



**Summer Villages of
Pigeon Lake**

**Regional Emergency
Management Agency**

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Hazard, Risk, Vulnerability Assessment (HRVA)

Request: Annual update required for HRVA.

Details: Hazard, Risk, Vulnerability Assessment (HRVA) completed using Alberta Emergency Management Agency (AEMA) online tool for communities and audited by our fire chiefs and County of Wetaskiwin Director of Emergency Management.

Recommendation: Approve 2018/2019 HRVA as presented.

	2017	2018-2019
1	Fire (urban/structural)	Forest Wildfire
2	Forest Wildfire	Tornado
3	Major Wind/Tornado	Wastewater Main Break (too many unknowns, can reduce risk)
4	Gas Main Break	Pipelines (too many unknowns, can reduce risk)
5	Water Contamination	Gas Main Break (too many unknowns, can reduce risk)
6	Lightening	Airplane Crash (too many unknowns, can reduce risk)
7	Missing Persons (Search & Rescue)	Algae Bloom (Lake)
8	Blizzards/Snowstorms	Ice Storm
9	Cold Weather (prolonged/extreme)	Blizzards
10	Fish Kill	Snow

Community Emergency Management Program

Risk Assessment for Region

Pigeon Lake Regional Emergency Management Agency

Summary Page

Priority	Hazard	Risk Score	Risk Level
1	Forest Fire (Wildfire)	144	Extreme
2	Tornado	96	Extreme
3	Wastewater Main Break	60	Extreme
4	Pipelines	48	Very High
5	Gas Main Break	45	Very High
6	Airplane Crash	40	High
7	Algae Bloom (Lake)	40	High
8	Ice Storm	16	Low
9	Blizzards	15	Low
10	Snow	12	Low
11	Civil Disturbance	8	Very Low
12	Floods (Watercourse)	4	Very Low

General Comments

Frequency:

Factors that may change the hazard frequencies:

Social impacts of the hazards:

Other consequences:

Factors that may change the vulnerability to these hazards, and would thus change the hazards' impact:

(1) Hazard: Forest Fire (Wildfire)

Risk: Extreme (144)

Priority: 1

Mitigation Strategy: Strength internal agency communication, and use of AFRRCS radios with a communication workshop. Ensure fire chiefs and first responders know when and how to escalate responses to REMP.

Frequency: Almost Certain

Factors that may change the hazard frequency:

Is the number of non-emergency occurrences of the hazard increasing?

Yes

Is human activity likely to lead to more interaction with the hazard or an increase in frequency?

Yes

Is there an environmental reason why the frequency of this hazard may increase?

Yes

Are human factors more likely to increase the risk?

Yes

Social impacts of this hazard:

Fatalities: Minor

Injuries: Moderate

Evacuation: Severe

Other consequences:

Property Damage: Severe

Critical Infrastructure Disruption: Severe

Environmental Damage: Minor

Financial Impact: Severe

Psychosocial Impact: Severe

(1) Hazard: Forest Fire (Wildfire)

Factors that may change the region's communities vulnerability to this hazard, and would thus change the hazards' impact

Is a large number of the population vulnerable or is the number of people vulnerable to this hazard increasing?

Yes

Does critical infrastructure reliance or a 'just-on-time' delivery system make the population more vulnerable?

Yes

Are response agencies/groups aware of, prepared, and trained for responding to this hazard?

Yes

Are prevention/mitigation measures currently in place for this hazard?

Yes

FireSmart programs being followed by all Summer Villages is essential to this prevention.

(2) Hazard: Tornado

Risk: Extreme (96)

Priority: 2

Mitigation Strategy: Stockpiles exist for evacuation (reception centres). Staff needs more training, exercises. Only facility currently authorizing our use is the Mulhurst Community Hall. Referring to committee how to handle access for Ma-Me-O Beach hall and Sundance hall (and other Summer Village assets). Add reception centre activation to REMP binder.

Frequency: Probable

Factors that may change the hazard frequency:

Is the number of non-emergency occurrences of the hazard increasing?

No

Is human activity likely to lead to more interaction with the hazard or an increase in frequency?

No

Is there an environmental reason why the frequency of this hazard may increase?

Yes

Are human factors more likely to increase the risk?

Yes

Social impacts of this hazard:

Fatalities: Severe

Injuries: Severe

Evacuation: Severe

Other consequences:

Property Damage: Severe

Critical Infrastructure Disruption: Severe

Environmental Damage: Moderate

Financial Impact: Severe

Psychosocial Impact: Severe

(2) Hazard: Tornado

Factors that may change the region's communities vulnerability to this hazard, and would thus change the hazards' impact

Is a large number of the population vulnerable or is the number of people vulnerable to this hazard increasing?

