



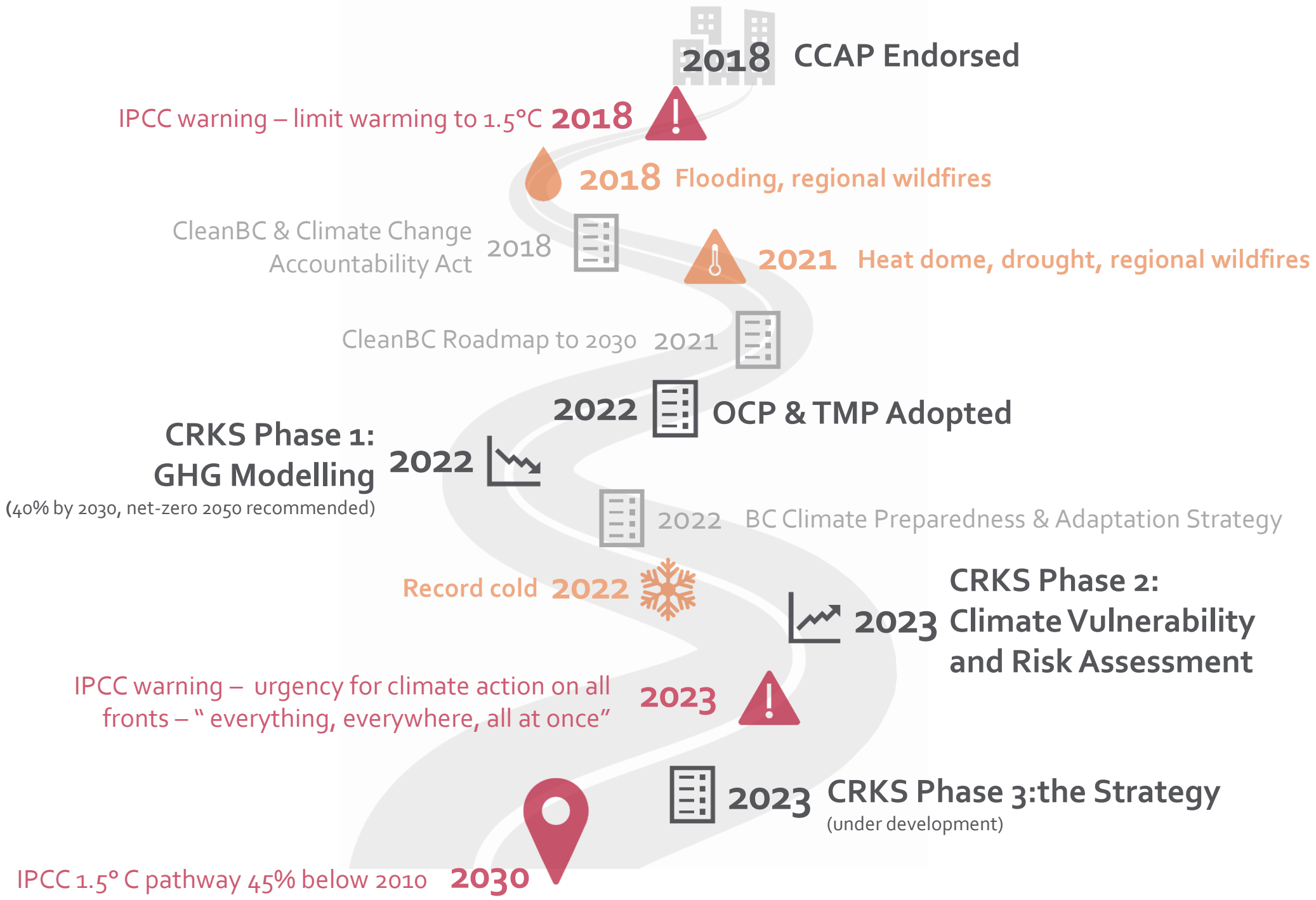
City of  
**Kelowna**

# Climate Resilient Kelowna Strategy: Vulnerability & Risk | Engagement

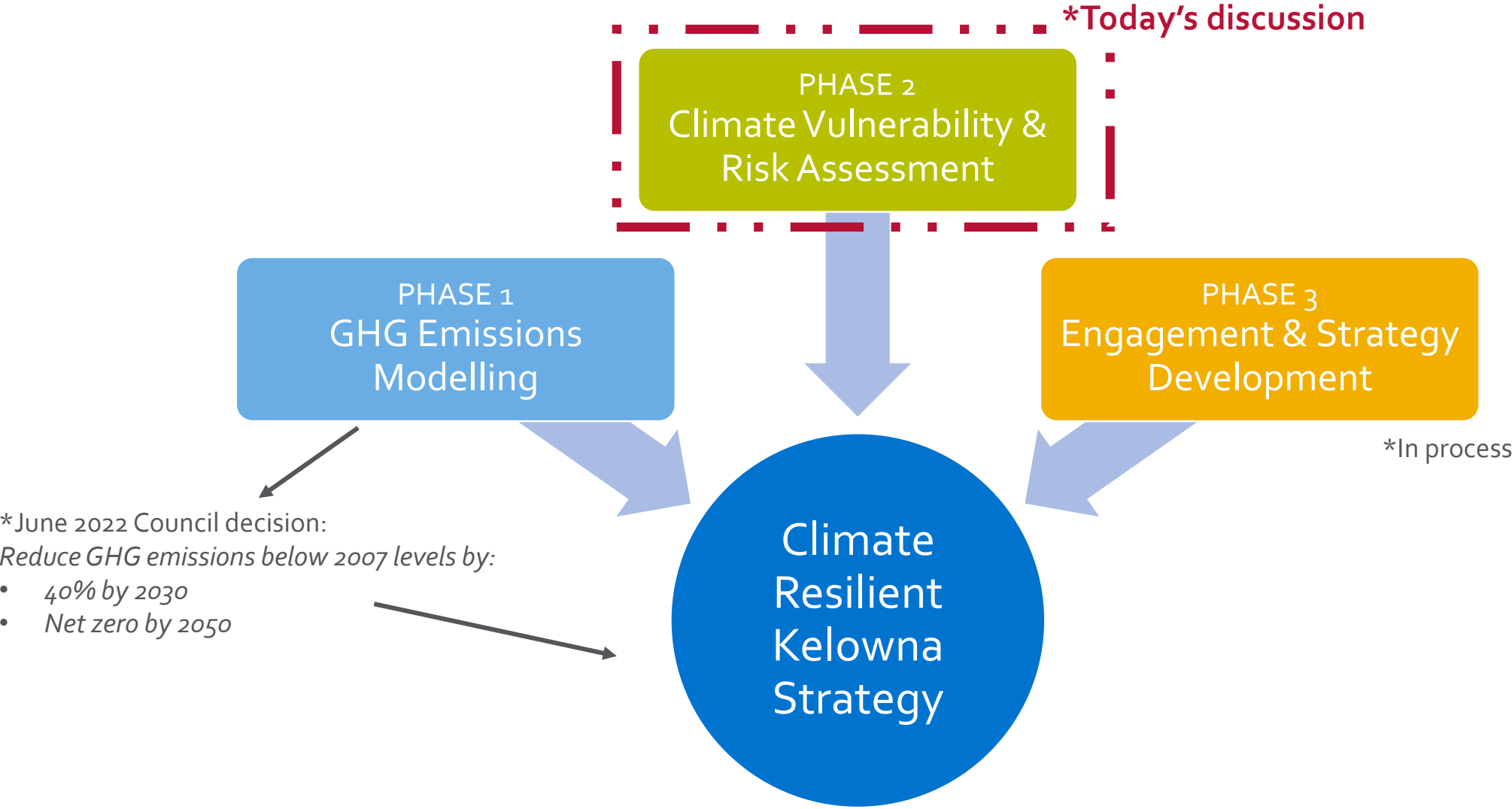
April 2023



# Why a Climate Resilient Kelowna Strategy?



# Developing the Strategy



# Climate change projections



**Warmer  
temps**



