1. MEETING MINUTES

The minutes are organized by topic per the agenda.

1.1 INTRODUCTIONS & MEETING GOALS AND OBJECTIVES

Brad Schmidt (CoE) opened the meeting by thanking everyone for attending and participating. Brad then discussed the topics and objectives of the meeting which are captured in the agenda. We also went around the room and did self-introductions.

1.2 PRESENTATION ON CO-FPS ACCESS POLICY

Brad Schmidt went through the Access Policy for use of the experimental CO-FPS projects. The Access Policy is attached in Appendix B. The Access Policy is also accessible from the CO-WIMS home page.

1.3 OVERVIEW TRAINING ON CO-WIMS – INTTERRA

Joy Collins (Intterra) gave an overview presentation of CO-WIMS that included topics such as how to log-in, how to view incident and aircraft intel data, navigating the graphic user interface, adding and removing layers, viewing legends, adding and editing map features, and how to add wildfire incidents into the system. She also presented information on the data flows and measuring tools. Details are contained in the training presentation materials.

1.4 ACCESSING AND MANIPULATING THE CO-FPS WORKSPACE

Joy Collins gave a presentation on how to access the CO-FPS workspace within CO-WIMS. She went through procedures for initiating a CO-FPS wildfire simulation and provided information on the current limitations and capabilities. Details are contained in the presentation materials.

Joy then asked users to provide feedback to Intterra as CO-WIMS questions arise.

Before the meeting break, Brad and Joy initiated a CO-FPS wildfire simulation. The output was briefly viewed toward the end of the training session.

1.5 TRAINING ON VIEWING AND INTERPRETING CO-FPS PRODUCTS

Bill Mahoney (NCAR) gave a presentation that highlighted the state of development of the CO-FPS noting that the development effort is only 10 months into a 60 month project period and significant fire model tuning will be required based on real wildfire cases. The version available now is the initial operating capability. Currently known issues include:

- The time required to generate an 18-hour fire simulation is currently too slow as it takes about 3 hours for the CAWFE® model to complete an 18-hour simulation on the currently available computer. The first three hours of the simulation does complete within about 30 minutes and is available on CO-WIMS as the output becomes available.
- The CAWFE® simulations currently propagate the fire line too quickly. Refinements are being developed and tested. Feedback on all the products will be used to identify improvements.

Joy then walked through the CO-FPS workspace within CO-WIMS and demonstrated the specific procedure for initiating a wildfire simulation including using aircraft intel data to analyze the fire characteristics, naming the fire simulation, choosing a forecast period, creating heat sources and burn boundaries, and finally submitting the information to CO-FPS. She then walked through the process of viewing the output, starting animations, overlaying products, viewing legends, etc.

Bill walked through each of the currently available CO-FPS experimental products and described the product resolution, update rate, units, and current performance caveats. The experimental "fire behavior" and "fire weather" product suites are available now. The "aviation hazard" product suite will be added to the system in October.

Joy concluded this session by providing training on how to print geo-spatial PDFs within CO-WIMS. The details are contained in the training presentation materials.

1.6 QUESTION AND ANSWER SESSION

The users had hands-on capabilities during the training session as all of the trainees had active CO-WIMS logins and access to the CO-FPS workspace. The following questions arose:

1. There was a request to add the experimental NWS HRRR model smoke product (HRRR-Smoke) to the CO-FPS product suite. NCAR will investigate this product.
2. There was a request to collate the current weather products in CO-WIMS with the HRRR products in CO-FPS so they can be seen outside of the CO-FPS workspace. It would be beneficial to be able to access both sets inside and outside the CO-FPS workspace.
3. There was a request to combine the drawing procedure for both the burn area boundaries and active fire lines.
4. There was a request to provide the numerical values of the smoke concentration as well as the hazard categories. The users want to be able to query the values.
5. The users requested that the system include some pre-selected test cases. This is an item that is on the enhancement list for CO-FPS development period 2.
6. The users want to be able to view a change-log that will provide information on system changes and enhancements as development moves forward.

