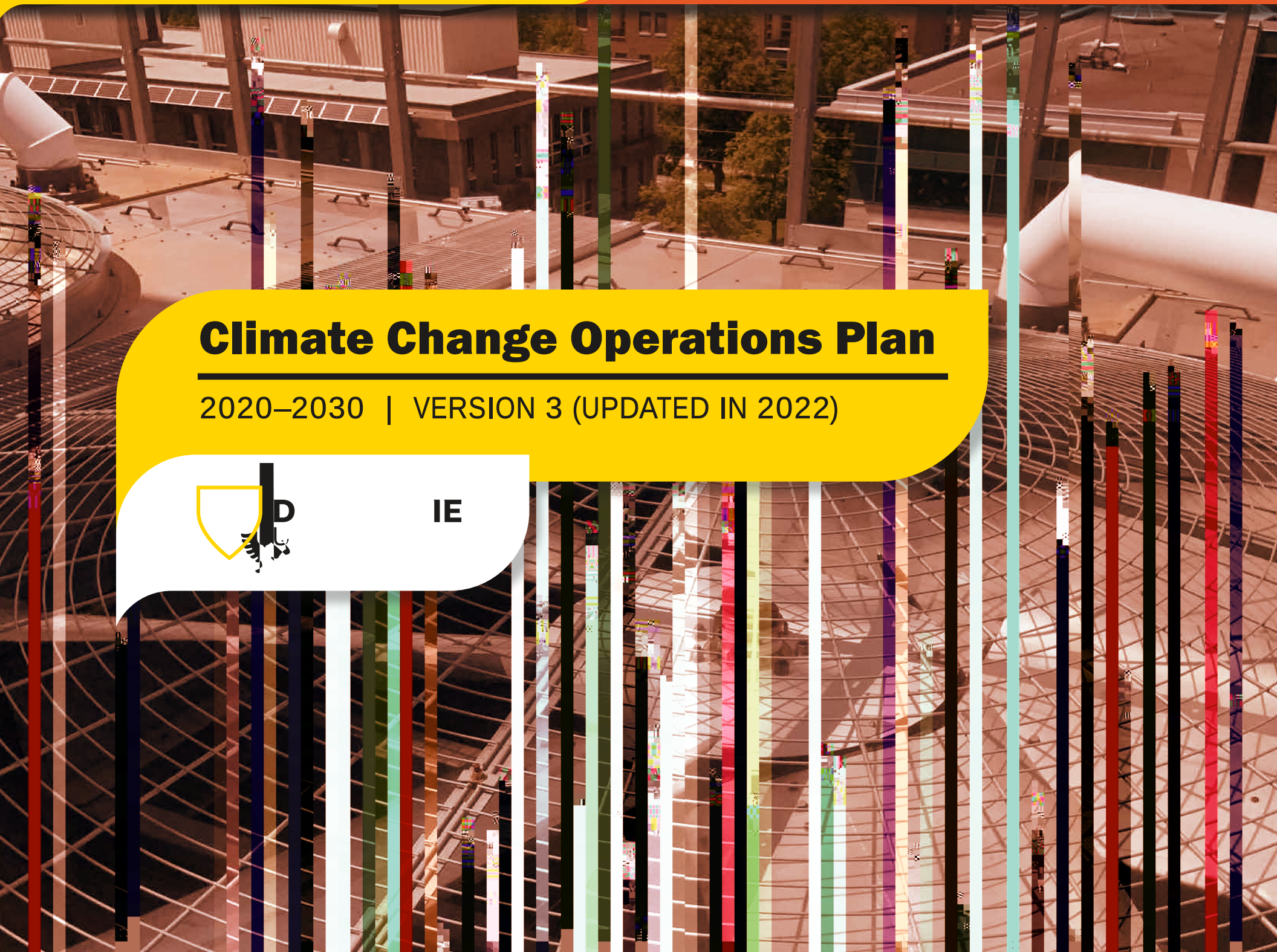


Climate Change Operations Plan

2020–2030 | VERSION 3 (UPDATED IN 2022)

IE

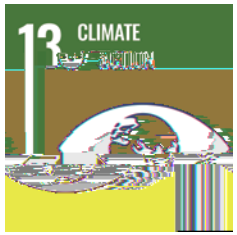
Acknowledgements

[illegible]

Land Acknowledgment

[illegible]

Table of Contents



Summary

Current Context

Climate Change and Its Projected Impacts

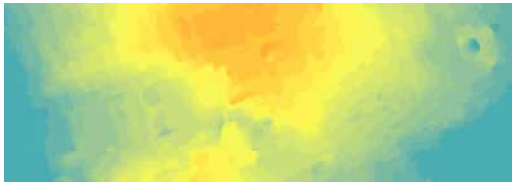
Climate Change Adaptation and Mitigation

Climate Change Planning for Halifax and Colchester County

Halifax

Coastal erosion on McNab's Island Halifax Harbour. Rochelle Owen, 2018.