**Drier  
summers**



**More  
precipitation**



**Warmer  
winters**



**Longer  
growing  
season**



**Shifting  
seasons**

Kelowna  
Climate Vulnerability and  
Risk Assessment

March 2023



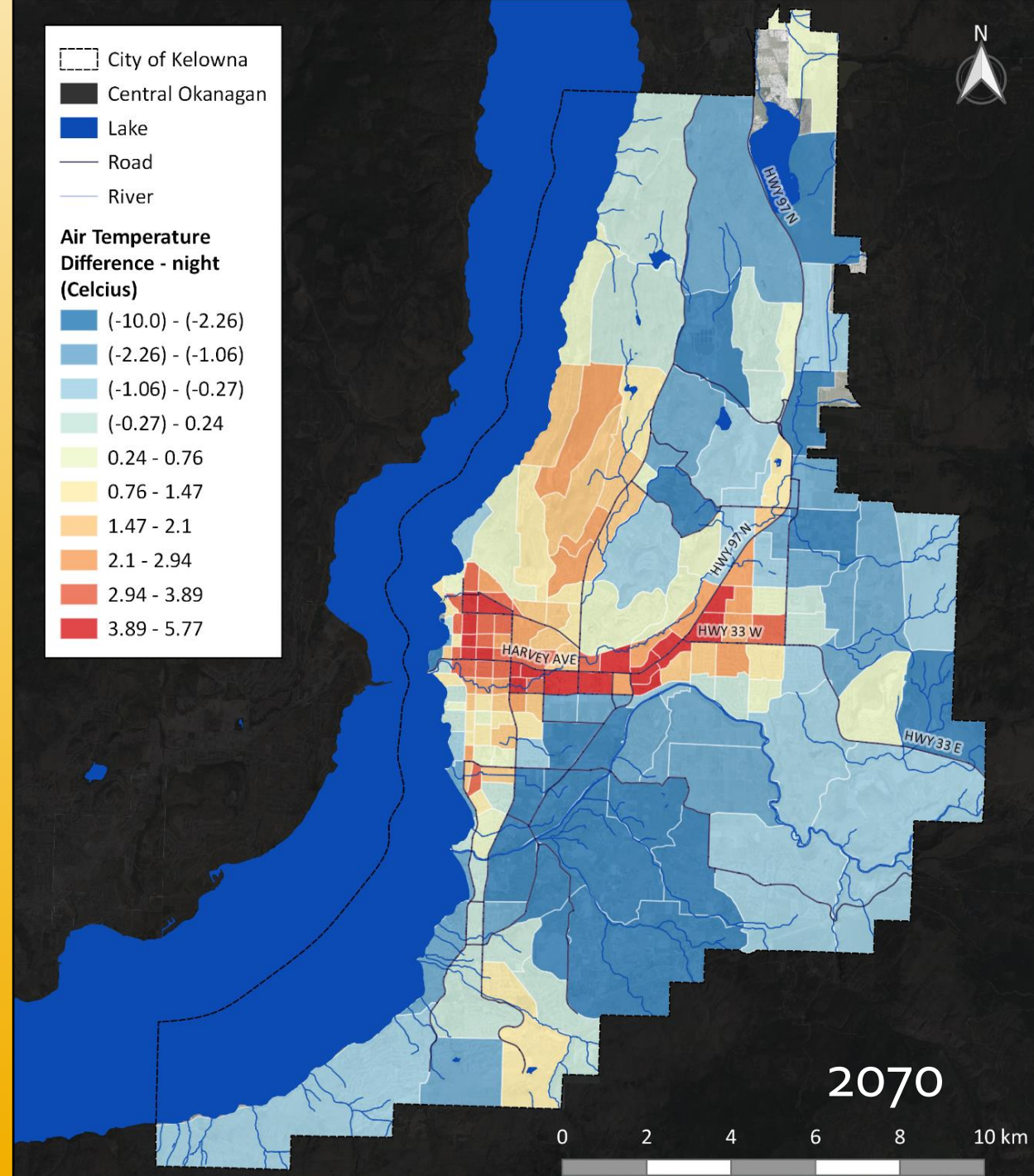
# Kelowna's CVRA

- ▶ Examines hazards today and in 2070
- ▶ Takes into account:
  - ▶ ↑ 100,000 people (approx.)
  - ▶ ↑ 50,000 dwelling units (approx.)
  - ▶ Expected local climate changes
- ▶ Hazards modelled
  - ▶ Heat
  - ▶ Flooding
  - ▶ Wildfire
- ▶ Landslides, water security, invasive species and extreme cold qualitatively reviewed



