Global Warming and Oregon Wildfires
Part II: History Repeats Itself, Again

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There is a saying that making good decisions is based on experience, and that experience is based on making bad decisions.

I have been writing article/editorials for this magazine on a fairly regular basis for more than 10 years and have been interviewed occasionally by Lars Larson on his radio program for the past 20. In both instances, topics have generally focused on my academic and professional careers regarding wildfires, reforestation, and forest management. And the Elliott.

Another topic has been Global Warming (aka "climate change" and "climate crisis"): based partly on a research paper I delivered to an international group of university researchers in the early 1990s, and mostly on my continuing education on the topic by top scientists and meteorologists as a long-time co-moderator of the Global Warming Realists blog.

This article is focused on the political and scientific predictive history by myself and others regarding the relationship between our changing climate and the great increases in western Oregon forest fires during the past 35 years. It is arranged in three parts with a conclusion:

1) published concerns by me and others regarding increasing risks of dead trees and catastrophic wildfires, from 1991 to 2014;

2) a slightly abbreviated transcript of a live radio interview I did with Lars on these topics in 2014; and

3) the published comments of the governors of Oregon, Washington, and California during and regarding the 2020 Labor Day Fires.

I. 1991-2014 Media Predictions

I began my intermittent research on conifer forest history and climate change in 1991, as Global Warming was just becoming a national concern. On Friday, September 13, I presented my findings to an international conference of

climatologists, gathered in Corvallis, on the topic of computerized Global Warming predictive models, carbon cycling, and northern hemisphere conifer forest history.

Human interference — such as politics and modern techniques to protect forests from blazes — allows tree parasites to lay waste to 90,000 acres of the Deschutes and Willamette national forests.

A natural disaster runs amok

By Theresa Novak
The Statesman Journal

Tiny worms and voracious beetles that have decimated almost 90,000 acres of trees are almost gone. Many of the dead trees they left behind soon will be gone, too.

For the first time in almost four years, the U.S. Forest Service will sell salvage timber sales on the Sisters and Mckenzie ranger districts. There, drought and infestation by spruce budworms and bark beetles have killed a vast number of trees in an area bisected by the Santiam Pass.

The damaged area crosses over two federal forests and encompasses some private timberland. Most of the damage is in the Deschutes National Forest, with a smaller portion in the Willamette National Forest near Suttle Lake.

Rich Mathis, who has owned the Suttle Lake resort for three years, said it is about time that the Forest Service did some-

ENVIRONMENT

Insects have killed 70,000 to 90,000 acres of Douglas fir trees in this area.

Figure 1. September 3, 1994 front-page Salem *Statesman Journal* article describing 90,000 acres of beetle-killed Douglas fir along Highway 20 and Santiam Pass.

My presentation (and subsequently published peer-reviewed paper) came to five conclusions, including: "none of the models in current use has demonstrated an ability to make accurate or reliable projections," a fact which I believe continues to be true to the present time.

Figure 1 is from a Fall 1994 front-page newspaper article by Theresa Novak regarding beetle-killed trees along Highway 20 and Santiam Pass.

Figure 2 features a Spring 1994 excerpt from an interview with Jim Petersen that specifically discussed the fire danger from these snags.

Figure 3 is the Fall 2003 B&B Complex Fire cover of this magazine, which featured a photo from the 1994 issue regarding the Highway 20 beetle-kill.

Figure 4 compares the 1994 Novak beetle-kill map with the online 2004 ORWW website map of the B&B Complex Fire.

