RISING TO THE CHALLENGE

South Huron's Climate Change Adaptation Strategy

Climate Change Adaptation Advisory Committee

December 5, 2019

Project Update

Climate Change Adaptation Strategy

Municipalities for Climate Innovation Program (MCIP)

FÉDÉRATION CANADIENNE DES MUNICIPALITÉS

FEDERATION OF CANADIAN MUNICIPALITIES

- MCIP program is delivered by the Federation of Canadian Municipalities (FCM) and funded by the Government of Canada
- December 2018: South Huron received a grant of $114,567 to create a climate change adaptation plan
- 24-month grant period to cover 80% of the eligible expenditures
- 59 communities across Canada received the funding

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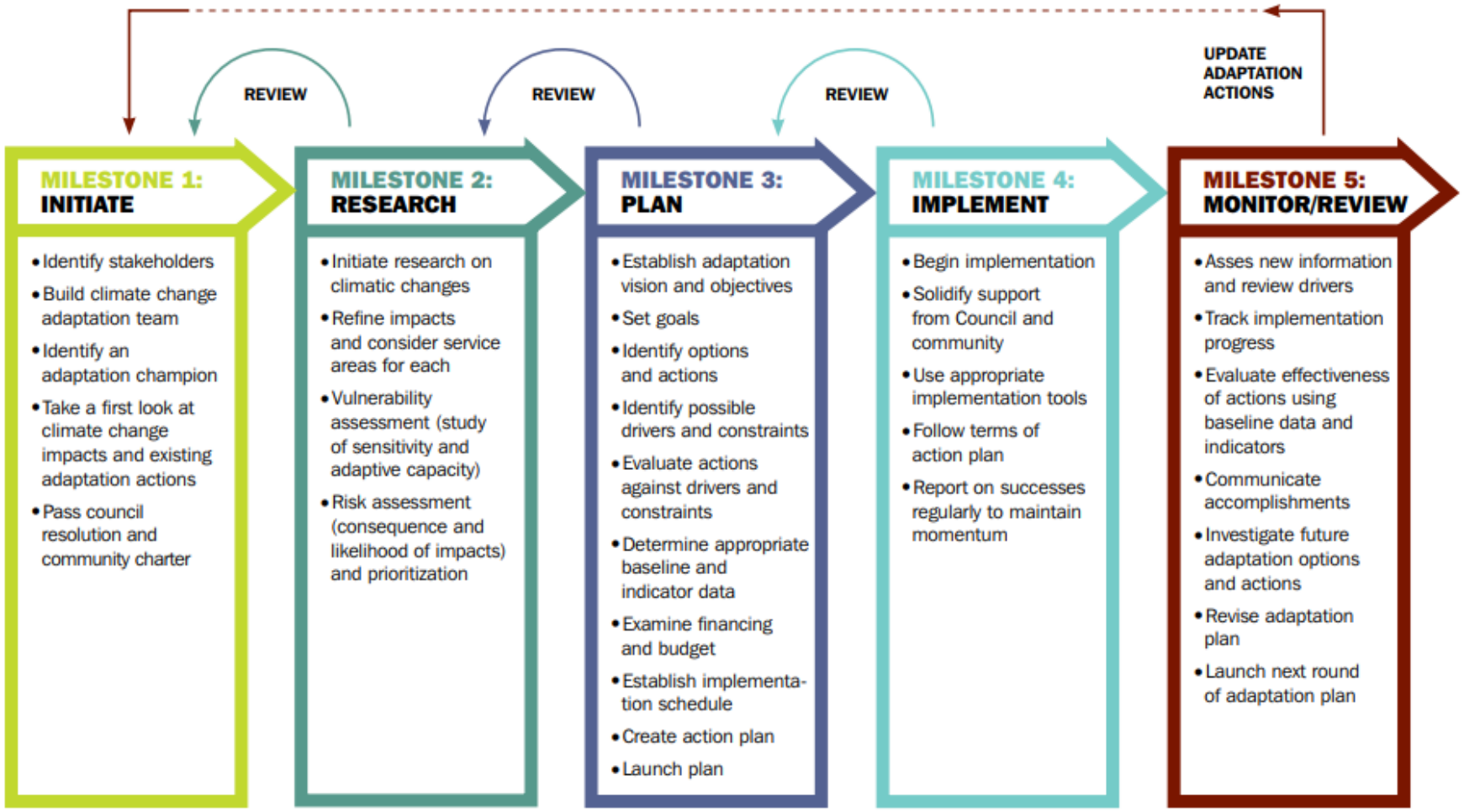
Climate Change Adaptation Strategy

ICELI BARC Milestone Framework



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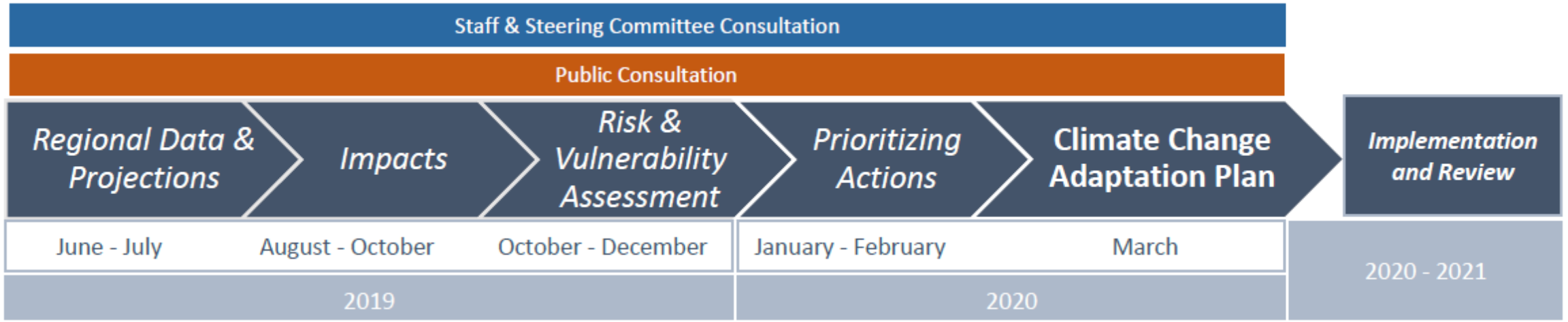
Climate Change Adaptation Strategy

