



BRITISH COLUMBIA
FireSmart[™]



FireSmart BC 2023 Research

Wildfire in the WUI

March 1, 2023



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- **BC FireSmart Committee & strategic plan**
- **Standing Committee on Research**
- **Current and future research projects**
- **WUI Research**

BC FireSmart Committee



Fire Chiefs' Association of British Columbia

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First Nations' Emergency Services Society of British Columbia

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Indigenous Services Canada (ISC)

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Ministry of Emergency Management and Climate Readiness (EMCR)



FireSmart Canada

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British Columbia Wildfire Service

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Forest Enhancement Society of BC

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Parks Canada

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British Columbia Office of the Fire Commissioner

- Started in 2017
- 12 provincial and federal agencies
- Completed strategic plan in 2021

OUR VISION

A wildfire resilient province, where everyone works, plays and lives FireSmart.

OUR MISSION

Build wildfire resiliency and reduce the negative impacts of fire for everyone in the province through FireSmart.

OUR STRATEGIC GOAL

Everyone in the province is aware of FireSmart, understands their role, accepts responsibility and takes action to increase wildfire resiliency.



Our Strategic Themes



EVIDENCE

Integrate research and information management to support evidence-based decision making.



EDUCATION

Targeted education, training and communication that empowers and mobilizes.



STRUCTURE

Build an aligned, sustainable and inclusive organizational structure.



ACCESS

Recognize unique needs and capacities to facilitate equitable access and outcomes.



COLLABORATION

Collaborate with partners to build capacity, trust, and public confidence.



ENGAGEMENT

Engage with all levels of Indigenous and non-Indigenous governments to support and implement policy, planning and funding.

Standing Committee on Research



The Standing Committee of Research under the BC FireSmart Committee is tasked with providing guidance on how best to support the furthering of wildfire resiliency in BC, establishing a method for research project coordination across the province, nationally and internationally as well as with aligning research priorities with those of FireSmart Canada as well as national agencies like Canada Wildfire, CIFFC and Natural Resources Canada.



Quick-Deploy FireSmart Data Collection Project



Background

- FireSmart BC and BC Wildfire Service (BCWS) have determined that data, collected before, during, and after a wildfire impacts a community could be used to identify the effectiveness of fuel treatments and structural vulnerabilities.
- Framework developed to support researchers in gathering empirical data during WUI events.

Objective

- The objective is to safely, effectively, and efficiently gather data to further the understanding of the efficacy of FireSmart treatments and the exposure of structures during WUI events by collecting data:

Goal

- To improve public uptake of the FireSmart principles via education

Quick-deploy FireSmart data collection



Framework Development

- collection methods
- logistics
- collection, storage, and eventual analysis of the data

Skill-sets and Equipment

- FPI has 6 researchers with a broad range of skills.
- Full complement of research gear.





- Over 40 days (July 3 to Aug 13) we were dispatch to 6 incidents. These included:
 - Larger complex incidents and smaller incidents (with minimal resources)
 - 6 researchers dispatched as teams of 2

Improvements and Changes for 2022

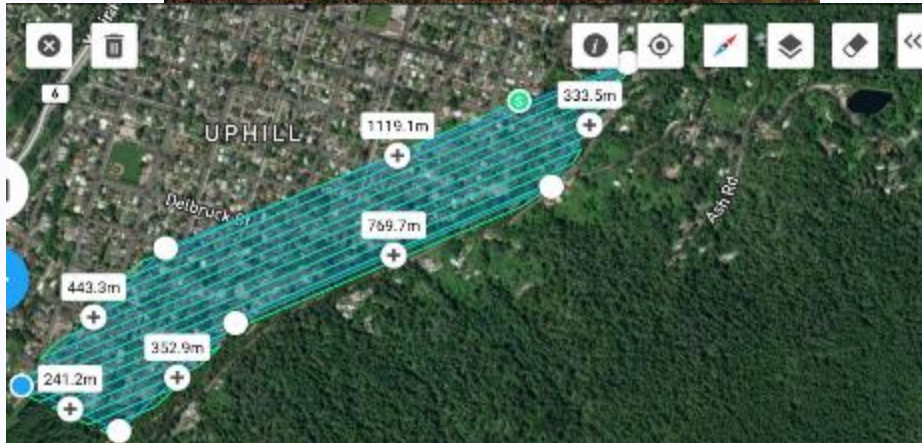


Project Updates



RPAS (Drones)

- RPAS – due to Federal regulations we were unable to use drones in fire restricted areas in 2021.
- Gained National Certification allowing us to fly in Fire Restricted Airspace.
- This will increase data collection in both quantity and the speed at which it can be collected.