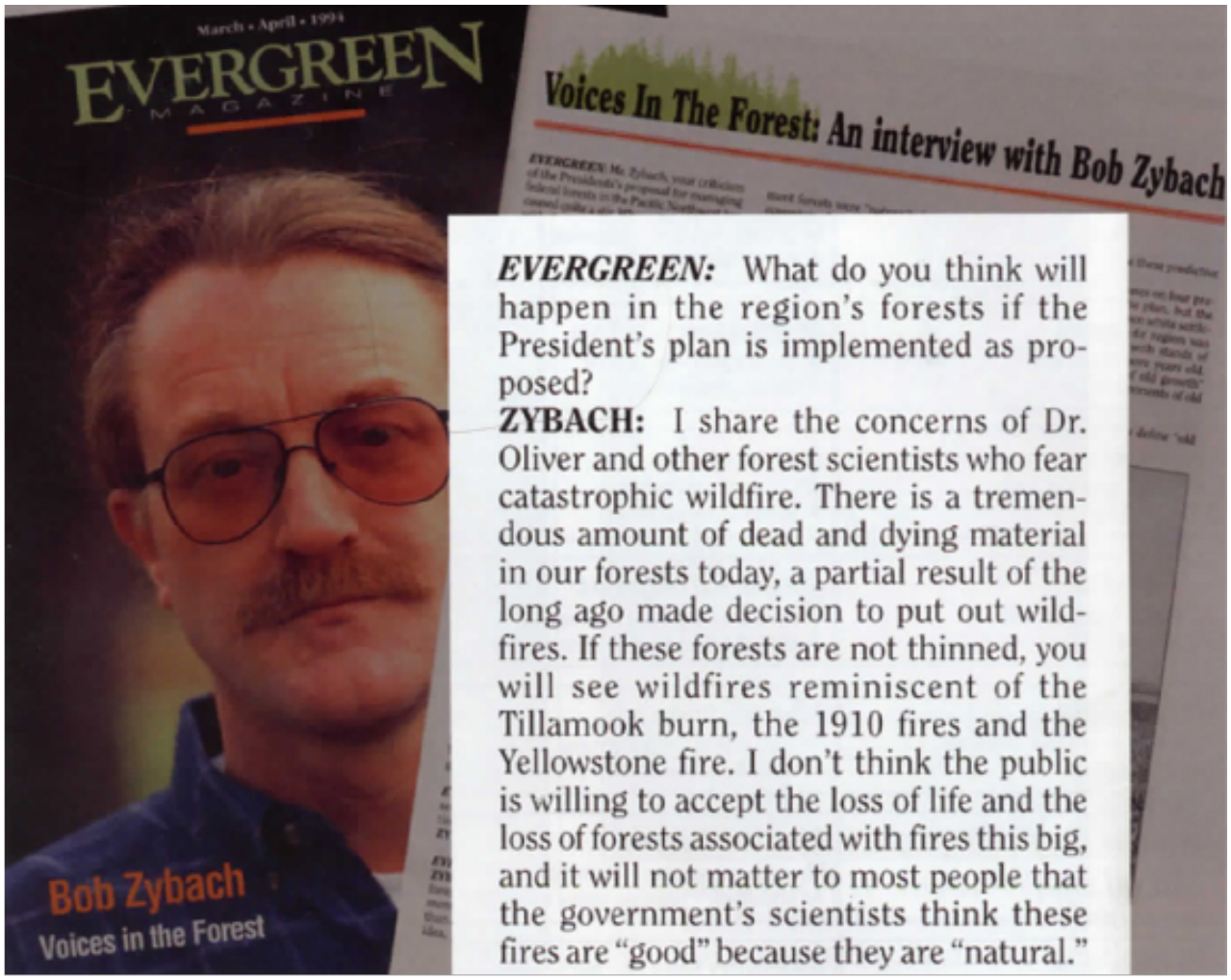

Figure 2. Excerpt from March-April 1994 interview with Jim Petersen, *Evergreen Magazine*, with predictions of catastrophic wildfire on beetle-killed trees on Highway 20 and the Santiam Pass, and fire-killed trees from the 1987 Silver Complex Fire on the Kalmiopsis Wilderness. The 2002 Biscuit Fire reburned the Kalmiopsis and the 2003 B&B Complex Fire burned through Santiam Pass. Both fires were the largest in history for those locations.

My Summer 2013 article in this series was about spotted owl habitat and led to an interview with Lars on his radio show that July. Conversely, the transcript of a July 2014 interview with Lars formed the basis of my Fall 2014 article, "Global Warming and Oregon Wildfire History."

The live interview was conducted on July 29 and included the fact it had been an extremely mild fire season, thus far, in 2014. The following day, July 30, the 25,000-acre Oregon Gulch Fire started (see Table 1).

