1
00:00:01,070 --> 00:00:05,070
[Sound of electrical sparks, sizzle of burning cigarette]

2
00:00:05,070 --> 00:00:09,070
[Forest fire crackles, thunder echoes]

3
00:00:09,070 --> 00:00:13,070
[Sound of wildfire rises] Narrator: A wildfire is born …

4
00:00:13,070 --> 00:00:17,070
and teams of people leap into action,

5
00:00:17,070 --> 00:00:21,070
sounding the alarm for nearby residents, providing local fire observations,

6
00:00:21,070 --> 00:00:25,070
and getting ready to battle the flames from ground and sky.

7
00:00:25,070 --> 00:00:29,070
These front-line responders do the heavy lifting

8
00:00:29,070 --> 00:00:33,070
when it comes to fighting and managing fires, but they’re often

9
00:00:33,070 --> 00:00:37,070
helped by the view from higher up. [rythmic music builds]

10
00:00:37,070 --> 00:00:41,070
From late spring to early fall, two US Forest Service planes flying

11
00:00:41,070 --> 00:00:45,070
at 10,000 feet, crisscross the Western United States chasing fires.

12
00:00:45,070 --> 00:00:49,070
Sometimes mapping dozens of fires in one night,

13
00:00:49,070 --> 00:00:53,070

they help identify a fire’s perimeter

14
00:00:53,070 --> 00:00:57,070
and any outlying fires or hotspots, andprovide

15
00:00:57,070 --> 00:01:01,070
information to the Fire Management Teams on the ground.

16
00:01:01,070 --> 00:01:05,070
Meanwhile, further above, NASA and NOAA satellites

17
00:01:05,070 --> 00:01:09,070
provide a powerful global view of active fires across the entire planet.

18
00:01:09,070 --> 00:01:13,070
Satellites can fill in the gaps

19
00:01:13,070 --> 00:01:17,070
between ground and airborne observations, identifying fires

20
00:01:17,070 --> 00:01:21,070
soon after they start, and detecting fires

21
00:01:21,070 --> 00:01:25,070
that nothing else can – like in remote stretches of wilderness –

22
00:01:25,070 --> 00:01:29,000
– or estimating a fire’s perimeter when planes aren’t available.

23
00:01:29,000 --> 00:01:33,070
These fire observations from air and space [crackling of wildfire]

24
00:01:33,070 --> 00:01:37,070
can help responders decide where to send firefighters and other resources.

25
00:01:37,070 --> 00:01:41,070
File footage voiceover: Three, two, one

26
00:01:41,070 --> 00:01:45,000
Main engine start, and liftoff of the Atlas

27
00:01:45,000 --> 00:01:49,000
rocket with the Terra flagship of the Earth Observing System.

28
00:01:49,000 --> 00:01:53,070
Narrator: And since NASA designed and launched the first satellite instruments to specifically measure fires

29
00:01:53,070 --> 00:01:57,070
20 years ago, satellite fire data has also been used in many other ways,

30
00:01:57,070 --> 00:02:01,070
including detecting smoke plumes, forecasting and

31
00:02:01,070 --> 00:02:05,070
measuring air quality downwind from a fire,

32
00:02:05,070 --> 00:02:09,070
measuring burned area after fires are extinguished, and looking at trends

33
00:02:09,070 --> 00:02:13,070
in global fire frequency and severity.

34
00:02:13,070 --> 00:02:17,070
NASA and NOAA scientists are working to leverage that satellite data

35
00:02:17,070 --> 00:02:21,070
with new airborne field campaigns featuring new technologies

36
00:02:21,070 --> 00:02:25,070
for measuring wildfires, so that we can all make