



# Neighbourhood Climate Action Plan

June 2025 | Progress Update



THE UNIVERSITY OF BRITISH COLUMBIA  
Campus + Community Planning

# Land Acknowledgement

The UBC Point Grey campus is situated within the traditional, ancestral, and unceded territory of the x<sup>w</sup>məθk<sup>w</sup>əyəm (Musqueam) people. For millennia, x<sup>w</sup>məθk<sup>w</sup>əyəm have been stewards and caretakers of the lands upon which UBC is now located.

These lands are a place of cultural and spiritual learning, welcoming and interacting with visitors to the territory. In pursuit of sustainability, climate action, and climate justice, we understand that they are also a place of learning where the x<sup>w</sup>məθk<sup>w</sup>əyəm acquired knowledge of local plants and animals for their enduring wellbeing and ways of thriving with these resources. UBC is working toward building meaningful, reciprocal and mutually beneficial partnerships with x<sup>w</sup>məθk<sup>w</sup>əyəm.



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# Overview

The Neighbourhood Climate Action Plan (NCAP) sets a pathway to a net-zero and climate resilient community for the residential neighbourhoods on the University of British Columbia’s (UBC) Vancouver campus.

NCAP addresses this goal through climate actions in six scope areas. Each scope area establishes goals and key targets establishing measurable outcomes by specific dates, and actions describing steps to be taken to achieve the targets and goals.

This report provides a 2025 progress update on NCAP implementation by scope area. The report tracks progress towards building climate resilience and reducing GHG emissions since NCAP was approved in June 2024. Included are summaries of key work and highlighted projects that are advancing NCAP goals.

The progress update supports the NCAP guiding principle of long-term accountability, ensuring visibility of NCAP progress and providing transparency to stakeholders.



Shaped by NCAP’s guiding principles, several co-benefits have been defined that NCAP actions will help deliver. These are:



### Affordability

Actions that reduce costs associated with taking climate action.



### Community Connection

Recognizing that a connected community is a resilient community, actions that support opportunities for community interaction and connection.



### Health & Wellbeing

Actions that improve health and wellbeing conditions for community members.



### Climate Leadership

Actions where UBC is leading climate action policy.



### Access for All

Actions that make it easier for everyone to access spaces, information, processes or programs.



### Academic Connection

Actions that provide opportunity for research connections with UBC’s academic community.

# Dashboard

Scope Area	Target	Indicator	Baseline	Target	2024	Notes
New Construction & Existing Buildings	<b>Target 1:</b> Embodied carbon in new buildings is reduced 40% versus baseline building by 2030.	% required reduction	0%	-40% (2030)	-10%	REAP 4.0 requires 10% reduction versus baseline.
	<b>Target 2:</b> At least 50% of homes have active, low carbon cooling by 2030, increasing to 100% before 2050.	% housing units with low carbon cooling	30% (2022)	50% (2030) 100% (2050)	—	Methodology for tracking cooling retrofits under development.
	<b>Target 3:</b> Building operational emissions are reduced by at least 60% from 2022 levels by 2035.	tonnes of CO <sub>2</sub> e per year	14,934 (2022)	-60% (2035) -100% (2050)	15,254 (+2%)	Operational emissions expected to continue to grow with increased developments, until NDES decarbonization.
	<b>Target 4:</b> All buildings in UBC’s residential neighbourhoods achieve net-zero operational emissions and are resilient to current and future climate conditions by 2050.					
Transportation & Mobility	<b>Target 1:</b> Per capita transportation emissions are reduced by at least 25% from 2022 levels by 2035.	tonnes CO <sub>2</sub> e per person per year	0.58 (2022)	-25% (2035)	—	Model inputs (e.g. Regional Transportation Model) are not updated annually. NCAP will update progress against this target aligned with updated input data.  NCAP Action TM-8 will explore improved options for monitoring neighbourhood transportation metrics.
	<b>Target 2:</b> UBC neighbourhood contributions to overall campus target of at least 66% of trips to and from UBC made by walking, cycling, rolling or transit.	% mode share by walk, bike, rolling, and transit	50% (2022)	66%	54%	
	<b>Target 3:</b> 12% of residents’ light-duty vehicles are zero emissions vehicles.	% light-duty vehicles that are ZEV	3.3% (2021)	12%	6.6%	Update is based on 2023 data; 2024 data not yet available.

