



SUBJECT	Wildfire Science at UBC Okanagan
SUBMITTED TO	Board of Governors
MEETING DATE	June 20, 2025
SESSION CLASSIFICATION	Recommended session criteria from Board Meetings Policy: OPEN
REQUEST	For information only - No action requested
LEAD EXECUTIVE	Lesley Cormack, Deputy Vice-Chancellor and Principal, UBC Okanagan
SUPPORTED BY	Rehan Sadiq, Provost and Vice-President Academic, UBC Okanagan Lael Parrott, Professor and Dean <i>pro tem</i> , IK Barber Faculty of Science

PRIOR SUBMISSIONS

The subject matter of this submission has not previously been considered by the Board of Governors.

EXECUTIVE SUMMARY

The very real costs of wildfires – human, habitat loss, climate impacts, financial – continue to escalate in British Columbia, Canada and across the world. As a campus located in BC’s fire prone interior, UBC Okanagan is developing a focus on wildfire co-existence that represents a transition from reactive to proactive climate-resilient strategies and balances the potential benefits and risks of wildfires.

This is anchored by a recently established cross-campus research initiative, the Centre for Wildfire Coexistence, led by Dr. Mathieu Bourbonnais (UBC Okanagan) and Dr. Lori Daniels (UBC Vancouver), which brings together expertise aimed at identifying proactive forestry and land management strategies to restore healthy and resilient forests and help communities adapt to a changing climate.

In addition to wildfire research, which includes more than 30 researchers spanning natural and applied sciences, health, social sciences and the humanities, UBC Okanagan is also developing and delivering training. A key element of delivering education will be the proposed National Prescribed Fire Training program, which is anticipated to launch in 2028.

A capital development priority to support this work is the transformation of the Velocity Avenue facility acquired by UBC Properties adjacent to the UBC Okanagan Innovation Precinct into the UBC Okanagan FIRE (Fire Innovation Research and Education) Facility, which would house a Province-wide camera network currently under development with BC Wildfire Service and a fire lab with first-in-Canada burn chambers and additional testing equipment. It would also provide space for the Prescribed Fire Training program and public-facing outreach and education space.

PRESENTATIONS

1. Wildfire Science at UBC Okanagan

Wildfire Science at UBC Okanagan

June 20, 2025

Lael Parrott, Professor and Dean *pro tem*
IK Barber Faculty of Science





Introduction and summary

How to transform to co-existence with wildfire?



(artwork: Jen Burgess
/ @isolinestudios;
source: Bowman et. al
2018, Fire, 1, 27)

Introduction and summary

UBC Centre for Wildfire Coexistence



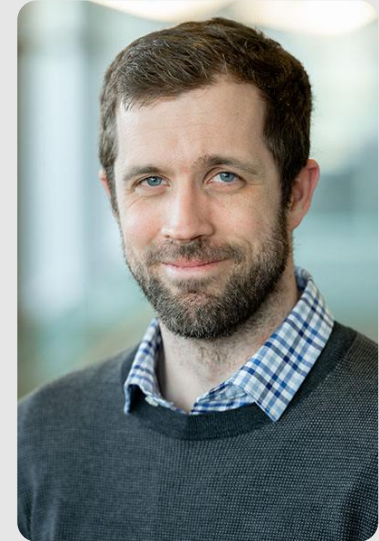
Launched in June 2024 by the IK Barber Faculty of Science and Faculty of Forestry, thanks to a \$5M donation from the Koerner family.

Co-directors



Dr. Lori Daniels

Centre for Wildfire Coexistence,
UBC-Vancouver



Dr. Mathieu Bourbonnais

Centre for Wildfire Coexistence,
UBC-Okanagan

Wildfire Coexistence in BC: Solutions Symposium

June 3-5, 2024

UBC Okanagan,
Kelowna



Introduction and summary

UBC Centre for Wildfire Coexistence



Through research and training, responds to an escalating need to proactively adapt forestry and land management practices with the aim of restoring healthy and resilient forests, as communities adapt to a changing climate.

Strong focus on external partnerships (First Nations, provincial and federal government agencies, community forests, ...)