Figure 3. Studley Campus Elevation Map.
Yvonne Ritchie, 2018.



Colchester

University Response

Permeable pavers

Vision, Principles, and Scope

Benchmarking

GHG Inventory

Scope 1: Direct GHG emissions and removals

Scope 2: Energy indirect GHG emissions

Scope 3: Other indirect GHG emissions

Figure 9. Quantitative summary of Dalhousie's GHG emissions for 2009–2010 baseline for Halifax and AC campuses.

EMISSIONS SUMMARY TONNES	TONNES OF CO2e

Climate Modelling for Halifax and Agricultural Campuses

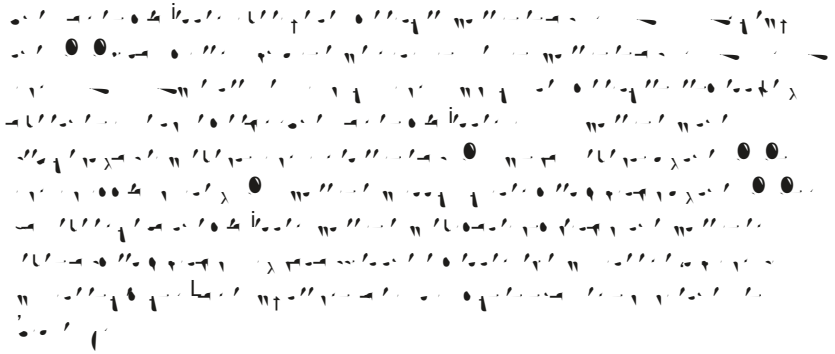


Table 1. Results of climate modelling data without any global action

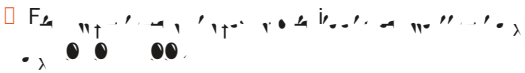
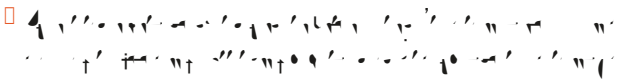
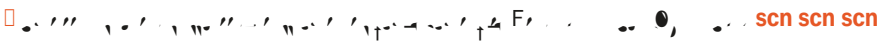
All Campuses (Halifax and Agricultural)	
Key Themes	  
Implications	     scn scn scn

Table 3. Key Climate Vulnerabilities and Impacts

Highest to Lowest Priority Vulnerabilities for the University	Vulnerabilities	Impacts
High		
Medium		
Low		

Table 4. University Specific Climate Change Vulnerabilities and Risks

VULNERABILITY	RISK (Probability and Impact)
Energy	
Downed transmission lines (most likely from severe wind events)	High
Changes in laboratory environments that threaten research animal health, interrupt research, disrupt hazardous material handling	High
Hypothermia if students/sta/faculty on campus without heat	Low
Built Environment	
Flooding of Data Centre Services below grade	High
Collapse or damage to vulnerable roofs from ice/snow	High
Flooding on or around campus	High
Freezing pipes causing flooding and water damage	Medium
More weather impacts (precipitation, wind, freeze/thaw, ice, heat) on the building envelope and outdoor surfaces	Medium
Impacts on the tunnels that supply buildings with electricity, heating, cooling	Low
Natural Environment	
Damage to foliage, weakened trees (from pests and winds)	High
Erosion	Medium
Damage to agricultural lands	Medium
Seasonal water shortages impacting campus lands and usage	Low
Transportation	
Impaired transportation systems through flooded roads and lands from increase precipitation and tree fall	Medium
Roads damaged in winter through increased freeze and thaw cycles	Medium
Other	
Respiratory distress or heat stroke (people and animals)	Medium
Falls as a result of snow/ice, with financial liability	Medium
Housing impacts in surrounding community and/on campus (ex. more severe storms causing impacts to housing)	Medium-Low

Goals, Actions and Targets

Campus Energy Solutions

Actions

Fuel conversion

Co-generation

District Energy (DE)

Renewables

Critical Infrastructure Resiliency

Targets

GHG reductions

Total 66,000 tonnes

Adaptation

Green Buildings

Actions

Recommissioning

Major and Minor Buildings Retrofits

New Construction

Rain water cistern in IDEA building

Targets

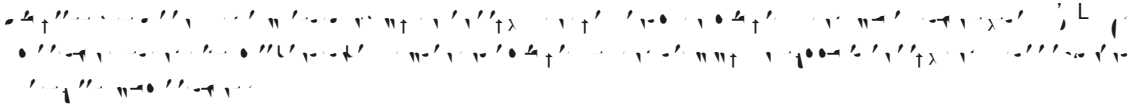
GHG reductions (o□sets growth)

