AirSpace Season 1, Episode 15

Smoke From a Distant Fire

Nick:

Welcome to Airspace from the Smithsonian's National Air and Space Museum with help from PRX. We're your hosts.

Matt:

I'm Matt, a Curator and Space Historian.

Emily:

I'm Emily, a Planetary Geologist.

Nick:

And I'm Nick, a writer here at the museum.

Reporter:

The fire is burning in Juab County near the Utah County border.

Speaker 5:

The fires are hotter. The fires are moving faster.

Reporter 2:

This fire is a monster.

Speaker 6:

We actually, talking to the forest service now about it being a fire year, as opposed to a fire season.

Emily:

The news networks and representatives from the U.S. Forest service all seem to be saying the same thing. Fighting fires is becoming a bigger and more vital operation with each passing year.

Matt:

And aerial firefighting is a very important part of attacking wilderness fires.

Nick:

On this episode of Airspace, we'll hear from a smoke jumper about what it's like to parachute in to fight fires that are too remote to reach with ground transportation.

Chelsea Cough:

Our jumpsuits have a lot of hockey pads in them around the hips and elbows and chest protectors. And we have a face mask. So we're pretty suited up.

Emily:

And Matt travels out to Utah, to an active wildfire to see aerial firefighting in action.

Matt:

The water spray is coming our direction, we're probably going to get a little wet.

Nick:

How to fight fires from the sky.

Emily:

And how changes in technology, climate and communication are impacting the ways we fight fires around the country.

Matt:

That's coming up next, on Airspace.

Emily:

We all live on the East coast, right? So I think sometimes it can be hard for people who live on the East coast to fully appreciate some of the effects that you might experience living in or near wildfire. Have you ever seen a wildfire?

Matt:

Yeah, so even before I took this trip out to Salt Lake City, I grew up in Phoenix and also went to school in San Diego. So wildfires were kind of always on the news and not too far away from the places that I was living.

Emily:

What about you, Nick?

Nick:

I have seen one very tame fire in the wild. I was at a stoplight.

Emily:

There was a stoplight in the wild?

Nick:

I was at a-

Emily:

I just want to be clear about what wild means.

Nick:

It was an uncontrolled fire, that's how I'm characterizing in the wild.

Emily:

So not exactly a wild fire?

Nick:

It was not under control until it was out.

Matt:

Well, I think it's also, we think about two different kinds of fires as being the predominant ones that we see in the news. Like there's structure fires, which you get in cities where you have apartment buildings on fire or some other structure. And then there's your wildfires, that are out there in sort of the untamed wilderness.

Emily:

Yeah.

And I lived for a while in Northern Idaho where there's quite a few forest fires, kind of in Washington. And especially when you're in kind of the lower lying areas, if there's a nearby wildfire, even if you can't see the fire, when you wake up in the morning, your sinuses are burning and the air quality affects an even greater area than what you would experience if you were just in sort of the burn zone.

Matt:

When I was at the University of California, San Diego, we were not in the burn area one year, but we had to close campus because roads in and out of town were all being reserved for emergency vehicles. And then also there was, essentially, like a snowfall of Ash. It's really like nothing I'd ever experienced before. It was weird.

Nick:

I have read that 90% of wildfires are started by people, either accidentally or intentionally. And that about 10% is lightning. My theory was that it was 90% people starting them. And then 10% lightning striking people who were lying about starting them.

Matt:

So I think in sort of uninhabited areas, they are a natural part of the ecosystem.

Emily:

There's plants and trees and all kinds of other organisms that are built to need a big burn every once in a while in order to survive as a species.

Matt:

But now, because humans live so much at the interface between urban areas and wilderness areas, humans have become a sort of larger cause or more frequent cause of wildfires because they're just out there doing human things. Sometimes they involve electricity or they involve cigarettes or campfires and these things do tend to cause fires. Yeah.

Emily:

I remember driving into Missoula, Montana one time and I was there to visit a friend and it's kind of a long drive. So you spend a lot of time reading road signs. And I remember seeing the sign on the highway that was like smoke jumper training facility. And I was like, what the heck is a smoke jumper? I'm still a little unclear as to what a smoke jumper is and how a smoke jumper works, but they're a really critical part of the infrastructure for fighting these forest fires.