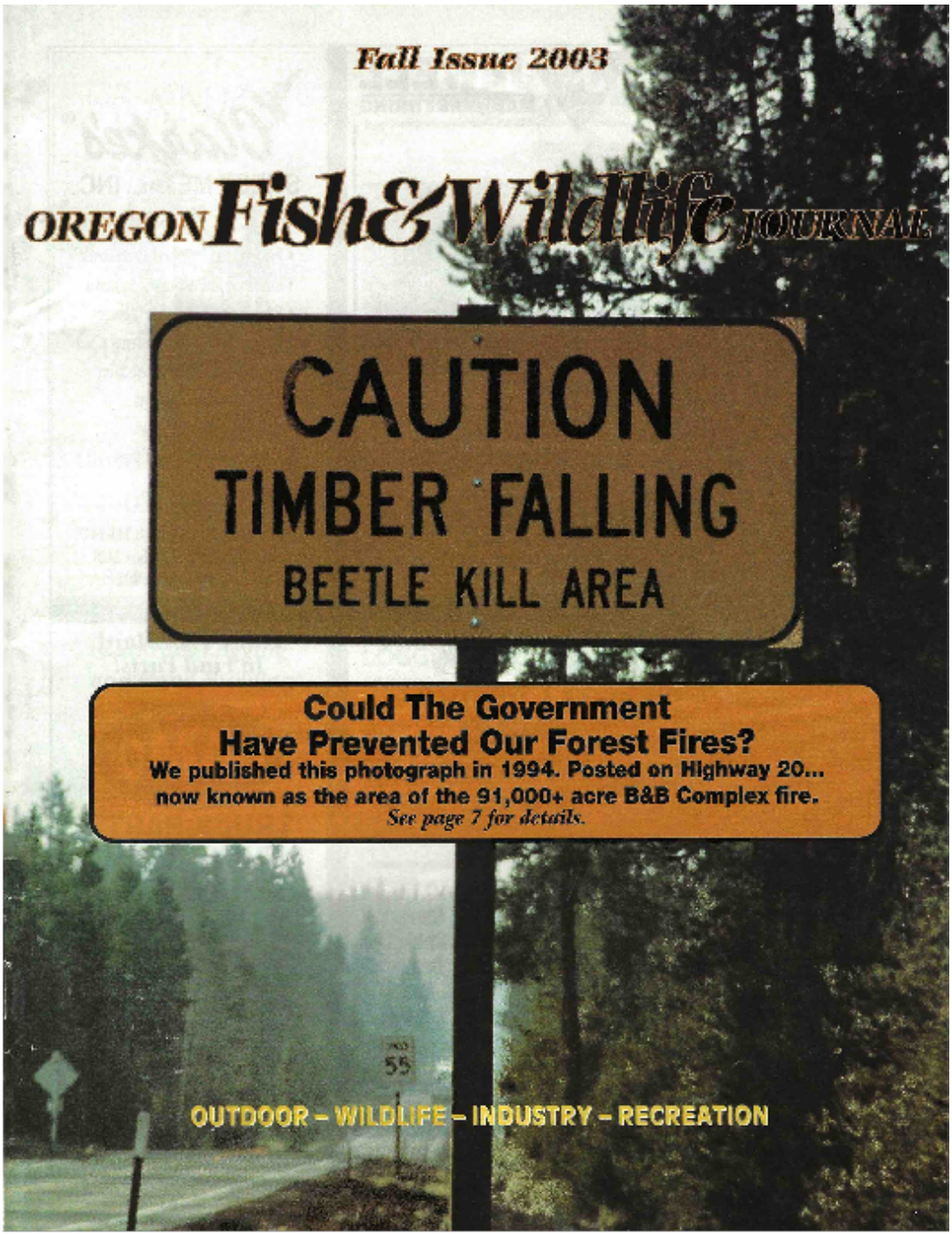

Figure 3. Fall 2003 cover to *Oregon Fish & Wildlife Journal*, references 1994 Highway 20 beetle-kill as background to current article on B&B Complex.

