

Welcome from the Canadian Forest Service, Great Lakes Forestry Centre

Director General, Danny Galarneau

Natural Resources Canada (NRCan), Canadian Forest Service (CFS), Great Lakes Forestry Centre (GLFC) is pleased to announce the launch of the quarterly WildFireSat e-bulletin. Our goal is to provide important information on the progress of the WildFireSat mission—the world’s first purpose-built operational satellite system for monitoring wildfires. The e-bulletin format will allow for easy access and an archive of past issues. Consider subscribing to receive notification of new editions about the status of the mission and share our WildFireSat e-bulletin with your colleagues.



Director of the Forest Ecosystems Division, Tracey Cooke



Welcome readers to the inaugural edition of our WildFireSat e-bulletin—your gateway to the latest insights and updates on our mission to develop cutting-edge wildfire monitoring technology. As we embark on this journey together, we invite you to delve into the fascinating world of WildFireSat, where innovation meets environmental stewardship. Our e-bulletin aims to be your go-to source for news, advancements, and in-depth analyses surrounding the groundbreaking satellite technology designed to detect and monitor wildfires. Join us on this exploration of how WildFireSat is revolutionizing the way we understand, manage, and respond to wildfires.

Principal Investigator, Joshua Johnston

Many of you already know me and know that I come from a background in both fire management and fire science. The WildFireSat mission is, not surprisingly, a marriage of these two fields. Our goal has always been to operationalize the decades of incredible work in technological, scientific, and operational developments to deliver something truly unique through this mission. It's a big task and there is a lot to be done; in fact, I often struggle to keep it all present in mind. Fortunately, we have a very high perch to view it from... it's one of the benefits of standing on the shoulders of giants.



But the challenge of keeping tabs on all that is happening is still real. Not long ago we held our first general, in-person meeting with representation from the wide range of stakeholders in the mission. Over and over the sentiments of scale, complexity and critical communications was raised in conversations I had. We will most certainly continue those meetings and all the other communications through which our team keeps in touch, but we also wanted to make sure you were able to receive regular comprehensive overview updates. The idea of this bulletin is not to replace those valuable discussions, nor is it to give you all details for every aspect. The goal here is to ensure that no matter which aspect of the mission you are most interested in, you'll still have a place where you can get the high-level status of everything. My hope is that this will be a place for you to share in that big picture vantage point—without the need to climb some giant.

WildFireSat Mission Manager, Canadian Space Agency, Denis Dufour



It is a pleasure to have the opportunity to introduce myself in this e-bulletin. I have only been at the Canadian Space Agency (CSA) as the mission manager for WildFireSat for a year and a half, but my roots in WildFireSat go back 10 years when I was asked to lead, from the industry side, the development of preliminary concepts for an infrared camera payload for the Canadian Wildland Fire Monitoring System (CWFMS). This was my introduction to the science behind the sensing of wildfires from space, and to the dynamic and knowledgeable wildfire research community here in Canada. Over the years, CWFMS led to WildFireSat, and it has been fascinating to see how the initial CWFMS concept evolved and matured along with the evolution of the underlying sensor

technology and an improved understanding of the requirements for a useful wildfire monitoring mission. We are now at the point where I am confident that we can deliver a successful wildfire monitoring mission that serves all Canadians.

This past November we held the first ever WildFireSat stakeholders meeting here in Montreal at the CSA. This was a wonderful and eye-opening opportunity from my perspective on the technical and scientific side of satellite instrument development, to really learn and appreciate how WildFireSat can help wildfire management decision makers. The perspectives offered from provincial wildfire managers, indigenous fire managers, and fire science researchers were

invaluable in making sure we put into place the best possible system to meet their needs. This first meeting was just the beginning of the conversation, and I look forward to deepening my knowledge of the challenges and needs of wildfire managers as we work together to deliver WildFireSat. As we do so, I look forward to sharing with you the ongoing WildFireSat satellite and technology developments.

Updates and Milestones

On the path to understanding the needs for Canadian wildfire management

The WildFireSat mission is unique, in that it is purpose-built for the needs of fire managers in Canada. One of our core principles is that fire managers must feel ownership in the mission and our success depends largely on the Canadian wildland fire management agencies putting our products into practice. We recently published the “[WildFireSat pathway for implementation and uptake in provincial and territorial fire management agencies](#).” This document is a synthesis of the knowledge exchange program the WildFireSat mission is developing to increase the likelihood of achieving a high level of adoption and integration in provincial and territorial wildland fire management agencies.

Fostering Collaboration

In November 2023 the WildFireSat stakeholder kickoff meeting was held at the CSA headquarters in Saint-Hubert, Quebec. The two-day event consisted of presentations outlining the WildFireSat mission on Day 1, and an interactive Day 2 with an innovative “Space Café.” This workshop marked the first opportunity since the rescoping of WildFireSat as an operational mission for the various groups involved in the mission—from members of the CSA to fire managers—to come together and connect in person at the same location. A summary of this meeting is now available through GLFC at [Wildland Fire Proceedings](#). Over the next few months, we will be working on summarizing what we heard and publishing more results from that meeting.

See the [video on wildfire management](#) produced for this meeting.

More information on the mission

The [CSA WildFireSat webpage](#).

A high-level overview pamphlet can be found at [WildfireSat: The world's first purpose-built operational satellite system for monitoring wildfires. Great Lakes Forestry Centre](#).

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