Automatic Dispatch

- Over-winter discussions with FireSmart BC, BCWS, and SPS personnel led to a change in how the research team is dispatched.
- **New process for FireSmart research team dispatch**
 - Incident Commander (IC) calls the Provincial Wildfire Coordination Centre (PWCC) and requests structural protection.
 - PWCC relays request to Structural Protection Coordination Officer and FireSmart Research Liaison.
 - FireSmart Research Liaison dispatches and provides research team with information support.



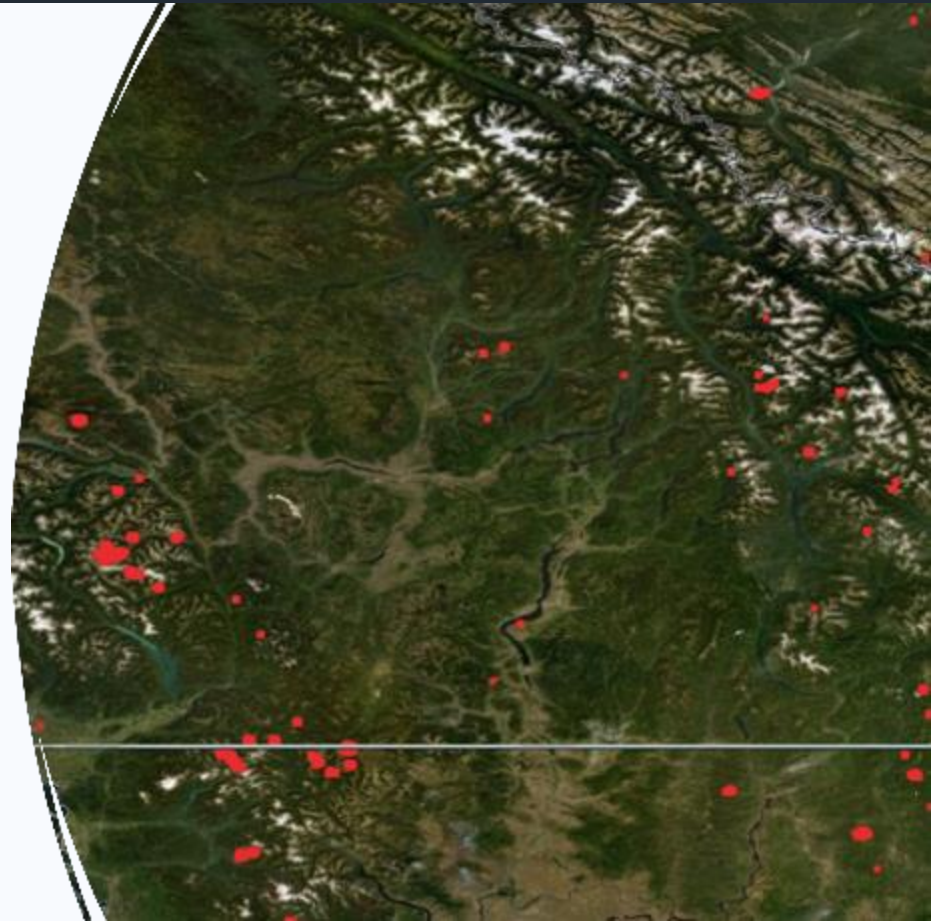
BCWS and SPS Liaisons

- The research group acted with and without liaisons positions last summer.
- On large complex fires (Sparks Lake) our liaisons were beneficial in navigating the ICS and the sectors we were working in.
- On smaller fires or little resources areas of large fires we acted without a designated liaison.
- 2022 we had a dedicated FireSmart Research Liaison who provided us with information support.

