



**NASA ARMD Wildfire Management Workshop**  
**Thursday, May 13, 2021, 8:00AM – 2:00PM PT (11:00AM – 5:00PM ET)**  
<https://nari.arc.nasa.gov/tfrsac-wildfire>

### **Background**

NASA's Aeronautics Research Mission Directorate (ARMD), in collaboration with the Space Technology Mission Directorate (STMD) and Science Mission Directorate (SMD), are hosting a workshop to understand comprehensive needs of wildfire management. The workshop will focus on needs within the three phases of the fire season: pre-fire season, during fire season, and post-fire season. We will consider the needs of the various stakeholders and operators who are involved in wildfire management planning, fire suppression, and post-fire analysis. Our interest spans near-term (< 3 years), mid-term (3-7 years), and long-term (10+ years) needs.

NASA has a history of contributions related to remote sensing, instrumentation, mapping, data fusion, and predictions. Furthermore, NASA's aeronautics community has possible contributions to manage the actual suppression and mitigation efforts through decision support tools for airspace operations coordination that would reduce the human workload during suppression operations.

### **Workshop Goal**

The goals of the workshop are to understand the state of the art in wildfire management and to identify the needs and challenges of stakeholders at various decision cycles from planning, prediction, detection, tracking, mitigation, and post-fire remedial efforts. These needs will reflect the various agencies and roles that are involved in wildfire management. NASA will use this input to inform potential contributions towards research, development, testing, and implementation opportunities to improve the state of the art in wildfire management.

### **Participants**

The workshop is for representatives of government organizations involved in forest and land management (Department of Forest, Interior, Land and Mines, National Guard, Defense, Homeland Security, etc.), the firefighter community, aerial firefighter pilots and operations specialists, airspace coordinators, researchers, scientists, technologists, industry, academia, and other stakeholders who are interested in improving the state of the art of wildfire management. The workshop will be held in conjunction with the Tactical Fire Remote Sensing Advisory Committee (TFRSAC) Bi-Annual Meeting.

### **Format**

Our primary goal is to understand the needs of the wildfire management stakeholders, so the format of the workshop will include breakout sessions focused on these specific topics:

1. Planning for fire season (for managers, analysts, and strategists – what can be done proactively?): Data, fusion, decisions, forest management, resources. What are the challenges to developing robust plans today?



2. Prediction methods and challenges (for planners and coordinators - what is needed to predict fire hazards for the season and day-to-day operations): Data, sensors, instrumentation, models, community inputs, guidelines, etc. How well do today's predictive capabilities satisfy those needs?
3. Suppression and mitigation (for fire fighters and aerial firefighting pilots and coordinators - what is needed by the firefighting community, and aerial firefighting pilots, coordinators, etc.): information, tools, automation, equipment, models, safety protocols, increasing firefighting duration and reducing response time, etc. What are the greatest challenges to suppressing and mitigating wildfires today?
4. Post-fire remedial effort (for analysts, scientists/researchers, prediction and management of secondary effects such as floods – what is needed to avoid further damage): data, models, safety protocols, mitigation guidance, etc.

Attendees are encouraged to contribute actively during breakout sessions.

### **Product**

The subject matter experts' inputs related to needs and challenges from all angles, roles, and phases of wildfire management will be compiled into a report. This NASA-developed report will describe the comprehensive needs assessment and identify opportunities where NASA (and others) can actively contribute to near-term, mid-term, and long-term needs. Needs and challenges relevant to the capabilities and technology efforts of NASA and others in the research community will be identified.

The preliminary report is expected by the end of May and the final report is expected in July 2021. As needed, further discussions will be conducted with wildfire community members. The workshop will be conducted by NASA Aeronautics Research Institute (NARI).

### **Points of Contact**

#### *Logistics and Operations Lead:*

Anna Cavolowsky, NARI, [anna.e.cavolowsky@nasa.gov](mailto:anna.e.cavolowsky@nasa.gov), 650 763 6248

#### *Workshop Technical Leads:*

Parimal Kopardekar, NARI Director, [parimal.h.kopardekar@nasa.gov](mailto:parimal.h.kopardekar@nasa.gov), 650 380 3276

Laurie Grindle, Director of Programs and Projects, NASA Armstrong, [laurie.a.grindle@nasa.gov](mailto:laurie.a.grindle@nasa.gov), 661 810 4009