Busting the Top Six Myths About the Timber Industry

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Sara Duncan: If you look at the Oregon Global Warming Commission's report, they report on what the largest emissions are, carbon emissions are in Oregon. And Forestry doesn't even show up in that report. The number one source of emissions, carbon emissions in Oregon, are automobiles. It is the transportation sector. We don't even show up on the map.

Chris Edwards: Welcome to Forestry Smart Policy, a podcast produced by the Oregon Forest Industries Council for policy makers and other thought leaders influencing decisions in Oregon. I'm Chris Edwards, your host and president of OFIC. All right, this was a fun one. In this episode, Sara Duncan, Director of Communications at the Oregon Forest Industries Council, and I take on the six biggest myths about the timber industry. These are the most common assertions and misconceptions we hear on a regular basis from both our detractors and from those on the Internet who are just plain uninformed. We discuss everything from if tree farms are really forests to the ever popular clear-cut harvest, along with controversial claims that logging is the largest source of carbon emissions in Oregon. Wall Street investors own all of Oregon's forests, and mechanization was the real cause of timber job losses, not the spotted owl. And just for fun, we also address if we cut down trees for toilet paper. Without further delay, here's our version of myth-busting forestry style.

All right, on today's episode of the Forestry Smart Policy podcast, we're going to be taking on some of the biggest myths about the forest product sector, the timber industry, if you will. Now, at the Oregon Forest Industries Council, we spend a lot of time talking with policymakers, whether it's at the legislative level, the Board of Forestry, and even the public about forestry here in Oregon. And part of that work entails reading the comments section on social media. And we all know how fact-filled the comments section may or may not be. And it is from the comments section on many social media platforms that we encounter some of the myths that we're going to be talking about today. So here with me today, it seemed appropriate to have Sara Duncan, the Director of Communications for the Oregon Forest Industries Council, to address some of these topics. And so, Sara, want to tell folks a little bit about yourself?

Sara Duncan: It's interesting to be on this side of the microphone today, cause usually I'm the one sitting on the other side of the desk taking notes for my editing process. I'll have to edit this one too, which will be also awkward to listen to my own voice. I am not from Oregon. I grew up in Missouri. I grew up around row crops. I'm more familiar with corn and

soybeans. I went to the University of Missouri and got a degree in journalism. I actually got a photojournalism degree. But my first job out of college was working for an agricultural company doing science and technology communications, which I really loved. But my husband and I wanted to get out to the Pacific Northwest. He got a job out here. We moved out here in 2011, really enjoy having access to the coast and to the mountains. We really like that. There's not a whole lot to see in the flat states. So this has been a really nice change for us. And once I moved out here, I started a blog about what it's like being a mom who promotes agriculture and advocates for agriculture. And that got noticed by the timber industry. And they decided if I was going to advocate for free, that they would like to pay me to do that. So I got hired at OFIC in 2015 as director of communications. And I didn't know anything about forestry. So it's been a really fun eight years learning from professional foresters. All you have to do is ask somebody to take you out to the woods and they are more than happy to put you in a pickup and spend a whole day telling you everything from what kind of species we plant to, you know, the best way to harvest them to all the fish and wildlife they see out there in the woods every day. So I've done that a lot and it's improved my knowledge base around forestry. And I can say I really like working with foresters and working in forestry. It's really fun. In the end, the issues that we fight in the comments section are really not that different than what's fought in the ag community. It's all around misperceptions, misconceptions of what we do and, you know, fear mongering in the end. So yeah, I do have the pleasure of reading the comments section and moderating comments on our social media pages. So I could probably sit here all day and talk about misconceptions, but let's hit on the biggest ones.

Chris Edwards: I'm glad you made the journey from agriculture to forestry because, let's face it, Douglas fir forests are much more interesting than corn fields. But that's a debate for another time. So let's start out with tree farms. We hear people all the time say, tree farms are not forests. The timber industry, you only plant Douglas fir, Douglas fir tree farms, those aren't quote real forests. What do you say about that, Sara?

Sara Duncan: I think to set the stage, one thing that people need to remember is, and it's hard when you think about crops, when you think about corn and even blueberries or hazelnuts here in Oregon, those are harvested annually and people are really familiar with that. And that, you know, provides food and people are comfortable with that. Forestry and forests tend to have, and I know previously on our podcast, we've had Dean DeLuca on here talking about humans and their sort of emotional connections with forests. And so I think that that weighs into thinking about trees and timber as a crop, as sort of a almost derogatory context. It's worth remembering that privately owned forests, I think we should acknowledge that what we're doing is we're growing trees for timber production. There are about 10 million acres in Oregon that are privately owned, and that is where over 75

percent of the lumber production comes from in Oregon. Oregon is the number one softwood lumber, plywood and manufactured lumber producer in the nation. So we're growing houses on those forests. So I think it's worth remembering that's the ultimate goal. That being said, while those trees are growing for 40, 50, 60, 70, 80 years, they're still providing all of the ecological benefits that you get from a quote, natural forest. And I would also challenge the premise that somehow planting Doug fir is a bad thing. Doug fir is our native species in Oregon. There's a reason that Oregon is the number one lumber producing state in the nation. We are living in one of the best places in the world to grow trees, and Doug fir is a native species here. Somebody once told me that if left to naturally re-seed, everything west of the cascades, 80% of that would be Douglas fir naturally. So that species has evolved to thrive in conditions that we live in with disturbance, for example, like fire and wind and ice. That being said, even though Doug fir is a native tree species and we do plant a lot of it, it's not the only species that we plant. We also plant spruce and hemlock and western red cedar. There's plenty of other species. What foresters do is they try to evaluate what's going to grow best in what location and then they plant that there. On the coast, for example, Doug fir don't do as well because of diseases and other reasons, so they might be planting something like spruce or hemlock on the coast. But in areas where Doug fir grows really well, yeah, we do plant it because that's what grows naturally there.