Fire Season 2022



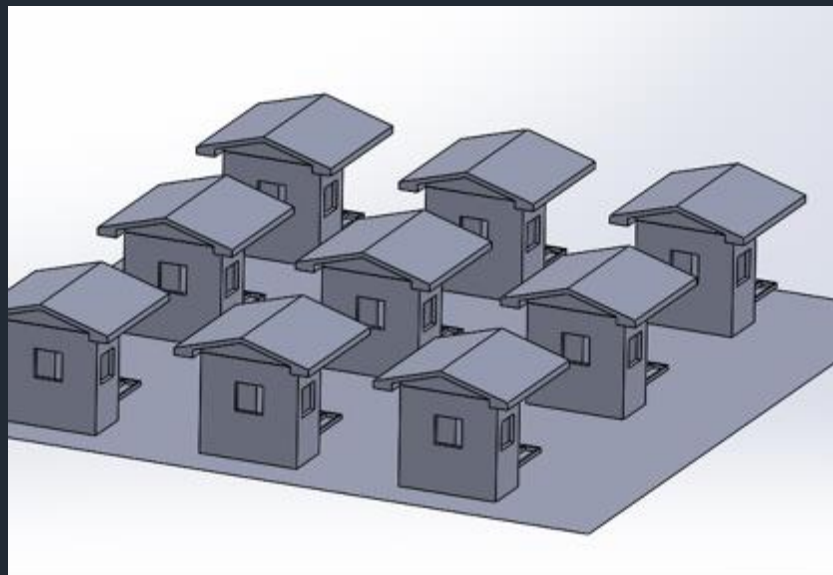
A similar number of overall fire starts as in 2021, but fires were smaller and not as close to communities. Overall, we still had 2 deployments and 4 equipment installations.





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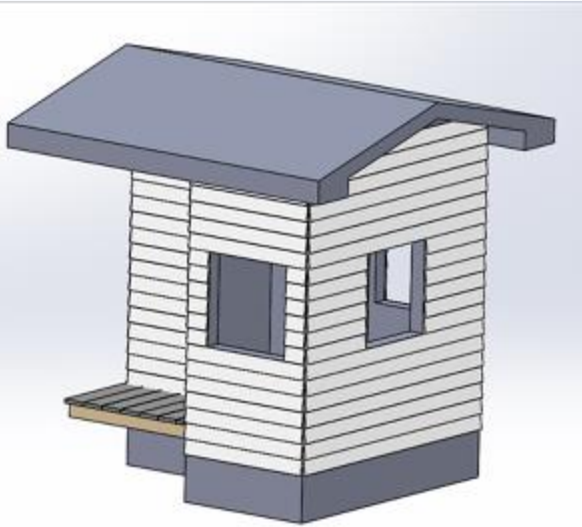
**Other
FireSmart
Research
Initiatives**





Basic post-fire structure assessments

- Researchers are not trained for ‘post-fire assessments’ in structural fuels.
- Basic training with a Fire Investigator will assist in collecting basic information to be able to piece together how structures ignite and then fire spreads
- One researcher Level 1 training completed at this time.



Structure Ignition Research

- Two plots in NWT where structure ignitions will be researched.
- One plot will have 9 'scaled down' structures of common materials and design. Will be subjected to heavy ember storm.
- Second plot will have two FireSmart structures (one with sprinklers) and one non-FireSmart structure within the forest.





Wildfire Ember Simulator (WES)

- We are in the process of creating a one of a kind Wildfire Ember Simulator with the University of Victoria.
- WES is a portable machine that will launch “embers” on to real life structures as an educational tool.



Questions or Comments?

FPInnovations

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Current and future research projects



- Wildfire Ember Simulator
- Post-fire examination framework
- Ignition Assessment System
- Northwest Territories ignition project
- Public perception surveys
- University program
- Wildland-urban interface research