Research & partnerships

UBC Okanagan



**Wildfire research is a key element of UBC
Okanagan's strategic focus on climate resiliency**

**Over 30 researchers in natural and applied
sciences, health, social sciences and humanities**



Example areas of wildfire research expertise

Wildfire risk mapping and modelling using sensors, drones, autonomous robots & cameras

Mapping fuel loads in relation to forest conditions

Forest management for resilience to wildfire



Example areas of wildfire research expertise

Impacts on wildlife habitat and animal movement

Watershed scale impacts – vegetation-hydrology-soils



Example areas of wildfire research expertise

Indigenous cultural use of fire

Wildfire impacts on agriculture and rural communities

Societal responses to wildfire and burned landscapes



Example areas of wildfire research expertise

Impacts of smoke on heart and lung health

Psychological impacts of wildfire



Training, Outreach & Public Safety

UBC Okanagan





Letter of Proficiency

Fundamentals Of Wildland Fire Ecology And Management

Program Dates

January 7, 2025 - June
1, 2025

Program Duration

60 Hours

Program Delivery

Online

Cost

\$3,000

[APPLY NOW >](#)

Proposed National Prescribed Fire Training Program



Prescribed fire manager

Burn boss

Ignitions/Holding

FEMO/FBAN

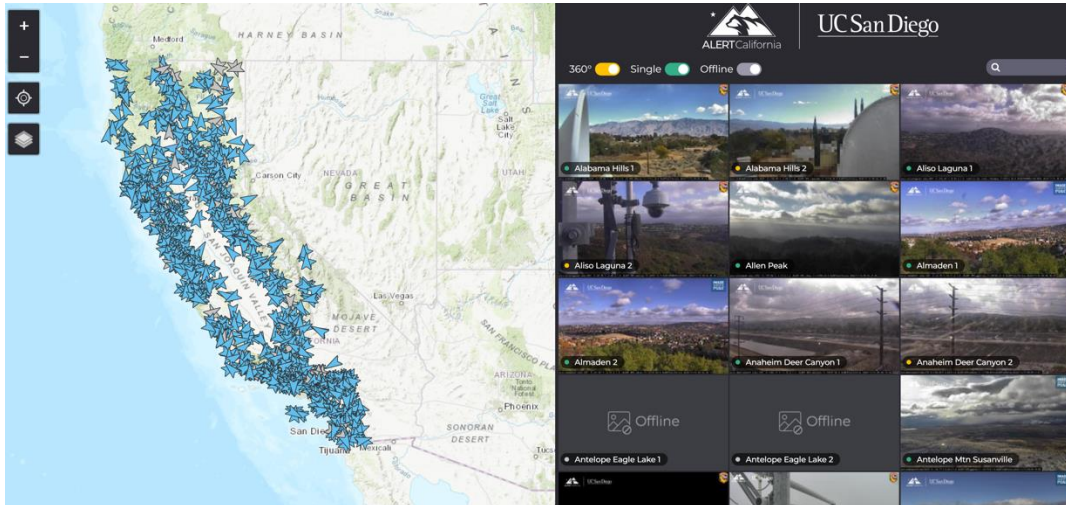
Prescribed fire crew member

Partnership between the IK Barber Faculty of Science and BC Wildfire Service to establish province-wide camera network



- MOU signed February 2025
- Will be modelled after UC San Diego, Alert California system
- Will begin camera installations this fire season
- PI: Mathieu Bourbonnais

Partnership between the IK Barber Faculty of Science and BC Wildfire Service to establish province-wide camera network



UBC Okanagan FIRE Facility *(proposed)*

- Fire lab with burn chambers
- Provincial camera network data centre with BCWS
- Maker spaces for sensor and robotics work
- Prescribed burn learning spaces
- Public-facing, outreach and education space



Collaboration & Partnership



Grasslands
Conservation Council
of British Columbia



THOMPSON-NICOLA
CONSERVATION COLLABORATIVE



CDFCP



NSERC
CRSNG



BRITISH COLUMBIA
CONSERVATION
FOUNDATION



OCCP
OKANAGAN COLLABORATIVE
CONSERVATION PROGRAM



Okanagan Basin
WATER BOARD



RAINCOAST
CONSERVATION FOUNDATION



City of
Kelowna



ROGERS



FPInnovations



Mitacs



Parks Canada
Parcs Canada



Bulkeley Valley Research Centre



fRI Research
Informing Land & Resource Management



LAKE COUNTRY
Life. The Okanagan Way.



UVIC



THOMPSON
RIVERS
UNIVERSITY



BRITISH
COLUMBIA



Canada
Natural Resources Canada
Ressources naturelles Canada



FOREST SERVICE
US
DEPARTMENT OF AGRICULTURE



CITY OF
WEST
KELOWNA



SFU



UNBC UNIVERSITY OF
NORTHERN BRITISH COLUMBIA



Agriculture and
Agri-Food Canada



Environment and
Climate Change Canada
Environnement et
Changement climatique Canada



FOREST SERVICE
US
DEPARTMENT OF AGRICULTURE



NTITYX
RESOURCES LP



MOUNTAINS OF OPPORTUNITY
CRANBROOK



KIMBERLEY



PACIFIC
INSTITUTE
FOR
CLIMATE
SOLUTIONS



First Nations'
Emergency Services Society
OF BRITISH COLUMBIA