Forest-fire Weather & Climate Group Presentation   v8

Objective:

This assignment requires a comprehensive presentation on a specific wildfire case study. Students must thoroughly explain pre-, during-, and post-fire weather conditions and associated fire evolution, and examine the impacts on people, industry, and the environment.

Presentation Guidelines:

- The presentation should last roughly 45 minutes, including roughly 5 minutes for questions.
- Use visual aids from the course website (e.g., NWP forecast maps from the course Forecast Tools tab, surface analysis maps, satellite images, soundings or cross-sections if appropriate, etc.) and other relevant online material.
- Focus on the synthesis of information and critical analysis rather than mere description. Namely explain why the fire weather is evolving the way it did, and how that weather affected fire behavior.
- Address any additional items specific to the fire case your group is presenting.

Presentation Structure

A. Introduction

- Introduce the fire case study. The Fire Name. Where? When?
- Discuss the local geography and climatology of the region

B. Environmental Conditions Leading up to the Fire (i.e., the long- and short-term antecedent conditions)

- Discuss environmental conditions leading up to the fire.
- What type of forest ecosystem was the fire burning within?
- Other relevant information to your group finds important.

C. Ignition (Source) and Weather Impact

- Identify the ignition source of the fire.
- Describe the synoptic and mesoscale weather on the day of ignition.
- Explain how the weather conditions may have influenced the ignition.

D. Fire Weather and Behavior

- Describe the synoptic and mesoscale weather during the study period.

- Consider factors such as fuel moisture content, wind speed, terrain & slope & slope aspect, fuel type, etc...

E. Additional Items
- Address additional information important for your specific case. For example, look at our Tips for Presenters, provided on the website for each fire case.

F. Impacts on People, Industry, and Environment
- Explore the direct and indirect impacts of fire and its smoke on human populations, industries, and the natural environment.
- Consider health, economic, and ecological impacts.

G. Conclusion:
- Summarize key findings and insights.

H. Questions and Discussion.
- Questions and discussion with peers.

Assessment Rubric
- Use the provided rubric when you design and practice your presentation, to ensure that you maximize the grade. Pay close attention to the criteria outlined for each section. Note that some evaluation items are based on the whole group and apply to everyone in the group, and other items apply to you as an individual.
- Ensure that the presentation adheres to the time limit.
- The audience will have the same rubric. The grades from the audience and from the instructors will be used to determine your overall grade for this presentation.

Important Note
Feel free to reach out to the instructors and TAs for clarification or guidance during preparation. This assignment aims to foster a deep understanding of the complex interactions between weather, environmental variables, and forest fires.

Capstone Narrative Report
- Within one week after your presentation, submit a concise but thorough written narrative report on your case-study fire. This, together with the presentation slides, is the "capstone project".
- Include a list of references citing sources and URLs used in the presentation.

- To plan ahead for figures in this report, save screen captures from your presentation.

Additional Tips

- For your presentation slides (e.g., PowerPoint, Keynote other app), the backgrounds should normally be white, to reduce ink used for printed copies.
- Every slide should have a page number, and the first name of the presenter on the slide.
- Weather maps, soundings, etc. should be large enough to see details from the back of the room. Namely, fully utilize the area of each slide, with less wasted space for margins. Don't try to squeeze too many maps on a single slide, because the resulting maps are often too small to see the important details.
- Every map or image should have an appropriate legend for colors (e.g., color bar)
- Every map or sounding or image should have valid date/time info.
- On every map, use an "X" or a star to indicate the location of the fire.
- For images or maps from journal papers or non-ATSC 413 websites, cite the authors and date near the image, and include details in a bibliography at the end of the narrative report.
- Double check spelling, slide numbering, etc. to ensure a tightly cohesive presentation and narrative.