7. There was a request to add a capability to identify a time period in the near future (during the next 24 hours for example) to schedule a burn simulation (to help evaluate the behavior of planned burns.
8. There was a question as to whether the fire surface heat release product should be in watts/m^2 or BTUs/ft^2.
9. There was a request to restrict the calendar to the actual available preceding, available time for the start of a simulation.
10. There was a request to enable a buffered perimeter of a burned area/heat source to have the fire line surround the entire shape.
11. There was a request to confirm timestamps in the legend/labeling; Local time vs. UTC (Zulu).

2. ACTION ITEMS

The following actions items resulted from the meeting.

- These minutes and presentation materials will be posted to the [CoE CO-FPS project website.](#)
- NCAR will investigate adding the HRRR-Smoke product to the CO-FPS.
- NCAR, Intterra, and the CoE will review the user requests and develop an action plan for addressing them.

Appendix A – Meeting Agenda

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

Colorado Fire Prediction System September Meeting Agenda
September, 27 2016: 1 p.m. - 5 p.m.

1:00 p.m. - 1:15 p.m.	Introductions & meeting goals and objectives - *CoE*
1:15 p.m. - 1:30 p.m.	Presentation on CO-FPS Access Policy - *CoE*
1:30 p.m. - 2:45 p.m.	Overview training on CO-WIMS - *Intterra*

- Logging into and navigating CO-WIMS
- Adding an incident into CO-WIMS

2:45 p.m. - 3:00 p.m.	Break
3:00 p.m. - 3:30 p.m.	Accessing and Manipulating CO-FPS Workspace - *Intterra and NCAR*

- Procedure for initiating a CO-FPS wildfire simulation
- Options and limitations on initiating wildfire simulations

3:30 p.m. - 4:00 p.m.	Training on Viewing and Interpreting CO-FPS Products - *NCAR and Intterra*
4:00 p.m. - 5:00 p.m.	Question and Answer and/or Revisit Specific Training Items - *NCAR, Intterra, and CoE*

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John W. Hickenlooper, Governor | Stan Hilkey, Executive Director

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Colorado Fire Prediction System (CO-FPS) Experimental Use Terms and Conditions

1. **Acceptance of Terms and Conditions**

   Any use of the Colorado Fire Prediction System (CO-FPS) and its products will constitute acceptance of this agreement. If you do not agree to these Terms and Conditions, you are not permitted to access, view, use, manipulate, evaluate, or experiment with CO-FPS.

2. **Permitted Use**

   CO-FPS is an experimental advanced numerical wildfire-modeling system currently under development by the Center of Excellence for Advanced Technology Aerial Firefighting (CoE) and the National Center for Atmospheric Research (NCAR). CO-FPS is accessed via an online interface administered by Intterra, a corporation domiciled in Nevada. CO-FPS is currently an experimental product and shall only be used to test, evaluate, and further develop CO-FPS. During testing of CO-FPS, the output, models, predictions, maps, images, and descriptions (collectively, "CO-FPS products") generated are not intended as a basis for decisions regarding plans, safety, strategy, tactics, situational awareness, or resource management on actual fire incidents.

3. **Disclaimer of Liability**

   CoE, NCAR, and Intterra, collectively referred to as "Developers," make no representations regarding the accuracy, availability, timeliness, or usefulness of CO-FPS products and shall not be liable for the lack thereof. In addition, the Developers shall not be liable for any damages resulting from the use of the CO-FPS website, the CO-FPS system, or CO-FPS products.

4. **Resource Use**

   Users are hereby advised that the demand for CO-FPS may at times exceed the ability of the system to keep up with requested simulations. Users are responsible for monitoring the process queue and using professional judgment and courtesy to avoid frivolous, needless, and capricious use of CO-FPS. The Developers reserve the right to monitor the process queue and manage it according to their sole discretion, including terminating a process and/or withdrawing permission to use CO-FPS.