# Hazard: Extreme Heat

- ▶ ↑ heat risk for Core Area & Urban Centres
- ▶ ↑ population affected by a 20-year heat event (100% versus 55% now)
- ▶ ↑ peak electricity demand
- ▶ ↑ hospitalizations
- ▶ ↑ tree mortality
- ▶ ↓ air quality
- ▶ ↓ tourism and ↓ crop yields/quality
- ▶ Deterioration of roads







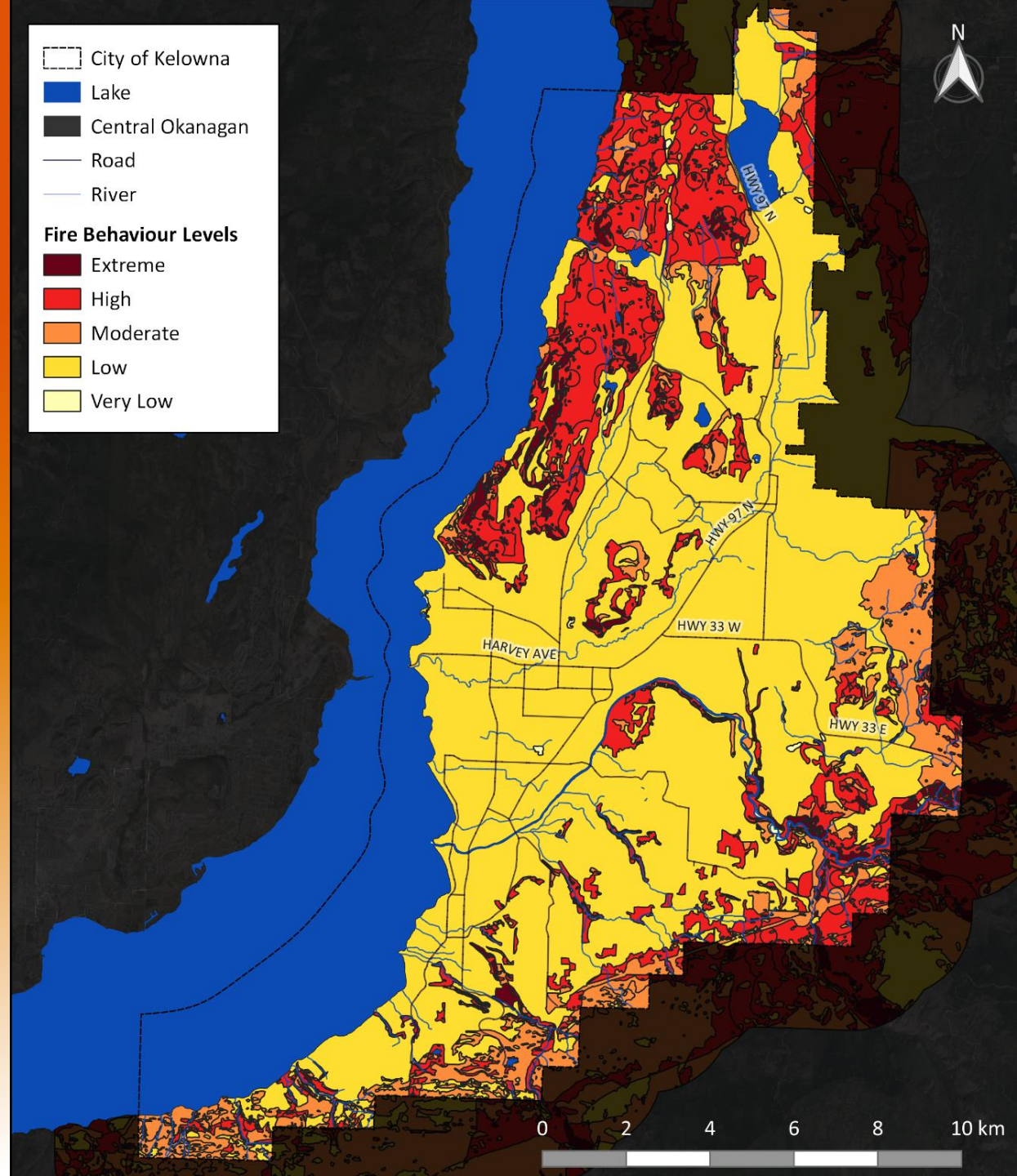
# Hazard: Flooding

- ▶ Nearly twice as many people affected by very rare flood
- ▶ 40 critical infrastructure assets at risk