II. July 2014 Radio Interview

Lars: Welcome back to the Lars Larson Show. You know that we talk about global warming issues on this show on a pretty regular basis and we love to have people

on both sides of the question . . . Bob, good to have you back on and thank you very much for taking the time today.

Bob: Well, thank you, Lars. I enjoy it.

Lars: Tom Tidwell is the U.S. Forest Service Chief, and it [news report] was mentioning that he had visited the High Desert Museum and he was interviewed by KTVZ, just so we get all the credit in, and he said because of climate change and biomass, wildfires are different now than they were ten years ago. And a direct quote from Tidwell, "'Our fire seasons today are 60 to 80 days longer, which creates more energy in the system," Tidwell told News Channel 21, "We see more erratic fire behavior." Let's start with the length of the fire season and I want to ask you first. You did your PhD thesis on this subject, right?

Bob: Yes, on the history of [Oregon] Coast Range wildfires . . . so the last 20 or 30 years, I've looked very closely at the history of wildfires in the Pacific Northwest.

Lars: Are the fire seasons two and a half months longer than they used to be?

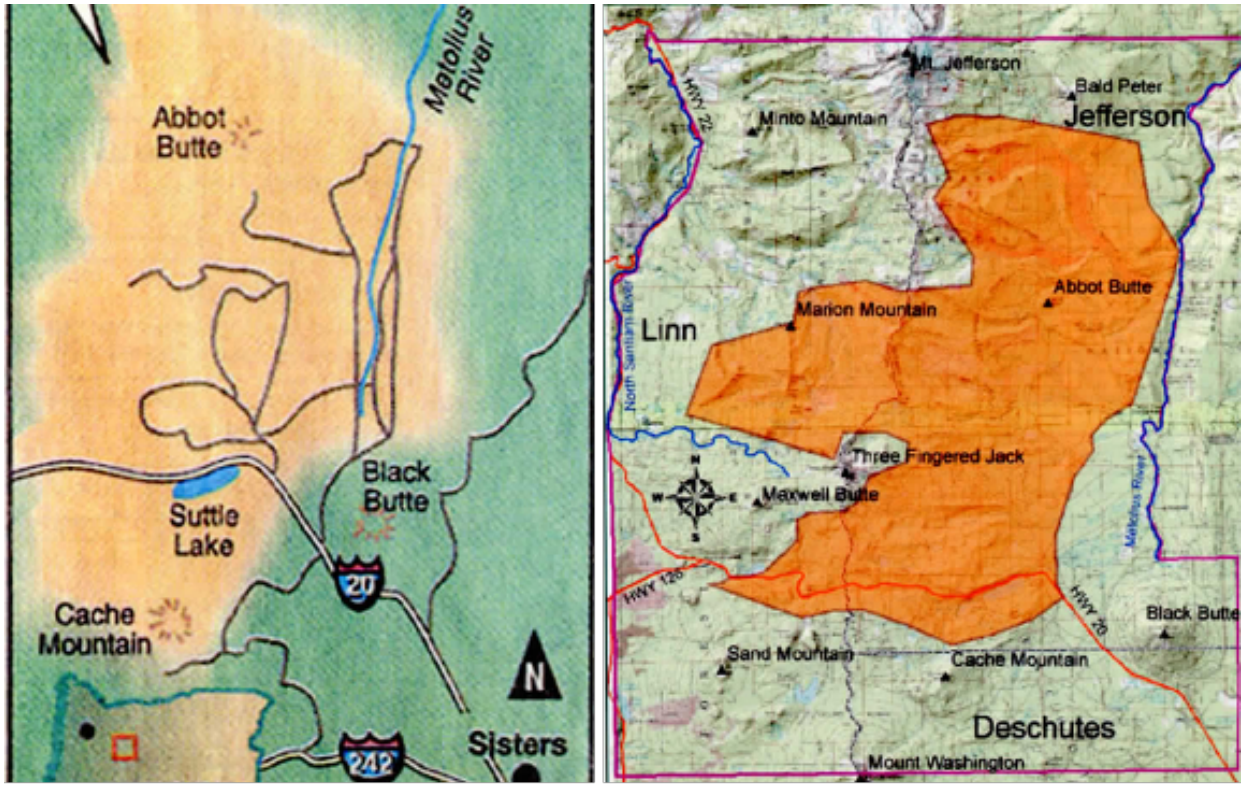

Figure 4. Map on the left is from the 1994 article showing Highway 20 beetle kill; map on the right is from March 2004 ORWW educational website focused on the predicted B&B Complex Fire. Note common Abbot Butte, Metolius River, Black Butte and Cache Mountain landmarks.