Adaptation

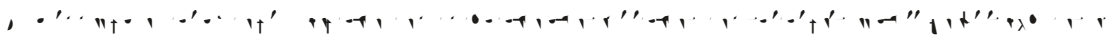
Knowledge and Behaviour

Actions

Operations Changes



University Plans



Natural Environment

Actions

Green and White Roofs

Native Trees and Vegetated Swales

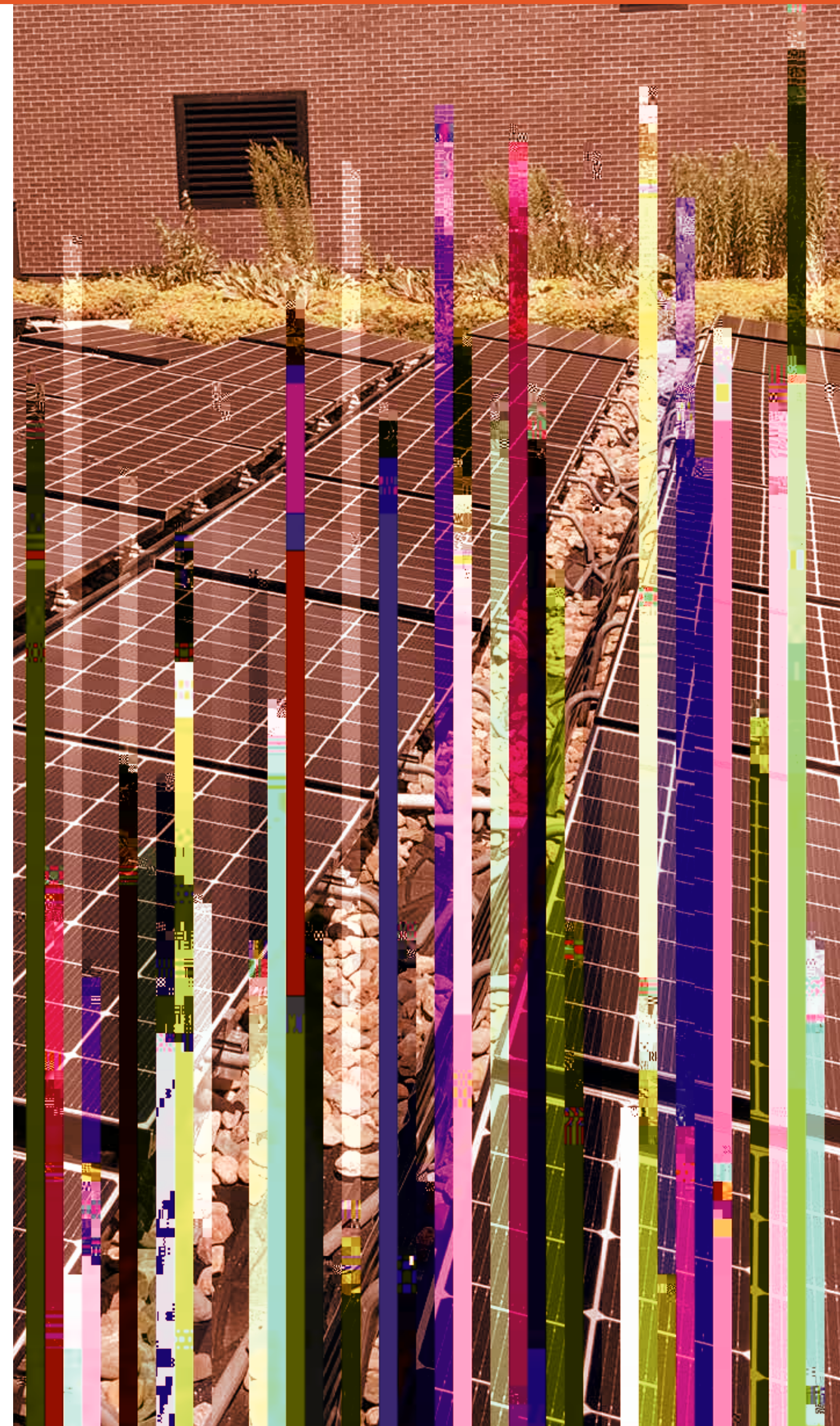
Rainwater Harvesting

Carbon O□sets and Sinks

Actions

Land procurement

References



DALHO

dal.ca/sustainability