- ▶ Electrical substations, water and wastewater treatment facilities at risk in a rare flood event
- ▶ Total damages from frequent floods in 2070 will be higher than rare floods today
- ▶ ↓ water quality



# Hazard: Wildfire

- ▶ 3 x more people living in or near areas with potential for high or extreme fire behaviour
- ▶ ↓ air quality
- ▶ ↓ tourism
- ▶ Unhealthy conditions for outdoor workers







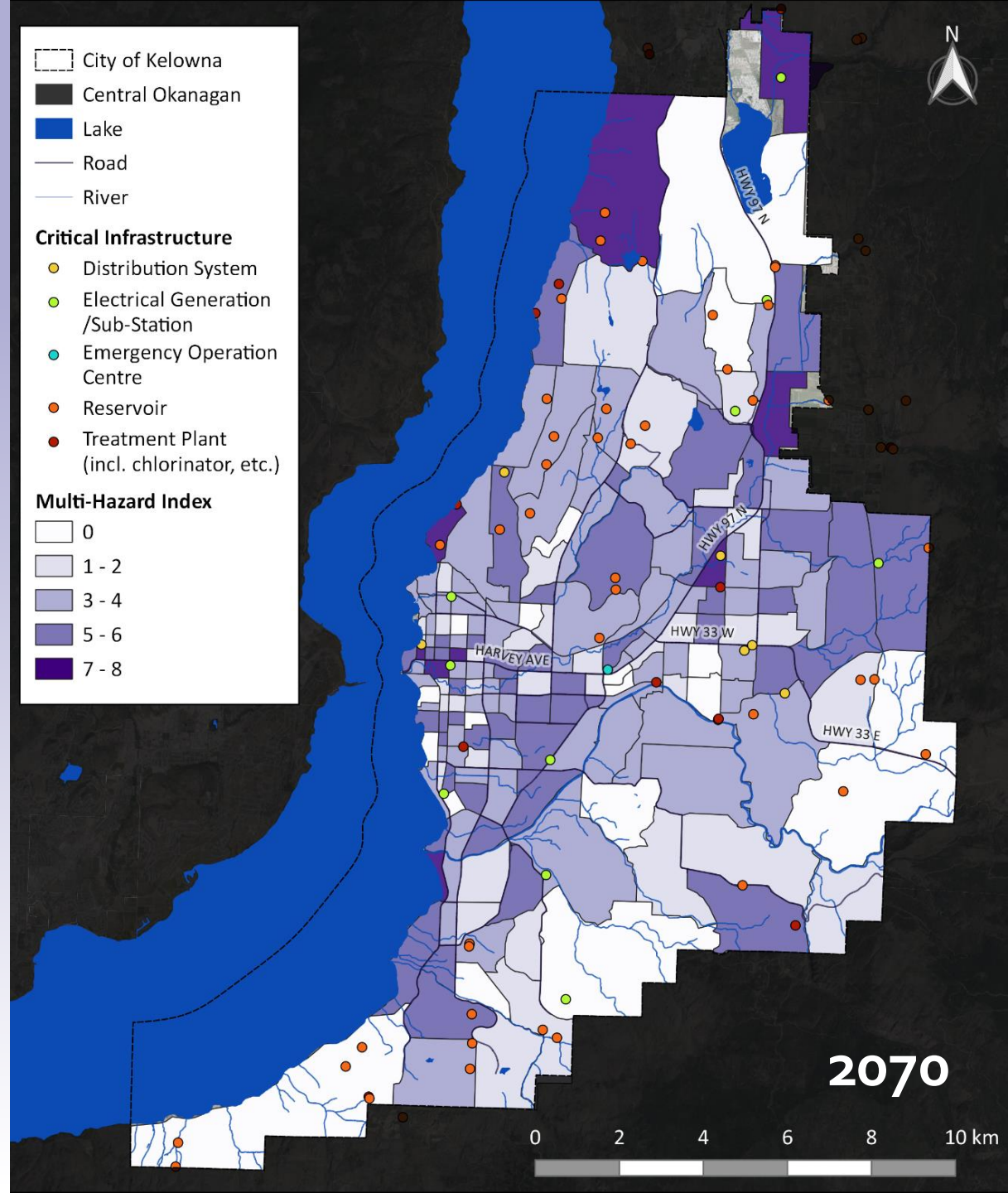
# Hazards: Landslides, Water, Invasive Species, & Extreme Cold

