Disaster Resilience Guidelines for Alberta

Purpose

The Disaster Resilience Guidelines for Alberta (Guidelines) provide emergency management stakeholders with suggested and scalable approaches to mitigating disaster risk. The Guidelines will act as a reference tool for those looking to form or augment policies, plans or strategies to limit disaster risk. It is for the end-user to decide how end-users build community resilience, prioritize their resources and time, and determine what value they receive from existing programs. While encouraged, adoption of the Guidelines, in whole or part, is voluntary.

Intended outcomes

The Guidelines are meant to help stakeholders:

- reduce the costs and other impacts of disasters;
- develop common, consistent and sustainable risk treatment strategies; and
- move towards a greater emphasis on disaster mitigation and preparedness.

What is resilience?

In its simplest form, resilience refers to the capacity to absorb, adapt and overcome a hazard's effects. Resilience is built through a process of empowering the people living and working in communities and organizations to prevent, mitigate, prepare for, respond to, and recover from emergencies and disasters. It is understood that resilience is the product of many factors, including the societal systems within which individuals reside and interact.

Societal systems

Individuals belong to different groups and systems that influence their capacity to adapt, absorb or recover from disasters. Factors that influence societal systems can include language, resident status, visible and non-visible disabilities, literacy levels, ethnicity, workgroups, school groups, religious associations, socio-economic status and many more.

The interaction of these systems can affect how individuals and communities experience government policies, including initiatives that seek to prepare Albertans to respond to emergency events. When we make decisions that include the diverse perspectives of Albertans and their communities, we better enable resiliency.

Authority to establish the guidelines

The Guidelines align with the Alberta Emergency Management Agency's role under section 2 (1) (a) of the Government Emergency Management Regulation in helping provide strategic policy direction and leadership to the Government of Alberta and its emergency management partners.

How to apply the guidelines

While organized in terms of priorities, objectives and illustrative strategies, the suggestions are meant to provide examples rather than be exhaustive. End-users may adopt or adapt the whole or selected portions of the document. Due to the broad nature of the material, users may note that an illustrative strategy may contribute to the accomplishment of multiple objectives or priorities. Users are encouraged to use the Guidelines in a way that is most appropriate for their needs and contexts.

Resilience and the HIRA

While the Guidelines complement HIRA processes by assisting users in identifying specific risk treatments and approaches, it can also act as a standalone guide to developing strategic approaches to disaster risk reduction.

A HIRA is a process used by emergency management staff to manage disaster risk in their community. In Alberta, the Local Authority Emergency Management Regulation requires local authorities to complete a HIRA as a part of their emergency management plans.

Sources

The Resilience Guidelines use regional, national, and international principles to align with internationally recognized best practices. The inspiration for Resilience Guidelines' priorities are the United Nations' *Sendai Framework for Disaster Risk Reductio*n, the objectives from the United Nations' *Disaster Resilience Scorecard for Cities* (Scorecard) with reference from the Justice Institute of British Columbia's *Rural Disaster Resilience Planning Guide*, and illustrative examples and sample actions from the Scorecard and the *Emergency Management Strategy for Canada*.

Conclusion

The Disaster Resilience Guidelines for Alberta recognizes that building and maintaining greater disaster resilience is a:

- shared responsibility among all members of our society; and
- culture and ongoing process, rather than a product or end state.

As such, this responsibility will require:

- a common commitment;
- collaboration, resource and knowledge exchange;
- shared governance and engagement models
- shared accountability; and
- new ways of doing things.

While ambitious, the guidelines are intended as a first step in a long-term culture change across the province, from response and recovery to greater prevention, preparedness, disaster risk reduction, and resilience.

Appendix

Suggested priorities, objectives, illustrative strategies, and sample actions

Below are sample community-level actions to consider for increasing your community's disaster resilience. As with the illustrative strategies, these sample actions are meant to provide examples of initiatives a community could take to help better show what action under the Guidelines might look like and are not meant to be prescriptive or exhaustive.

