



## Jefferson County Hazard Risk Assessment

Each jurisdiction must come up with their own **risk assessment**.

Use this document to assist you and your jurisdiction in identifying potential hazards within your area.

After creating a list of hazards, use the risk index equation to calculate a risk for each disaster within your community.

Once you have completed the assessment, please email your answers to [ciaranixon@greateregypt.org](mailto:ciaranixon@greateregypt.org).

If you have any question regarding this assessment, feel free to contact Ciara by email or telephone at 618-997-9351 ext. 29.

*Thank you.*

### Your Information:

Name:

Job Title:

Date:

Time allotted for this document:

### Check the jurisdiction you represent:

- ☐ Jefferson County
- ☐ Village of Belle Rive
- ☐ Village of Bluford
- ☐ Village of Bonnie
- ☐ Village of Dix
- ☐ Village of Ina

- ☐ City of Mt. Vernon
- ☐ City of Nason
- ☐ Village of Waltonville
- ☐ Village of Woodlawn
- ☐ Other:

Let's start by thinking about any and all-natural hazards that have affected your community in the past. Do any historical natural hazard events come to mind? If so, start your list of possible natural hazards with experiences that you have been through or have heard of within your community. What happened previously is a great guide in planning and preparing for what may happen again. Even for events that took place 100 or more years ago, there is still the possibility that it could happen again.

Though this list may start with your own personal experiences or based off of stories you've heard, this should not be the only way you come up with a list of natural hazards. There are other natural hazards that may be possible in the future, that may not have happened yet. The nature of some threats may change overtime, whether that is due to weather pattern changes, or just the rarity of that threat happening. It's always good to be prepared for anything and everything, and remember:

*It's not **IF** it happens, it's **WHEN** it happens.*

Below are two different lists of hazards. The first list is of hazards that have historic data in the state of Illinois. The second list of hazards are less probable to happen in Illinois, but are still possible.

Check the box next to each hazard you feel your community should be prepared for.

List of Possible Hazard:

- |  |   |
|--|---|
| <input type="checkbox"/> Dam Failure                                     | <input type="checkbox"/> Landslide              |
| <input type="checkbox"/> Earthquake                                      | <input type="checkbox"/> Levee Failure          |
| <input type="checkbox"/> Epidemic  | <input type="checkbox"/> Meteor Impact          |
| <input type="checkbox"/> Extreme Heat                                    | <input type="checkbox"/> Terrorism              |
| <input type="checkbox"/> Flooding  | <input type="checkbox"/> Thunderstorm           |
| <input type="checkbox"/> Ground Failure (mine subsidence/karst/sinkhole) | <input type="checkbox"/> Tornado                |
| <input type="checkbox"/> Hazardous Materials Event                       | <input type="checkbox"/> Volcanic Eruption      |
| <input type="checkbox"/> Infestation                                     | <input type="checkbox"/> Wildfire               |
| <input type="checkbox"/> Invasive Species                                | <input type="checkbox"/> Winter storm/Ice storm |

Are there any other hazards that your community would like to add to their list?

Now, to rank the hazards from the list that you have created, we first need to understand the **Risk Index** equation.

$$\text{RISK INDEX} = \text{PROBABILITY} * \text{SEVERITY}$$

The **PROBABILITY** of an event is how likely the event will occur.

The **SEVERITY** of the event is the degree to which a hazard affects the functionality of society and the natural environment.

Use the table below to give each hazard a probability and severity ranking. Then, use the above equation to complete the hazard risk assessment by giving each hazard a risk index. Use the risk index of each hazard to then rank each hazard by most threatening/important to least threatening/importance.

| Probability       | Characteristics   |
|-------------------|---|
| 4 – Highly Likely | Event is probable within the next calendar year.<br>These events have occurred, on average, once every 1-2 years in the past.   |
| 3 – Likely        | Event is probable within the next 10 years.<br>Event has a 10-15% chance of occurring in any given year.<br>These events have occurred, on average, once every 3-10 years in the past.    |
| 2 – Possible      | Event is probable within the next 50 years.<br>Event has a 2-10% chance of occurring in any given year.<br>These events have occurred, on average, once every 10-50 years in the past.    |
| 1 – Unlikely      | Event is probable within the next 200 years.<br>Event has a 0.5-2% chance of occurring in any given year.<br>These events have occurred, on average, once every 50-200 years in the past. |

| Severity         | Characteristics  |
|------------------|--|
| 8 – Catastrophic | Multiple deaths.<br>Complete shutdown of facilities for 30 or more days.<br>More than 50% of property is severely damaged.   |
| 4 – Critical     | Injuries and/or illnesses result in permanent disability.<br>Complete shutdown of critical facilities for at least 14 days.<br>More than 25% of property is severely damaged.                                  |
| 2 – Limited      | Injuries and/or illnesses do not result in permanent disability.<br>Complete shutdown of critical facilities for more than seven days.<br>More than 10% of property is severely damaged.                       |
| 1 – Negligible   | Injuries and/or illnesses are treatable with first aid.<br>Minor quality of life lost.<br>Shutdown of critical facilities and services for 24 hours or less.<br>Less than 10% of property is severely damaged. |

# Jurisdiction Hazard Risk Assessment

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