Chris Edwards: So let's be clear. You said somebody told you once. Was that in the comment section or was that a bona fide educated?

Sara Duncan: That was a forester. Most of the facts that I'm going to tell you today, I've learned from professional foresters, either my colleagues here at Oregon Forest Industries Council or the professional foresters that I've had the benefit of working with for the past eight years in our member companies.

Chris Edwards: It should also be noted that while privately owned land, forests predominantly in Western Oregon produce Douglas fir because it is the most desirable specie from a building perspective for building homes, and we all know that we need more homes. It is also just naturally the strongest specie here in most of Western Oregon. So we're just playing to our strengths here in the great state of Oregon. But let's take on another topic. How about clear cuts? We hear about this all the time. We're like, oh, well, I don't support clear cutting, but thinning, thinning is OK. So are clear cuts really necessary? And why don't we just thin trees forever?

Sara Duncan: Yeah, I think that this one might be. It's the thing I see all the time. I sat there a focus group, for example, a couple of years ago, and I've always wondered if the public understands the terms working forests or actively managed forests. I was pleasantly

surprised to discover, in this one focus group, at least with this one group, which is a group of women, middle-aged women, they did understand what a working forest was, and they did understand active management. What they explicitly said, though, was, yes, active management is good, but not clear cutting, which is really interesting to me because that is predominantly what we do, at least in Western Oregon, for harvest. So yeah, there's certainly people don't like it, and I get why people don't like it. I mean, like I said, I'm not from Oregon. I've lived here 12 years now when I first moved here. And of course, we drove to the coast on 26, and we look out on the hillside and you see clear cuts. And it does make you wonder, like, wow, couldn't there be a better way for them to harvest a necessary material for building products? So why do we do it? There are several reasons that we clear cut. One of them goes back to the fact that the dug for is the native species here, and it is a sun loving species. So if you wanted to thin a forest and then replant dug for, they're not going to survive. Those seedlings won't survive in a shade, a shaded area. They need open canopy. They need sunlight to grow. As I said, they have evolved. Dug for has evolved to thrive after disturbance, after a large scale landscape level disturbance like a fire or like wind or ice damage. That's when they really do best. So one of the reasons that we clearcut is to mimic those natural disturbance events without all the negative parts of that, right? We don't actually need to wait until the forest burns in order to harvest it. We don't get the smoke associated with it. We don't get the damage associated with a wind or an ice event. So it's mimicking those natural events. Then there's obviously, I mean, I'm not going to avoid the elephant in the room. There are economic reasons, too, that we clear cut instead of doing other, like thinning, for example. Harvesting is expensive. Harvesting is expensive. And when you decide you're going to harvest a unit, there are costs associated with that. And it has to be worthwhile, right, to go out there. And it makes more economic sense to do that once than to do that every couple of years.

Chris Edwards: One of the things that we've seen as the legislature has struggled with policy around thinning and making communities and landscapes more resilient to wildfire is their ability to, the thinning prescription's ability to pay for itself.

Sara Duncan: That's right.

Chris Edwards: Because it is so expensive to go in and set up. To illustrate a point, I'll use an extreme. If you were to send a crew in with equipment to harvest one tree, think about how expensive that one tree would be to sell on the market if you were going to recoup all the costs for setting up all that equipment to go in and harvest the one tree. Whereas if you spread the cost of going in and setting up and harvesting over all the trees, the per unit cost just came way down.

Sara Duncan: Totally. Yeah. And of course, we play in a, in some cases, an international market, but certainly a North American market, where we have to be able to meet that market price, not only with the cost of the log, plays into the cost of the lumber, that ends up going to Home Depot or lumber distribution yards, certainly around the western United States, but also with significant inroads into East Coast markets as well. That's right. And we have to be able to hit that, hit that market price. Right. Yeah. So some of it is economic efficiency, but some of it is also truly understanding how trees grow, how that species grows in Oregon. And one other thing I want to say is that when we go and we clear cut a unit, we are not actually clearing out every single tree in that unit. And specifically after the Private Forest Accord passed with new regulations that expanded some of the places where we have to leave trees, we do leave trees even in a clear cut for wildlife habitat, leave trees around streams to buffer those streams for both shade and water filtration. There are trees left standing on steep slopes, for example. People think, you know, clear cut. And I think there's this impression that we go in and we cut down every tree in a in the whole section. And in fact, we we do leave trees behind. It's not like we're clearing off the entire area. The other thing I don't want to leave out is that we do thin. I think a lot of people don't understand or they don't. And why would they really know that most of our member companies do a thinning at some point? It's not that different than, for example, I grow carrots in my garden and I spread seed when the time comes. When the carrots come up, they're too tight, close to one another to actually you're going to end up with like essentially baby carrots and maybe not even that if you don't go in there and thin some of them out. It's not that different from when you reforest after a harvest. First of all, there are requirements. The Forest Practices Act requires stocking levels, so they have to actually meet stocking requirements. They have to plant so many trees per acre. And then also a forester recently told me, this was really interesting to me. I didn't know this. I learn something every time I go out in the woods with foresters. They plant them at such a density so that they are competing against one another for light, and they put on a lot of height early on. They really go up quickly, and that's intentional so that they get tall and above, deer brows and other things like that. And then when those trees start to get large enough that the canopy closes, that's an ideal time for thinning. Then you can go in and you can thin out a percentage of those trees, then makes the remaining trees more robust. They have more space. They have more access to sunlight. They have more access to nutrients. They don't have to compete with each other as much. So that's called a precommercial thin. Precommercial means basically the trees aren't big enough to send to the mill to create a product. So often they'll leave them on the ground for decomposition. It also creates a pad on the on the forest floor for the equipment in the future. But there is also a commercial thinning that could be done after age, I think, 20 or so, where you actually do produce a product that you can send to

the mill. So we do thin sometimes twice in the course of a forest's life before harvest at, you know, whatever, 60 years old.