Scope Area	Target	Indicator	Baseline	Target	2024	Notes
Transportation & Mobility	<b>Target 4:</b> 100% of trips by UBC neighbourhood residents are made by walking, cycling, rolling, zero emission transit or zero emission vehicles by 2050.	% total mode share by walk, bike, rolling, transit or ZEV	—	100%	—	NCAP Action TM-8 will explore improved options for monitoring neighbourhood transportation metrics. NCAP will update progress against this target aligned with updated monitoring methods.
Waste, Materials & Consumables	<b>Target 1:</b> Per capita waste emissions are reduced by at least 30% from 2022 levels by 2035.	tonnes CO <sub>2</sub> e per person per year	0.18 (2022)	-30% (2035)	—	NCAP Action WC-3.2 will explore improved options for monitoring neighbourhood waste generation and diversion. NCAP will update progress against this target aligned with updated monitoring methods.
	<b>Target 2:</b> UBC's residential neighbourhoods achieve net-zero emissions from solid waste by 2050.	tonnes CO <sub>2</sub> e per year	2,771 (2022)	-100% (2050)	—	NCAP Action WC-3.2 will explore improved options for monitoring neighbourhood waste generation and diversion. NCAP will update progress against this target aligned with updated monitoring methods.
Ecology	<b>Target:</b> Pending					Analysis is ongoing that will support defining targets.
Climate Emergency Preparedness	<b>Target:</b> By 2030, at least 50% of homes have active, low carbon cooling, reaching 100% before 2050.	% housing units with low carbon cooling	30% (2022)	50% (2030) 100% (2050)	—	Methodology for tracking cooling retrofits under development.
Neighbourhood Infrastructure	<b>Target 1:</b> At least 65% of neighbourhood energy supply is from low carbon sources (electricity or low carbon district energy) by 2035.  <b>Target 2:</b> 100% of neighbourhood energy supply is from net-zero sources by 2050.	% low carbon energy	32%	65% (2035) 100% (2050)	32%	Energy supply mix expected to remain fairly constant until NDES decarbonization.

# Progress:

## New Construction & Existing Buildings

NCAP Progress Update | 2025



### Goal

New and existing buildings achieve low carbon, energy efficient operations, incorporate low embodied carbon materials and design, and provide residents with safe and healthy homes that are resilient to the effects of climate change.

### Project Highlights

#### Codes Acceleration Fund (CAF) Project

UBC was awarded a 3 year federal CAF grant that is supporting development of a REAP roadmap for adopting the top steps of the BC Energy and Zero Carbon Step Codes, developing a tiered embodied carbon targets, and increasing resiliency through updated future climate energy modelling and passive design measures. Initial phases of work have helped inform the REAP 4.0 updates for embodied carbon and cooling energy targets.



#### Low Carbon Resilient Retrofit Design Study

With support from BC Hydro and BC Housing, a retrofit design study was undertaken that evaluates retrofit strategies for existing apartment buildings to electrify heating and add cooling to reduce emissions and address overheating due to climate change. The study, delivered by a consulting team led by RDH Building Science, provides costed retrofit bundles, guidance on managing retrofit process and a summary of available financial incentives and other retrofit supports. This work will inform NCAP's approach to implementing existing building retrofits.

### Key Actions



- NCAP has supported development of **Residential Environmental Assessment Program (REAP) version 4.0**, which is targeting approval for June 2025. REAP 4.0 includes preconditions (required items) and optional credits applicable to all new developments in UBC's residential neighbourhoods. REAP is the key tool for implementing NCAP actions for all scope areas on new building sites. Highlights of this work are included throughout this Progress Update report.
- REAP Energy and Emissions preconditions and credits were updated and added to align with key NCAP actions. This includes:
  - Requiring all new developments be designed and constructed to comply with the BC Zero Carbon Step Code, Zero Carbon Step (EL-4) for operational carbon;
  - Restricting the use of indoor combustion-based fireplaces.
- REAP Climate Adaptation now includes a precondition requiring designs meet a cooling energy efficiency target (aka Cooling Energy Demand Intensity, CEDI).
- REAP Materials and Resources now includes a precondition establishing a target of a 10% reduction in embodied carbon.
- **C+CP's Development Services** launched the 1-Step Residential Heat Pump Permit to simplify permit application for apartment owners who wish to retrofit their units to install heat-pumps. These retrofits will provide low-carbon heating and cooling in their homes, providing resiliency from climate change and reducing energy consumption and costs through energy efficiency provided by heat pumps.

