

WELCOME

THE WEBINAR WILL BEGIN SOON



Integrating **CLIMATE
RISK ASSESSMENT** with
Environmental Due Diligence
in Canada

DISCLAIMER FOR ERIS CONTENT:

This disclaimer applies to all webinars, podcasts, videos and other reference materials (hereon referred to as 'online content') hosted by ERIS, and any associated documents, information or opinions presented, or obtained from, online content. Please read this disclaimer before participating in, reading, or making any other use of the material provided by ERIS or on ERISINFO.COM.

- ERIS makes no representations or warranties about the accuracy or suitability of information provided in the webinars and related materials such as reference materials, presentation documents and recordings.
- The information contained in the webinars and related materials are not intended to constitute advice of any kind or the rendering of consulting, or other professional services. Registering for a webinar only constitutes an agreement to attend, not a contract for consultancy or advice.
- The opinions expressed in a webinar are those of the speaker(s) only and may not represent the views of ERIS. To the extent permitted by law, ERIS excludes all liability for any loss, claim or damage, cost, or expense, including any indirect or consequential damages or lost profit, whether arising in negligence or otherwise, suffered in connection with the access to, participation in, or use of the webinar by you or any other person.
- ERIS reserves the right to suppress the posting of any webinar recordings it produces.



Integrating **CLIMATE
RISK ASSESSMENT** with
Environmental Due Diligence
in Canada



CLIMATE RISK ASSESSMENT

POWERED BY  ClimateCheck®

Instantly know property risks due to climate change



PRECIPITATION
aka Storm



DROUGHT



HEAT



FIRE



FLOOD

erisinfo.com/ca/climaterisk



Integrating **CLIMATE RISK ASSESSMENT** with Environmental Due Diligence in Canada

Tuesday, April 11, 2023

Presented in partnership with:



Agenda

- Physical climate risk and data.
- The current regulatory landscape and the factors driving increased attention to climate risk assessments.
- Data outputs/hazards included in a climate risk evaluation and the typical scope of work for climate risk due diligence and existing portfolio analysis
- The users of physical climate risk data, how they use it, and how environmental professionals can assist in the assessment process
- Q & A

Panel



Caleb Inman

CEO & Founder
Climate Check



Joelle Doubrough

Senior Environmental
Planner
SLR Consulting
(Canada) Ltd.



Jeff Doerner

SVP, Sales North America
ERIS
(Moderator)



ClimateCheck®

ERIS 

SLR 

Climate Risk & Due Diligence

info@climatecheck.com

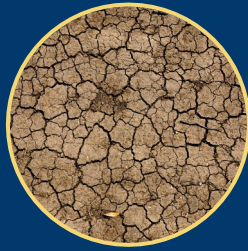
Proprietary and Confidential, Not for Distribution Without Permission

Comprehensive Climate Data

Physical Climate Risk Data



Heavy Precipitation



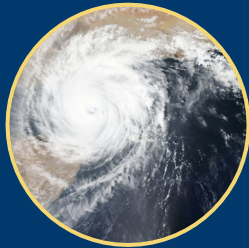
Drought



Extreme Heat



Wildfire



High Winds



Flood:
Coastal Flooding



Flood:
Pluvial and Fluvial*

Flood

Hazards and Spatial Resolution

- Pluvial / Surface Flooding (10m)
- Fluvial / River Flooding (10m)

