Sustainable Canadian Agricultural Partnership

Competitive. Innovative. Resilient.

Agriculture Resiliency Program:

Extreme Weather Preparedness Sub-Program
GUIDELINES

Prince Edward Island CANADA

Canada

5.3 AGRICULTURE RESILIENCY PROGRAM

PROGRAM DESCRIPTION

The Agriculture Resiliency Program encourages a robust and adaptable industry through proactive risk management in agriculture. The program will support initiatives that build the strength and viability of the agriculture industry, as well as initiatives that assist industry in preparing for current and future threats such as climate change and extreme weather. Supporting initiatives in producer wellness and mental health are included as an essential part of a resilient system.

The Agriculture Resiliency Program is composed of 3 sub-programs:

- ***5.3.1 Agriculture Resiliency Research Sub-Program***
- ***5.3.2 Extreme Weather Preparedness Sub-Program***
- ***5.3.3 Producer Wellness Sub-Program***

These guidelines provide information for the **Extreme Weather Preparedness Sub-Program** (5.3.2).

INDEX

5.3.2 EXTREME WEATHER PREPAREDNESS SUB-PROGRAM

PEI's first climate change risk assessment[1] highlights the increased likelihood of extreme weather events on PEI, including post-tropical storms, intense precipitation events, flooding, and extreme heat. PEI's primary industries are particularly vulnerable to extreme weather events. This sub-program supports producers to make infrastructure improvements to increase farm preparedness for extreme weather events, recognizing it can be challenging to accept responsibility for the full cost of retrofitting for future extreme weather events. This sub-program supports activities in four streams:

1) Extreme Wind Preparedness;
2) Extreme Heat Preparedness;
3) Flood Preparedness; and
4) Critical Systems Backup Power.

If a farm identifies other extreme weather risks or other project activities that would increase their resilience to extreme weather risks, please contact the program delivery team to discuss your proposed project and potential eligibility. Contact us at agresiliency@gov.pe.ca or at 902-213-6476.

NOTE: For a wildfire risk assessment, please contact Emily Foster (PEI's FireSmart Coordinator) at efoster@gov.pe.ca or 902-218-6159. Learn more information about wildfire risk mitigation at https://www.princeedwardisland.ca/en/information/environment-energy-and-climate-action/firesmart.

GUIDELINES

Eligible Recipients

- Mi'kmaq First Nations and other Indigenous groups;
- Agricultural producers; and
- Others may be considered upon request, at the discretion of the Extreme Weather Preparedness Review Subcommittee

Eligible Activities/Expenses

- Assessments of farm infrastructure for vulnerability to extreme weather risks and design of eligible project activities, as described in the program streams below, and;
- Costs associated with the implementation of approved project activities to increase farm resilience to extreme weather risks, as described in the program streams below.

Ineligible Expenses/Activities

- In-kind activities;
- Academic institution overhead fees;
- Business Risk Management-type activities;
- Normal and on-going operating and maintenance activities, including building repairs;
- Activities that do not provide a direct benefit to the Sector;
- Activities related to aquaponic food production, or to aquaculture, seaweed, fish and seafood production and processing (except international marketing and traceability activities for fish and seafood);
- Activities which provide tax credits or rebates; and
- Development and enforcement of regulations.

[1] https://www.princeedwardisland.ca/en/publication/pei-climate-change-risk-assessment-2021

Funding

- 75% of infrastructure assessment and retrofit design details by professional engineers to a maximum of $7,500;
- 50% of eligible expenses to implement eligible activities to increase farm resilience to extreme weather risks, up to $40,000 per project; and
- 50% of eligible costs for generator projects to a maximum of:

Gross Farming Income Level	Maximum Funding
$10,000-$99,999	$7,500
$100,000-$250,000	$15,000
$250,000+	$25,000

- The maximum total contribution per recipient for the Extreme Weather Preparedness Sub-Program over the life of the Sustainable CAP Framework Agreement (2023-2028) is $75,000.