# Progress: Transportation & Mobility

NCAP Progress Update | 2025

## Goal

Residents benefit from convenient and reliable transit and an expanded on-campus mobility network (e.g. shared bike programs and cycling infrastructure) that prioritizes active and sustainable modes for people of all ages and abilities. These initiatives better support residents in ensuring they get to where they need to go comfortably and safely, while reducing greenhouse gas emissions.

## Project Highlights

### Sustainable Transportation Accessibility in UBC's Residential Neighbourhoods

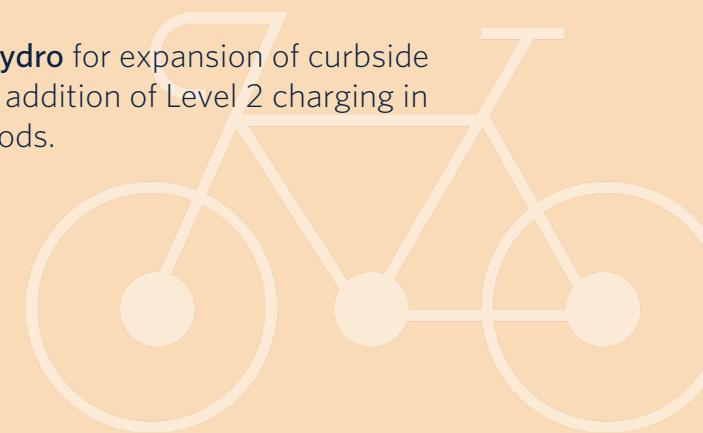
SEEDS Research Collaboration 

In collaboration with SEEDS Sustainability Program (SEEDS) and students from GEOG 371, a research project was conducted on sustainable transportation modes for residents of UBC's residential neighbourhoods to help understand barriers to access for these services. Multiple research methods were applied to understand current usage and access data, and to determine barriers to increasing adoption of sustainable transportation modes. Findings will be used to support further research into transportation accessibility and affordability, as well as updates to UBC's Transportation Plan and future transportation programs.



## Key Actions

- NCAP supported development of the amended **Wesbrook Neighbourhood Plan**, including support for sustainable transportation initiatives, including:
  - Curb space prioritization for essential activities (pick-up, drop-off) and sustainable modes;
  - Plans for new dedicated cycling lane along Binning Road;
  - Resilience recommendations for future public transportation stops.
- REAP Health and Wellbeing — Bicycle Parking precondition was refined and updated.
- REAP Energy and Emissions — Electric Vehicle Charging Infrastructure precondition was amended to add a requirement that all commercial parking stalls dedicated to car-share are electrified.
- Undertook planning with **BC Hydro** for expansion of curbside DC Fast Chargers (DCFC) and addition of Level 2 charging in UBC's residential neighbourhoods.



# Progress:

## Waste, Materials & Consumables

NCAP Progress Update | 2025



### Goal

Transition towards a zero-waste community by creating opportunities for residents to share, reuse, and repair, supporting the circular economy. Thoughtful building and neighbourhood design, along with community programming, make waste sorting for recycling and organics easy and efficient for all residents and visitors. Construction and demolition practices make efficient use of building materials and optimize their reuse and diversion from landfill.

### Project Highlights

#### Share, Reuse, Repair Initiatives in UBC's Residential Neighbourhoods

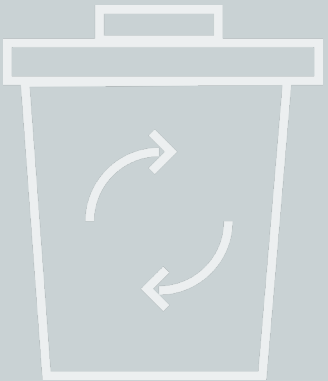
SEEDS Research Collaboration 

In collaboration with SEEDS Sustainability Program (SEEDS), UNA, and students from GEOG 371, a research project was conducted on waste management and Share, Reuse, Repair (SRR) initiatives in the UBC residential neighbourhoods. Research explored community interests in various SRR initiatives and will be used to help expand zero waste programming offered by the UNA.



### Key Actions

- **UNA and UBC Campus and Community Planning** collaborated on launching a Reuse Cafe to support the circular economy, which included:
  - Clothes mending;
  - Bike tune-ups in collaboration with the [Bike Kitchen](#);
  - Community weaving project with old textiles supported by [Community Fabric](#);
  - Learn more about the launch event and future programming [here](#).
- **UNA** expanded and enhanced the Green Depot services through expanded hours and new initiatives, such as a Community Share Library, Free Store initiative, and Seed Library. Learn more [here](#).