Matt:

Oh yeah. So the way that we fight wildfires today, no matter if it's a big one or a little one, actually requires a lot of coordinated activity between different types of firefighting. So you have your hot shots, for example, who hike into the fire and fight it on the ground. And you have airplanes and helicopters who are dropping water and retardant on and around the fire. And then you have your smoke jumpers who are actually teams of people in crews as small as two, or as large as eight, who are jumping out of helicopters and planes into the burn area to fight the fire. I actually got the opportunity to interview a smoke jumper who is stationed out in Missoula, Montana. And she shared with me some of the sort of ins and outs and the pro tips of how they prepare to go out into a wilderness.

All right, Chelsea, can we start by just having you tell us who you are and what you do?

Chelsea Cough:

Yeah, Sure. My name is Chelsea Cough and I'm a Missoula Smoke Jumper for the U.S. Forest Service. A lot of times, instead of just saying my name, people just give me a nice cough.

Matt:

Wow. So I think when most people think about firefighting, they think about fire hoses, but how do you fight a fire without fire hoses, without the fire truck? How do you fight it with just the things that you can carry on your back?

Chelsea Cough:

Being able to have access to water is definitely a luxury. Even getting helicopters in is pretty unique if it's a smaller fire. So the idea of what we do is suffocating a fire. So think about a lot of times if you were out camping and you're going to put your fire out at the end of the night, instead of just dousing it in water, sometimes you can dig that fire and bury it with dirt. And so that's essentially what we're doing there. We're getting rid of all the fuel, which in fire, what we refer to as fuel is like dead end down. Like old logging slash. And so the fire line is where we dig down to the mineral soil, removing all that organic matter. And as you're removing all that organic matter, that fire has nothing to consume anymore. So it's going to burn into that fire line and then it's going to stop.

Matt:

And what kind of gear are you carrying with you when you go into that fire?

Chelsea Cough:

When we go into the fire, we have what we call a PG bag. And so that has our fire shelter in it, which is about a 10, 15 pound... Kind of looks like a big baked potato, I guess, when it would be deployed. Every firefighter carries that as a safety precaution if you are going to get overrun by a fire. Then we also carry a ton of water, usually at least a gallon or so, and then lots of snacks, of course, GPS.

Matt:

So some of it is just sort of what you would think of as like camping or hiking gear.

Chelsea Cough:

Yeah, exactly. It's really similar because smoke jumpers are pretty much self-sufficient for three days, we tend to carry a lot of things like extra socks and a toothbrush, like that kind of stuff in our bag as well, just so we can get through. And we also carry chainsaws, but we only have two per load. And then sometimes in wilderness areas, we don't actually get a chainsaw because there's certain regulations where you have to use a cross cut saw or a smaller handsaw.

Matt:

So even when there's a forest fire, they will limit what you can actually use on the fire.

Chelsea Cough:

Yeah, exactly. Because there's certain regulations and noise precautions that they try to keep in place. And some of the wilderness out here for wildlife and habitat and just try to keep things a little quieter. So even just having a helicopter and range of a wilderness area, sometimes you have to request to lift certain restrictions to be able to operate a helicopter in wilderness. By the time you're all said and done, each person has a pack between 110, 140 pounds.

Matt:

Oh my gosh. Can you take us sort of step-by-step through your most recent smoke jumping experience?

Chelsea Cough:

Yeah, so a lot of times we have a general idea. If it's a heavy fire activity type of day, they're doing a lot of smoke checks. There's a plane in the air, they're calling it a lot of smoke checks. So that kind of gets the hair on your arms to stand up a little bit. You kind of know it's coming down. A lot of folks like to keep steaks and sausages and things like that in the freezer at work. So we put that kind of stuff in our jump pockets right before we're about to put our jump gear on. It's nice to get on the ground and be able to cook steaks that night. So as soon as that jump call comes in, a siren goes out, we all put our jump gear on, got on the Sherpa. And that's the plan that we've had most of the summer.