Chris Edwards: And those thinning projects are viewed as investments in the future of that stand and may or may not recoup the cost of that actual labor and the equipment costs and everything that went into that thinning.

Sara Duncan: Yep, that's right. You can also imagine that a thinning operation, from just like a practical perspective, might be more expensive than a clear cut operation because you have to have your operator going in there and felling trees without damaging the other ones that are there. Right? So that's like a little bit of a trickier harvest operation than harvesting essentially all the trees in one space where you're taking them all down and you don't have to necessarily worry about any damage to trees left standing. All right. So we covered thinning. We talked about Douglas Fir. If you want to replant, you need to replant on a sunny slope.

Chris Edwards: A harvest meadow, if you will.

Sara Duncan: A harvest meadow, if you will. And that slope is not going to be so sunny if you only thinned prior to that, because of course there would be all the trees that are left standing, creating a shaded canopy. And so you, by definition, can't be replanting. There's one other thing that I left out. I have a good friend who's a wildlife biologist, and she all the time reminds me that open canopy sections, harvest meadows, if that's what we want to call them, they do provide habitat for species. You get native understory growing back after a harvest, and that's often attractive to songbirds, to pollinators. So there are definitely species that benefit from early seral habitat, is what that's called, and that's important in the ecosystem of a forest as well. And with a mosaic of forest management objectives and ownerships over the landscape in Oregon, we see we have everything. That's right. Yeah. If you zoom out, which sometimes you get an opportunity to do if you go out with a forester and you're standing up on a ridge and you can really look out and see across the landscape, we are intentionally creating different age classes over time on a large scale, right? So you might have some areas that have recently been harvested that are creating that wildlife habitat for those species that I just talked about, or maybe you have some middle-age stands that are providing habitat for a different kind of species. All of those different age classes provide habitat for different species, and all of that is important. And if you really zoom out and you look at that mosaic of age class, like we were talking about at the very beginning, it is providing all of the same ecological benefits that a quote natural forest would create as well.

Chris Edwards: Speaking of zooming out, recently there was a salacious article talking about how quote NASA scientists were shocked that they could see clear cuts from space in Oregon, as if such technology, which we can all use every day on Google Earth, was somehow shocking.

Sara Duncan: Shocking, yeah.

Chris Edwards: Right. So, you know, and I've noticed growing up on the Oregon coast for the first half of my childhood, my dad had a little plane, just a little four seater, and he would fly as frequently over to the Willamette Valley. He was working in the valley some and then living on the coast, abandoned. So we were flying over the coast range all the time, and you would see clear cuts, obviously, and still about the same number of clear cuts today, because what do you know? They grow back. Because we replant after harvest. And so while, of course, it could seem shocking to the uninitiated when they first see the clear cuts, say, from the sky, they're like, wow, there's a lot of clear cuts. And like, well, yeah, but fast forward in five years, that clear cut is going to be green, and you're going to see a different one somewhere else. That's right. And all those patches of land are in different states of maturity as we cultivate the forest through the cycle. That study was, I don't know, really frustrating if you want to call it a study.

Sara Duncan: I mean, I said this, I think I said this to you at the time the story comes up, I can see my mailbox from space, like using satellite imagery. So no one should be surprised that you can see a clear cut from space. Like that's not really shocking. But I can understand, and this is the reason that our detractors use that kind of imagery. It looks like a little bit shocking when you, when you're looking at it from above and you look down and you see big, you know, empty squares. But when you're also looking at it from an airplane in the air, you probably can't see what's been replanted. So it may look like a clear cut to you, but there may also be three or four or five-year-old trees that maybe just aren't green enough for you to view them from space. And then the other thing that's frustrating is like the insinuation there is that somehow that has damaged something, right? The fact that we have clear cut. And interestingly, somebody did quick math. One of the foresters did quick math about that study. And I think it said something like I'd have to look it up. There's a percentage of the coast that's been clear cut in the past 20 years. And it actually worked out to be a 60-year rotation, which is pretty good. That's a pretty good rotation age. That's the average in Oregon and nothing to be surprised by. There's some implication there that that has caused harm just by the fact that we've clear cut some percentage of the coast range in the last 20 years. And that's not true. There's no evidence. People are just insinuating that something is wrong with that, that you have degraded the environment because of that, which is frustrating.

Chris Edwards: And if we really wanted to lean into that a little bit and go back over the last 100 years, probably darn near 100% of the coast range has been clear cut.

Sara Duncan: That's correct, yeah.

Chris Edwards: At some point. Or been burned in standard replacing fire. Prior to folks logging, there were standard replacing fires. And it's a bit of a myth that 100% of Western Oregon was old growth forests. Right. In fact, it's not even close to 100%. I did see some data recently that I was actually surprised at what a low percentage of forests had been in Western Oregon have been old growth over time. Yeah. Yeah. I mean, going back to what I said at the very beginning, it's worth remembering that what we're doing is growing houses.