Priority 1: Understand Disaster Risk

Disaster risk reduction begins with a current, complete and shared understanding of the risks that might affect your organization and your larger community. Understanding your risks is the starting point in building disaster resilience.

OBJECTIVE 1.1: IDENTIFY, UNDERSTAND, AND USE CURRENT AND FUTURE RISK SCENARIOS

Illustrative strategy	Sample Actions
1.1.1 Collect and standardize transparent disaster risk and vulnerability data.	• Consider developing and maintaining a standard, integrated set of risk and resilience data for your community. • Identify and look to mitigate gaps in hazard and risk-related data.
1.1.2 Prepare and maintain standardized risk and vulnerability assessments and treatment plans.	• Identify and apply a consistent and standardized hazard identification and risk assessment process that considers best practices and your community's needs and capacities. • Promote community partners' use of similar systems to facilitate appropriate information sharing.
1.1.3 Strengthen mechanisms to monitor, evaluate and report on disaster risk reduction plans.	• Develop and regularly update your community's subject-matter expert and stakeholder-reviewed hazard identification and risk assessments. • Engage partners to strengthen public and stakeholder awareness of disaster risk.
1.1.4 Include local and Indigenous knowledge in disaster risk assessments.	• Seek to understand and account for local and Indigenous ways of knowing and approaches to disaster risk reduction in your community's prevention and mitigation plans.
1.1.5 Understand vulnerability and the impact of disasters on different people.	• Seek to identify local populations at risk through a structured vulnerability assessment. • Look to understand and account for the perspectives and needs of your community's vulnerable populations.
1.1.6 Establish policies to share non-sensitive risk information as appropriate.	• Proactively communicate your community's risk data with the public and partnering organizations as appropriate. • Encourage and engage partners in exchanging information and best practices to facilitate the local identification of hazards and assessment of risk.

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Priority 2: Strengthen Disaster Risk Governance

Building resilience is a shared goal. Governing for risk reduction involves both building your own organization's capacities and helping strengthen your community partners' ability to organize, mobilize and enhance a community's collective ability to mitigate, prepare for, respond to, and recover from disasters.

OBJECTIVE 2.1: ORGANIZE AND GOVERN FOR RESILIENCE

Illustrative strategy	Sample Actions
2.1.1 Create and implement an overarching disaster risk reduction plan.	• Ensure a disaster risk reduction vision and goals for your community are articulated. • Reflect that vision and goals in relevant strategic, development and business plans.
2.1.2 Develop strong leadership and clarified coordination and responsibilities for disaster risk reduction.	• Consider appointing a Chief Resilience Officer for your community. • Encourage local leaders to become disaster risk reduction champions throughout your community.
2.1.3 Use disaster risk reduction as a key decision-making principle and priority.	• Ensure the consideration of disaster risk is an explicit step in your strategic, policy and budgetary decision-making processes. • Consider regularly evaluating your community's risk reduction performance against your disaster risk reduction vision and goals.
2.1.4 Engage in and promote collaborative, coordinated and cohesive approaches to disaster risk reduction.	• Engage partners and leverage existing partnerships and frameworks to strengthen emergency management and disaster risk reduction collaboration. • Promote the inclusion of stakeholder groups in disaster risk reduction planning efforts as appropriate and feasible.
2.1.5 Support shared risk governance through local, regional, provincial and national partnerships.	• Examine existing, or consider developing new, cross-organizational emergency management governance tables. • Consider the value in adopting or formalizing regional risk reduction approaches.
2.1.6 Promote risk-aware regulatory tools and evaluate existing regulations.	• Conduct a review of existing, relevant regulations and tools against your disaster risk reduction vision. • Ensure risk is considered in regulatory and bylaw development.

