

INCIDENT SEVERITY

WHEN DO INCIDENTS BECOME EMERGENCIES? SEVERITY SCALES

For Oil Spills
For Releases of Hazardous Material

WHEN DO INCIDENTS BECOME EMERGENCIES?

In general, emergency response should be proportionate to the size and complexity of the hazards that an incident brings. The greater the threat to the environment and public safety and welfare, the larger and more urgent the response.

An “incident” becomes an “emergency” as the following conditions become evident or more likely to occur:

THREAT TO HUMAN SAFETY AND WELFARE

- Poisoning of water or food sources and/or supply
- Presence of toxic fumes or explosive conditions
- Damage to personal property
- Need for the evacuation of people
- Interference with public or commercial transportation

THREAT TO THE ENVIRONMENT

- Injury or loss of animals or plants or habitats that are of economic or ecological importance such as:
 - Commercial, recreation or subsistence fisheries (marine plants, crustaceans, shellfish, aquaculture facilities) or livestock
 - Seal haul outs
 - Marine bird rookeries
- Impact to recreational areas such as public beaches
- Impact to ecological reserves, forests, parks, archaeological and cultural sites

SEVERITY SCALES

Incident severity is often ranked from 1 to 3 or 4, with a “Level 1” incident considered minor; a Level 2, moderate; a “Level 3,” major; and a “Level 4” severe. Thresholds depend on the sort of incident and hazards. The following examples are for oil spills (using a 1-3 scale) and for releases of hazardous material (using a 1-4 scale):

For Oil Spills

The severity of an oil spill depends not only on the amount and kind of oil that has been released, but also on the immediate circumstances (location, sea conditions, weather, time of day, sensitivity of the site and of the spill plume). Hence the following is intended only as rough guide. In general, releases of oil should be classified according to their degree of impact. For example, spills that meet the criteria of a minor incident but that also 1) occur in or endanger critical areas, 2) generate critical public concern, 3) become a focus of an enforcement action; or 4) pose a threat to public health or welfare may be classified as moderate or major.

Category 1

Severity of Incident: **Minor** -- A spill, release or potential release of a known, non-combustible variety of oil from a limited source (e.g., from a day-use recreational craft). No deaths, and, if injuries, they are minor.

Amount of Oil Involved: Generally less than 100 gallons into inland waters or less than 1,000 gallons in coastal waters

Extent of Incident: Limited to initial area of release and unlikely that it will spread (e.g., an area of 300 square feet or less).

Population Affected: Evacuation will be limited to the immediate area that can be secured in a short period of time and for a limited duration (usually no more than 4 hours). A limited number of the populace will be affected.

Resources: Normally to be handled by local emergency responders without RIOST support.

Category 2

Severity of Incident: **Moderate** -- A spill, release or potential release of oil that poses an uncertain risk to the environment. No deaths, but injuries can be minor to severe.

Amount of Oil Involved: A discharge of 100 gallons to 1,000 gallons into inland waters or 1,000 to 10,000 gallons in coastal waters, or a discharge of any volume that poses a threat to the public's health or welfare. (E.g., a small leak from a tanker that is controlled would be a Level 2, while a release of the entire contents would be a Level 3.)

Extent of Incident: Area may be large but it is limited and not so large as to disrupt normal community functions.

Population Affected: Evacuation will be considered to a designated area that local resources can achieve. Extended sheltering is not required.

Resources: Local response agencies may need assistance from other agencies. The RI EMA and possibly the National Response Center of the US Coast Guard must be notified. Incident command may request RIOST support.

Category 3

Severity of Incident: **Major** -- A spill or release that has resulted in a serious fire, explosion or environmental contamination over a large area that is apt to get larger. Injuries or deaths may have already occurred.

Amount of Material Involved: A discharge of more than 1,000 gallons into inland waters or more than 10,000 gallons in coastal waters or a discharge of any quantity that substantially threatens the public's health or welfare or that generates wide public interest.

