**Disaster Scenario Exercise**

Adapted from “Environmental Justice Considerations during Emergency Responses – Survival Tabletop Exercise” by J. Kyle Bryant, EPA Region 4.

## [Purpose](#_[Name_of_Chapter)

This is a popular activity that gets people talking and thinking about how to work through competing beliefs, build consensus, and organize to complete a task. It deepens understanding of group dynamics, which can help with later discussions about implementing actions.

## What you will need

**Who:** community participants, facilitators

**Where:** in-person or virtual workshop

**How long will it take:** 30 minutes

**Materials:** Disaster Scenario Prompt (below)

## Instructions

1. Break out into groups of 3-4 participants to complete the following activity. After the activity, discuss in a large group the questions presented at the end of this worksheet.
2. **Activity Directions:** You and your companions have just survived the crash of a small plane. Both the pilot and co-pilot were killed in the crash. It is mid-January, and you are in Northern Canada. The daily temperature is 25 below zero, and the nighttime temperature is 40 below zero. There is snow on the ground, and the countryside is wooded with several creeks crisscrossing the area. The nearest town is 20 miles away. You are all dressed in city clothes appropriate for a business meeting. Your group of survivors managed to salvage the following items:
   1. A ball of steel wool
   2. A small ax
   3. A loaded .45-caliber pistol
   4. Can of Crisco shortening
   5. Newspapers (one per person)
   6. Cigarette lighter (without fluid)
   7. Extra shirt and pants for each survivor
   8. 20 x 20 ft. piece of heavy-duty canvas
   9. A sectional air map made of plastic
   10. One quart of 100-proof whiskey
   11. A compass
   12. Family-size chocolate bars (one per person)

Your task as a group is to list the above 12 items in order of importance for your survival. List the uses for each. You MUST come to an agreement as a group. Remember to consider people’s realistic weaknesses and abilities, not an idealized state. Also, think about what decisions will lead to the entire group’s survival.

Once you’ve reached a consensus, read below for an explanation, and scoring to see how you ranked. Then discuss the reflection prompts to see what you learned

1. Discussion Prompts:
   1. Did someone take the lead in the discussion? Why do you think some individuals spoke up more, and some spoke less?
   2. If you didn’t have to reach a consensus, would you have made a different decision? Why?
   3. Did you find it difficult to reach a consensus? Why?
   4. Were there any particularly effective strategies that emerged which aided in negotiations or dispute resolution and helped the group reach a consensus? What were the strategies and how were they effective?
   5. What did you learn from this activity about working together in an emergency? How can these lessons be applied to a community setting?

## Scoring and Rankings

To award points, look at the ranking numbers on this answer sheet. Award points to each team’s top choices according to the numbers here. For example, the map would earn 12 points, while the steel wool would earn 2 points. Lowest score wins (and survives).

1. Cigarette lighter (without fluid): The gravest danger facing the group is exposure to cold. The greatest need is for a source of warmth and the second greatest need is for signaling devices. This makes building a fire the first order of business. Without matches, something is needed to produce sparks, and even without fluid, a cigarette lighter can do that.
2. Ball of steel wool: To make a fire, the survivors need a means of catching the sparks made by the cigarette lighter. This is the best substance for catching a spark and supporting a flame, even if the steel wool is a little wet.
3. Extra shirt and pants for each survivor: Besides adding warmth to the body, clothes can also be used for shelter, signaling, bedding, bandages, string (when unraveled), and fuel for the fire.
4. Can of Crisco shortening: This has many uses. A mirror-like signaling device can be made from the lid. After shining the lid with steel wool, it will reflect sunlight and generate 5 to 7 million candlepower. This is bright enough to be seen beyond the horizon. While this could be limited somewhat by the trees, a member of the group could climb a tree and use the mirrored lid to signal search planes. If they had no other means of signaling than this, they would have a better than 80% chance of being rescued within the first day. There are other uses for this item. It can be rubbed on exposed skin for protection against the cold. When melted into an oil, the shortening is helpful as fuel. When soaked into a piece of cloth, melted shortening will act like a candle. The empty can is useful in melting snow for drinking water. It is much safer to drink warmed water than to eat snow, since warm water will help retain body heat. Water is important because dehydration will affect decision-making. The can is also useful as a cup.
5. 20 x 20 foot piece of canvas: The cold makes shelter necessary, and canvas would protect against wind and snow (canvas is used in making tents). Spread on a frame made of trees, it could be used as a tent or a wind screen. It might also be used as a ground cover to keep the survivors dry. It’s shape, when contrasted with the surrounding terrain, makes it a signaling device.
6. Small ax: Survivors need a constant supply of wood to maintain the fire. The ax could be used for this as well as for clearing a sheltered campsite, cutting tree branches for ground insulation, and constructing a frame for the canvas tent.
7. Family size chocolate bars (one per person): Chocolate will provide some food energy. Since it contains mostly carbohydrates, it supplies the energy without making digestive demands on the body.
8. Newspapers (one per person): These are useful in starting a fire. They can also be used as insulation under clothing when rolled up and placed around a person’s arms and legs. A newspaper can also be used as a verbal signaling device when rolled up in a megaphone-shape. It could also provide reading material for recreation.
9. Loaded .45-caliber pistol: The pistol provides a sound-signaling device. (The international distress signal is 3 shots fired in rapid succession). There have been numerous cases of survivors going undetected because they were too weak to make a loud enough noise to attract attention. The butt of the pistol could be used as a hammer, and the powder from the shells will assist in fire building. By placing a small bit of cloth in a cartridge emptied of its bullet, one can start a fire by firing the gun at dry wood on the ground. The pistol also has some serious disadvantages. Anger, frustration, impatience, irritability, and lapses of rationality may increase as the group awaits rescue. The availability of a lethal weapon is a danger to the group under these conditions. Although a pistol could be used in hunting, it would take an expert marksman to kill an animal with it. Then the animal would have to be transported to the crash site, which could prove difficult to impossible depending on its size.
10. Quart of 100 proof whiskey: The only uses of whiskey are as an aid in fire building and as a fuel for a torch (made by soaking a piece of clothing in the whiskey and attaching it to a tree branch). The empty bottle could be used for storing water. The danger of whiskey is that someone might drink it, thinking it would bring warmth. Alcohol takes on the temperature it is exposed to, and a drink of minus 30 degrees Fahrenheit whiskey would freeze a person’s esophagus and stomach. Alcohol also dilates the blood vessels in the skin, resulting in chilled blood belong carried back to the heart, resulting in a rapid loss of body heat. Thus, a drunk person is more likely to get hypothermia than a sober person is.
11. Compass: Because a compass might encourage someone to try to walk to the nearest town, it is a dangerous item. It’s only redeeming feature is that it could be used as a reflector of sunlight (due to its glass top).
12. Sectional air map made of plastic: This is also among the least desirable of the items because it will encourage individuals to try to walk to the nearest town. Its only useful feature is as a ground cover to keep someone dry.

## What to do next

Return to the ERB and use the responses to the discussion prompts to answer Question 2 in the Key Takeaways Form on Strategizing Actions. Then, move onto the next activity in Workshop 3: Create Vision Statement.