OBJECTIVE 2.2: ENHANCE INSTITUTIONAL CAPACITY FOR RESILIENCE

Illustrative strategy	Sample Actions
2.2.1 Support partner and stakeholder development and maintenance of their resilience capacity.	• Encourage partnerships with the non-profit and private sectors to strengthen collaborative prevention and mitigation efforts. • Consider your community's ability to provide financial support (i.e., grants, subsidies, etc.) to local organizations to help build their disaster resilience.
2.2.2 Assess and understand local and organizational resilience capacity.	• Look to assess your community's resilience capacity within its emergency management and disaster risk reduction planning and programs. • Encourage and support the sharing of appropriate risk information between stakeholders.
2.2.3 Promote, support and leverage multi-sectoral disaster risk governance bodies, arrangements, plans and policies.	• Consider the need and value of developing regionalized risk management and emergency management plans and arrangements. • Encourage community partners to conduct evidence-based mitigation planning and initiate projects that contribute to comprehensive, proactive risk reduction strategies.
2.2.4 Provide disaster risk reduction training and education to build cross-sector capacity.	• Engage in, promote or provide in conjunction with your community partners resilience building and risk reduction training. • Look to include key community partners in your emergency management training and exercises as appropriate.

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Illustrative strategy	Sample Actions
2.2.5 Promote and support the sharing of disaster risk reduction best practices.	• Enhance the preparedness of local businesses, non-governmental organizations and individuals by sharing emergency management guidelines, information, and best practice summaries. • Look to support or incent the development of a local or regional disaster risk reduction community of practice.
2.2.6 Limit new risk and maintain accountability for risk at all government levels.	• Ensure clarity in your community and organization's roles and responsibilities for risk reduction. • Encourage local leaders and community organizations to assess and make plans to address their risks.

OBJECTIVE 2.3: STRENGTHEN FINANCIAL CAPACITY FOR RESILIENCE

Illustrative strategy	Sample Actions
2.3.1 Prepare financial plans with an understanding of the potential economic impacts of disasters.	• Look to quantify the potential financial and economic impacts of disasters on your community. • Regularly review and assess your operating and capital budget planning against your community's disaster risk vision and goals.
2.3.2 Identify, develop or support financial mechanisms to build resilience.	• Ensure your community's financial plans include priorities for disaster resilience. • Look to develop and maintain a disaster reserve or contingency fund.
2.3.3 Understand the cost-saving benefits of disaster risk reduction.	• Consider concepts such as return on investment, the triple bottom line and values at risk. • Look to apply those concepts when making mitigation decisions.
2.3.4 Explore innovative risk financing mechanisms, such as specialized bonds, specialized insurance, etc.	• Build an awareness of the range of possible risk financing methods and approaches, including, but not limited to, insurance. • Assess the availability and appropriateness of applying those methods in your community.
2.3.5 Develop metrics and a strategy to measure the economic impacts of resilience building.	• Look to identify the potential economic impacts of disaster events on your community. • Seek to quantify those impacts and their potential cascading effects.
2.3.6 Support and prioritize disaster prevention.	• Consider making investments in disaster prevention and mitigation a standing budgetary priority. • Promote and champion your community partners adopting a similar approach.

Priority 3: Invest in Disaster Risk Reduction

The long-term reduction of disaster risk involves a long-term commitment, consistent investment, appropriate planning, and a focus on enhancing built and natural spaces to better protect our communities from the impacts of disasters.

OBJECTIVE 3.1: PROMOTE RESILIENT DEVELOPMENT AND DESIGN

Illustrative strategy	Sample Actions
3.1.1 Conduct risk-informed planning and development using risk assessments focused on vulnerable populations.	• Integrate disaster risk assessments into relevant land use, economic and community development planning. • Support mitigation as a priority in land planning and community development decisions.
3.1.2 Promote the development or adoption of resilient building methods.	• Look to adopt or expand the use of sustainable or disaster resilient building design standards in the construction or refurbishment of community buildings and assets. • Promote the use of those standards by partnering organizations.
3.1.3 Avoid or limit development in high-risk areas.	• Seek to avoid increasing community risk through land use bylaws that limit development in known hazard areas.
3.1.4 Promote the development of structural and non-structural disaster mitigation measures.	• Ensure mitigation planning considers the availability of policy and planning measures in addition to structural approaches for disaster risk reduction. • Look to identify the cost-benefit of early, policy-based risk interventions versus structural mitigation.

