

Rapid Lesson Sharing

Event Type: Ensuring ICPs are Located in Clean Air

Date: July 28-29, 2021

Location: Alder Creek Fire ICP and Base Camp
Montana

Lessons from this Story of Moving ICP and Base Camp Due to Unhealthy Air

It's July. In Montana. 2021. There are fires.

The Wise River Incident Command Post and Base Camp was established in a sage-filled valley bottom surrounded by mountains. Joe, the incoming IMT's Safety Officer, arrived and immediately took note of the proximity of camp to the Alder Creek Fire and the smoke layer hovering in the valley.

Joe's experience as a Burn Boss has taught him about the adverse health impacts of smoke and PM 2.5. (Fine particulate matter [PM 2.5] is an air pollutant that is a concern for people's health when these levels in the air are high. PM 2.5 are tiny particles in the air that reduce visibility and cause the air to appear hazy when levels are elevated.)

Joe immediately started doing some research and getting estimates for the air quality in the Wise River Valley using an air quality app. After seeing the rough numbers that the Air Quality app was showing, he ordered an ARA (a Regional Smoke Specialist) and an air monitor and began discussions with his IMT about moving their Incident Command Post (ICP).

Complaints About Smoke

As the IMT transitioned, Joe began to collect complaints about the smoke from all of the IMT support functions. "I recognize that firefighters experience smoke on the fireline, but they need to have some sort of reprieve from it while they rest," Joe informs. "All the other IMT support functions shouldn't have to be subjected to those types of hazards."

As ARA Sam arrived at Wise River in the early afternoon of July 28, he noted the heavy smoke elevated a few hundred feet above the valley floor. His experience



Photo taken from ICP/Base Camp as the Alder Creek Fire backed down the mountain. Photo by Taijia Robinson.



As the sun sets, smoke from the nearby fires begins to settle into the valley where ICP/Base Camp is located. Photo by Jordan Crain.

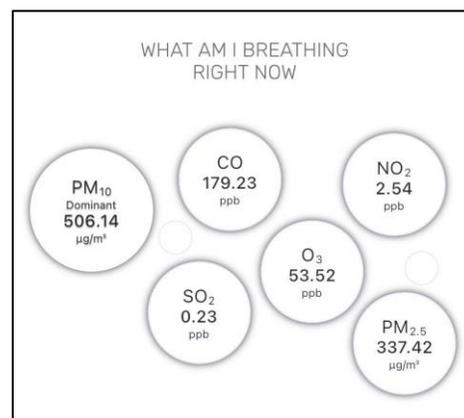
taught him that, based on the topography, the smoke and particulate matter would slowly drain into the valley floor. Compounding this was the close proximity of the Alder Fire to the ICP and Base Camp as well as having two other fires in the vicinity. Sam deployed his smoke monitor and began collecting data.

That night, the monitor collected five readings. All of them were in the “Unhealthy” range before the monitor lost power. The next morning, Sam was able to restart the monitor. The readings continued to be in the “Very Unhealthy” to “Hazardous” range for the morning, then dropped down to “Unhealthy” for the rest of the day. Based on this information, Sam assumed that the overnight readings when the monitor lost power were “Unhealthy” to “Very Unhealthy”.

Massive ICP and Base Camp Moved 10 Miles

Safety Officer Joe and ARA Sam worked together to identify new camp locations. While the objective was not necessarily to get people out of the smoke (which certainly was a concern), the primary concern was to get people out of the high concentrations of PM 2.5. The ICP and Base Camp needed to be located in a geographic area in which the local weather patterns and topography would assist with pulling in cleaner air—not in the “Hazardous” to “Very Unhealthy” ranges.

The end result of this story, through countless discussions and education, is the decision to move the approximately 10-acre ICP and Base Camp 10 miles down the road. The smoke monitor was moved to this new location to continue to collect data and ensure that the PM 2.5 was at an acceptable level.



Air Quality Information using the BreezoMeter application.

Lessons

- ❖ Visibility is not a good indicator of PM 2.5 levels. Atmospheric conditions play a role in smoke and how it is perceived. Humidity plays a role. While visibility might look good—it might not actually be good.
- ❖ Regional Smoke Specialists (ARAs) are tools Logistics or Safety can use to check for suitable locations of camps or to ensure that site selections will have the least amount of impact. Engage an ARA early on and save yourself the headache of moving a camp or ICP.
- ❖ Our wildland fire culture expects smoke and its associated materials to be part of normal operations. We need to focus on the effects of smoke and understand it can cause premature mortality and an elevated risk of heart disease, etc. We accept that risk is part of fireline operations. But we should do everything we can to limit the inhalation of PM 2.5 during rest periods and for Incident Support personnel.
- ❖ There are several tools out there to provide you information about the air quality in your area, including: [BreezoMeter](#) and the website [fire.airnow.gov](#).

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