Yes

Does critical infrastructure reliance or a 'just-on-time' delivery system make the population more vulnerable?

Yes

Are response agencies/groups aware of, prepared, and trained for responding to this hazard?

Yes

Are prevention/mitigation measures currently in place for this hazard?

Yes

(3) Hazard: Wastewater Main Break

Risk: Extreme (60)

Priority: 3

Mitigation Strategy: Request additional information on how to respond, who responds and gather maps of the wastewater pipeline locations to further assess other risks (specifically leaks into the lake).

Frequency: Unlikely

Factors that may change the hazard frequency:

Is the number of non-emergency occurrences of the hazard increasing?

No

Is human activity likely to lead to more interaction with the hazard or an increase in frequency?

Yes

Is there an environmental reason why the frequency of this hazard may increase?

Yes

Are human factors more likely to increase the risk?

Yes

Social impacts of this hazard:

Fatalities: None

Injuries: Minor

Evacuation: Minor

Other consequences:

Property Damage: Minor

Critical Infrastructure Disruption: Moderate

Environmental Damage: Severe

Financial Impact: Severe

Psychosocial Impact: Moderate

(3) Hazard: Wastewater Main Break

Factors that may change the region's communities vulnerability to this hazard, and would thus change the hazards' impact

Is a large number of the population vulnerable or is the number of people vulnerable to this hazard increasing?

Yes

Does critical infrastructure reliance or a 'just-on-time' delivery system make the population more vulnerable?

Yes

Are response agencies/groups aware of, prepared, and trained for responding to this hazard?

No

Are prevention/mitigation measures currently in place for this hazard?

No

Who would be the secondary responders to fix a wastewater leak?

(4) Hazard: Pipelines

Risk: Very High (48)

Priority: 4

Mitigation Strategy: Cenovus Emergency Plan Sept 2017 on file, contacting vendor for update. Only affects 3 properties in Summer Village of Ma-Me-O Beach.

Frequency: Unlikely

Factors that may change the hazard frequency:

Is the number of non-emergency occurrences of the hazard increasing?

No

Is human activity likely to lead to more interaction with the hazard or an increase in frequency?

Yes

Is there an environmental reason why the frequency of this hazard may increase?

Yes

Are human factors more likely to increase the risk?

No

Social impacts of this hazard:

Fatalities: None

Injuries: Minor

Evacuation: Minor

Other consequences:

Property Damage: Moderate

Critical Infrastructure Disruption: Minor

Environmental Damage: Moderate

Financial Impact: Moderate

Psychosocial Impact: Moderate

(4) Hazard: Pipelines

Factors that may change the region's communities vulnerability to this hazard, and would thus change the hazards' impact

Is a large number of the population vulnerable or is the number of people vulnerable to this hazard increasing?

No

Does critical infrastructure reliance or a 'just-on-time' delivery system make the population more vulnerable?

Yes

Are response agencies/groups aware of, prepared, and trained for responding to this hazard?

Yes

Are prevention/mitigation measures currently in place for this hazard?

Yes

(5) Hazard: Gas Main Break

Risk: Very High (45)

Priority: 5

Mitigation Strategy: Cenovus Emergency Plan Sept 2017 on file, contacting vendor for update. Only affects 3 properties in Summer Village of Ma-Me-O Beach.

Frequency: Likely

Factors that may change the hazard frequency:

Is the number of non-emergency occurrences of the hazard increasing?

Yes

Is human activity likely to lead to more interaction with the hazard or an increase in frequency?

Yes

Is there an environmental reason why the frequency of this hazard may increase?

Yes

Are human factors more likely to increase the risk?

Yes

Social impacts of this hazard:

Fatalities: Minor

Injuries: Minor

Evacuation: Moderate

Other consequences:

Property Damage: Minor

Critical Infrastructure Disruption: Minor

Environmental Damage: None

Financial Impact: None

Psychosocial Impact: Severe

(5) Hazard: Gas Main Break

Factors that may change the region's communities vulnerability to this hazard, and would thus change the hazards' impact

Is a large number of the population vulnerable or is the number of people vulnerable to this hazard increasing?

No

Does critical infrastructure reliance or a 'just-on-time' delivery system make the population more vulnerable?

No

Are response agencies/groups aware of, prepared, and trained for responding to this hazard?

Yes

Are prevention/mitigation measures currently in place for this hazard?