## Goal

Trees, landscapes and other natural assets provide vital ecosystem services to help UBC's neighbourhoods adapt to a changing climate. Anchored by UBC's Campus Vision 2050 commitment to understand and incorporate Musqueam values into planning, climate adaptive planting practices support a network of resilient, connected green public spaces, courtyards, and corridors integrated with neighbourhood buildings. Neighbourhood urban ecosystems are well designed to provide welcoming and restorative places for the community to come together and build connections.

## Project Highlights

### Urban Heat Island Guidebook: Mitigation Strategies for the UBC Vancouver Neighbourhoods

UBC Sustainability Scholar Project 

This guidebook offers strategies for mitigating the urban heat island (UHI) effect in UBC Vancouver neighbourhoods. It highlights nature-based and engineered solutions to enhance outdoor shading, reduce cooling demands, and support sustainable transportation use during extreme heat. Offering recommendations and actionable insights, the guidebook serves as a resource to UBC planners & architects, UNA staff, and residents working to build climate-resilience within existing and future neighbourhoods. Find the final guidebook [here](#).

### Shade Mapping for Neighbourhood Climate Adaptation and Community Wellbeing

SEEDS Research Collaboration 

In collaboration with SEEDS Sustainability Program (SEEDS) and UBC's Master of Geomatics for Environmental Management (MGEM), a methodology was developed for mapping shade coverage at UBC Vancouver's campus including the residential neighbourhoods. The final map displays shade frequency across the campus neighbourhoods and provides insights into area with lower shade coverage. Explore the final Shade Frequency map [here](#).

### Shade Mapping Trees & Buildings

SEEDS Research Collaboration 

Building upon the foundational work of the shade frequency mapping project, a second round of shade analysis projects were completed in collaboration with SEEDS and UBC's MGEM program. One project explored shade from different climate resilient tree species to provide recommendations around species selection as well as planting configurations for efficient shade coverage. A related project looked at the impact of tree shade on building energy use for cooling and found some statistically significant evidence that tree shade can help lower cooling energy demand in buildings.



## Key Actions

- Foundational research projects were completed with the support of **SEEDS Sustainability Program** to analyze shade in UBC's residential neighbourhoods. This supports NCAP's work to establish performance targets relating to neighbourhood shade coverage.
- Work has initiated to develop a planting and soils tool that will support climate resilient plantings in new and existing neighbourhood spaces.
- NCAP supported ongoing development of **UBC's Biodiversity Strategy**, highlighting key areas relating to climate resilience to consider, including shade, wildfire risk, and flood mitigation.
- **REAP** Biodiversity preconditions and credits were updated to strengthen requirements for site landscapes to improve biodiversity and climate resilience.
- NCAP supported development of the amended **Wesbrook Neighbourhood Plan**, including consideration of climate resilience for neighbourhood greenspaces.

# Progress:

## Climate Emergency Preparedness

NCAP Progress Update | 2025



### Goal

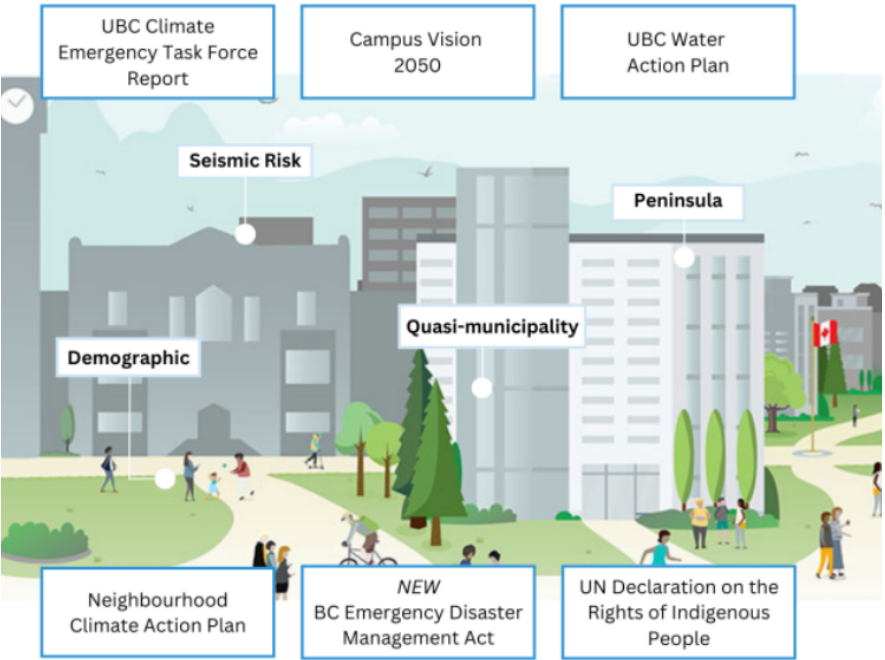
Residents are prepared for and well supported during extreme climate events such as heavy rainfalls, windstorms, wildfires and extreme heat. Through expanded resources, infrastructure, and proactive communication, residents feel safe and protected in their communities. Community-led social connectedness programs have strengthened ties between neighbours, creating a more resilient community network.