Timeline

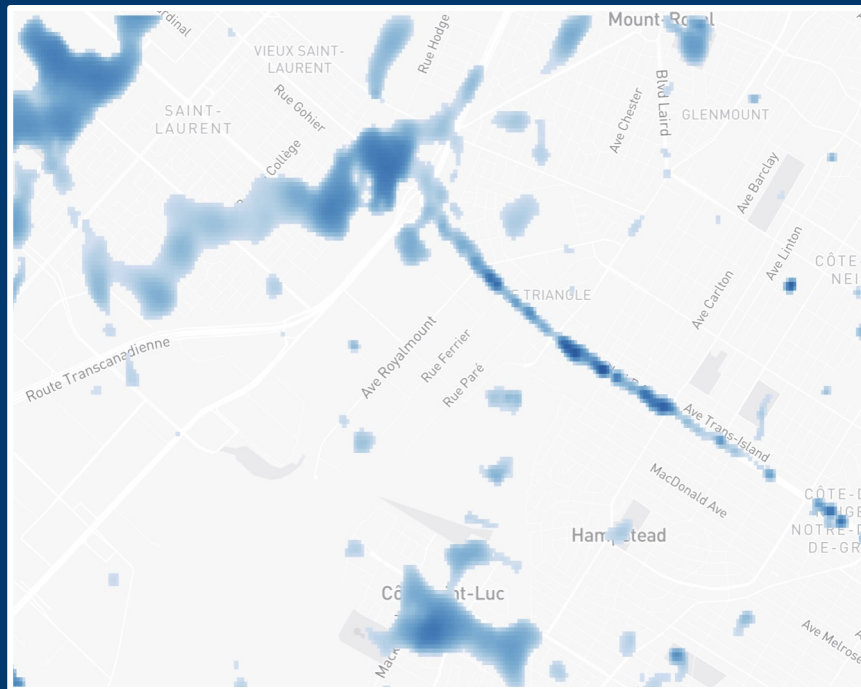
- Current & 30-year

Key Metrics

- Probability
- Depth

Emissions Scenarios

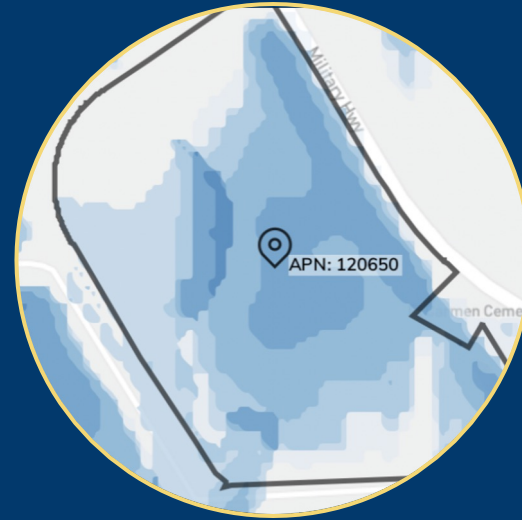
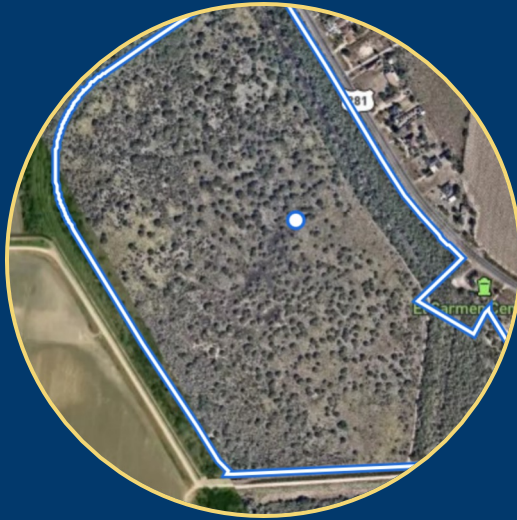
- RCP 4.5
- RCP 8.5



Surface flooding risk in Montreal - Decarie Expressway

Query by Specific Location

Search by Parcel or Any Polygon



Individual Property Report

ClimateCheck®

Have a question?
info@climatecheck.com

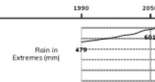
LOCATION

645 Cutler Avenue
Halifax, NS
B3B 0N8

RISK RATINGS

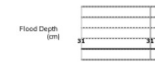
1-90 /100

Precipitation
Extreme risk



90

Flood
High risk



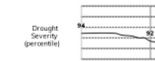
47

Heat
Significant risk



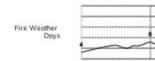
28

Drought
Relatively Low risk



14

Fire
Relatively Low risk



1

ABOUT THESE RATINGS

Our ratings reflect hazard risk at a property relative to the rest of our data coverage area. Ratings are based on historical risk and projected 2050 risk. A rating of 1 represents the least risk (but not necessarily none).