No

(6) Hazard: Airplane Crash

Risk: High (40)

Priority: 6

Mitigation Strategy: Review specialist responders, would assume first response by fire would handle similar to vehicle collision then escalate to aircraft specialists. Do we exist on a flight plan to the international airport? We are completely missing a Emergency Response Procedure for this situation, attempting to collect information from County of Leduc resulted in they simply refer to Airport Plan, contacted airport fire chief to request copy of that plan for our region.

Frequency: Very Unlikely

Factors that may change the hazard frequency:

Is the number of non-emergency occurrences of the hazard increasing?

No

Is human activity likely to lead to more interaction with the hazard or an increase in frequency?

Yes

Is there an environmental reason why the frequency of this hazard may increase?

No

Are human factors more likely to increase the risk?

Yes

Social impacts of this hazard:

Fatalities: Severe

Injuries: Minor

Evacuation: Minor

Other consequences:

Property Damage: Minor

Critical Infrastructure Disruption: Moderate

Environmental Damage: Minor

Financial Impact: Moderate

Psychosocial Impact: Severe

(6) Hazard: Airplane Crash

Factors that may change the region's communities vulnerability to this hazard, and would thus change the hazards' impact

Is a large number of the population vulnerable or is the number of people vulnerable to this hazard increasing?

No

Does critical infrastructure reliance or a 'just-on-time' delivery system make the population more vulnerable?

No

Are response agencies/groups aware of, prepared, and trained for responding to this hazard?

Yes

Are prevention/mitigation measures currently in place for this hazard?

Yes

(7) Hazard: Algae Bloom (Lake)

Risk: High (40)

Priority: 7

Mitigation Strategy: Low human risk, high tourism/economy risk. Support Pigeon Lake Watershed Association and continue promoting area and public awareness campaign.

Frequency: Likely

Factors that may change the hazard frequency:

Is the number of non-emergency occurrences of the hazard increasing?

No

Is human activity likely to lead to more interaction with the hazard or an increase in frequency?

Yes

Is there an environmental reason why the frequency of this hazard may increase?

Yes

Are human factors more likely to increase the risk?

Yes

Social impacts of this hazard:

Fatalities: None

Injuries: None

Evacuation: None

Other consequences:

Property Damage: None

Critical Infrastructure Disruption: None

Environmental Damage: Severe

Financial Impact: Moderate

Psychosocial Impact: Moderate

(7) Hazard: Algae Bloom (Lake)

Factors that may change the region's communities vulnerability to this hazard, and would thus change the hazards' impact

Is a large number of the population vulnerable or is the number of people vulnerable to this hazard increasing?

Yes

Does critical infrastructure reliance or a 'just-on-time' delivery system make the population more vulnerable?

No

Are response agencies/groups aware of, prepared, and trained for responding to this hazard?

Yes

Are prevention/mitigation measures currently in place for this hazard?

Yes

(8) Hazard: Ice Storm

Risk: Low (16)

Priority: 8

Mitigation Strategy: Ensure Summer Village offices can work offsite if power lost to their office.

Frequency: Probable

Factors that may change the hazard frequency:

Is the number of non-emergency occurrences of the hazard increasing?

No

Is human activity likely to lead to more interaction with the hazard or an increase in frequency?

No

Is there an environmental reason why the frequency of this hazard may increase?

Yes

Are human factors more likely to increase the risk?

Yes

Social impacts of this hazard:

Fatalities: None

Injuries: None

Evacuation: None

Other consequences:

Property Damage: Minor

Critical Infrastructure Disruption: Minor

Environmental Damage: None

Financial Impact: None

Psychosocial Impact: None

(8) Hazard: Ice Storm

Factors that may change the region's communities vulnerability to this hazard, and would thus change the hazards' impact

Is a large number of the population vulnerable or is the number of people vulnerable to this hazard increasing?

No

Does critical infrastructure reliance or a 'just-on-time' delivery system make the population more vulnerable?

Yes

Are response agencies/groups aware of, prepared, and trained for responding to this hazard?

Yes

Are prevention/mitigation measures currently in place for this hazard?

No

(9) Hazard: Blizzards

Risk: Low (15)

Priority: 9

Mitigation Strategy: Ensure Summer Village offices can work offsite if power lost to their office.

Frequency: Likely

Factors that may change the hazard frequency:

Is the number of non-emergency occurrences of the hazard increasing?

No

Is human activity likely to lead to more interaction with the hazard or an increase in frequency?

No

Is there an environmental reason why the frequency of this hazard may increase?

Yes

Are human factors more likely to increase the risk?