Sara Duncan: We're still providing all of the other benefits as those forests grow, but that's the functionality. That's the primary management objective of those lands is to produce lumber for building materials. One way that we sometimes look at it, there's a pie chart that Oregon Forest Resources Institute produces that shows that a third, so 30 million acres of forest land in Oregon, a third of it is set aside as reserve, where little to no harvest happens there. And this is like national parks and wilderness areas and that sort of thing. And then another third of it is mixed use. Some of it may be for harvest, but some of it may be managed for wildlife purposes or for recreational purposes. So there's limited harvest in that second slice of the pie. And then the remaining one third, and again, that's about 10 million acres of forest, is managed primarily for timber production in Oregon. So when you look at it holistically, I think that's a pretty good balance. One third, one third, one third for these different resources and different values and different societal needs. And that's a pretty good balance to have. All right. Well, then let's go to the next one. This assertion just, it just drives me bananas.

Chris Edwards: And that is that logging is the number one source of carbon emissions in Oregon, implying that somehow, you know, trees just poof, emit carbon. They just bleed carbon. It's just absurd. And then the follow on to that is that old trees are better at carbon sequestration. And before we get into this, we should talk a little bit about terminology, because the word sequestration gets confused. I think it's a little bit easier if you divide it into carbon capturing and carbon storing. Right. That's correct. So anyway, what do you say about this assertion that logging is the number one source of carbon emissions in Oregon?

Sara Duncan: Yeah, this is... It's asinine. Let's just say up front, it's asinine. It gets under my skin because, I mean, one of the reasons I continue to work in this industry and really love working in this sector is because I really, truly believe that forestry is part of the solution to climate change. We have a good, really good carbon story to tell, and I think that that's why people try really hard to twist it around on us because they don't really want us to have the

good story that we have. That talking point that logging is the number one source of carbon emissions in Oregon comes from, predominantly from one study that was set up in a very prescribed way to have a very determined outcome. But the fact is that's not even true at all. I mean, if you look at the Oregon Global Warming Commission's report, they report on what the largest emissions are, carbon emissions are in Oregon. And forestry doesn't even show up in that report. The number one source of emissions, carbon emissions in Oregon, are automobiles. It is transportation, the transportation sector. We don't even show up on the map. I mean, the reality is, and some of it comes down to having to remember fifth grade or maybe even freshman year biology, right? The fact that trees literally take sunlight and water and pull carbon dioxide out of the air to put it into woody biomass as they grow. They convert carbon dioxide into sugars that they then store in biomass as they grow, right? That's pretty phenomenal. That's really an amazing thing that trees do.

Chris Edwards: Yeah, the process of photosynthesis.

Sara Duncan: Exactly. Yeah, photosynthesis, which incidentally, I have a 15-year-old daughter in high school right now, and she just took a test the other day about the Calvin cycle and photosynthesis, and I had to remind myself what all of those acronyms mean, but I can understand why the general public sometimes doesn't remember all of those details, but that is literally what trees are doing. They were pulling carbon dioxide out of the atmosphere. They're storing it in their wood fiber, and they are releasing oxygen back out into the atmosphere. So when those trees ultimately get harvested, that carbon that's stored within the growing part of the tree is still locked up in that tree when we convert it into building material. 50% of the dry weight of lumber, when you pick up like a two by four at Home Depot, 50% of that weight is stored carbon. So yes, I mean, I think we need to acknowledge that there are some aspects of harvest that we don't take the entire tree, root ball and all, and convert that into a product that we use. There are some parts that remain like the roots, for example, stay in the soil and break down, but that's stored carbon in the soil. There are parts of the tree that don't end up going into lumber production, the tops, the limbs, for example. But, Nett, we are still, and if you really want to hear more about this, go back and listen to our podcast episode with Dr. DeLuca. It's called, it all starts in the soil. And he really gets into the percentages, and I'm not going to try and remember exactly what they are. But all of that stored carbon in the, essentially in the trunk of the tree, goes into lumber production. And it is not like, it doesn't like leak out in some way between the woods and the mill. Right. And of course, of course, there are some emissions in the burning of diesel. Right. To run the equipment. Right. And the manufacturing process. To do the harvest.

Chris Edwards: And you know, some emissions in the manufacturing process. And the employees driving the car from home to work. Right. You know, to get to the job that does that manufacturing process. Of course, there are some emissions, but they pale in comparison to the overall carbon storage. Absolutely. Of that building product. That renewable building product. With that building product, we are building homes, and increasingly, through new technologies of mass timber, we can build larger structures. And replace steel and concrete in many applications. Not all applications, but in many applications. And steel and concrete are very carbon-intensive. Building materials. We've got to build with something. And that's exactly what you just said. My parents right now are in Mexico, and my dad actually emailed me a couple days ago and said, I'm noticing that all of the buildings here are made out of concrete. He's like, don't you think that that...

Sara Duncan: As a communications person, my dad's always trying to, here's an idea for you. Here's a talking point. And I was like, aw, thanks, dad. We've already thought of that as an industry. There's a whole body of science and research around life cycle assessments for carbon that take all of the things you just said, Chris, into account. All right, we have to think about the whole life cycle here. The emissions associated with harvest, the emissions associated with manufacturing, but then also you have to think about what you just said, which is substitution benefits, right? I can tell that I'm getting excited about this because I'm talking too fast. I'll try and slow myself down. There are, if you add in all of those different factors, substitution for not using a carbon-intensive building product like concrete or steel, and instead you use wood that not only stores carbon, but also is less intensive in terms of emissions as those other products. If you add all that together, we still come out ahead. Building with wood always comes out ahead. Even the Intergovernmental Panel on Climate Change concluded several years ago that the best long-term carbon mitigation plan would be a sustainable harvest of timber from the forest, and building with wood in the built environment, and continuing that cycle indefinitely.