### Project Highlights

#### Resilience Hubs for UBC Campus Communities

*Campus as a Living Lab (CLL) Grand Challenge project* 

NCAP staff have been identified as a key stakeholder to this CLL project and participated in some early sessions as research kicked off. This project focuses on enhancing campus resilience in response to climate hazards, aligning with Campus Vision 2050. By integrating multidisciplinary research and operational expertise, the project will support UBC's long-term resilience planning, addressing key priorities in climate emergency preparedness and community wellbeing. Research activities will focus on water infrastructure, transportation system vulnerability, support needs and capacities of UBC communities, current and future physical and social vulnerabilities, mass care supports, mapping governance arrangements in pre-emergency and emergency situations, future local emergency and disaster governance structures, planning for earthquake resilience and the application of research to campus emergency planning. Learn more [here](#).



UBC's unique context, policies and strategies support for resilience hub ([source](#)).

### Key Actions

- **UNA** has initiated work to support improved infrastructure, facilities and operations during extreme heat events, including adding trees and shade structures at the Wesbrook Community Centre Splash Pad, internal review of cooling centre operational procedures and policy, and working with **UBC Safety and Risk Services** to explore post emergency training.
- **UNA** completed a feasibility study looking at low carbon, resilient upgrades to the Old Barn Community Centre, including adding mechanical cooling.
- **REAP** Climate Adaptation preconditions and credits were updated to strengthen climate resilience within new neighbourhood developments. This includes:
  - Design requirements for wildfire risk reduction (building materials and site landscapes);
  - Strengthened design requirements to avoid overheating in buildings under future climate conditions;
  - Updated credit for refuge spaces and back-up power;
  - New credit for design features that support social connection;
  - New credit for urban heat island mitigation.
- NCAP supported development of the amended **Wesbrook Neighbourhood Plan**, including consideration of strategies to mitigate risk of urban-wildland interface fires.

# Progress:

## Neighbourhood Infrastructure

NCAP Progress Update | 2025

### Goal

Water and energy infrastructure servicing UBC's residential neighbourhoods is resilient and ready to respond to our changing climate. Upgraded systems support climate action and prioritize efficient, affordable and resilient services.

### Key Actions

- Work has continued to update **UBC Vancouver's Integrated Rainwater Management Plan (IRMP)**, aligned with future climate projections. Proposed strategies and financial recommendations from the updated work will be presented for endorsement in mid 2025.
- **REAP** Water — Rainwater Management precondition was updated to align with UBC's updated IRMP, providing sites with the ability to manage more intense and frequent rain storms due to climate change.
- Continued work supporting **Corix Utilities**, the owner/operator of the **Neighbourhood District Energy System (NDES)** a centralized energy supply system that has been providing heat and domestic hot water to Wesbrook Place since 2015. Key work has included reviews of technical engineering studies on NDES decarbonization options.