OBJECTIVE 3.2: SAFEGUARD SYSTEMS THAT PROTECT AGAINST DISASTERS

Illustrative strategy	Sample Actions
3.2.1 Identify, protect and monitor natural ecosystems.	• Look to identify your community's critical ecosystems and environmentally sensitive areas (i.e., wetlands, breeding grounds, etc.). • Regularly monitor those systems against a defined set of indicators.
3.2.2 Sustain, safeguard and use natural buffers for risk reduction.	• Ensure your community's land use policies protect its critical ecosystems. • Look at multiple avenues and methods to enforce, or incent compliance with those policies.
3.2.3 Understand and mitigate potential impacts of climate trends on natural and societal systems.	• Seek to collaborate with neighbouring communities to identify, assess and monitor the long-term health of critical ecosystems and environmental assets on a regional basis. • Monitor and track long-term regional, national or international climate projections and trends relevant to your community.
3.2.4 Incorporate regional and Indigenous approaches to protecting natural assets and systems.	• Consult with local and Indigenous communities to identify and assess traditional and Indigenous ways of environmental stewardship. • Consider ways to incorporate local and Indigenous approaches into your organization's stewardship practices .

OBJECTIVE 3.3: ENHANCE INFRASTRUCTURE RESILIENCE

Illustrative strategy	Sample Actions
3.3.1 Assess the capacity and adequacy of critical infrastructure and supporting systems.	• Ensure your community employs a process to identify and maintain its critical infrastructure and ensure the integrity and the operability of those assets. • Ensure capital and infrastructure development aligns with your community's disaster risk reduction vision and goals.
3.3.2 Develop a plan or strategy for the protection, update and maintenance of critical infrastructure and systems.	• Develop and regularly update a long-term capital plan and priorities informed by your community's disaster risk reduction vision and goals. • Look to include your community's critical infrastructure providers in developing your long-term plans and priorities.

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Illustrative strategy	Sample Actions
3.3.3 Invest in disaster resilient infrastructure and supporting systems.	• Integrate investments in disaster-resilient infrastructure as a standing priority in your community's budgets and longer-term development and strategic plans. • Ensure your infrastructure plans account for both development and long-term maintenance and upgrades that account for potential community growth.

OBJECTIVE 3.4: PROMOTE SOCIAL CAPACITY FOR RESILIENCE

Illustrative strategy	Sample Actions
3.4.1 Promote a culture of mutual assistance and care for the most vulnerable.	• Seek to engage local leaders, community groups, and networks in providing disaster prevention and preparation information and education to the public and community groups. • Look at ways of incenting and facilitating community groups and individuals helping each other.
3.4.2 Promote and strengthen the sense of community.	• Feature and celebrate local community leaders and groups who contribute to your community's overall resilience. • Celebrate significant achievements or milestones in enhancing your community's resilience.
3.4.3 Strengthen and support individual resilience before, during and after a disaster.	• Ensure individuals and vulnerable groups within your community are regularly engaged on disaster resilience issues and planning as appropriate and feasible. • Help empower individuals in strengthening their resilience through the provision of preparedness information and education.
3.4.4 Promote community initiatives that motivate disaster risk reduction.	• Look to support local leaders and community groups in identifying and promoting community-organized disaster risk reduction efforts and events. • Empower partners to develop and promote comprehensive and collaborative approaches to emergency management and disaster risk reduction within their own communities.
3.4.5 Promote and enable individual responsibility for disaster resilience.	• Educate partners on disaster risks and their potential impacts. • Support and promote the establishment of neighbourhood or community emergency and disaster preparedness self-support groups.