Individual Property Report

645 Cutler Avenue
Halifax, NS
B3B 0N8

Selected Geometry

Address

645 Cutler Avenue, Halifax, NS, B3B 0N8

Coordinates

-63.558062°, 44.712210°

Boundaries



ClimateCheck

Page 2 of 22



Individual Property Report

47 Flood
High Risk

645 Cutter Avenue
Halifax, NS
B3B 0N6

Pluvial Flooding Risk Within 500 meters



ClimateCheck

Page 8 of 22



Individual Property Report

Heat
Significant Risk

645 Cutler Avenue
Halifax, NS
B3B 0N8

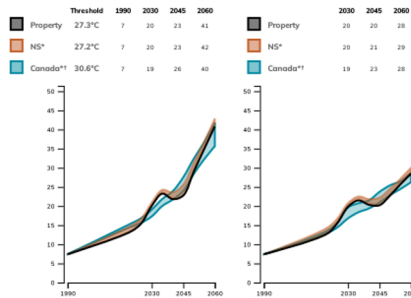
Extreme Heat Risk

Risk Rating: 28/100. Compared to the contiguous U.S. and Canada, this property has **significant** risk from extreme heat due to climate change.

In this location, historically, an average of about 7 days per year reached above 27.3°C (81.2°F).
In 2050,

- about **29** days in an average year will reach above 27.3°C, and
- about **7** days per year will reach above 30.3°C (86.5°F).

Projected Extremely Hot Days Per Year Through 2060



* colored area represents 25th-75th percentile estimate for population. Table shows 50th percentile.
† population in 48 contiguous U.S. states.

*ClimateCheck®

Page 11 of 22



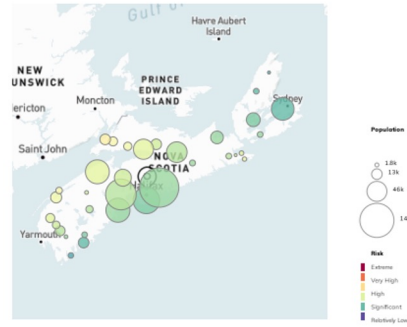
Individual Property Report

Heat
Significant Risk

645 Cutler Avenue
Halifax, NS
B3B 0N5

Risk Ratings for Extreme Heat in Nova Scotia

The numbers of people with each Extreme Heat Risk level in Nova Scotia, and their approximate locations, are shown below. Larger circles represent a greater number of people.



Extreme Heat Risk Ratings by Population in NS

Risk Level	Population	Total	%
Extreme	12k	12k	1%
Very High	15k	15k	2%
High	24k	24k	3%
Significant	1,100k	1,100k	14%
Relatively Low	55k	55k	6%
Significant	180k	180k	21%
Significant	200k	200k	21%
Significant	110k	110k	12%
Significant	70k	70k	8%
Significant	45k	45k	5%

*ClimateCheck

Page 13 of 22



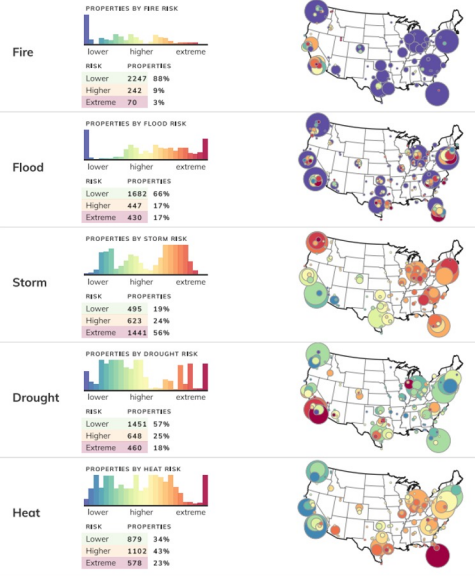
Portfolio Analysis

Sample Portfolio

ClimateCheck™

Climate Change Risk Analysis: Hazards

PROPERTIES 0 5 10 50 100+



ABOUT YOUR RISK

Your overall risk is an average of future impacts of storms, heat, fires, floods, and drought.