Chris Edwards: Well, how can you do that, though, Sara, if you're just letting everything become old growth, and then once it's old growth, of course, it's sacred. You can't cut it down. And you can't cut that sacred old growth. What do we do? It feels like, well, it doesn't feel like, activists are absolutely trying to box us in.

Sara Duncan: Oh, for sure. Absolutely. I mean, there's this whole interest in old mature forests, which look like those forests definitely have value. I'm an avid outdoors person. My family hikes and camps, and we enjoy going to national parks. We've gone to all state parks in Oregon, basically. I love hiking in older trees. There's value there. Species have value there. You know, they're good. They're great. Let's have them. That doesn't mean that all of our forests need to be old growth. Because like I said, you need habitat for... In fact, I just

listened to a presentation from Jake Verschil with NKASI, like a couple months ago. Plus NKASI. Oh, the National Council for Air and Stream Improvement. I think I got that right. They do a lot of research on active forest management and the impacts of forest management on different things, whether it be wildlife habitat or water quality or those sorts of things. And he was giving a presentation about the fact that there are several songbirds that are actually listed as species of concern at the state and federal level. And because their habitat, which is that early seral habitat, that younger forest where there's still open canopy and they're still flowering plants that they can use for food sources, that habitat is dwindling. There's just not enough habitat for them. So we definitely need all those different age classes. And if we allow them all to get old and mature and old growth, we're really doing a disservice to those other species that need other areas. And like you said, once those trees get old and mature, we're not going to be able to harvest them. It's a theoretical path to nowhere. Yeah. I mean, if theoretically, and again, this isn't actually a thing where a hundred percent of your acreage becomes old growth because trees die and they burn. Right. And so that stand will eventually be replaced with something. Right. But even if theoretically, it weren't replaced and a hundred percent of the forested landscape in Western Oregon were to become old growth, what's the price?

Chris Edwards: What is the price that we have paid as a society for that? We have no building products. Right. I mean, what are you going to build with? Right. Because everything's locked up in old growth. Well, and I think people can realize that, look, we're one of the best places in the world to grow trees and to harvest trees sustainably for building materials.

Sara Duncan: We also have some of the strictest environmental regulations and protections for forest management and for the environment in Oregon. If we decide, yep, we're just going to hands off, we're not going to harvest, we're going to shut all those operations down or even continue to shut them down, squeeze down the amount of forest land that we can actually harvest, that doesn't mean that the world is going to stop building with wood, right? Our population continues to grow every day, and people need structures to live in, to work in. They're still going to build with wood. They're going to get that wood from some other place if we don't grow it here in Oregon. They're going to get it from another state or they're going to get it from another country. And there are other places in the world that do not have the environmental protections for forest management that we have in Oregon. So I personally believe if we're going to, and I think that wood is, as we just talked about, a really good building material for all the climate carbon benefits we talked about, we should be growing it here in Oregon where we do it right and where we are protecting the environment and we're protecting wildlife habitat and water resources and all those things while also creating building materials that we need, critically need for our

housing shortage, and also provide the other benefits like recreation opportunities and air purification and water filtration and jobs, right? Like we're also employing tens of thousands of Oregonians in our sector with highly paid jobs in areas of the state that are not in the urban centers. That's important.

Chris Edwards: I do want to explore one more piece of this thread around old growth, and that is this sort of implication that old growth is better at storing or sequestering, you know, capturing. I mean, it's absolutely false. It's just demonstrably false that old growth forests are capturing carbon at a rate that is as fast or greater than younger, more vigorously growing forests. I mean, you can equate growth per year to carbon sequestered out of the atmosphere per year. Once that forest gets old, mature, the canopy closes, it slows down its rate of growth to the point where these really old, old growth forests.

Sara Duncan: Yes, I mean, they truly, because they are large trees, there is by definition a lot of carbon in each tree, which to our comments earlier, if it's harvested, that carbon does not go poof into the air. It's still embodied in the wood, and that eventually becomes a wood product. But it doesn't, it has slowed down the rate of capture or absorption out of the atmosphere, and it's just sitting there. Right. And at some point, it actually on a stand level becomes a source of emissions. As a tree, you get to, like at a stand level, as that forest gets to a certain age, like you said, it's no longer putting on growth, and it is dropping limbs and needles and trees are dying. Or burning. Or burning. And at some point, it tips over into a source of emissions. So kind of think of it like a teenage boy. They are putting on a whole lot of growth. And I've got a 13-year-old too. Man, that kid can eat. They put on a whole lot of growth, like in the early 15, 20 years of the tree's life, and that growth is pulling carbon out of the atmosphere. That's sequestration. That's capture, carbon capture. And trees do that, young trees do that at a much higher rate than old trees. And at some point, it plateaus and stops putting on all that growth. And that probably differs by species, by site, by the quality of the soil, by the amount of rain, like all these things that professional foresters are considering in their management. And it's probably somewhere between the ages of 30 and 80, 90, something like that. And it's probably different in every... It totally is. Which is why it's, you know, I think the idea of putting a number on how old you should grow trees to for carbon benefits is a fallacy because of all the reasons that you just said. But the other thing to think about there too, so another thing that I remember that was told to me by a carbon scientist is forests are a great place to capture carbon, but they're not a great place to store carbon long term, because once you've reached that age where they start to plateau, you've got all that carbon stored in there that is now at risk to wildfire or some other infestation of insect and disease that would effectively cause that tree to die and emit all that carbon, obviously not all at once. Carbon is emitted as trees decompose over time. But in the end, that carbon is still being released. Thankfully, it just happens to be that

we usually harvest right as that tree has reached its maximum growth rate. We harvest it, and then we start that cycle all over again, because that way you capture all that carbon, you send it out to become wood products in the built environment, and you start the cycle over again with a new tree.

