1. MEETING MINUTES

The minutes are organized by topic per the agenda.

1.1 INTRODUCTIONS & MEETING GOALS AND OBJECTIVES

Melissa Lineberger introduced Representative Kraft-Tharp who provided a welcome to everyone and gave a little background on the project and its genesis. Other participants introduced themselves to the group. Barbara Brown provided an overview of the agenda

1.2 PRESENTATION ON CO-FPS DEVELOPMENT PLANS FOR FY 17-18

Barbara Brown presented an update on CO-FPS activities over the last six months and an overview of plans for the next twelve months. Some of the major accomplishments include setting a 72-h data retention period for CO-FPS information in CO-WIMS; implementation of an improved level set algorithm for fire spread predictions; implementation and testing of the Scott and Burgan fuel model; evaluation of the feasibility of using cloud computing facilities for the CO-FPS system; development and implementation of a rapid simulation capability; an initial assessment of the fire simulations, which included examination of 11 fires from 2016; and an investigation of the impact of the initial size of an active fire area on the simulated rate of spread and heat release.

Plans for the next twelve months include continued efforts to evaluate and improve the modeling system and provide products via CO-WIMS and implementation of several new capabilities. In addition, a training functionality will be installed in CO-WIMS, which will allow users to work with several stored historical cases. New developments will include some additional air quality products and capabilities, investigation of methods to incorporate spotting events, and further investigation of the use of cloud computing resources to run the system.

More details are included in the presentation that was given during the meeting (available from the [CoE's CO-FPS website).](#)

A question was raised regarding a new project that NCAR is undertaking with funding from NASA, to establish a near-real-time fuel moisture database. Branko Kosovic (lead of the NASA project) briefly described this project and its potential benefits to CO-FPS. The project will be ongoing for the next two years. It was pointed out by Rod Moraga that the fuel moisture information from RAWS tends to not be very accurate and there may be better data to use to calibrate the NASA information. Branko noted that since the calibration will not be done in real time, it will be possible to calibrate with historical data or data from other sources (e.g., GOES-16).

1.3 PRESENTATION ON SCOTT AND BURGAN FUEL MODEL IMPLEMENTATION IN CO-FPS

Branko Kosovic presented information regarding the implementation of the Scott and Burgan model and initial testing of CO-FPS with this new capability. Branko noted that the Anderson fuel model is still available as an option when running simulations via CO-WIMS. Additional fine-tuning of the system will be done during the next few months. Fuel moisture content (FMC) is currently constant. However, it is expected that future implementations will incorporate FMC as an input parameter from the user in real time in CO-FPS. This enhancement will likely lead to significant improvements in rate of spread predictions. Moreover, when live herbaceous moisture content is available (e.g., from satellite index like NDVI), dynamic models could be applied to modify the fuel load of dead fuel. Initial testing has indicated that the change from the Anderson system to Scott and Burgan will result in small-to-moderate changes in the predicted fire perimeters for several fires from 2016. More details on the fuel model implementation are included in the presentation given during the meeting (available from the [CoE's CO-FPS website).](#)

1.4 CSFS PRESENTATION ON CO-WRAP REFRESH, INCLUDING TUNING OF COLORADO LANDFIRE DATA

Rich Homan and David Buckley described ongoing CO-WRAP development efforts and updates to the LANDFIRE fuel model for Colorado, including a risk assessment system developed by the Colorado State Forest Service (CSFS) and Tecnosylva (https://www.coloradowildfirerisk.com/). The main goal of the system is to provide planning information. The ongoing fuel model updates provide more realistic representations of current fuels in Colorado.
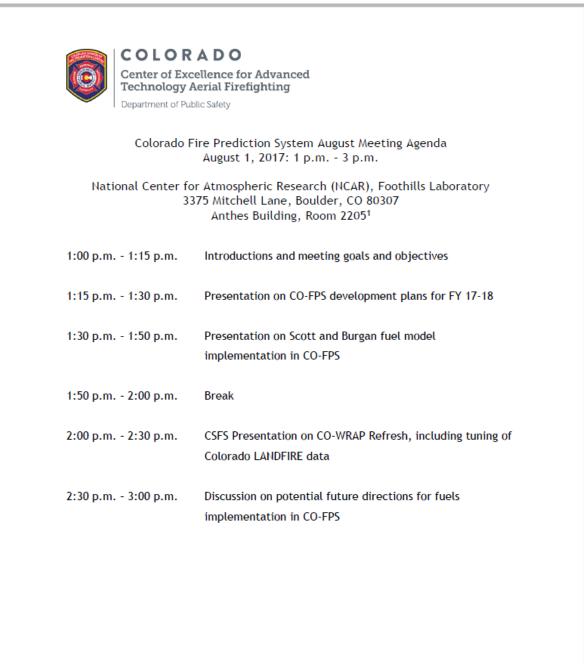
1.5 DISCUSSION ON POTENTIAL FUTURE DIRECTIONS FOR FUELS IMPLEMENTATION IN CO-FPS

An open discussion of how fuels and fuel moisture should be best handled in CO-FPS led to many ideas and avenues for testing and improvement. One option discussed is to incorporate a slider bar in CO-WIMS that would allow the user to indicate fuel moisture as an input parameter. Another possibility would be to provide multiple scenarios for fuel moisture (e.g., low, medium, and high); however, some stakeholders felt that it would be better to not include this parameter as an input from the user since the Wildfire Decision Support System (WFDSS) already does something like this. It was generally agreed that the best solution would be for the system to utilize the best information possible (e.g., from the results of the ongoing NASA project). Some stakeholders expressed the idea that they would be happy to be given the worst-case scenario via the CO-FPS simulations; in contrast, others felt that the simulations need to provide results that are close to reality or people will not make use of the system. The long-term solution will be direct incorporation of near-real-time fuel moisture information when it is available.

Appendix A – Meeting Agenda

COLORADO
Center of Excellence for Advanced Technology Aerial Firefighting
Department of Public Safety

Colorado Fire Prediction System August Meeting Agenda
August 1, 2017: 1 p.m. – 3 p.m.

National Center for Atmospheric Research (NCAR), Foothills Laboratory
3375 Mitchell Lane, Boulder, CO 80307
Anthes Building, Room 2205[1]

1:00 p.m. – 1:15 p.m.	Introductions and meeting goals and objectives
1:15 p.m. – 1:30 p.m.	Presentation on CO-FPS development plans for FY 17-18
1:30 p.m. – 1:50 p.m.	Presentation on Scott and Burgan fuel model implementation in CO-FPS
1:50 p.m. – 2:00 p.m.	Break
2:00 p.m. – 2:30 p.m.	CSFS Presentation on CO-WRAP Refresh, including tuning of Colorado LANDFIRE data
2:30 p.m. – 3:00 p.m.	Discussion on potential future directions for fuels implementation in CO-FPS

---

[1] Note that entry to this building is via a secure door. Call 303-330-4583 if no one is available to let you in.

375 County Road 352 #2065-A   Rifle, CO 81650   colorado.gov/dfpc/coe
John W. Hickenlooper, Governor | Stan Hilkey, Executive Director