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Subject: Safety Lesson of the Day



**Today's discussion is from the
Environmental Factors Category.**

Scenarios:

[Scenario 1](#)

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SMOKE EXPOSURE

Exposure to smoke during fire operations can be a significant safety concern. Research has shown that smoke exposure on prescribed fires, especially in the holding and ignition positions, often exceeds that on wildfires. There are many precautions that can be taken to reduce personnel exposure to smoke.

- **Planning:** Smoke exposure needs to be considered when planning suppression tactics and prescribed fires. Simple actions can mitigate smoke exposures, such as:
 - Altering line locations can have a significant impact on smoke exposure.
 - Placing firelines in areas of lighter fuels or moving lines to roads or other barriers that will require less holding, patrol and mopup will significantly reduce the smoke exposure to personnel.
 - Use flanking attack as opposed to head attack (where appropriate) in heavy smoke situations.
 - Check fire behavior forecasts for smoke and inversion potential.
 - In heavy smoke, give up acres to gain control.
- **Implementation:** Many techniques can help reduce the exposure of personnel to heavy smoke, such as:
 - Rotating people out of the heaviest smoke area may be the single most effective method.
 - Locate camps and incident command posts in areas that are not prone to inversions.
 - Minimize snag falling, consistent with safety concerns, to avoid putting heavy fuels on the ground that will require mopup.
 - Changing firing patterns and preburning (black lining) during less severe conditions can greatly reduce exposure to smoke.
 - The use of retardant, foam or sprinklers can also significantly reduce the workload and exposure time for holding crews.

References:

Standards for Fire and Fire Aviation Operations, Interagency, www.nifc.gov/references/index.html