Chris Edwards: It's one of those instances where there is a nice alignment between the economic incentive and the environmental incentive, because foresters, professional foresters, landowners, land managers, are trying to maximize the amount of volume, which is carbon, that they're growing on their land, and they're also considering the risk of loss. And the longer that that tree sits around, after it's reached a certain age, sits around on the landscape, the more likely it is that it will, all of those carrying costs and all of the investment that's been put into the previous decades, will go up in smoke. Right, exactly right. And, ironically, become an emission. That's right. And, you know, interestingly, in the 2020 Labor Day fires, I saw one report that said that the carbon emissions associated with that fire year eclipsed the other largest emission sources in Oregon. Transportation, and then there was another one below that.

Sara Duncan: Those two combined were still less than the carbon emissions associated with the 2020 Labor Day fires. So those are intense, like concentrated carbon emissions. Well, certainly, I mean, we've spent a lot of time, Sara, on this particular topic, and I think just that illustrates, you know, the amount of passion that we have for this particular topic of all the myths illustrates just how dishonest activists have been in trying to basically hijack the climate and carbon issues to advance their agenda. And it's just wrong, and it's dishonest. Yeah, it's intellectually dishonest, and it's particularly frustrating to me, because like I said, that's one of the reasons I do this. And to have that narrative sort of flipped around and used against us is, I think it's just really frustrating. And I think it's frustrating because we believe that it's intentional, whereas the next question, the assertion that we're cutting down trees for toilet paper or printer paper or any sort of paper, the assertion that we cut down trees for paper here in the Pacific Northwest, in Oregon, that I don't know that that's necessarily intentional. I think that that's just a misconception. It's a misconception. People just don't understand how we get wood for paper production because we do produce paper products here in the Northwest. I think it might maybe comes from like, I don't know. I remember when I was a kid and there was this big push to like, don't print things out, don't waste paper. And there were like people putting little signature lines at the end of their email that's like, don't print this email, save a tree. So I think people think that has sort of like perpetuated this misconception that we're out there cutting down trees for paper products or toilet paper. Like I'm only going to speak for Oregon because that's where all my knowledge is. I can't talk about like the southeast or whatever, but I can say with certainty, no one in Oregon is cutting down trees for toilet paper. We are cutting down trees

for lumber production. And one of the great things about this industry is that we do a pretty darn good job of using 100% of that tree. So we send that tree to the mill, and it turns it into lumber. But there are byproducts that are produced. You can't create lumber out of every, you know, it's a round tree and we're turning it into square boards. So you're not going to be able to use all of that for lumber. So you end up with chips, and you end up with sawdust, and you end up with other things. And it's from those byproducts that aren't able to be made into lumber that we then send to another manufacturing facility to be made into paper. Even sawdust gets collected up off the floor. It could be sent into a cogen facility to produce electricity, or it could be used for a particle board, that we try and make sure that every part of the tree gets used. And so we're not cutting down trees for toilet paper. We are producing toilet paper as a byproduct of the things that can't be turned into lumber.

Chris Edwards: And those wood chips, the little chips that come from cutting squared off boards out of circular, round trees, all those little wood chips don't cover the price that the sawmills get from the pulp and paper companies that buy those from the sawmills, doesn't cover the cost of the actual wood chip itself. Right. Yeah, it doesn't pencil. It doesn't pencil. So you could never, ever afford in the Pacific Northwest to go out and log a hillside and take all of that wood, all those logs into a facility just to chip them up. Yeah. And then and then sell those chips to a paper company and at the market price, because it's a market commodity, and ever have it pencil.

Sara Duncan: You would lose so much money. You would be, you just you go out of business. So this is not a thing here in the Pacific Northwest. I'm not going to say that it's not a thing elsewhere in the world. Right. Because I do believe that there are areas of the world where forests are harvested for the production of paper. But not here in our forests here in the Pacific Northwest. That's just not a thing. All right. So the next question is a little bit about timber companies and the structure of timber companies. So we hear the assertion all the time that timber companies in the state of Oregon, they're all owned by out-of-state Wall Street investor types. Corporations, Wall Street corporations, all the words that make you feel just gross, dirty, yucky. Yeah. So perhaps we could talk a little bit about that. Well, what I do know is there are more than 75,000 forest landowners in Oregon, and the vast majority of them are...

Chris Edwards: That's a lot of suits. That's a lot of corporate Wall Street investors for sure. The vast majority of those 75,000 are locally owned, family owned, Oregon based companies or families. Our membership, we definitely still have family owned, Oregon based companies and even large industrial forest land ownership. And the other thing I would say is there's some inherent negative association. I mean, and there's a reason that our detractors use the word corporate and use the word Wall Street and reuse the word

investors. It's because the American public don't like those things. And so that's why they're using them to demonize these companies as if they don't also... Look, they may be based in, I don't know, DC or Chicago or whatever. That doesn't mean that the people who manage the forest here in Oregon aren't Oregonians. They still hire local foresters to manage the forest. They still hire local contractors for reforestation efforts, for fire prevention, for harvest operations. It goes to local mills. Those are all local jobs supported by companies. It doesn't really matter if they're based here or they're based in some other state. So that is just an effort to make it look like something that we're doing is wrong and not contributing to Oregon's economy in the way that it used to be.