Stream 1: Extreme Wind Preparedness (Infrastructure Retrofits)			
Activity	**Eligible Activities/Expenses**	**Ineligible Activities/Expenses**	**Other Requirements**
Farm Buildings (excluding tarp barns)	**Part 1: Infrastructure Assessment** Infrastructure assessments of agricultural buildings with low human occupancy[2] by professional engineers licensed to work on PEI, resulting in a recommendations report highlighting potential project activities to improve extreme wind preparedness. **See Appendix A for recommended Scope of Work for infrastructure assessments** **Part 2: Implementation of recommended project activities from an infrastructure assessment, including but not limited to:** • Structural bracing (install additional bracing to strengthen building frame); • Hurricane straps or ties (metal straps to secure the roof to the walls & prevent uplift); • Impact resistant windows & doors (upgrade openings to withstand high winds and debris); • Concrete anchors (secure structure to the foundation to prevent it from shifting during storms); • Storm shutters (install shutters or plywood covers to protect windows and doors); • Contracted services for implementing retrofits and reinforcements; and • Other requests may be considered on an individual basis.	• Activities that are part of a new building construction project; • Any work that are not directly related to increasing extreme wind preparedness of farm infrastructure; • Replacing coverings for tarp barn structures, greenhouses or polytunnels; • Project activities for high human occupancy buildings[3]; and • Ongoing building maintenance or repairs that are considered normal operations.	• Premises ID for livestock enterprises; • Buildings must be insured against insurable perils, and a current copy of the insurance policy must be submitted; • Project activities for building retrofits need to be identified through an infrastructure assessment by any PEI Licensed to Practice Professional Engineer with structural experience (does not apply to tarp barns or greenhouses/polytunnels). Please contact the Department of Agriculture if more information is required; • A post-project verification of the work completed needs to be submitted by the contracted engineering firm or the applicant at claiming; and • Building must not be in derelict condition, as defined by the consulting engineer. If there are critical structural flaws or needed repairs that will not be addressed by the applicant, the building may not be eligible for program support for project activities to increase wind resistance.
Tarp Barns, Grain Bins, Perennial Crop Trellis Systems, Green Houses and Polytunnels	• Upgrading and retrofitting tarp barns to increase resistance to wind, including, but not limited to installing additional bracing (purlins), rails, steel posts (to replace wooden), cables and additional anchoring. • Retrofitting and reinforcing grain bins: reinforcing lids and doors, adding stiffened channels and bracing, and improving anchoring. • Retrofitting and reinforcing perennial crop trellis systems to meet the "Recommended Minimum Standards for Wind Resilient Trellis Design Guide." The Design Guide can be found at: https://www.princeedwardisland.ca/sites/default/files/publications/af_min_standard_wind_resilient_trellis.pdf • Retrofitting and reinforcing greenhouses and polytunnels against high winds, including, but not limited to improving anchoring, adding cross bracing, collar ties, extra hoops, rails, high-quality film/plastic for double covers, and foot supports.		
NOTE: Strategically placed hedgerows and shelterbelts around farm infrastructure can help mitigate risk of damage from extreme winds. To apply for a hedgerow planting, please contact: https://www.princeedwardisland.ca/en/service/apply-for-hedgerow-planting			

[2] An occupant load of not more than 1 person per 40 m^2 of floor area (National Building Code of Canada, 2020)
[3] An occupant load of more than 1 person per 40 m^2 of floor area (National Building Code of Canada, 2020)

