



Hazard Resilience Index (HRI)

Nuclear Failure

Nuclear Accidents

Nuclear Failure

Please refer to the *Hazard Resilience Index Instructions (HRI)* document for more information on using this document.

Nuclear failure ^{1 2 3 4 5}

Hazard Resilience Rating	High Resilience <input type="checkbox"/>	Low Resilience <input type="checkbox"/>	Need More Info <input type="checkbox"/>	Not Applicable <input type="checkbox"/>
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Yes	No	Need More Info	Not Applicable	FACTORS	This factor is important to my community
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The community has explored alternatives to nuclear power to reduce risk.	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Community-based nuclear failure exercises have taken place in schools and the community-at-large (e.g., table-top or full-scale exercises)	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Existing nuclear facilities have emergency management plans and plans for containment of hazardous materials.	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Most residents and businesses are prepared for nuclear accidents by arranging emergency meeting and communication plans with loved ones and know where to find safe shelters.	<input type="checkbox"/>

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Plans are in place to safely evacuate resident to designated shelters.	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Regulations are in place that prohibit development and limit land use within areas of nuclear accident risk	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Regulations require specific building codes for developments within areas of nuclear accident risk, such as sealing building ventilation systems for residences in proximity to nuclear plants.	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The community has contact with nuclear preparedness agencies such as the Canadian Nuclear Safety Commission to receive nuclear emergency preparedness training and information in the event of a nuclear accident.	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The community has plans in place for the evacuation of residents to safe shelters.	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The community has pre-designated shelters both in and outside of the community in the event of nuclear crisis.	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The community has plans which include banning food and water distribution, sheltering livestock, protecting animal feed and providing uncontaminated feed, especially to milk producing cows, goats, and sheep.	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There is a warning system in place to notify community residents of a nuclear accident and the warning includes instructions such as remaining indoors and closing all windows, doors, chimneys and turning off ventilation systems	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There is a warning system in place to notify police, fire and ambulance personnel of a potential nuclear accident	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There is a warning system in place to notify transient, migrant and homeless people of a potential nuclear accident	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Redundant cooling systems are in place.	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Diverse cooling systems are in place.	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	In a worst case scenario following failure of all cooling systems and back-up cooling systems, manual cooling protocol has been developed and, furthermore, created to minimize risks to workers.	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Existing homeless shelters have made provisions for increased capacity, hazard specific conditions and evacuation procedures to other emergency shelters located outside of nuclear fallout danger zones.	<input type="checkbox"/>

References

¹ Clay County, City Of Fort Gaines, City Of Bluffton (2006). Pre-Disaster Mitigation Plan. Retrieved from <http://www.rivervalleyrc.org/Pre%20Disaster%20Plans/Clay%20County/Clay%20Cnty%20Pre-Disaster%20Mitigation%20Plan.pdf>

² Canadian Nuclear Safety Commission. (2011). About CNSC. Retrieved from <http://nuclearsafety.gc.ca/eng/about/index.cfm>

³ Public Safety and Emergency Preparedness Canada. (2005). The Chemical, Biological, Radiological and Nuclear Strategy of the Government of Canada. Retrieved from http://www.publicsafety.gc.ca/pol/em/fl/strat_e.pdf

⁴ Lemyre, L., Lee, J., Turner, M. & Krewski, D. (2007). Terrorism preparedness in Canada: a public survey on perceived institutional and individual response to terrorism. *International Journal of Emergency Management*, 4, 296-315.

⁵ Fingas, Merv. (2002). *The Handbook Of Hazardous Materials Spills Technology*. New York: McGraw-Hill