Sara Duncan: Yeah, if you refer to Wall Street investors, that sounds a lot more nefarious than a retired teacher, depending on their pension for their retirement. And that's where a lot of money, investment money has come from, historically into Oregon Forest ownership, has been through pension funds and those type of investment vehicles. I think the other thing that's the reason that that allegation is made or assertion is made is because there's some sort of negative connotation associated with that when it comes to management. It's like if they're just prioritizing for their investors, then therefore they must be deprioritizing other management objectives like wildlife habitat and clean water and all of the other services that we're talking about. In fact, I did an interview with a reporter several months ago who was trying to get me to essentially say that yeah, REITs and TIMOs might manage their forests different than like a family owned company. And my response was it's really difficult to paint a broad brush of management associated to some type of ownership. At the end of the day, all landowners have to operate to match the Forest Practices Act, which is... And there's not a special chapter as it turns out. No. For REITs or TIMOs. They all have to still follow the rules that we have in Oregon. And as I already said, they're some of the strictest environmental protections in the world, certainly the most modern. So it doesn't really matter if that land is owned by one company or mom and pa. They still have to operate at the Forest Practices Act level.

Chris Edwards: We should probably clarify for folks that don't know what REITs and TIMOs are. So REITs are R-E-I-T, that's a real estate investment trust, and a TIMO is a timber investment management organization. So TIMOs, think of them as being like the local management company for a property that is owned by an investor or a fund. It could be a pension fund. Of course, if you have a pension fund, nobody at the pension fund, the quote at the fund, they're not foresters. They have to hire somebody to manage that investment for them. That's what a TIMO does.

Sara Duncan: And sometimes those, I know one guy who's a forester out on the coast. Some of those foresters stay with the land, regardless of ownership. So like he's been

managing the same area, coastal forest land, for decades. And it has changed hands in terms of ownership several times. And he's still the one that's managing it, right? He's an Oregonian. I sometimes find that really a little bit insulting, that there's some insinuation that those foresters are operating any differently than they would if it were owned by some family owned company. Because I know those guys. We know those guys. And there's plenty of super good people working for TIMOs and REITs.

Chris Edwards: And to qualify as a REIT, X percent, it's in the 90s. And I honestly, I can't remember what percent, but the profits have to flow through to the investors. And they don't actually stay in the company, per se. Otherwise, it wouldn't qualify to be a REIT in the first place. But they still also pay taxes. Just because they operate as a REIT and TIMO, they still pay Oregon taxes. It still goes back into our state economy.

Sara Duncan: Oh, I would also say, I can say, while I don't know the percentages, I do know that at OFIC, the Oregon Forest Industries Council, we have 52 members and fewer than 10 of them are either a REIT or a TIMO. I think it's actually quite a bit fewer than 10, but I'm very comfortable saying it's fewer than 10. I'd have to pull out our membership list and go one by one. But most members of the Oregon Forest Industries Council are individuals, entrepreneurs, privately held families, companies of these sorts.

Chris Edwards: All right. For the last question, what I think will be the last question that we want to talk about is let's talk a little bit about the listing on the Spotted Alp, because that was a major watershed moment in the forest product sector, where it marked the turning point from the industry's reliance on federally owned public timber as the largest source of timber. Not the only source, but the largest source of log supply. And when the Spotted Alp listing happened, and the federal forests were, for all intents and purposes, shut down compared to the volume that they produced previously, the industry became reliant on the volume that could be harvested on private lands, which just, I mean, just decimated the manufacturing in the state of Oregon. Because there's just a fraction of the amount of log volume available, so thousands and thousands of jobs were lost as mills shut down. That is a demonstrable fact. It's not really disputed. But I do hear all the time our detractors say, well, you know, it wasn't really the spotted owl that caused all that job loss. It was mechanization. And it's true that the industry has mechanized a lot, since then, part of the mechanization and the need to mechanize was in fact driven by the shutdown of the federal forest. And so, yes, there has been a lot of mechanization since then. To survive. That's right, to survive. But maybe you have some thoughts about that.

Sara Duncan: I do. I hear this one a lot. I actually heard it recently, in fact, because this year, or last year, I guess it was 23, was the 50th anniversary of the Endangered Species Act. And so this came up again. And this assertion that, yeah, it wasn't really the owl listing.

The industry overblows that claim, and it was really mechanization. And I mean, like you said, all you have to do, I mean, you were here in the 90s, and I wasn't. So I'm going to defer to your personal experience. But all you have to do is look at the harvest levels and how they just absolutely fell off a cliff after the listing of the owl. And all of the mills that shut down after that happened in like the two decades that followed the listing of the owl. Yes, were we mechanizing? Absolutely. I'm not going to say that we weren't. Every industry was mechanizing. And that's something that also gets under my skin, that it's okay for every other industry to advance and invest in technology and improvements, modernization, efficiencies. That's good for folks like Intel and tech companies. But when it comes to the timber industry, it's considered a bad thing. We are just like every other industry that is trying to work as efficiently as possible and use modern mechanization. I mean, a modern mill, you know better than I do, looks nothing like a mill that you would have seen your grandfather's mill, right? They're using high-tech lasers. Or my dad's mill.

