

**REPORT TO ENVIRONMENTAL SERVICES COMMITTEE
MEETING OF WEDNESDAY, MARCH 20, 2024**

SUBJECT **Extreme Heat Vulnerability Mapping and Information Portal Project**

ISSUE SUMMARY

To provide the results of the Capital Region Extreme Heat Vulnerability Mapping and Information Portal project.

BACKGROUND

In 2018, a Regional Hazard Risk and Vulnerability Assessment (HRVA) for the capital region of BC was undertaken by the Regional Emergency Management Partnership, and extreme heat was identified as a hazard of regional significance. In the summer of 2021, BC experienced an extreme heat wave that claimed more than 700 lives, with 24 of those in the capital region.

To support emergency planning and local climate adaptation planning efforts, the Capital Regional District (CRD), with support from municipal partners, accessed a \$150,000 Union of British Columbia Municipalities grant from the Community Emergency Preparedness Fund to undertake a regional extreme heat vulnerability mapping initiative. The intention of this initiative was to support the integration of extreme heat disaster risk reduction and climate adaptation planning through the development of a mapping product that provides a highly localized picture of vulnerability to heat in the capital region.

The CRD's Climate Action service worked collaboratively with local government climate/sustainability and emergency management program staff, and Island Health, to scope and execute the project. During the technical phase, CRD staff coordinated multiple workshops for representatives from all local governments in the region, including methodology review and project outputs, and undertook other key engagements to get technical input and guidance. Updates have been provided throughout the project via existing inter-municipal staff committees (climate and emergency management) and directly with key stakeholders, as required.

This project involved the development of three main indices:

- Extreme Heat Exposure
- Demographic Vulnerability Index
- Building Vulnerability Index

Each index was developed and analyzed with distinct methodologies, ranging from individual buildings to broader administrative geographic units. Results are provided in a project report (Appendix A).

As part of the grant initiative, the Capital Region Extreme Heat Information Portal has been collaboratively developed with project partners and the Province (GeoBC). This portal presents the data and analyses through interactive geographic maps for public exploration of their risk levels. Additionally, authorities have login access to the portal with more extensive maps and layers. The Extreme Heat Information Portal can be found at: <https://heat.prepareyourself.ca>.

Next Steps

The project findings can be used for a variety of purposes and will serve as important data input for further regional emergency and climate adaptation related mitigation, planning and policy initiatives.

The public portal, with accompanying geographic information system and products, will be shared directly with CRD and local government staff, regional emergency management programs, Island Health and provincial and federal agencies and can be used in educational initiatives. Staff will continue to connect with First Nations to provide the data and explore its applicability to their needs. As this work is very novel, staff will continue to connect with local governments to share learnings and resources and support the development of a provincial heat mapping guidance resource document.

The CRD remains committed to supporting established inter-municipal and inter-agency committees, seeking opportunities for enhanced collaboration. Recognizing the dynamic nature of technology and scientific advancements, ongoing risk modelling focused on extreme heat will be imperative to continuously update emergency preparedness, planning and response strategies.

ALTERNATIVES

Alternative 1

The Environmental Services Committee recommends to the Capital Regional District Board: That the results of the Extreme Heat Vulnerability Mapping and Information Portal project for the capital region be referred to municipal councils, the Electoral Areas Committee and First Nations for information.

Alternative 2

That this report be referred back to staff for additional information.

IMPLICATIONS

Alignment with Board & Corporate Priorities

The recommendations align with the Board's priority Climate Action & Environment initiative 3c to increase resilience, community and adaptation planning to address climate-related risks and disasters.

Alignment with Existing Plans & Strategies

The recommendations align with goal 2 of the CRD Climate Action Strategy to support the region on its pathway to livable, affordable and low-carbon communities that are prepared for climate change, and specifically contribute to the completion of action 2-4d to expand data collection and mapping efforts to identify vulnerabilities to the impacts of climate change.

Intergovernmental Implications

The data and mapping components can help local authorities to recognize priority areas for risk reduction and enhanced emergency response efforts. By examining vulnerability to heat, emergency managers can strategically prioritize interventions and resources in areas most in

need of attention. The data can also be used when updating local hazard, risk, and vulnerability analyses (i.e., HRVAs). CRD staff will continue to engage the region’s local governments through the CRD’s Climate Action Inter-Municipal Working and Task Force on better understanding new climate adaptation related policy approaches and supporting implementation of existing programs and policies in a collaborative manner.

CONCLUSION

Working collaboratively with and on behalf of local governments in the capital region, the CRD secured a \$150,000 grant from the Union of British Columbia Municipalities Community Emergency Preparedness Fund to initiate the Extreme Heat Vulnerability Mapping and Information Portal Project for the capital region. The data analyzed is provided in the new public Extreme Heat Information Portal. This work will help guide planning and decision-making to improve community resilience, emergency planning and public health strategies across the capital region.

RECOMMENDATION

The Environmental Services Committee recommends to the Capital Regional District Board: That the results of the Extreme Heat Vulnerability Mapping and Information Portal project for the capital region be referred to municipal councils, the Electoral Areas Committee and First Nations for information.

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ATTACHMENT

Appendix A: Heat Vulnerability Data & Analysis Project Final Report – Licker Geospatial Consulting Company and Thrive Consulting (February 2024)