- ▶ Transportation impacts
- ▶ ↓ water quality and/or quantity
- ▶ ↓ biodiversity and degraded habitat
- ▶ Disruption to agricultural production
- ▶ ↑ health impacts



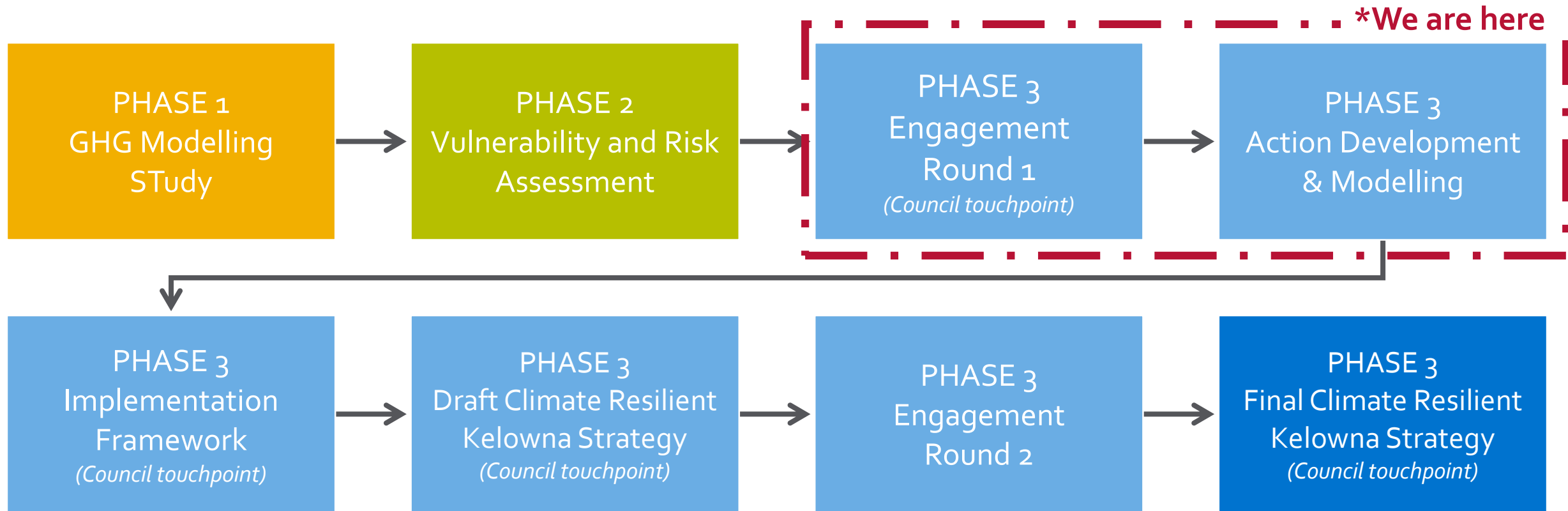
# Multi Hazard Analysis

- ▶ Climate hazards may not occur in isolation
- ▶ Combined risk of the three modelled hazards (Heat, Wildfire, Flooding)
- ▶ Risk calculated relative to other zones