Timeline



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Climate Trends and Projections for South Huron

CLIMATE VARIABLE	SUMMARY OF PROJECTIONS	TREND
TEMPERATURE	• Annual mean temperature increase by 2.1 ˚C (immediate) and 4.2 ˚C (near).	↑
	• Seasonal mean temperature increase – with winter season projected to experience the greatest increase by 2.3 ˚C (immediate) and 4.6 ˚C (near).	↑
	• The number of very hot days (temperature over 30 ˚C) increase by 18.5 days (immediate) and 44.1 days (near).	↑
	• The number of tropical nights (lowest temperature does not go below 20 ˚C) increased by 10.2 days (immediate) and 29.6 days (near).	↑
	• Winter days (temperature drops to at least -15 ˚C) decrease by 8.9 days for the immediate future and 13.6 days for the near future.	↓

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Climate Trends and Projections for South Huron

CLIMATE VARIABLE	SUMMARY OF PROJECTIONS	TREND
PRECIPITATION	• Total annual precipitation increase by 6% (immediate) and 9% (near).	↑
	• Seasonal precipitation increase for: ○ Spring by 9.8% (immediate) and 16% (near). ○ Fall by 3.4% (immediate) and 6.5% (near). ○ Winter by 9.8% (immediate) and 16.6% (near)	↑
	• Summer precipitation remains relatively unchanged compared to historical baseline.	↔
	• Heavy precipitation days of at least 10mm and 20mm of precipitation falls increase for the immediate and near future by 3-4 days and 1-2 days, respectively.	↑
	• Maximum precipitation that falls over a 1-day or 5-day consecutive period increase for the immediate and near future by 7-14% and 8-16%, respectively.	↑

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Climate Trends and Projections for South Huron

CLIMATE VARIABLE	SUMMARY OF PROJECTIONS	TREND
SEASONAL CHANGES	• Lengthening of the frost free season by 25 days (immediate) and 49 days (near).	↑
	• Earlier date of last spring frost to April 18 to April 23 (immediate) and April 7 to April 13 (near) from historical May 1 to May 5.	Earlier
	• Later date of first fall frost to Oct. 31 to Nov. 8 (immediate) and Nov. 13 to Nov. 22 (immediate) from historical Oct. 18 to 26.	Later
	• Annual freeze-thaw cycle decrease by 9% (immediate) and 22% (near).	↓

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Climate Trends and Projections for South Huron

CLIMATE VARIABLE	SUMMARY OF PROJECTIONS	TREND
EXTREME WEATHER EVENTS	• Shorter return of extreme events (more frequent occurrence) • Increase in the length (number of days) and number of heatwave events per year. • Heavy rainfall and drought extremes are projected to increase • Freezing rain, Ice and Snow Events are expected to increase, particularly in the coldest months of winter (January and February) • Wind gust increase for southern Ontario (as locally influenced and large-scale frontal storms)	More frequent, intense and severe
	• Extreme cold events are projected to still occur, however these events will be less cold and less frequent	Less frequent, less cold

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Public Engagement (to date)

- Climate Change Adaptation Strategy Webpage
- Public survey – October 4th to 21st, 2019
  - Questions around climate change knowledge, impacts, vision of the strategy
  - 65 responses received
- Social media posts (capacity building)
  - September 30th to October 4th, 2019 – focus around benefits of adaptation
  - November/December 2019 – focus around public survey findings

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Staff Engagement (to date)

- Staff survey – September 18th to October 4th ,2019
  - Insight into climate change knowledge, impacts and actions
  - All questions optional
  - 36 responses (~70% response rate among staff)
- Departmental Sessions – October 2019
  - Discussions around climate projections, potential impacts to each department, and actions to address impacts
  - All departments completed a session
- Impact Prioritizing Exercise – November 2019
  - Prioritizing impact statements that are most important to least important to help inform the risk and vulnerability assessment

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Impact Statements

74 impacts from climate change have been identified

What is an Impact Statement?

Climate variable

↓

What happens?

↓

What is the impact to the Municipality?

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Vision and **Goals**
for South Huron's Adaptation Strategy

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Vision for South Huron's Adaptation Strategy

Building a resilient and future-ready South Huron through an informed and involved community to ensure that no social, economic and environmental priority is left behind in the face of climate change.

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Next Steps for Committee Input

DECEMBER

- Impacts

JANUARY

- Vision and Goals for the climate change adaptation strategy
- Risk (likelihood x consequence) and vulnerability (sensitivity/adaptive capacity) assessments of impacts
- Public consultation for risk and vulnerability assessment

FEBRUARY

- Action planning

MARCH

- Review of the draft climate change adaptation strategy

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