And we were flying up to the Idaho panhandle, which is right on the Canadian border there. And as soon as we got up over the fire, it was starting to get a little bit late at night. It was around five or six. And so the winds were starting to do kind of weird things, starting to get a little shifty. And there was a lot of timber in that area. A lot of trees, I was the third person on the load. So I was able to be really close to the front and kind of get a good visual of where our jump spot was. There's someone that sits in the door as well that's not actually going to jump the fire and that's the spotter. And so that person in the back has a headset on all the time. And they're talking to the pilot.

So between the spotter and the pilot, they're saying, "Hey, the guys in the back are looking at this spot over here, out your left door. Can we go and do a couple orbits around that and get a good look at it?" So as soon as we decide we like that jump spot, the spotter goes ahead and throws streamers and the streamers kind of simulates a release point for where the jumpers will be released out of the plane and where they will hit that jump spot. So a lot of times you'll see streamers come out of the plane and they'll be pretty consistent, consistent. And then all of a sudden, once you get close to those tree tops, those streamers might just take off and shoot in a different direction or something. And

so that would be a big watch out because that indicates that there's kind of burbles in the air right around those trees.

Matt:

And what is a burble?

Chelsea Cough:

So a burble is, it's kind of like an eddy in a river where the river is just flowing. And then as soon as it comes around a corner, it kind of creates this vortex, this circular motion. So to be caught in that as a jumper can be a pretty hazardous situation because it's going to push you down to the earth a little bit faster than you would experience if you did not have those burbles. And so, as we talk to our, I was talking to my jump partner, and we made a flight plan. So those spotter times it just right so that he slaps you on the back in the same place that he was going to release those streamers earlier on. So he gives you a slap, and then my jump partner jumped in the door right behind me and gave him a slap and got over those trees and into the jump spot.

Matt:

So after you've jumped, have you ever been stuck in a tree? And if so, how did you get down from there?

Chelsea Cough:

Landing in a tree sometimes is the best option. Once you choose that, that's your fate that you're going to be in a tree, you want to pick the right tree. So you want a soft tree. Firs are typically ideal. Firs, probably not pines, because pines don't have quite as many branches and a fir is just going to be nice and soft. So if you are deciding you're going to come into a tree, you want to make yourself really big. So it's like starfish, you kind of want to just spread your body out so that your body and your parachute and your canopy lines are going to be able to catch up and snag and hold onto as many pieces and things as possible. Because worst case scenario is that your canopy hits the tree and it collapses those air cells in the canopy, but doesn't grab on to anything in the tree. And then you end up falling out of the tree without being able to have that tree catcher.

Matt:

So when you're making yourself like a starfish, are you trying to maximize surface area? Is that what you're doing?

Chelsea Cough:

Yeah, exactly. So once you get into that tree, you want to be able to kind of pull down on our risers and pull on our canopy a little bit, just to make sure that you're hung up, that you have a good anchor, because that anchor is going to be where you end up repelling from.

Matt:

So in those cases, do you just lose your parachute after that? You don't have a parachute to hike, to pack back?

Chelsea Cough:

No. So if that ends up happening, you know pretty early on that that's going to be your fate. We end up calling, radioing up to the jump plane and on every jump plane we carry spurs for tree climbing. So you would immediately get down to the ground and then climb right back up and end up cutting your-

Matt:

You really don't get a break, do you?

Chelsea Cough:

No breaks. That's why trees are not ideal.

Matt:

Jumping into those fires, and then also I imagine you do a lot of jumping during training. Do you have any desire to do skydiving as a hobby? Or do you feel like you get enough jumping out of planes?

Chelsea Cough:

I picked up paragliding in this year. So Missoula is a great place to do a lot of paragliding. And there's quite a few people that do it that I also jumped with. So it's definitely a passion to be in the air as much as possible.

Matt:

Yeah. It seems like you can't get enough of it.

Chelsea Cough:

No, definitely not.

Emily:

What would you guys put in your pockets to grill?

Matt:

I think I would go with the steak option.

Emily:

You mean grill master Shindell would take just a steak? You wouldn't have some marinaded situation in the freezer for these kinds of things? I mean, if you're a smoke jumper and you know, you're going to grill up some stuff during fire season, you're not going to like marinate some rump roast?