0 100



Who and Why?

Who is using climate data and why?

ESG Reporting - Commercial Real Estate Stakeholders

- Portfolio level
- Asset due diligence

Best Practices - Equity Due Diligence

Regulatory Requirements - B-15 (Canada) , SEC (US)

What We Do

Process for Property (& Portfolio) Resilience Assessments (PRA)

1

Climate Hazard Screening

Property or Portfolio level analysis

Used for 1) new asset due diligence / loan origination and 2) as part of a portfolio screening

ClimateCheck / ERIS

2

Vulnerability Assessment

Assets identified with high climate risk are reviewed to assess the vulnerability and sensitivity of the property to the hazards identified.

Due Diligence Consultant

3

Resiliency Measures

Identify property-specific resilience measures - can include prioritization and cost estimates.

Due Diligence Consultant

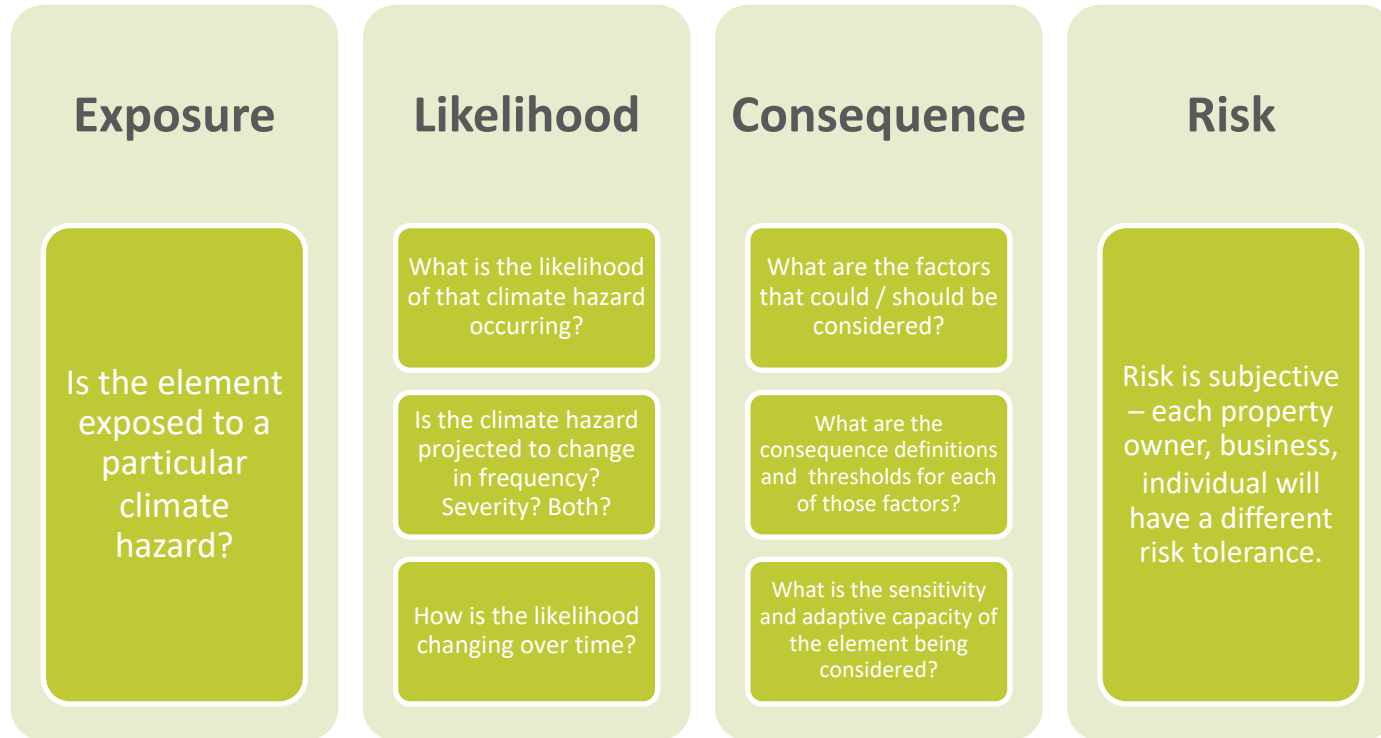


Integrating Climate Risk Assessment with Environmental Due Diligence in Canada

global **environmental** and **advisory** solutions



Climate Hazard Data within the Context of Climate Risk



Current State of Practice

- **Physical & Transition Risks**
 - Focus on asset management / risk to an asset or portfolio of assets (i.e., stranded assets)
- **Engineering / Construction Standards**
 - National Building Code of Canada (2015, Table C-2)
 - Canadian Highway Bridge Design Code (CHBDC/ CSA S6 2014, Annex A3.1)
- **Planning - Environmental Assessment Process Requirements**
 - Non-designated projects generally do not consider climate risk outside of mandated engineering design standards for construction/safety
- **Municipal Climate Action Planning**
 - Community based / social based planning

Regulatory Drivers

- **Environmental Assessment Process**
 - Effects of the project on the environment (GHG Emissions)
 - Effects of the environment on the project (Climate Change)
- **Municipalities**
 - Federation of Canadian Municipalities (FCM)/ Municipalities for Climate Innovation Program (MCIP) member municipalities investing in climate risk / vulnerability assessments when considering development applications.
 - Influence zoning decisions
- **Funding Programs**
 - Investing in Canada Infrastructure Program (ICIP)
 - Disaster Mitigation and Adaptation Fund (DMAF)