Extent of Incident: Large area may be impacted, possibly disrupting essential community services. Extensive environmental contamination is possible.

Population Affected: Presents an immediate danger to the public and response personnel. Evacuation will impact a large numbers of the populace and/or disrupt everyday life in affected communities for several days or more.

Resources: Local response agencies will need assistance from several outside sources. The RIEMA and the National Response Center of the US Coast Guard must be notified. Incident command is likely to request RIOST support

For Releases of Hazardous Material

Category 1

- Severity of Incident: **Minor** -- A spill, release or potential release of known hazardous substance. No deaths, if injuries, minor in nature.
- Extent of Incident: Limited to initial area of involvement and unlikely that it will spread. For example, a single structure or area of 300 feet or less.
- Type of Material Involved: Identified hazardous substance that is not radioactive, water reactive or hypergolic. Generally a flammable or combustible liquid but could also include limited amounts of corrosives.
- Amount of Material Involved: A limited amount of a hazardous substance or smaller container. Would generally be less than 55 gallons.
- Population Affected: Evacuation will be limited to the immediate area that can be evacuated in a short period of time for a limited duration (usually does not exceed 4 hours). A limited number of the populace will be affected.
- Resources: Local resources can handle, includes automatic mutual aid agreements.

Category 2

- Severity of Incident: **Moderate** -- A spill, release or potential release of known or unknown hazardous substance. No deaths; injuries can be minor to severe.
- Extent of Incident: Release may not be controllable without special resources. Limited to several blocks or buildings.
- Type of Material Involved: Unknown hazardous substance or hazardous substance that is toxic, reactive, flammable, radioactive, corrosive, or biological in nature.
- Amount of Material Involved: An amount limited by the size of the container and the release from it. For example, a small leak from a tanker that is controlled would be a Level II, while a complete failure releasing the entire contents would be a Level III or IV.
- Population Affected: Evacuation will be considered to a designated area that local resources can achieve. Extended sheltering is not required.
- Resources: Local response agencies may need assistance from outside sources.
- Notification: Requires notification of the RI EMA and possibly the National Response Center of the US Coast Guard.

Category 3

- Severity of Incident: **Severe** -- A spill, release or potential release of a hazardous substance with an associated fire, explosion or toxic/corrosive cloud. Injuries or deaths may have already occurred.
- Extent of Incident: Large area may be impacted possibly disrupting essential community services. Extensive environmental contamination is possible.
- Type of material Involved: Unknown hazardous substance or hazardous substance that is capable of producing a toxic/corrosive gas cloud, is highly reactive or unstable, is a flammable gas or produces significant flammable vapors, is radioactive or chemical/biological pathogen.
- Amount of Material Involved: Large amounts of hazardous material or limited amount of a very dangerous substance.

Population Affected: Presents an immediate danger to the public and operating personnel. Evacuation will require large numbers of the populace and/or extending over an area that will have a significant impact on the community. It may require activation of shelters for evacuees.

Resources: Local response agencies will need assistance from outside sources.

Notification: Requires notification of the RIEMA and the National Response Center of the US Coast Guard.

Category 4

Severity of Incident: **Major** -- A spill or release of a hazardous substance that has resulted in a serious fire, explosion or environmental contamination over an extended area.

Extent of Incident: Has an impact over a wide area with the probability that it will spread to a larger area. The impacted area can be smaller in a highly urbanized area with a large population impacted.

Type of Material Involved: A known or unknown hazardous substance that can be highly toxic, very reactive or unstable, flammable or explosive; etiological agents that are extremely pathogenic.

Amount of Material Involved: A hazardous substance in a large amount that can affect a large area.

Population Affected: Evacuation will affect a large area and will have to be done in stages taking several hours or more (evacuation duration could exceed several days). A large number of the populace is affected. Presents immediate danger to the public and operating personnel.

Resources: Mutual aid will be needed with a need for a large number of resources.

Notification: Requires notification of the RI EMA and the National Response Center of the US Coast Guard.