Matt:

I have a feeling that when you get done with a long day of digging trenches and hacking your way through the wilderness, you probably just want the simple comfort. So a nice charred piece of red meat is all I would need.

Nick:

Have you seen Matt? No, no, no. He was a shoving whole racks of lamb into his cargo pockets and he couldn't get his legs into his parachute harness.

Matt:

Oh man. Yeah. The firefighter who ate too much.

Nick:

When I first heard the story about the stakes in the pockets, I thought they were just being tough, justifiably so. But the actual intensity of the work they do when they get there-

Matt:

Right, it's like, imagine the last time you felt like you'd really earned a cheeseburger and then think about the amount of work that these people do.

Nick:

Yep. My pockets full of Cliff Bars are not going to cut it for clearing brush when your life and other lives depend on it.

Emily:

So when did the idea of smoke jumping actually happen? Is this an old thing that's as old as aviation or is this something that's a little bit more modern?

Nick:

First, we invented the airplane, 1903.

Emily:

Okay.

Matt:

Yeah.

Nick:

And it wasn't too much longer.

Matt:

So parachutes, of course, were first intended to help save pilots lives when their airplanes malfunctioned in the air, which happened fairly often with those early planes. But by the 1930s, people were actually thinking about using parachutes and jumping for tactical reasons and for firefighting. So it was actually a forest service employee in the 1930s who first proposed smoke jumping as a way to get firefighters to have more energy for fighting the fires, rather than hiking in.

Nick:

Seven hours, hiking into a fire zone with 110 pounds on your back. You're very tired. You're fatigued. If we throw you out of an airplane into that same fire zone, you are fully awake.

Matt:

Yeah. I have a feeling that falling to the ground from an airplane into a burn zone. There's nothing like that to really wake you up,

Emily:

Get the adrenaline running and give you a lot of energy to start digging those fire lines.

Matt:

Yeah.

Well fighting any fire from the air, it takes a lot of coordination. As I prepared to arrive on the site of an active fire in Utah, I knew there would be a lot of different moving parts, but I didn't quite realize just how many. There were over 1000 people working together from 38 different states. There were rows and rows of tents where people were camping onsite in order to work to keep the centralized food, water and showers all operating smoothly.

Emily:

So it sounds like this was an all-inclusive firefighting operation from food to infrastructure for controlling aircraft and providing everything that you need for a thousand people.

Matt:

Yeah. I mean, the people there were essentially working two week long shifts, I'll introduce you to the and crews and take you into the action.

Emily:

After the break?

Matt:

After the break.

Emily:

So Matt, after multiple delays of your flight and practically no sleep, you arrived just outside of Salt Lake.

Matt:

Well, that all faded pretty quickly into the background. I mean, it was a pretty incredible sight to see. It was about an hour outside of Salt Lake and we arrived on their 21st day of fighting the Pole Creek fire. So my travel problems were nothing compared to what they were experiencing. The equivalent of 77,000 football fields worth of land had already burned. And in this case there was so much air traffic, they had to borrow a mini air traffic control tower to coordinate the skies.

Emily:

So in addition to all this infrastructure that gets brought in, specifically at the command center you went to Matt, there's an enormous variety of aircraft that are used in different kinds of circumstances.

Matt:

Yeah. On any fire, the aircraft can range from small to pretty large. There are planes that are officially called large air tankers.

Nick:

Large as in C-130s and then there are other types of planes that are officially, and very descriptively called very large air tankers.

Emily:

Very creatively named.

Nick:

You get the sense that these are vanity sizings on somebody's aircraft.

Matt:

So yeah, there are helicopters type one, two, and three. Type one being the largest. So the Sikorsky S 64 is the largest of the large. It is affectionately nicknamed the sky crane. And then you have smaller helicopters, the type two, that can sort of use buckets that they dangle from the helicopter to pick up water from lakes and ponds, and then dump it on fires or they can deliver supplies. And then you have the even smaller helicopters, the type three, where they're mainly delivering supplies into the burn site.

Emily:

And you got a chance to check out a lot of these different aircraft while you're out in Utah, right?