Bob: No. They are about exactly the same for the last 200 years.

Lars: [Laughs] That's quite a statement. So, for 200 years, we've had fire seasons about the same length. Why do you suppose the U.S. Forest Service Chief, Tom Tidwell, is saying then that they are two to two and a half months longer?

Bob: Well maybe because he is following the lead of President Obama, who said last week up in Washington [State] that the wildfires are due to "climate change." I think they have agendas to support. I think it's political. It's not scientific, and that's what bothers me.

Lars: Is it fair to say -- and in fact I had somebody email me -- saying 2014, according to the National Interagency Fire Center, is actually the quietest fire season of the decade so far this year. Is that fair to say?

Bob: That's probably pretty true.

Lars: They say outside of the west coast . . . burn acreage for this year in the United States is the lowest in a decade, less than half of normal, and one of the lowest on record.

Bob: Well, I don't know if it is one of the lowest on record, and I don't know how they are measuring "normal," but the last ten years have been terrible and the last 20 years have been terrible. Actually going back to about 1987. But these fires were predicted more than 20 years ago by Chad Oliver up at University of Washington -- he's at Yale now -- by me, by Jim Peterson, who has *Evergreen Magazine* --which was nationally distributed -- that the build-up of fuels caused by passive management of our forests was going to result in massive forest fires, and that's exactly what has occurred.

Lars: . . . ls it warmer today than it was ten years ago, or cooler, or about the same temperature?

Bob: I think the records are showing that in the northwest we've got generally cooling temperatures for the last 15 or 17 years. As far as the seasonality of wildfires, they're pretty darn predictable. July and August are the big months. Have been since the 1820s. Sometimes it will start a little bit earlier in June or early July in eastern Oregon, because it dries out sooner. But western Oregon, about now -- late July until mid-August -- is when it gets its worst, and then they usually taper

off in September. There's some starts there, and then the rains hit them and that's been the same pattern as long as we've had historical records. It has not changed.

Lars: . . . When Tidwell says something like that, and says the fire seasons are longer today than they used to be . . . You know, small, relatively small changes in temperature are not going to make the difference between say the Coast Range where it's wet and damp and central Oregon where it's bone-dry all summer, is it?

Bob: . . . We have had wildfires here in February and March. It depends on humidity and the wind. You get an east wind and low humidity and the fuels dry out. So fuel build-ups are a result, in Oregon, of spring rains. That's where you get your vegetation build-up; or management policies that say don't salvage dead material; or let things grow and don't log, say, in forests; or don't graze on the prairies. So it's not a matter of temperature at all. It's humidity and wind and it's fuel. And then it's a source of ignition; and since we have lightning strikes -- not on the Coast Range, but southwest Oregon, eastern Oregon and along the Cascades -- at this time of year, it's predictable that when they strike fuels, they will burn. If we have an east wind and low humidity, they get out of control really quickly. But the temperature doesn't have anything to do with the length of the fire season; and the main thing that controls the annual fuels, the ones that are particularly combustible, are the spring rains -- where you get big, heavy grass build-ups and a lot of woody growth.

Lars: . . . On the subject of fire season, so we have the head of the U.S. Forest Service, saying that we have a longer fire season by 60 to 80 days. I mean that would be a gigantic increase in the length of the fire season, if it was true, but you say we've had basically the same for the last 200 years. Let' talk about the fuel load . . . Give me your take on that first, if you don't mind, Doc?