Stream 2: Extreme Heat Preparedness			
Activity:	**Eligible Activities/Expenses**	**Ineligible Activities/Expenses**	**Other Requirements**
Shade for Outdoor Livestock	• Construction or purchase of portable livestock shade structures for livestock on pasture; and • Purchase and planting costs for new shade trees, including tree guards and livestock fencing.	• Shelter or tree plantings to benefit non-commercial livestock (livestock not used to generate declared farm income); • Fixed, non-portable buildings; and • Coniferous or invasive species.	For shade trees: • Planting plan that includes a site map with information on tree species and location, tree density and total planted area; • Trees must be climatically adapted deciduous species • Trees must be protected with fencing or tree guards to prevent livestock browsing or rubbing; and • Maximum tree caliper of 1". The program will support tree purchases to a maximum of $40/tree. • **Please note:** Smaller trees and saplings often establish easier and grow faster than larger, more expensive trees.
Enhanced Livestock Watering	• Installation of additional or upgraded watering infrastructure to supply cool fresh water at more locations in livestock housing or in pastures, addressing the needs of higher water demand due to heat.	• New waterers where there were no pre-existing livestock.	• Premises Identification Number.
Heat Protection for Harvested Horticultural Crops	• Modifications to farm vehicles (such as flatbed trucks or trailers) to add roof and curtain walls for shading for harvested crops; • Addition of roll tarp reflective covers to farm trailers/wagons or harvest equipment to shade harvested crops; and • Reusable reflective tarps to cover harvested crop bins, totes, or lugs.	• Refrigerated storage of harvested crops.	
NOTE: Enhanced Livestock Barn Cooling and Ventilation The PEI Department of Agriculture's Agriculture Technology Advancement Sub-program may support projects that use industry leading solutions to improve ventilation of livestock barns. To learn more about this program or to apply, please visit: https://www.princeedwardisland.ca/en/information/agriculture/agriculture-research-and-innovation-program			

Stream 3: Flood Preparedness			
Activities	**Eligible Activities/Expenses**	**Ineligible Activities/Expenses**	**Other Requirements**
Flood	***Addressing fuel storage in flood risk zones:*** • Relocating fuel tanks out of flood risk zones; Upgrading of fuel tanks such that they are waterproof or sealed; • If tanks cannot be waterproofed or sealed, replacing with new storage tanks (must be double walled anchored and have bollards); • Permanently anchoring existing or new tanks to a concrete slab or to concrete or steel posts; o Retrofitting and upgrading of shut-off fuel connectors and water-tight seals; and o Raising of electrical components above flood risk zone.	• Locks, vents, and signage that are legally required and should already be installed; and • Storage facilities for bulk fertilizer products with storage sizes of greater than 1000 kg (granular) or greater than 1000L (liquid).	• **Farm infrastructure must be in an identified flood risk zone.** The Agriculture Resiliency Program delivery team can help identify whether farm infrastructure is at risk; • All fuel tanks (retrofitted or new) must be ULC certified, anchored and protected with bollards to be eligible for this program; and • All projects addressing fuel storage must adhere to the *Environmental Protection Act* and its Regulations, including the Petroleum Storage Tanks Regulations, and the Watercourse and Wetland Protection Regulations. • Premises Identification for livestock farms.
	Addressing the storage of non-fuel crop inputs in flood risk zones: • Relocating existing storage rooms above flood level; • Installing of solid metal shelves to restrict absorption of floodwater and spilled chemicals; and • Racking packaged fertilizer or other crop inputs (including bags, pails, mini bulks and 1000L totes) above flood risk level.		
Raising of electrical components (motors, compressors, control panels, etc.) above flood risk levels.			

Stream 4: Critical Systems Backup Power			
Activities	**Eligible Activities/Expenses**	**Ineligible Activities/Expenses**	**Other Requirements**
Critical Systems Backup Power	• Installing battery backup systems, generators and other charging mechanisms (i.e. solar) for critical farm systems, including but not limited to: o electric fence chargers, livestock water supplies; and o temperature/ventilation control systems for crop storages, livestock barns and greenhouses.	• Whole farm backup generators, for farms that have already received support through the On-Farm Electrical Interruption Assistance Program.	• Premises identification for livestock farms. • For generator projects, a copy of 2022 or 2023 Canada Revenue Agency for income tax purposes showing Gross Farming Income. Please note, the Canada Revenue Agency Income Tax must match Canada Revenue Agency number given on the Application form.

CLAIMS PROCESS

Applicants shall maintain an accurate record of expenditures incurred and shall submit, upon completion of the project, the following:

- a claim form summarizing expenditures;
- copies of all paid invoices with verification of payment;
- a report on the project and its results in terms of meeting applicant and program objectives; and
- copies of material produced (or when applicable, photos of activities funded).

