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| --- | --- | --- | --- | --- | --- |
| **Hazard** | **Event** | **Likelihood of an Event**  0=None  1=Rare  2=Occasional  3=Frequent | **Impact on Population**  0=No Impact  1=Limited  2=Substantial  3=Major | **Impact on Property**  0=No Impact  1=Limited  2=Substantial  3=Major | **Total Risk Number**  Likelihood x  Population +  Property |
| **Natural** |  |  |  |  |  |
| Seismic Fault | Earthquake |  |  |  |  |
| Weather | Drought |  |  |  |  |
| Weather | Flood |  |  |  |  |
| Weather | Tornado |  |  |  |  |
| Weather | Wild Fire |  |  |  |  |
| Weather | Winter Storm  (Severe) |  |  |  |  |
| **Technological/**  **Anthropogenic** |  |  |  |  |  |
| Built structures | Dam Failure |  |  |  |  |
| Hazardous Materials (Fixed) | Release |  |  |  |  |
| Hazardous  Materials | Transportation Accident |  |  |  |  |
| Weather | Power Failure |  |  |  |  |
| Nuclear Materials | Release |  |  |  |  |
| Rail/Air Transportation | Crash |  |  |  |  |
| Civil Unrest | Civil Disorder |  |  |  |  |
| Weapons of Mass Destruction | Nuclear Attack |  |  |  |  |

**Scoring Guide**

1. **Likelihood of Event**

a. None. Event is not likely to occur.

b. Rare. Event occurs <once every 30 years (e.g., once every 50 years).

c. Occasional. Event occurs <once every 5 years, but >once every 30 years (e.g., every 12 years).

d. Frequent. Event occurs >once every 5 years (e.g., every 2 years).

2. **Impact on Population**

a. No Impact (0). There is little or no likelihood of this hazard affecting the community or, if it occurs, there would be a minimal effect on the Medical Center.

b. Limited (1). Event generally involves a serious threat to a moderate number of people in the community. There may be a few deaths and injuries and only minor population dislocations (e.g., avalanche or landslide).

c. Substantial (2). Event affects a significant number of people, and may involve some loss of life, injuries, and possibly a sizable dislocation of population. Some events of transportation accidents, urban fires, and floods fall into this category.

d. Major (3). Event affects a widespread area of the community or a concentrated area with severe effects. It may result in a large number of deaths and injuries and involve a massive evacuation and/or shelter operation. Large-scale earthquakes, tornadoes, heavy flooding, and hurricanes fall into this category.

3. **Impact on Property**

a. No Impact (0). Little or no likelihood of this event affecting the community or, if it occurs, damage to public and private property would be minimal.

b. Limited (1). Event generally involves only light structural damage to public or private property. Local resources would be adequate to repair or replace the damaged property.

c. Substantial (2). Event results in moderate structural damage over a widespread or concentrated area. Damage to public and private property may exceed local resources to repair or replace.

d. Major (3). Event results in heavy structural damage to public and private property over a widespread area or a concentrated area with severe effects. The magnitude of the functional disruption may result in a Government Declaration of a Disaster or Emergency