Priority 4: Enhance Disaster Preparedness, Response and Recovery

In conjunction with enhanced risk awareness, mitigation and prevention activities, disaster resilience requires your community is able to appropriately prepare for, respond to, and recover from, disasters and large-scale emergencies.

OBJECTIVE 4.1: ENSURE EFFECTIVE DISASTER PREVENTION, PREPAREDNESS AND RESPONSE

Illustrative strategy	Sample Actions
4.1.1 Create, maintain and test preparedness and response plans.	• Ensure your community creates, maintains and tests its emergency management plans and 1) those plans address the most likely and most severe risk scenarios, and 2) are shared with relevant stakeholders and organizations who have a role to play. • Encourage partners' participation in multi-stakeholder disaster response exercises.
4.1.2 Develop and maintain public alerting systems that consider different language abilities and literacy levels.	• Aim to ensure your community has access to available warning systems, as appropriate. • Consider the value and feasibility of creating new warning systems.
4.1.3 Promote the development and maintenance of local, regional, and provincial response capacities.	• Ensure that investing in disaster response as appropriate and feasible is a standing priority in your community's budgetary processes. • Encourage partners' development of preparedness and response capabilities.
4.1.4 Promote and develop mutual aid arrangements between communities and organizations.	• Maintain and invest in existing mutual aid arrangements. • Seek to assess the need and value of creating formalized mutual aid agreements with neighbouring communities.
4.1.5 Promote interoperability of response systems and agencies.	• Look to define and strengthen your community's interoperability with neighbouring cities and other levels of government. • Encourage partners to establish interoperable emergency management systems.
4.1.6 Enhance information and intelligence systems that support decision-making in emergencies.	• Assess the value, cost and feasibility of adopting electronic event management software and interoperable communication systems. • Consider opportunities to consolidate or improve the interoperability of existing intelligence and data systems.

OBJECTIVE 4.2: EXPEDITE RECOVERY AND BOUNCE FORWARD

Illustrative strategy	Sample Actions
4.2.1 Establish innovative recovery solutions.	• Conduct a cross-jurisdictional and best practice scan to identify and assess new and leading practices in community disaster recovery. • Reflect on lessons learned and best practices from disasters, and exchange knowledge with partners to incorporate these findings into your community's emergency management plans.
4.2.2 Consider the community's long-term priorities and development in the design and delivery of recovery programs.	• Look for ways your community's recovery programs can align with and support your community's overall long-term vision and plans. • Seek to identify and pursue "win-win" investments that address multiple objectives, including risk reduction.
4.2.3 Support and promote efforts to "bounce forward" after a disaster.	• Use the expenditure of resources and funding after a disaster as an opportunity to harden or increase the resiliency of your community's assets and systems. • Encourage your partners to create linkages between recovery and mitigation.

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Illustrative strategy	Sample Actions
4.2.4 Engage in community-centred disaster recovery.	• Ensure that coordinated and comprehensive disaster recovery arrangements and plans are in place and commonly understood before an incident. • Include clearly stated and agreed-upon roles and accountability across all relevant organizations in those plans.
4.2.5 Strengthen pre-disaster recovery planning capacity.	• Look to develop and maintain post-event recovery and economic reboot plans. • Test and validate those plans with your community partners in conjunction with your community's other emergency management plans.
4.2.6 Strengthen participation of populations at risk in disaster risk reduction and recovery.	• Ensure relevant at-risk groups have an opportunity to input into your community's recovery plans as appropriate. • Engage partners to identify post-disaster vulnerabilities and opportunities to improve the availability of post-disaster services. • Consider creating a community recovery network that integrates and leverages existing informal community groups (i.e., affiliation groups, volunteer groups, etc.).