TERMS AND CONDITIONS

- Approved projects must be completed within the timeframe outlined in the funding agreement;
- Applicants must meet the eligibility criteria and submit a complete application and proposal to the Department of Agriculture;
- Applications will be assessed on a ***first come-first serve basis*** and ***for merit and impact;***
- If the project is not approved, all incurred costs are the responsibility of the applicant;
- Assistance will be available until funds are totally allocated within that year; and
- Projects may be funded below the maximum contribution rate upon assessment and availability of funding.

HOW TO APPLY

Completed applications may be submitted to the attention of the Program Officer via regular mail or email. There will be application intake periods advertised on the program website.

Email Applications:
Applications may be submitted via email at
agresiliency@gov.pe.ca

Regular Mail Applications:
Applications may be submitted via regular mail at:
PEI Department of Agriculture
Attn: Agriculture Resiliency
11 Kent Street
PO Box 2000
Charlottetown PE C1A 7N8
(902) 213-6476 (telephone)

PUBLIC TRUST

Projects approved for funding under the Sustainable CAP which have demonstrable links to increasing public trust may be eligible for additional project funding.

REGIONAL COLLABORATION

Projects that are assessed to demonstrate benefits and impacts to more than one Atlantic province may be eligible for funding on a regional basis.

EVALUATION AND CONTROL

A complete evaluation of this program is planned to ensure that the objectives and results are achieved and to assess the relevance of its renewal. Program metrics are collected and reported on an on-going basis.

GUIDING PRINCIPLE

Sustainable CAP programs are available to all Canadians who are eligible to participate in those programs. Wherever possible, the needs of under-represented groups, including Indigenous Peoples, women, youth, and persons with disabilities, were considered during program development.

Appendix A:
Farm Structural Assessment for Weather Resilience
SCOPE OF WORK

Objective:
The farm structural assessment will evaluate the condition and integrity of farm structures such as barns, sheds, and crop storages as it relates to impacts for future high wind and extreme snow load with a focus on post-tropical storms. This assessment will identify areas of concern and prioritize recommended project activities that will increase the structures' resilience to extreme weather.

Work to Be Carried Out:

1) Inspect farm structures to determine resilience to high wind and extreme snow load:
    a) Examine the foundation, walls, roof, doors, windows, trusses, bracing, support posts and beams, exterior cladding, and any other building elements linked to extreme weather resilience
2) Identify and prioritize recommended activities to improve structural resilience to high winds and extreme snow load. Highlight essential repairs or retrofits that need to be completed before considering other potential project activities.
    a) Recommended activities should differentiate between basic repairs and maintenance activities, and activities to retrofit or renovate the structure to increase lateral force resisting systems.

Reporting:
A **recommendation report** will be completed for each producer operation and will include, but not limited to, the following:

1) **Description of structures**: Dimensions, style of construction, age of structure, use of building;
2) **Description of Lateral Force Resisting System (LFRS)**: Diaphragm, knee bracing, portal forms, moment frame, etc.
3) **Description of Condition of LFRS**: Adequate, insufficient, deteriorated, not present;
4) **Recommendations:**
    - Maintain, repair, remediate, or retire building
    - Prioritized repair and remediation activities
    - Prioritized activities to strengthen wind resiliency and improve lateral force resisting systems
    - If applicable for complex projects, an estimate of the engineer's fee for completing detailed engineering work for retrofit activities. NOTE: Detailed costing of implementation activities are not part of this assessment.
5) **Appendices:** Additional documentation, such as photographs, etc. to support the findings and recommendations presented in the report.

The report should be clear, concise and accessible to the farm owner or operator, providing actionable insights to inform decision-making regarding maintenance and improvement of the farm structures.

Field Review of Remediation:
For those projects that are approved and funded, an engineer's field review of remediation report/letter will be required to verify that the project activities have been completed as specified (this work will be contracted separately, outside this Scope of Work).

Qualifications: Hold a professional engineering license to practice on Prince Edward Island and have structural experience.

Recommended budget: $1500 per farm visit (including up to two buildings) plus $500 per additional building. Larger, more complex buildings may justify a more detailed assessment at greater expense. If the recommended activities require engineering details/components, the cost of preparing these details could be eligible in the implementation phase of a project.

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