Matt:

Yeah. I actually got to talk to the crew of a type two helicopter, find out how they do their job and the equipment that they use. We met up right alongside a very active airfield.

Ty Burlingham:

I'm Ty Burlingham, I'm the Chief Pilot at Precision Helicopters based out of Newberg, Oregon.

Jordan Wilburn:

My name is Jordan Wilburn, I'm a field mechanic for Precision Helicopters.

ZJ:

Hi, my name is ZJ. I drive a fuel truck for Precision Helicopters.

Jordan Wilburn:

He does a lot more than just drive a fuel truck.

ZJ:

MY primary job is driving the fuel truck and then I help out wherever and whenever.

Matt:

Tell us what you did yesterday.

Ty Burlingham:

Yesterday, we had a couple different jobs. One of which, and especially the most common job for us with the medium helicopter, the Bell 205, we use a water bucket. So we pick up water wherever we can, ponds, streams. We'll go in and try to suppress the fire with that bucket. And then at the end of the night last night, we actually went out and took hot meals to the firefighters on the hill. So with that we use a 150 foot essentially under the helicopter and cargo nets and run that out for them.

Matt:

Can you describe what it's like flying over a fire like this?

Ty Burlingham:

It's a really unique type of flying, the fire makes its own wind. So you could get a number of different directions of wind, it really messes your performance on the aircraft. So I keep on my head on a swivel and be ready for the ever changing wind. It's kind of a patience game. It can get pretty interesting out there, a lot of turbulence at times and just every second is different with a fire.

Matt:

And so why don't you tell us about your aircraft over here? Taking us on a little audio tour of your aircraft.

Ty Burlingham:

Absolutely, we fly a 1971 Bell 205. It's known as the 205 plus plus, or the super 205. So as you can see right now, we have half the seats folded up in the rear. And this blue bag here is our 150 foot long mine with our cargo hook, so that's how we go out and do the cargo missions. We have four aft facing seats and five forward facing seats back here. Very rarely do we fill the aircraft unless we're doing a troop transport, getting personnel up on the hill. Back here in these gunner well basically, we use it for cargo. So the firefighters will put their packs, tools, chainsaws, gas, all that on both sides as well as our bucket is on the other side in this space.

Matt:

Can you walk us around to the bucket and show us how that works?

Ty Burlingham:

Yeah, absolutely.

Matt:

So this is the bucket. And how many gallons does it hold?

Ty Burlingham:

324 gallons.

Matt:

So it's a large, orange... What is it made out of?

Ty Burlingham:

It's a rubber.

Matt:

It's a rubber, okay. With lots of straps and then a metal sort of stabilizing thing here at the top? I don't even know what to call it.

Ty Burlingham:

So you notice the one side of the bucket has chains on it, and the other side is all straps. The reason for that is, if you look inside the bucket, there's a sand bag right inside there. So the goal for that is, when we come into whatever water source we're using, we'll set the bucket down with a little bit of forward speed, and that will tip the bucket over and essentially make it scoop water and it will sink. It has a spreader bar on top of the bucket just to keep it open for us so that it doesn't collapse while we're trying to get water. The cables is the suspension system, how it's hung from underneath the helicopter.

Matt:

So looking at this bucket, I would guess that if you didn't mind getting close and personal, you could probably put five or six people in that thing. It would be a great swimming pool for a small dog.

When you're carrying that much water, how much additional weight does that add to the helicopter?

Ty Burlingham:

Roughly 3,000 pounds.

Matt:

So after you drop that, that must mean that you have to be kind of ready for a big drop in weight for the craft.

Ty Burlingham:

Absolutely, if you don't make any power adjustments in the aircraft, you will climb very rapidly.

Matt:

So you must by now be very good at just sort of anticipating that, reacting sort of instinctively?

Ty Burlingham:

Well, let's just say, you learn everyday. I can do three very effective drops with what water is in this bucket. So three 1,000 pound drops.

Matt:

What's the most memorable moment you've had in this helicopter fighting fires?

