

# DISASTER CHARACTERISTICS

Tom Cox VE6TOX  
Alberta Emergency Management Agency  
Emergency Management Training Officer

Disasters are not simply large-scale emergencies. Disasters have a number of distinct characteristics which are normally not seen during emergencies.

Emergencies are normally handled adequately by the emergency services. Amateur radio is not required in any way during emergency events. Responders have the equipment, training, experience, and communications to adequately handle any emergency event. Examples would be a house fire, a car accident or a heart attack.

Disasters may exceed the capacity of responders, may result in larger numbers of casualties or more damage to property, may be over a larger area, or may be unpreventable. Time may be short (explosion, gas release, or tornado) or there may be plenty of warning (tsunami, blizzard, wildfire).

One informal way of determining if an incident is an emergency or a disaster is to throw more emergency responders at it. If it is an emergency, the arrival of the emergency services will almost immediately make things better. If not, then it likely is a disaster.

Here are some other characteristics of disasters.

## 1. THE SCOPE WILL NOT BE KNOWN

With most emergencies, you can look at the situation and determine what happened, what's happening, what needs to happen and what the appropriate response would be. With a disaster, the death and utter devastation that you see may not be the worst hit area. As a matter of fact, disasters often see that the hardest-hit areas are the last to be responded to because they are unable to call for help. If you don't know the ENTIRE scope, you can't respond appropriately. Fire departments are often trained to drive by an injured child after an earthquake; if you haven't checked your entire area, you may help the child, but miss the 50 kids trapped in a burning school further along.

## 2. COMMUNICATIONS WILL FAIL

Every disaster report includes communications failures. Communications failure are almost a defining characteristic of disasters and initial communications failures often indicate you are about

to lose control of the situation. Emergency officials fail to realize that simple communications failures are an indication that things are likely to get worse and continue with their routine emergency response. The problem is, there are multiple types of communications failures that can be experienced. If you don't know exactly how many types of communications failure exist, your efforts to fix communications failures may not work. Millions of dollars have been spent to increase interoperability, but communications failures continue because the one failure you fixed wasn't actually the main problem.

### **3. SITUATION CONSTANTLY CHANGING**

In an emergency situation, the arrival of the emergency services generally makes an immediate and marked improvement in the situation. In a disaster, the initial emergency response may be entirely appropriate (or inappropriate if they scope isn't known), but rapid changes in the situation may result in a need to rapidly change the direction or even the type of response. The emergency response may have been entirely appropriate for the crash of the jet into the World Trade Centre, but with the second crash, in one second, the response to the first tower now needs to be reoriented to multiple events. The incident at the Pentagon means your response must be re-assessed again. The collapse of the first tower means your response has to completely change in an instant. The crash of the second tower results in further requirements to change. Every time the situation changes, you have to reorient yourself to the new situation, determine the scope, reorganize the response and redeploy.

### **4. EMERGENCY SERVICES AFFECTED**

In emergencies, the emergency responders are unaffected by the event or the incident only has minor impact. The fire hall is still standing, the police are responding, and the ambulance service has all their gear. In disasters, the fire hall is destroyed (burned by a wildfire, destroyed by the tornado, flooded by the hurricane), the police are unable to respond (roads are flooded, blocked, washed out or white-out conditions are occurring), and the paramedics are unable to concentrate on their job (home destroyed, spouse missing, children injured, parents missing, co-worker dead). Assumptions about response are based on normal conditions. In a blizzard with white-out conditions, the ambulance is waiting for the fire department to assist them, the fire department is overwhelmed with calls, the police car is hung up on a windrow, the snow plows can't deploy because they might hit a drifted-over car and the sanding truck has slid off the road. If fire-fighting aircraft are grounded due to extreme winds, why do we think a helicopter can be dispatched to rescue people?

## **5. UNUSUAL RESPONSE**

If your normal response is not working and lives are at risk, then almost any alternative will be considered. Some of the alternatives can be quite innovative; elephants to assist the tow company, front end loaders and busses driven by fire fighters, beer cans to provide thousands of people with water,

## **6. UNUSUAL LOCATIONS**

Along with the unusual response, you will have unusual locations being used; a warehouse or school room becomes an Emergency Operations Centre. A playground for sand-bagging. An arena for volunteer coordination. A church for pets and donations. An empty parking lot becomes a staging area or a triage location or helispot for medical evacuations. A destroyed building becomes a rest area or command centre. Some locations are required by the Incident Command System (Incident Command Post, some are pre-planned locations (helibase, parking lot outside the hospital emergency admitting, or evacuation centre), some are ad-hoc depending on the needs of the incident (triage, staging area, helispot) and some locations simply spontaneously develop (media gather, relatives gathering, memorials, volunteers gathering).

## **7. USE OF VOLUNTEERS**

Normally, for emergencies, volunteers are sparingly used (ie. Victim Services) or discouraged. In a disaster situation, they become essential to the response. Attempts to keep volunteers out may cause frustration and anger. In some cases the volunteer response has overwhelmed the emergency responders. If you don't manage the volunteers and incorporate them in, they will inadvertently interfere with the response efforts.

## **8. MASSIVE CONVERGENCE**

Emergency responders are completely unprepared and overwhelmed by the sheer numbers of people that arrive on their scene. Researchers have found that HUNDREDS of organizations respond to a disaster instead of the dozen or so that may respond to a house fire or car accident. Mutual aid partners, government regulators, businesses, charitable groups, disaster volunteer organizations, pet carers, agricultural workers, transportation companies, utilities, medivac helicopters, medical workers, retired personnel, local and international media, contractors, grief counsellors, and even amateur radio. Each has a specific role to play or perceived role to play. When a disaster disrupts a community, EVERY single aspect of the community needs to respond. HUNDREDS of organizations will need to be integrated into the response or the response will be overwhelmed.

## **9. PEOPLE TAKE PICTURES OF POLES**

Related to some of the points above, disasters have numerous other characteristics; the arrival of international media, the widespread use of mutual aid, use of a military response to aid civil authorities. A humorous by-product is that people take pictures of utility poles; this is an indication of the unusual nature of a disaster. You don't see power poles or telephone poles down without someone trying to fix it immediately. The picture of a pole down is the media or public's attempt to convey "This was unusual, it was widespread, and fixing the utility pole wasn't the most important thing on anyone's list."