Bob: Sure. This probably started -- the fuel load problem that has led into the wildfires -- probably started with the Wilderness Act. A lot of Wilderness areas included timber. The Kalmiopsis in southern Oregon is a good example. In 1987 it burned. There was no salvage because it was a Wilderness area. The Jefferson Wilderness area had beetle-kill in the early 90s. In both those instances, myself and other people said these are going to bum up catastrophically if something isn't done to remove these now dry fuels. Anybody that has used wood heat knows that dry wood burns better than green wood. And then, point of fact, they both did. The B&B Complex burned up almost the exact perimeter of the beetle-kill on the crest of the Cascades in 2003. The previous year, the Biscuit fire burned up the Kalmiopsis again, took out the entire Silver Complex fire that had burned there in

1987, and expanded the boundaries to about 500 thousand acres. So those things were predicted before we had a global warming problem, or about the same time. People, me included, were saying these are time bombs; these fuels are going to go out of control. Since then, we've exacerbated the problem by doing two things: (1) we've created a wildlife habitat for spotted owls, which is burning up for the same reason -- the fuels are building up and there's nothing to control them; and (2) the other reason is lack of salvage. We are not salvaging the areas that have been killed and so we are piling up the dry firewood in those areas and as a result the fires are, as predicted 20 years ago, becoming larger and more destructive.

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Lars: And when they talk about trying to ameliorate this through thinning projects . . . That doesn't actually solve the problem, or probably even reduce it, does it?

Bob: Not a bit. I've seen a lot of those projects and they are pretty irritating. They are just busy work. Before I went back to college, l worked for 20 years in reforestation. We did lots of reforestation work throughout the Pacific Northwest and by removing fuels, by putting in road systems, by using aerial surveillance, and so on, we [people who worked in the woods] were able to keep wildfires at bay from the end of World War II say, until the 1980s, and until the Federal government started putting in passive management policies. The thinning projects they put in are silly, almost. They encourage the remaining trees to grow [greater amounts of fuel]. They are more like precommercial thins or leaf-raking, almost literally, than they are anything that needs to be done. We need to go in and be very aggressive and actively manage the major fuels, which are logs, which also create jobs, which also create income, which also create safer conditions for fish and wildlife and less air pollution and less water pollution.

Lars: And if you do that and, you know, in the process of logging you are knocking off the limbs, you take the limbs and grind them up. I don't know how much commercial value that grind is, but there are markets for some of that stuff and if you take the rest of it and burn it . . . you should be able to do all that and actually

improve the forest, rather than just let it build up until it's feet thick and then a fire starts and the fire sits there and burns through this fuel from now till the rains hit.

Wildfire Name	Year	Date	Acres	County	Landowner
Big Windy Complex	2013	July 26	26,700	Josephine	BLM
Whiskey Complex	2013	July 26	18,000	Douglas	USFS
Douglas Complex	2013	July 27	48,700	Douglas	BLM
Oregon Gulch	2014	July 30	25,800	Jackson	BLM
Stouts Creek	2015	July 30	26,500	Douglas	Private
Collier Butte	2015	August 2	12,300	Curry	USFS
Chetco Bar	2017	July 12	191,100	Curry	Wilderness
Whitewater	2017	July 23	14,500	Marion	Wilderness
Spruce Lake	2017	July 29	14,500	Jackson	National Park
Happy Dog	2017	August 8	31,400	Douglas	USFS
Jones	2017	August 10	10,100	Lane	USFS
North Umpqua Complex	2017	August 11	43,200	Douglas	USFS
High Cascades Complex	2017	August 13	27,500	Jackson	National Park
Miller Complex	2017	August 14	39,700	Jackson	USFS
Horse Creek Complex	2017	August 21	33,800	Lane	USFS
Horse Prairie	2017	August 26	16,400	Douglas	BLM
Eagle Creek	2017	September 2	48,800	Hood River	USFS
South Umpqua Complex	2018	July 15	28,700	Douglas	USFS
Taylor Creek	2018	July 15	52,800	Josephine	BLM
Klondike	2018	July 15	175,300	Curry	Wilderness
Miles	2018	July 16	54,300	Jackson	USFS
Terwilliger	2018	August 19	11,600	Lane	USFS
Milepost 97	2019	July 24	13,100	Douglas	Tribal
Beachie Creek	2020	August 16	193,600	Marion	Wilderness
Lionshead	2020	August 16	204,500	Marion	Wilderness
Holiday Farm	2020	September 7	173,400	Lane	Private
Slater	2020	September 7	34,00	Josephine	USFS
South Obenchain	2020	September 8	32,700	Jackson	USFS
Riverside	2020	September 8	138,100	Clackamas	USFS
Archie Creek	2020	September 8	131,600	Douglas	USFS
Thielsen	2020	September 8	10,000	Douglas	USFS
Jack Creek	2021	July 5	24,200	Douglas	USFS
Chaos	2021	July 30	28,800	Douglas	USFS
33 Major Fires	**9 Years**	**July-Sept.**	**1,901,734**		

