

Intro

>> I'm Shawn Urbanski, and I'm a research physical scientist at the Missoula Fire Sciences Lab, and I work with the Fire, Fuel, and Smoke Program.

What do you do

One of the projects we're working on currently is its a laboratory investigation of the pollutants that are released when wildfire fuels are consumed by fire.

Looking at litter fuels, ponderosa pine needles, loblolly pine needles, Douglas fir needles.

Real simple fuel beds, but even though they're simple, they're really important in terms of,

What are your projects

there's a lot of this fuel out there that burns, and it's a major contributor to smoke.

Right now, we're putting together a model that predicts how much smoke is produced and how much

of the different chemical pollutants that are in the smoke are produced, based on the moisture

of the fuels, the density, the packing of the needles, how densely packed are the needles,

and also the depth of the fuel beds.

What are the benefits

So, this has a couple positive benefits to the general public.

One is involved with prescribed fires.

If managers who conduct prescribed burns have better tools

to predict how much smoke is produced, then they are less likely to produce more smoke

than they had intended to, and you're less likely to have those unintended consequences of a local community being smoked out by a prescribed fire.

And also, during the wildfire season, when we're dealing with wildfires

that really can't be controlled and there's not much land managers can do

Conclusion

to stop the smoke production, they can, hopefully with these improvements to the tools, be able to better predict how much smoke is being produced.

And, those improved predictions of smoke production feed into air quality models and allow the air quality modelers to give a better forecast as to what the smoke is going

to be, both on local communities near the fire, but also communities hundreds of miles away

which can be easily impacted during the wildfire season when there's a lot of fires burning.