

# School Hazards Assessment & Risk Matrix/Index

Prior to updating your school’s emergency plan, it is recommended that your planning/safety team complete the following activities:

1. **Brainstorm & Risk Matrix Assessment** (this document)
2. Safety Policies Assessment Activity
3. Campus Safety Assessment Worksheet

Each activity will take about an hour, but you don’t necessarily need to have your entire planning/safety team involved in each activity. The *Brainstorm Activity* (this document) should include at least 3 team members, the *Safety Policies Assessment Activity* should include as many team members as you can get together, and the *Campus Safety Assessment* should include at least 2 members.

## **Supplies needed (recommended to better facilitate this activity as a group):**

**Easel and stand, or whiteboard**

**Markers (colors)**

**Post-it Pads**

**Comfortable room and adequate seating**

**Use easel for writing down input from group.**

**Post-it pad to write down hazard and move around matrix as needed.**

## **Directions for the Hazard Brainstorm Activity**

As your team completes the activities below, please make sure that a team member creates a master copy of the team’s work. The master copy should be typed and digitally distributed to all team members.

Try to keep to the following time schedule:

<b>Brainstorm (p. 3)</b> <b>10-15 minutes</b>	<b>Risk Matrix (p. 4)</b> <b>10 minutes</b>	<b>Risk Index (p. 5)</b> <b>10 minutes</b>	<b>Action Plan (p. 6)</b> <b>15 minutes</b>
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- **Brainstorm (p. 3).** In this activity, your planning/safety team will simply brainstorm a list of hazards at your school site or school facility (bus yard, physical plant, etc.). Look at page 2 for the types of hazards to consider.
- **Risk Matrix (p. 4).** Once you’ve completed the brainstorm list, take the brainstormed items and put them into the Risk Matrix on page 4.
- **Risk Index (p. 5).** Take the most relevant hazards and complete the Risk Index sheet on page 5.
- **Action Plan (p. 6).** Based on your findings in the activities above, what are the most important actions your team can recommend to enhance school safety? Complete the action plan on p. 6.

# Safety and Security Assessment— Issues to Consider

Prior to completing the risk matrix sheet (p. 4); each group should brainstorm a list of hazards that exist at your school site (p. 3). Your list should be comprehensive, and should address hazards or risks in each of the following settings:

- School-based/Site-based
  - No emergency operations plan
  - Obstructed or unsafe evacuation pathways
  - Unsafe gathering/rendezvous points
  - Lack of shade/water/etc.
  - Other school site hazards
- Surrounding neighborhood
  - High crime rates
  - Prone to flooding, fires, insect/animal activity
  - Next to an intersection with heavy truck traffic (Hazmat, traffic, etc.)
- Greater community
  - Nearby railroad line, Hazmat, airport/base, floodplain, etc.
- District-wide
  - No emergency operations plan
  - Unclear or outdated school policies and procedures



**A comprehensive emergency management plan should address all-hazards, including, but not limited to:**

- *Natural* - Earthquakes, floods, fires
- *Technological* - Power outages, nearby chemical plant
- *Infrastructure* - Roads and bridges, utilities
- *Non-structural* - Portable room dividers, bookshelves, suspended ceilings and light fixtures
- *Man-made* - Hazardous materials release, terrorism
- *Biological* - Pandemic flu, contaminated food
- *Physical well-being* - Broken bones, violence
- *Student culture and climate* - Bullying, drugs, violent behavior (take a look at school specific incident data)

**When developing a hazard profile, your school should consider questions, such as:**

- *Frequency of occurrence* - How often is it likely to occur? (Look at historical data)
- *Magnitude and potential intensity* - How bad can it get? (Historical data)
- *Location* - Where is it likely to strike? (Historical data)
- *Probable geographical extent* - How large an area will it affect? (Historical data)
- *Duration* - How long could it last?
- *Seasonal pattern* - When is the time of year it is more likely to occur?
- *Speed of onset* - How fast will it occur?
- *Availability of warnings* - How much warning time is there? Does a warning system exist?



## **Risk Matrix**

**Directions:** First, have members of your school emergency leadership team brainstorm a list of hazards that could affect the safety and security of students and staff at your school site (see p. 3). Plot each significant hazard on the risk matrix below. Your group can determine its own criteria for probability. For example, probability could be defined as the likelihood of a given event happening in a single school year.