Table 1. Western Oregon large-scale wildfires following topical 2013 and 2014 articles and radio interviews with Lars Larson regarding wildlife habitats and forest fires.

Bob: And chars the soils and sterilizes it and it sloughs off in the rivers and the whole bit; and creates a lot of carbon dioxide in the process for the people that are worried about that. The way the Indians did it for ten thousand years or so is to have regular prescribed burns and so the fuels never built up and the nutrients that go into the soil or the ash from the plants that [burned] -- the flash fuels mostly -- and those are the forests that are uniformly described as Eden-like by the first explorers and settlers that came to Oregon. The forests were safe. They were beautiful. They were highly productive. Wildlife was productive. So, a combination of logging to get rid of all the fuel build ups of the last 30 and 50 years -- but done along the watershed boundaries and on a landscape scale -- combined with prescribed fires as the Indians did, would pretty much resolve the problem as well as rejuvenating our rural economies and our wildlife populations.

Lars: . . . Dr. Zybach, I appreciate you coming on. We are going to have some links up to some of the material that you have and you always bring a lot of intelligence to the show. Thanks very much.

Bob: Thank you, Lars.

III. 2020 Labor Day Fires Politics

Gavin Newson, Governor, California, September 11: "The debate is over around climate change . . . I'm a little bit exhausted that we have to continue to debate this issue. This is a climate damn emergency. This is real and it's happening. This is the perfect storm," Newsom, 52, said as he stood on charred, smoky mountain terrain near Oroville in Northern California.

Jay Inslee, Governor, Washington, September 11: "Fires across the Pacific Northwest and California shouldn't be called wildfires, but 'climate fires' . . . This is not an act of God," Inslee said. "This has happened because we have changed the climate of the state of Washington in dramatic ways."

Kate Brown, Governor, Oregon, September 13: "The harsh reality is that we're going to see more of these wildfires. They're hotter, they're more fierce, and obviously much more challenging to tackle. And they are a sign of the changing climate impacts . . . Climate change is here, it's real, and it's like a hammer hitting us in the head . . . And we have to take action . . . This is truly the bellwether for climate change on the West Coast," Brown, a Democrat, said on "Face the Nation." "And this is a wake-up call for all of us that we have got to do everything in our power to tackle climate change."