Ty Burlingham:

So earlier this year we got dispatched out to a fire in Idaho. The fire was pretty spread out, it was a grass fire so it was moving really fast. They had a number of aerial resources on the fire but I was the only

helicopter there. So they had a number of single engine air tankers and heavier tankers. They were concentrating on the head of the fire, as they should have been, it was moving really fast. But what they didn't realize is one of the flanks was moving toward a ranch. The ranch owner was out there moving dirt with a tractor trying to cut the fire off and I asked permission from the AirTAC, to plane over the fire, if I could go over there and assist that. He allowed me to and fire did swipe close by and we ended up getting the fire stopped before it got to their house so that was really rewarding.

Matt:

So we've talked a lot about the work you guys do as aerial firefighters, but what is the life of the aerial firefighter like? It seems like you'd be on the road a lot going from site to site. How do you maintain normalcy?

Jordan Wilburn:

Define normalcy. We have our own normal. It takes a lot of working together, a lot of logistical ins and outs. You can't rely on home to solve all your problems so we definitely rely on each other to make sure that we've got a place to stay, place to eat, a place to sleep. We do late work and early work, 18 to 20 hour days sometimes whenever you need to. So you just got to rely on each other. And that's the only normalcy you really can maintain.

Matt:

Is there anything that you carry with you that just makes you feel at home wherever you go?

Ty Burlingham:

My suitcase.

Jordan Wilburn:

A good pair of flip flops.

Matt:

I left the helicopter crew and they went right back to work cleaning their beautiful blue helicopter. I got in the car and headed about 10 minutes away from the airfield. We pulled off a gravel road by a ranch gate that only days earlier had been surrounded by smoke. A patchwork of burnt ground dotted the area and evacuated houses could be spotted through the trees nearby. As we stepped out of the car, the sky filled with sound, a giant whale of a helicopter, a type one aircraft called a sky crane, came quickly into view and made a beeline, or a helicopter equivalent of a beeline, to a small pond just beside our car door.

We're here at the covered bridge canyon while one of the sky cranes is coming in to use its snorkel to fill up with water, that it will then bring to one the fires. Coming down right now, it's about 50 feet off the water. It's still coming down. The water spray is coming our direction. We're probably going to get a little wet and there it goes. Snorkel is in the water and now it is pulling the water up into the helicopter. So it's a pretty cool, precise maneuver that it's doing right now.

Emily:

So Matt, I think you were great.

Matt:

Oh thanks, yeah.

Emily:

Your second career. You're going to be a weather guy.

Matt:

Yeah. On location-

Emily:

Weather reporting, live weather reporting.

Matt:

With the gusts that are almost blowing you over as you pretend to be drowning.

Emily:

Yeah, you got to power through.

Nick:

But never moving your hair.

Matt:

So much Aquanet.

Emily:

I had a burning question since we started talking about this topic, there's this urban legend. Do you guys know it?

Matt:

Sharks found in the remnants of forest fires?

Emily:

I'm talking about swimmers found in the realm of forest fires, but perhaps there's a shark version. It's an urban legend. I'm sure there's a lot of flavors of it. Matt, is it true? Did you ask them when you went to Utah?

Matt:

I did. I did it for you. I talked with Steve Dillman, a long time sky crane operator. That's the helicopter with the big snorkel that slurps the water. Steve's been doing this a long time, flying various helicopters with the forest service since just after his service in Vietnam. So I asked him directly and he cracked a little smile when he answered.

There are urban legends out there of swimmers being sucked up by aerial firefighters. But that can't be true, right?

Steve Dillman:

We have a screen on this thing, it's tough to get it any much more than about a half inch in size. I have in past, with different fires when I was working the bucket, tried to pick up a floating fish that was dead on the water and tried to drop it on them. And it was quite difficult to get the fish in the bucket.

Matt:

You were just trying to test your accuracy.

Steve Dillman:

Yeah, there was a dead carp I think in that pond so I was trying to get it out so the firefighters on the line could see it. I don't think I ever did.

Matt:

So as you guys can tell, the aerial firefighters I met in Utah were quick to laugh and I have to say their laughter along with their professionalism, made it easy to kind of forget the very real and dangerous position that their work puts them in. Just a few days earlier, there had been a crash on the same runway that the helicopter crews we're now using. And just about every year, aerial firefighting does claim lives.

Nick:

Yeah.

