1
00:00:00,000 --> 00:00:04,000
Where there’s fire,

2
00:00:04,000 --> 00:00:08,000
there’s smoke.

3
00:00:08,000 --> 00:00:12,000
But smoke can also travel far beyond a burning fire. It blows across continents and oceans,

4
00:00:12,000 --> 00:00:16,000
altering air quality and affecting weather patterns.

5
00:00:16,000 --> 00:00:20,000
What happens when that smoke mixes with the atmosphere — where it goes,

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00:00:20,000 --> 00:00:24,000
what exactly it carries, and how it affects people and ecosystems — is important

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00:00:24,000 --> 00:00:28,000
and ongoing research. Enter NASA, NOAA

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00:00:28,000 --> 00:00:32,000
and university partners, working from airplanes, mobile research laboratories

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00:00:32,000 --> 00:00:36,000
and ground stations to follow particles of smoke produced by fires

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00:00:36,000 --> 00:00:40,000
across the United States. The mission? It’s called

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00:00:40,000 --> 00:00:44,000
the Fire Influence on Regional to Global Environments and Air Quality,

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00:00:44,000 --> 00:00:48,000
or FIREEx-AQ, for short.

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00:00:48,000 --> 00:00:52,000

Generally, the goal is to track smoke as it crosses North America, taking air samples

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00:00:52,000 --> 00:00:56,000
ranging from high in the sky to down on the ground where people are breathing it.

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00:00:56,000 --> 00:01:00,000
These measurements will help answer some big questions, like:

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00:01:00,000 --> 00:01:04,000
What's in the smoke? How do fires affect air quality across North America?

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00:01:04,000 --> 00:01:08,000
What are some of the long-term affects of smoke from

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00:01:08,000 --> 00:01:12,000
these fires? And importantly, how can satellites help us

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00:01:12,000 --> 00:01:16,000
answer these questions? There are a few stops along the way.

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00:01:16,000 --> 00:01:20,000
First up: Boise, Idaho. From Boise,

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00:01:20,000 --> 00:01:24,000
the FIREEx-AQ team will deploy throughout the U.S., taking measurements

22
00:01:24,000 --> 00:01:28,000
of smoke from wildfires.

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00:01:28,000 --> 00:01:32,000
Next up, the team heads to Salina, Kansas, to focus on smoke from agricultural fires,

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00:01:32,000 --> 00:01:36,000
looking at the unique composition of chemicals in these small, managed burns.

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00:01:36,000 --> 00:01:40,000
Finally, all this data comes back to the lab

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00:01:40,000 --> 00:01:44,000
where researchers put it into computer models, improving forecasts of where smoke

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00:01:44,000 --> 00:01:48,000
travels, and what it carries, as fires burn across North America.

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00:01:48,000 --> 00:01:52,000
FIREEx-AQ is just one of NASA’s many

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00:01:52,000 --> 00:01:56,000
missions studying fires and how they’re changing with our planet.

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00:01:56,000 --> 00:02:00,000
From the ground, the air and space, we’re keeping a close eye on Earth

31
00:02:00,000 --> 00:02:04,000
and how it burns.