Chris Edwards: So this particular issue is personal to me because I lived through it not only when I was in high school, but then I went to college, I studied business at Oregon State, and then I came back to my dad's company to work for it. that was in those years of the aftermath, after the spotted owl listing. And so we were scrambling, trying to figure out how to make a buck in the industry that's just been decimated. And so my dad is, has always been the consummate entrepreneur and trying to figure out different angles, you know, using small logs, producing, you know, very niche products or having niche processes that were designed to meet the needs of much larger companies. And at the end of the day, like it really came down to whether or not you had enough capital to invest in the mechanization to stay competitive. We did not have enough capital. We were like, we were a small producer. We did not have a big bank role behind us. And each mill project that my dad put together, he put it together through just sweat and determination and relationships. And, you know, I'm sad to say that none of them had staying power over the long term. Because you just didn't have the capital to invest in the latest and greatest technology. Back then, it was $20 million to build a new stud mill. $20 million wouldn't come close to meeting the needs now. We're talking about mill projects that well over $100 million to be the latest and greatest and have the technology to run high production capacity and throughput with frankly fewer employees. Because employees are really expensive. And we have a workforce shortage, not just in our sector, but in all the sectors. Everybody across the economy is experiencing this big workforce shortage right now. So it requires capital. So going back to the question about who owns mills and timberlands, it's entities with capital. Whether that's a fund or it's a group of investors that all pitch in and go in together on a mill, because it's hard to have, you know, to be an individual investor and bear all that risk. Or it's a family that has really been dedicated to staying in the sector and reinvesting in the sector.

Sara Duncan: We have many members like that. Right, absolutely. I think the mills that are still around now are the ones that have been innovative enough and funded well enough that they have been able to survive. But yeah, the other thing that gets at me is some of the improvements that we made or the industry made after the listing of the owl, or frankly just like over the decades, have been safety improvements. It's made working in the industry much safer than it used to be. Much safer. Much safer. Much safer. Now we've got, you know, when you're operating a piece of hardware machinery, instead of being on the ground with a chainsaw, you're in an air conditioned cab, you've got, you're protected, you're up off the ground. That's a lot safer. And yeah, it requires fewer employees, fewer people. But it's also really safer and highly mechanized. And some of those jobs, especially in the mill, are now highly skilled. They require a different skill level than they used to. And that being said, you're right, our members still are not able to get enough employees as they need to operate at a place that they would like to. Even paying on average, I mean, the timber industry, I know if you look at the Free Facts and Figures books, we pay on average higher than the state average annual wage. And in some of these counties like Clatsop County, they pay double the average wage in those counties because they are really good jobs. And that's, you know, important to remember when you think about overregulating an industry and the outcome that may have on decreased jobs. Those are very highly valued jobs in those communities. Yeah, they are. And they're highly skilled, but they don't require a college degree. And that's an opportunity for a family. Right. The cost of college, my kids are about to go to college, and it's overwhelming. The cost of college is expensive. And if you can get out of high school and get a really good job like that and start making money and not have to spend $100,000 on college, you know, that's setting yourself up for success.

Chris Edwards: Yeah, so it's just not accurate to imply that job losses in the industry were driven by mechanization instead of the spotted owl listing. I mean, the spotted owl listing was the watershed moment that led to tens of thousands of job losses. And as a result of much lower timber supply and everybody, all the remaining manufacturers having to compete with one another over a much smaller log supply, they had to, they had to invest massive amounts of capital. And I think it's also worth noting that because we're mill manufacturers are supplying building products into what is a commodity market, they don't set the price. That overall balance of supply to overall demand is what determines what the market price is. If you're oversupplied compared to demand, the price will go down. If you're undersupplied compared to a rising demand, the price will go up. And you can't just turn a mill on and off. Just dial up the production, dial down the production. It's not that easy. These mills are designed to just pretty much run all out all the time. Because if you're not doing that, you're probably not going to survive against a neighbor that is doing it. Right. Yeah. I mean, just see the 2020 pandemic, right? I think all of us remember when the cost

of lumber went up to the point that people were talking about it. My friends were talking about the fact that the cost of lumber is so high. And I had a reporter call me and say, well, can't you guys just build more mills? It was like, no, that's not how this works. You can't just dial up production just simply because demand has gone up. And that's why we saw such high lumber prices. And now we're kind of on the flip side, right? Demand is down and that's the reality of living and working in a commodity market, a global commodity. And so there are going to be markets where companies can make a lot of money. And during those markets, those were once in a lifetime markets, post pandemic. I mean, everybody that I've spoken to in the sector has said, look, that was a once in a lifetime thing. It's been decades since that's happened. It'll probably be decades until it happens again. In the meantime, you're going to have a bunch of smaller market fluctuations. You're going to make a little bit of money during some of them, and you're going to lose a little bit of money during some of them. Hopefully over time, the gains are greater than the losses, and you're able to manage your cash flow and your assets to weather the storm. So, you know, hopefully you made good money when times were good, and then you're able to control your losses. But you can't eliminate the losses unless you just shut down. And that doesn't do anybody any good. Well, we covered a lot of ground. It's been fun talking about this stuff, and I look forward to sharing this episode with folks that are interested, because we talk about this stuff all the time here. And every now and then, when we're talking, we say, wait, is that true?

Sara Duncan: And so we'll go and we'll do the research, and we'll look into it and say, yeah, no, that is true. And so we're very confident in the veracity of everything that we've shared today in our myth-busting episode. It's nice to be able to do this, actually, because I think there are some of these, the ones that we talked about, like I said, I could probably sit here all day and debunk things that people say on social media. I don't think anyone wants to listen to that, but there are a lot of things, but the ones that we talked about today are the ones that I think rise to the top the most, and I know policymakers hear them, and it's nice to be able to have a forum where we can address them and give actual concrete information that tells a different story, because we don't often get an opportunity to do that. So, thanks for having me on.

Chris Edwards: Thank you. I hope you enjoyed this episode. Be sure to check back for new content coming your way soon on the Forestry Smart Policy podcast. And as always, if you have a question about this episode or something else, just drop us a note at podcast at ofic.com, and who knows, maybe in a future episode we will address your question or whatever beef you may have with what we have presented.