No

Social impacts of this hazard:

Fatalities: None

Injuries: Minor

Evacuation: None

Other consequences:

Property Damage: None

Critical Infrastructure Disruption: Moderate

Environmental Damage: None

Financial Impact: None

Psychosocial Impact: None

(9) Hazard: Blizzards

Factors that may change the region's communities vulnerability to this hazard, and would thus change the hazards' impact

Is a large number of the population vulnerable or is the number of people vulnerable to this hazard increasing?

No

Does critical infrastructure reliance or a 'just-on-time' delivery system make the population more vulnerable?

No

Are response agencies/groups aware of, prepared, and trained for responding to this hazard?

Yes

Are prevention/mitigation measures currently in place for this hazard?

Yes

Could the Summer Villages continue business away from the their office for a few days if needed?

(10) Hazard: Snow

Risk: Low (12)

Priority: 10

Mitigation Strategy: Ensure Summer Village offices can work offsite if power lost to their office.

Frequency: Probable

Factors that may change the hazard frequency:

Is the number of non-emergency occurrences of the hazard increasing?

No

Is human activity likely to lead to more interaction with the hazard or an increase in frequency?

No

Is there an environmental reason why the frequency of this hazard may increase?

Yes

Are human factors more likely to increase the risk?

No

Social impacts of this hazard:

Fatalities: None

Injuries: None

Evacuation: None

Other consequences:

Property Damage: Minor

Critical Infrastructure Disruption: Minor

Environmental Damage: None

Financial Impact: Moderate

Psychosocial Impact: None

(10) Hazard: Snow

Factors that may change the region's communities vulnerability to this hazard, and would thus change the hazards' impact

Is a large number of the population vulnerable or is the number of people vulnerable to this hazard increasing?

No

Does critical infrastructure reliance or a 'just-on-time' delivery system make the population more vulnerable?

No

Are response agencies/groups aware of, prepared, and trained for responding to this hazard?

Yes

Are prevention/mitigation measures currently in place for this hazard?

Yes

(11) Hazard: Civil Disturbance

Risk: Very Low (8)

Priority: 11

Mitigation Strategy: Maintain strong relationship with RCMP detachments in Thorsby and Wetaskiwin.

Frequency: Rare

Factors that may change the hazard frequency:

Is the number of non-emergency occurrences of the hazard increasing?

No

Is human activity likely to lead to more interaction with the hazard or an increase in frequency?

Yes

Is there an environmental reason why the frequency of this hazard may increase?

No

Are human factors more likely to increase the risk?

Yes

Social impacts of this hazard:

Fatalities: None

Injuries: Minor

Evacuation: None

Other consequences:

Property Damage: Minor

Critical Infrastructure Disruption: Minor

Environmental Damage: Minor

Financial Impact: None

Psychosocial Impact: Moderate

(11) Hazard: Civil Disturbance

Factors that may change the region's communities vulnerability to this hazard, and would thus change the hazards' impact

Is a large number of the population vulnerable or is the number of people vulnerable to this hazard increasing?

No

Does critical infrastructure reliance or a 'just-on-time' delivery system make the population more vulnerable?

No

Are response agencies/groups aware of, prepared, and trained for responding to this hazard?

Yes

Are prevention/mitigation measures currently in place for this hazard?

Yes

Local Crime Watch and quick to report local disturbances.

(12) Hazard: Floods (Watercourse)

Risk: Very Low (4)

Priority: 12

Mitigation Strategy: Low chance, since we are not near large rivers or low water table, everything drains to lake.

Frequency: Rare

Factors that may change the hazard frequency:

Is the number of non-emergency occurrences of the hazard increasing?

No

Is human activity likely to lead to more interaction with the hazard or an increase in frequency?

No

Is there an environmental reason why the frequency of this hazard may increase?

No

Are human factors more likely to increase the risk?

No

Social impacts of this hazard:

Fatalities: None

Injuries: None

Evacuation: Minor

Other consequences:

Property Damage: Minor

Critical Infrastructure Disruption: Minor

Environmental Damage: Minor

Financial Impact: Moderate

Psychosocial Impact: Moderate

(12) Hazard: Floods (Watercourse)

Factors that may change the region's communities vulnerability to this hazard, and would thus change the hazards' impact

Is a large number of the population vulnerable or is the number of people vulnerable to this hazard increasing?

No

Does critical infrastructure reliance or a 'just-on-time' delivery system make the population more vulnerable?

No

Are response agencies/groups aware of, prepared, and trained for responding to this hazard?

No

Are prevention/mitigation measures currently in place for this hazard?

No

Chance of flood occurring in our area extremely low since we are not near river or low water areas.