- **Task Force on Climate-related Financial Disclosures (TCFD) Reporting**
 - Growing as private sector businesses examine physical and transitional risks
- **Canada's Draft Guideline B-15 (March 2023)**
 - Office of the Superintendent of Financial Institutions ("OSFI") issued Draft Guideline that sets out OSFI's expectations related to the management of climate-related risks by federally regulated financial institutions

QUESTIONS?



Integrating **CLIMATE
RISK ASSESSMENT** with
Environmental Due Diligence
in Canada



CLIMATE RISK ASSESSMENT

POWERED BY  ClimateCheck®

Instantly know property risks due to climate change



PRECIPITATION
aka Storm



DROUGHT



HEAT



FIRE



FLOOD

erisinfo.com/ca/climaterisk



The screenshot shows the Erisinfo website with the 'infoHUB' dropdown menu open. The menu options are: Eris Blog, News & Updates, Learning Resources, Webinars, Podcasts, and Videos. The website header includes the Eris logo, contact information (1-866-517-5204, info@erisinfo.com), and a 'SIGN IN / ORDER' button. The main navigation bar includes links for ABOUT, PRODUCTS & SERVICE, infoHUB, FAQs, CONTACT, and SCRIVA. The main content area features a 'SmartCD' introduction, a 'WEBINARS' section with the text 'Integrating CLIMATE RISK ASSESSMENT with Environmental Due Diligence' and a date 'FEBRUARY 23 - 11 PM ET', and a 'SCRIVA' section with the text 'Our new report authoring platform' and 'ROCK YOUR REPORT CREATION'.

ERIS 

and videos **ALL IN ONE PLACE.** 1-866-517-5204 info@erisinfo.com SIGN IN / ORDER 

ABOUT PRODUCTS & SERVICE info**HUB** FAQs CONTACT SCRIVA

Introducing **SmartCD** 

ERIS **Blog**

News & Updates

Learning Resources

Webinars

Podcasts

Videos

ERIS  **WEBINARS**

Integrating **CLIMATE**
RISK ASSESSMENT with
Environmental Due Diligence

FEBRUARY 23 - 11 PM ET

SCRIVA  BY ERIS

Our new report authoring platform

**ROCK YOUR
REPORT CREATION**

UPCOMING WEBINARS



May 17

ERIS' New Report Authoring Platform: **SCRIVA**

THANK YOU

To learn more:

Caleb Inman

Founder & CEO
Climate Check
info@climatecheck.com

Joelle Doubrough

Senior Environmental Planner
SLR Consulting (Canada) Ltd.
jdoubrough@slrconsulting.com



Integrating **CLIMATE**
RISK ASSESSMENT with
Environmental Due Diligence
in Canada