Matt:

And even with highly skilled teams, the work has its risks. At 21 days into battling the pole Creek fire. The situation was only about 50% contained.

Emily:

We started this episode with a quote from the forest service explaining that fire season is a lot more like a fire year.

Matt:

Right.

Emily:

And with so much more time being spent battling these blazes, they must be embracing some new aerial tech, right?

Matt:

Yeah. So potentially drones could cut back on the human risks and the costs that go up when the number of fires is increasing.

Nick:

In 2017, the cost of fighting wildfires reached $200 billion for the first time-

Emily:

With a B?

Nick:

Billion with a B, yeah. And Congress recently restructured the budget to give a firefighting efforts and extra a hundred million dollars, which is almost as much as Avengers Infinity War made on opening day.

Matt:

Yeah. And we can only kind of expect the cost to go up if things stay on the same track. Right? I mean the White House just released a report that predicts a seven degree increase in global temperatures by 2100.

Nick:

So cost, scope, intensity of fires is changing.

Emily:

Well. And I got to put the plug in for science here with the fire season becoming fire year round, there's a lot more resources being put into fire sciences and mitigating and sort of maintaining different kinds of ecosystems, kind of encouraging the natural burns and going in and doing controlled burns so that you actually make sure that these ecosystems are getting that sort of reset that they need, which also makes them less dangerous or less dangerous wildfire risks.

Matt:

Yeah. And the aircraft that I saw were actually not designed specifically to fight fires. They were repurposed military aircraft. Some of the new aircraft are being designed specifically for firefighting and they'll have more infrared capabilities to fight fires in the dusk and the dark hours and to do so a lot more safely.

Nick:

Okay. So before we wrap up, I want to talk about the most surprising thing that I found out while we were researching this episode. Did you guys know that there is a Steven Spielberg movie about aerial firefighting?

Matt:

Yeah. Didn't it come out in the nineties?

Nick:

It's not very good. This is easily the only Steven Spielberg movie I had legitimately never heard of. It was Audrey Hepburn's last movie.

Emily:

Okay. We have to back up. What's the name of this film?

Nick:

Always.

Emily:
It's called Always. With Richard Dreyfus.

Nick:
With Richard Dreyfus.

Emily:
And Audrey Hepburn.

Nick:
Yep, and he plays that ghost.

Emily:
He plays a ghost.

Nick:
And a firefighter.

Matt:
Yeah. That's right. So he dies fighting fire as a smoke jumper and haunts his wife, right?

Nick:
Yeah. Haunts his long-time girlfriend, Holly Hunter, and then-

Emily:
Holly Hunter?

Nick:
Holly Hunter is in it.

Emily:
It's star studded.

Nick:
Yeah, yeah, yeah.

Matt:
I haven't seen it on any of the streaming services.

Emily:
So this is what we're this weekend guys, right?

Nick:

We're going to review Always.

Emily:

Some beverages and Always.

Nick:

Next episode. We're going to review Always.

Matt:

Come on, man.

Nick:

1989, like post ET, post Jaws.

Matt:

Well, first things first, man, we've got to decide on a good movie.

Nick:

Are you suggesting another film for the next episode map?

Matt:

We got to see First Man early, all of us, right? We were all in that theater.

Emily:

Work perks.

Matt:

Right.

Emily:

We'll be back in two weeks with our professional review of First Man, the Neil Armstrong bio-pic. I have a lot to say about this movie. You have a lot to say?

Matt:

There's quite a bit to say.

Emily:

And that is it for this episode of Airspace.

Nick:

Our podcast is produced by Katie Moyer, Jocelyn Frank and Lizzie Peabody.

Matt:

Mixed by Tarek Fouda, special thanks to Genevieve Sponsler, Jason Orfanon, and John Barth.

Emily:

Check out our Instagram for some impressive photos taken by the U.S. Forest Service and to see Jocelyn interviewing a horse.

Matt:

And Matt in fire gear.

Nick:

See you again in two weeks.

Emily:

Do the steaks and sausages cook while they're in their pockets. Do they have special grill pockets? So that by the time they're done for the day they're cooked?

Matt:

No.

Speaker 14:

From PRX.