# Next Steps:



# Engagement

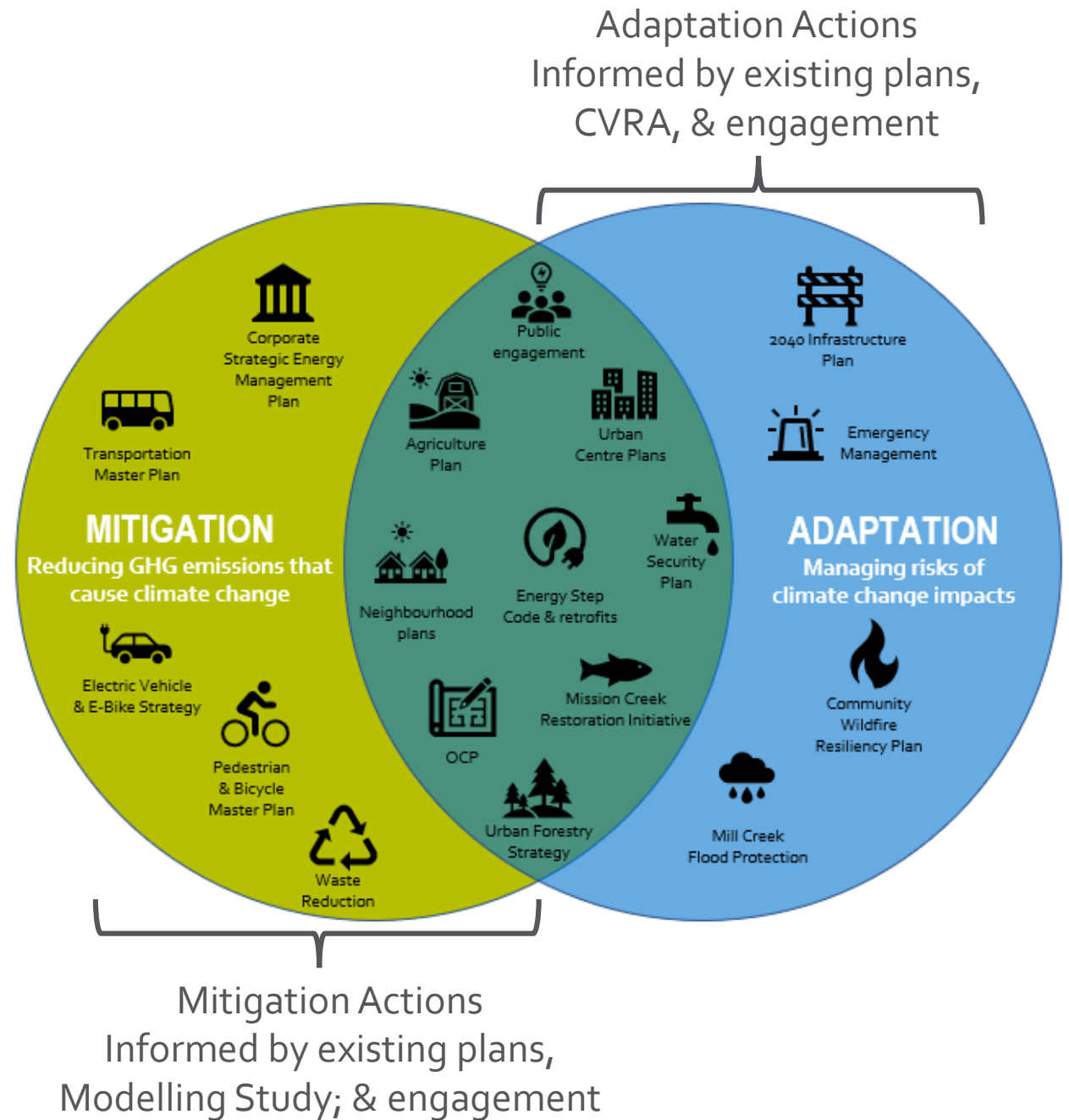
In person and online opportunities including:

- ▶ [Getinvolved.kelowna.ca](https://getinvolved.kelowna.ca)
- ▶ Survey (opens April 4)
- ▶ Information sessions (mid April)
- ▶ Focused engagement with interested & affected parties working group (including youth)





# Developing the Strategy



# Questions?