



1
00:00:00,000 --> 00:00:04,000

Music

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00:00:04,000 --> 00:00:07,000

We are in the most severe drought on the gauged record.

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00:00:07,000 --> 00:00:11,000

And the drainage area is so large, and there are so many different soil types,

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00:00:11,000 --> 00:00:16,000

the only way to get a handle on the total picture is going to be remote sensing from a satellite.

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00:00:16,000 --> 00:00:22,000

So SMAP will be remote sensing satellite that will be examining soil moisture from space.

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00:00:31,000 --> 00:00:27,000

Music

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00:00:31,000 --> 00:00:35,000

We service water to over a million people here in Central Texas,

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00:00:35,000 --> 00:00:40,000

and we manage the Colorado River from Lake Buchanan all the way to the Gulf of Mexico.

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00:00:40,000 --> 00:00:43,000

What you can't measure, you can't manage,

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00:00:43,000 --> 00:00:49,000

and the soil moisture is a very important part of the cycle of water that we can't measure right now.

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00:00:49,000 --> 00:00:55,000

Soil moisture is a hidden reservoir that holds water that we don't have gauges on,

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00:00:55,000 --> 00:01:00,000

and it's important because that reservoir has to be filled up before we see runoff into our stream gauges.

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00:01:00,000 --> 00:01:05,000

Music

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00:01:05,000 --> 00:01:10,000

The lakes continue to just ignore all the rainfall and continue downward.

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00:01:10,000 --> 00:01:18,000

And, it's just because the soils are so dry that... you can't have excess moisture until the soils are wet.

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00:01:18,000 --> 00:01:24,000

With soil moisture monitoring, we'll have a better understanding earlier on

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00:01:24,000 --> 00:01:27,000

whether this is a rainfall event that's going to deliver runoff

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00:01:27,000 --> 00:01:30,000

or whether it's a rainfall event that's just going to be soaked into the soil and not cause a flood event.

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00:01:30,000 --> 00:01:34,000

In flash flood, particularly when you're coming out of a drought,

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00:01:34,000 --> 00:01:41,000

there's always a question mark about how the soil is going to react to a heavy rain storm.

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00:01:41,000 --> 00:01:42,000

Let's say it's been dry,

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00:01:42,000 --> 00:01:47,000

you don't have a whole lot of ground cover. Your grasses are gone, uh, you lose top soil

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00:01:47,000 --> 00:01:55,000

which in turn mean you can't grow anything because it takes hundreds of years to produce new top soil.

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00:01:55,000 --> 00:01:57,000

As we go into the future and we have more and more people,