*(You may draw the matrix on a board. Hazards may be written on Post-its and placed/moved around matrix during group discussion.)*

<b>High</b>			
<b>Medium</b>			
<b>Low</b>			
	<b>Low</b>	<b>Medium</b>	<b>High</b>

**Probability**

**Severity**

## Hazard/Risk Index Worksheet

Instructions: Use the worksheet below when analyzing the potential risk presented by each hazard you identified in the previous activities. Risk applies to population, infrastructure, or facilities impacted by damage or loss of use/access. Circle the appropriate numbers in each column and total them. The highest numerically rated hazards with a rating of High or Medium should be considered in your school's Emergency Operations Plan.

Hazard	Frequency	Magnitude	Warning	Severity	Risk Priority
	4 Highly likely 3 Likely 2 Possible 1 Unlikely	4 Catastrophic 3 Critical 2 Limited 1 Negligible	4 Minimal 3 6-12 hours 2 12-24 hours 1 24+ hours	4 Catastrophic 3 Critical 2 Limited 1 Negligible	<input type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low
	4 Highly likely 3 Likely 2 Possible 1 Unlikely	4 Catastrophic 3 Critical 2 Limited 1 Negligible	4 Minimal 3 6-12 hours 2 12-24 hours 1 24+ hours	4 Catastrophic 3 Critical 2 Limited 1 Negligible	<input type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low
	4 Highly likely 3 Likely 2 Possible 1 Unlikely	4 Catastrophic 3 Critical 2 Limited 1 Negligible	4 Minimal 3 6-12 hours 2 12-24 hours 1 24+ hours	4 Catastrophic 3 Critical 2 Limited 1 Negligible	<input type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low
	4 Highly likely 3 Likely 2 Possible 1 Unlikely	4 Catastrophic 3 Critical 2 Limited 1 Negligible	4 Minimal 3 6-12 hours 2 12-24 hours 1 24+ hours	4 Catastrophic 3 Critical 2 Limited 1 Negligible	<input type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low
	4 Highly likely 3 Likely 2 Possible 1 Unlikely	4 Catastrophic 3 Critical 2 Limited 1 Negligible	4 Minimal 3 6-12 hours 2 12-24 hours 1 24+ hours	4 Catastrophic 3 Critical 2 Limited 1 Negligible	<input type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low
	4 Highly likely 3 Likely 2 Possible 1 Unlikely	4 Catastrophic 3 Critical 2 Limited 1 Negligible	4 Minimal 3 6-12 hours 2 12-24 hours 1 24+ hours	4 Catastrophic 3 Critical 2 Limited 1 Negligible	<input type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low
	4 Highly likely 3 Likely 2 Possible 1 Unlikely	4 Catastrophic 3 Critical 2 Limited 1 Negligible	4 Minimal 3 6-12 hours 2 12-24 hours 1 24+ hours	4 Catastrophic 3 Critical 2 Limited 1 Negligible	<input type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low
	4 Highly likely 3 Likely 2 Possible 1 Unlikely	4 Catastrophic 3 Critical 2 Limited 1 Negligible	4 Minimal 3 6-12 hours 2 12-24 hours 1 24+ hours	4 Catastrophic 3 Critical 2 Limited 1 Negligible	<input type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low
	4 Highly likely 3 Likely 2 Possible 1 Unlikely	4 Catastrophic 3 Critical 2 Limited 1 Negligible	4 Minimal 3 6-12 hours 2 12-24 hours 1 24+ hours	4 Catastrophic 3 Critical 2 Limited 1 Negligible	<input type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low
	4 Highly likely 3 Likely 2 Possible 1 Unlikely	4 Catastrophic 3 Critical 2 Limited 1 Negligible	4 Minimal 3 6-12 hours 2 12-24 hours 1 24+ hours	4 Catastrophic 3 Critical 2 Limited 1 Negligible	<input type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low

## Action Plan

- Based on your team’s discussions in the previous activities, what actions can be taken to either prevent or mitigate a hazard or emergency? (Mitigate – prevent or reduce impact of a hazard)
- In your recommendations below, note the person or people who should implement your recommendation and the time frame in which the recommendation should be adopted.
- For those elements that require longer-term capital planning (i.e. \$\$), it may be necessary to develop immediate procedural modifications that may not fully remove the hazard but will reduce its impact (mitigation).

Hazard or Emergency	Recommendation (What action? Who will be responsible? When will the action be implemented?)	Actions Complete	Completion Date
		<input type="checkbox"/> Yes <input type="checkbox"/> No	
		<input type="checkbox"/> Yes <input type="checkbox"/> No	
		<input type="checkbox"/> Yes <input type="checkbox"/> No	
		<input type="checkbox"/> Yes <input type="checkbox"/> No	
		<input type="checkbox"/> Yes <input type="checkbox"/> No	
		<input type="checkbox"/> Yes <input type="checkbox"/> No	
		<input type="checkbox"/> Yes <input type="checkbox"/> No	