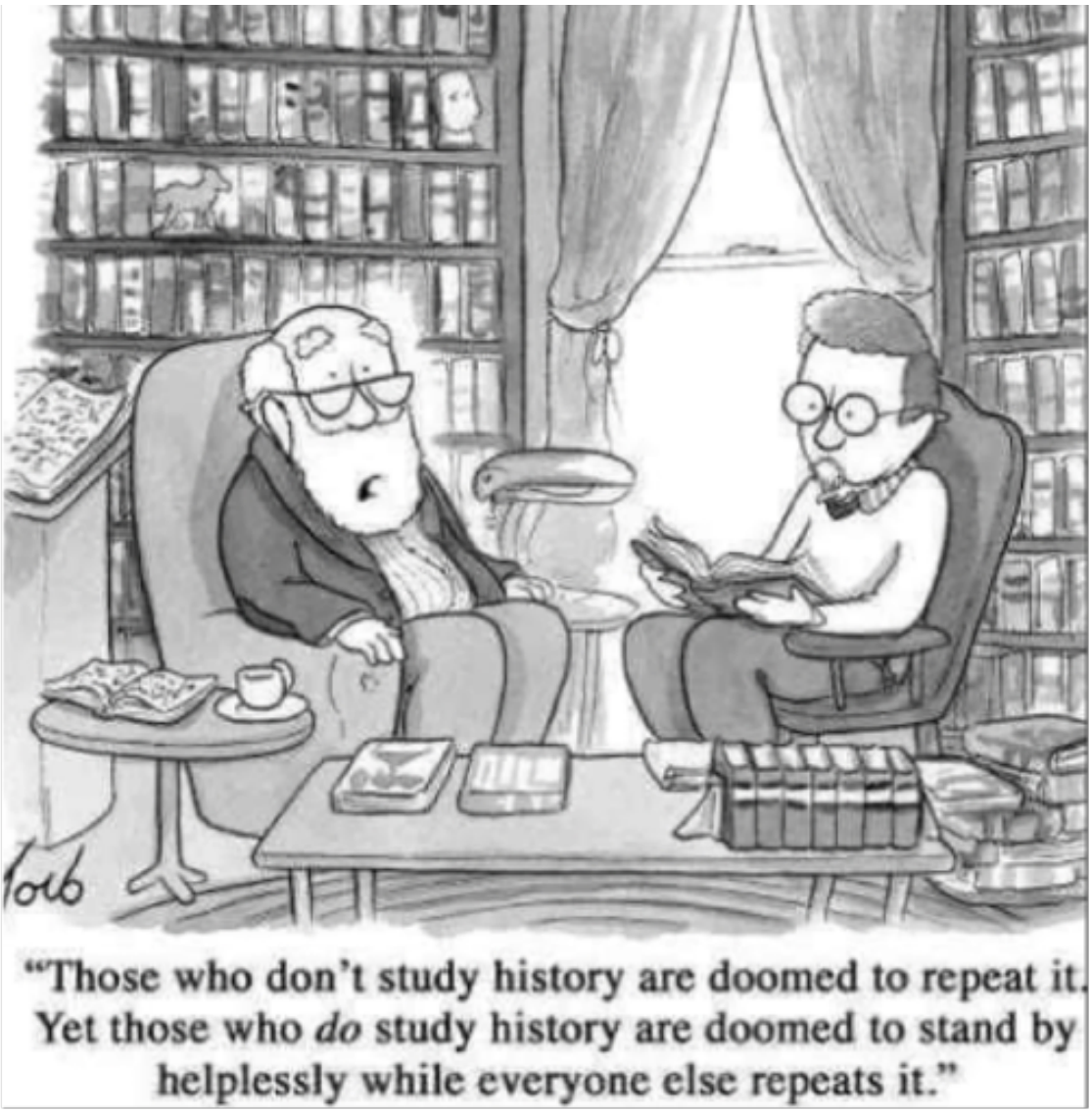

Figure 5. 2022 cartoon by Tom Toro, Portland, Oregon, has gone viral on Internet.

Conclusions

Between 1952 and 1987, 35 years, only a single wildfire greater than 10,000 acres in size -- the 1966 Oxbow Fire -- occurred in western Oregon. From 1987 until now, even catastrophic-scale wildfires more than 100,000 acres in size have become commonplace, as predicted.

During just the past nine years, from 2013 through 2021, there have been 33 western Oregon wildfires greater than 10,000 acres in size. Of these 33 major wildfires, 30 began and/or burned completely on federal forestlands, and only three began on private or Tribal lands.

The climate is the same for all ownerships -- only management actions have changed. Federal forest managers have harvested less than 5% of the millions of snags remaining from these fires. The remaining 95% will likely burn again, as many already have.

Too many bad decisions have been made by our legislators and public forest managers the past 35 years. We need to learn from these costly errors to make better decisions moving forward.

We can do better. Major wildfires in western Oregon remain predictable and largely preventable. They have had little or nothing to do with "climate change" and nearly everything to do with federal passive management policies. To fix, we just need the legal ability to actively manage our public forests. Again.