

# Hazard Resilience Strategies

## *Astronomical*

Asteroid Crashes, Comet Crashes and Meteorites  
Geomagnetic Storms  
Space Object Crashes

### Asteroid Crashes, Comet Crashes and Meteorites

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- Ensure community-based asteroid, comet and meteorite crash exercises have taken place in schools and community-at-large (e.g., table-top or full-scale exercises).
- Ensure there is a warning system in place to notify community residents of a potential asteroid, comet or meteorite crash.
- Ensure there is a warning system in place with the Canadian Space Agency to notify emergency response personnel of a potential asteroid, comet, meteorite crash or geomagnetic storm.
- Ensure the community has in place mechanisms to discuss asteroid, comet and meteorite crashes with Traditional Knowledge holders, community members and subject matter experts about, for example, possible warnings and appropriate responses that will avoid alarm while keeping the community safe.

### Geomagnetic Storms

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- Ensure community-based geomagnetic exercises have taken place in the community-at-large (e.g., table-top or full-scale exercises).
- Ensure the community has worked with utilities to ensure that sufficient systems are in place to avoid long-term power outages and overheating of transformers and other malfunctions due to geomagnetic storms.
- Ensure the community has worked with pipeline companies to ensure the pipelines are not subject to excess corrosion where geomagnetic storms could then cause leakage from pipe.
- Ensure there is a warning system in place to notify community residents of potential geomagnetic storms.
- Ensure there is a warning system in place with Public Safety Canada to notify emergency response personnel of potential geomagnetic storms.

- Ensure the community has in place mechanisms to discuss geomagnetic storms with Traditional Knowledge holders, community members and subject matter experts about, for example, possible warnings and appropriate responses that will avoid alarm while keeping the community safe.

## Space Object Crashes

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- Ensure community-based space object crash exercises have taken place in the schools and community-at-large (e.g., table-top or full-scale exercises).
- Ensure there is a warning system in place to notify community residents of a potential space object crash.
- Ensure there is a warning system in place to notify emergency response personnel of a potential space object crash.

## References

Matheny, J. G. (2007). Reducing the risk of human extinction. *Risk Analysis*, 27(5), 1335-1344.

NASA. (2006, 15 March). *Solar storm warning*. Retrieved from [http://science.nasa.gov/science-news/science-at-nasa/2006/10mar\\_stormwarning/](http://science.nasa.gov/science-news/science-at-nasa/2006/10mar_stormwarning/)