

## TOOL OVERVIEW: FLOOD VULNERABILITY ASSESSMENT FOR CRITICAL FACILITIES

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<https://mrcc.purdue.edu/FVA/>

### INTRODUCTION AND OVERVIEW

The Flood Vulnerability Assessment for Critical Facilities (FVA) tool is available online to help critical facilities—such as hospitals, fire and police departments and utility providers—evaluate their preparedness for when the next big rainstorm hits. The tool consists of a series of questions that will help communities in the Midwest determine a facility’s risk based on factors such as its proximity to a flood plain, past flooding issues, stormwater drainage structures and the location of backup generators, servers and other critical systems. Facilities are also able to use the tool to evaluate current emergency communication plans for heavy rainfall and determine whether improvements are necessary. After completing the assessment, users receive a report with specific recommendations and resources for steps they can take to reduce the facility’s vulnerability to riverine and/or urban flooding.

### WHAT ARE THE GOALS OF THE FVA?

- Identify specific vulnerabilities of a particular critical facility to flooding by looking at factors such as proximity to a floodplain or other bodies of water, past flooding issues, emergency management plans and location of critical systems like primary and back-up power
- Provide recommendations and/or resources to critical facility managers for short- or long-term changes that could be made to reduce their facility’s risk to flooding
- Provide educational information to increase the awareness of critical facility managers to their facility’s risk of either riverine or urban flooding

### WHO SHOULD TAKE THIS ASSESSMENT?

- A critical facility
  - According to FEMA, critical facilities include hospitals and other healthcare facilities, fire and police stations, emergency operations centers, communication and data centers, essential government buildings and other critical facilities and their contents, machinery and equipment therein that serve the community or affect the safety, health or welfare of the surrounding population. In some cases, the community may determine that wastewater treatment plants, water treatment plants, electrical substations, transportation facilities and buildings such as schools or community centers are critical or essential for their community.
- The FVA is designed to assess a one-building critical facility or a site of buildings (up to seven buildings) that function as one critical facility (e.g., a medical campus).

### MY FACILITY IS NOT IN A FLOODPLAIN, SO DOES THIS ASSESSMENT APPLY TO ME?

- While flooding is most common for those in the floodplain, flooding also occurs outside of the floodplain and is referred to as stormwater and/or urban flooding.
- According to FEMA, properties outside of high-risk flood areas account for more than 20 percent of National Flood Insurance Program (NFIP) claims and one-third of disaster assistance for flooding.

### WHAT DO I NEED TO HAVE PRIOR TO STARTING THE ASSESSMENT?

- Knowledge about the building and where critical systems are located
- Basic engineering knowledge about the building (preferred)
- Access to emergency response plans for weather (preferred)

### **HOW LONG WILL THIS ASSESSMENT TAKE ME?**

- Approximately 45 minutes to an hour and a half
- It will depend on how many buildings are assessed and if the information needed is readily available

### **WHAT IS THE FORMAT OF THIS ASSESSMENT?**

- Users need to complete the assessment on a computer. It is an online tool that only requires Internet access, it does not need to be downloaded onto the computer.
- The assessment is a set of online questions. The majority are yes/no or multiple choice, with a couple of open-ended questions as well.
- Each user will create a profile to log in to the assessment.

### **THE SECTIONS OF THE ASSESSMENT INCLUDE:**

- Facility Siting Conditions
- Communication and Emergency Operations Planning
- Past Flooding Issues and Mitigation Efforts
- Importance and location of critical systems

### **WHAT WILL I RECEIVE AFTER TAKING THIS ASSESSMENT?**

- After completing the FVA, you will receive a Facility Risk Summary and Recommendations Report. This will summarize the most important findings and provide a set of recommendations and/or resources as steps that could be taken to reduce the facility's risk to flooding events.
- You will also have the option to download the completed assessment for your records.