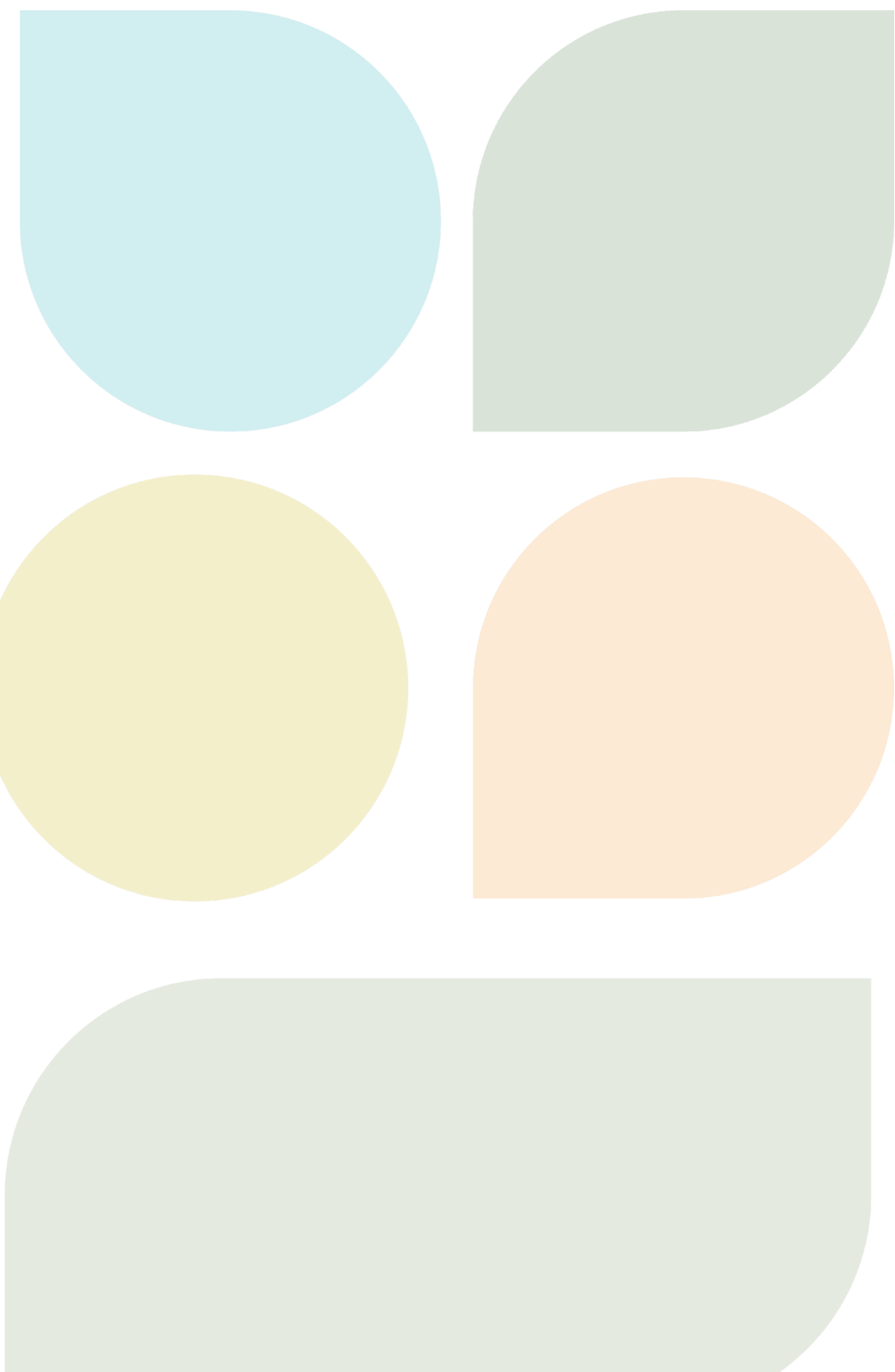
# NCAP Implementation Updates

NCAP is a living plan, and will adapt and evolve over time, responding to new information, technologies, and a changing provincial and federal policy landscape. Our approach to implementation reflects NCAP’s guiding principles and is anchored by commitments to:

- Shared responsibility and collaboration
- Climate equity and justice
- Ongoing community dialogue
- Learning and research
- Monitoring and reporting

Some highlights from the past year that reflect these commitments are shared below:

- Continued collaboration with **UNA** staff, including monthly check-in sessions and **UBC-UNA partnerships** to deliver climate related community programming.
- Equity continues to provide the central lens used to shape NCAP implementation. Further to this, an Equity Memo was prepared to support NCAP Implementation. This memo provides an overview of NCAP’s main equity considerations, and ways to address these equity considerations based on a range of best practices. This memo also discusses gaps in NCAP’s current equity approach, and evaluates, highlights, and expands upon the necessary equity considerations within each NCAP scope area.
- Continued relationship with **UBC SEEDS Sustainability Program** creating academic partnerships for student-led research that supports NCAP actions.
- Development of NCAP Progress Update template to enable sharing regular updates on NCAP implementation. The report is intended to be public facing, helping to inform the community on key NCAP initiatives. The NCAP Progress Update will also be shared with **UBC’s Board of Governors** as part of June Climate Action update reporting.
- Progress against all specific actions in the NCAP Action Matrix has been updated. A detailed chart with current status can be found at <https://planning.ubc.ca/ncap>



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