

Maureen and Mike

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**Oral History Number: 128-001**

**Interviewee: Edward George "Ed" Heilman**

**Interviewer: Floyd Cowles**

**Date of Interview: May 24, 1984**

Floyd Cowles: This is Floyd Cowles interviewing Ed Heilman in Missoula, Montana, on May 24, 1984, for the preliminary interview of the smokejumper oral history project [OH 133, Smokejumpers 1984 Reunion Oral History Project]. Ed recently retired as Director of Aviation Fire Management in the regional office here in Missoula of the U.S. Forest Service. Ed, would you give me a brief autobiography?

Ed Heilman: Okay, Floyd, I was...My name is Edward George Heilman. I was born in Butte, Montana, on March 25, 1929. My father was a journalist, and in my early days he was with United Press. In those days, the United Press transferred its employees very frequently, so as I was growing up, my parents and I moved around a great deal and was therefore raised in really a lot of places, mostly California, but not exclusively. So my connection with forestry began as just a kid when I was...had the usual desire for adventure and so forth. Among the various career options that seemed attractive to me was that of forest ranger, and I read a lot and so forth about what forest rangers were supposed to do.

My first actual contact, personally you might say, came shortly after my 16th birthday in March of 1945, and this was during World War two. At that time my parents and I lived in Sacramento California, and I was just finishing up my junior year in high school. I applied for a job with the Tahoe National Forest, which is just east of Sacramento California, and during the war—World War Two—the employment regulations were relaxed somewhat and 16-year-olds could legally work for the Forest Service provided they had their parents' permission. So my parents, of course, gave me permission, and I applied and, much to my surprise, was accepted for employment by the Big Bend Ranger District of the Tahoe National Forest in the Sierras and Central California. So I reported for work—Greyhound bus to work. During the war, there was gasoline and tire and other forms of rationing, and automotive travel wasn't at all common, so of course, I had to get to work basically with the Greyhound bus.

So I reported for work, and after filling out some papers and so forth was assigned to a fire crew at a guard station called Blue Canyon—Blue Canyon Guard Station—which was just west of a little town called Emigrant Gap right on Highway 40. That's U.S. 40, which I believe is now Interstate 80, I believe. This was just on the west slope of Donner Summit between Sacramento and Reno, Nevada. So I reported for work on this fire crew. There were three kids you might say, and a foreman. The foreman was a man named Lester Bigley (?), and he must have been in his 40s, I would guess. At this guard station, there were one other crew. It was a D8 tractor operator and a swamper, and they were hired to build firebreaks paralleling the Southern Pacific Railroad, which ran in an east-west direction right through the same area. So at this guard station, then, was the four-person fire crew—used to call it four-man fire crew—and the tractor crew.

So our job then was to equip our fire truck, which was a 1942 Ford Six. It had a 300-gallon tank on it and a demountable tanker unit. It was one of a series of trucks at the time that were called Green Hornet, which was a popular radio show in those days. This was, at the time, a first line fire engine. It was one of the latest and the best in the California region, and we were very proud of this particular truck. Polished it and so forth. We went through quite a lot of training on how to build a fire line, how to use tool—hand tools—and how to use the truck itself. It had a pretty substantial pump on it, and we learned basic hose lays and that type of thing. Our project work, when we were not training, was station maintenance. There were several stations on the ranger district, and our building maintenance—sharpening tools, painting, and that type of thing—was basically what we did. There were a number of public campgrounds in the area, but because of the wartime conditions, there was very little or no use of these campgrounds, so we had very little to do with the campgrounds themselves. They were basically closed for the war.

I'd been on the job, perhaps, two or three weeks and came word of a fire. This was our very first fire for all of us on the crew except, of course, the foreman who had been working for many years. So we were all hyped up about this fire, and we were absolutely convinced that it was a fire started by a Japanese balloon bomb, which were launched by the thousands during the war from Japan in an attempt to set fires in Western U.S. We knew that this was a Japanese balloon bomb, and of course, we had the illusion that on the bomb was a Japanese soldier of some type. This shows the degree of misinformation that existed in those days. So with some difficulty we hiked up to this rather remote fire, and much to our disappointment it turned out to be a hold-over lightning strike perhaps a quarter of an acre or so. Much to our disappointment, no balloon bomb, no Japanese for us to be a hero with and so on.

FC: Did you ever see one of those balloon bombs?

EH: I've seen replicas in the Smithsonian, but I've never actually seen one out in the woods. I've heard of people that have seen them.

FC: When I was on the Helena, Jack Himan [Jerry "Jack" Hinman] was ranger at Canyon Ferry, and he actually found one on the Canyon Ferry District.

EH: I'll be darned. Yes, there were thousands and thousands of those things launched, but they really didn't set very many fires.

FC: Go on with your—

EH: Anyway, that was, oh, probably late June or early July of 1945. This war was still going on. The atom bomb have not yet been dropped. In fact, the civilians, most of us never even dreamed of an atom bomb. We went on through the summer. Had quite a busy summer. A lot of fires that year, mostly railroad fires because there was heavy rail traffic because of the war,

and they set an awful lot of fires. This was the friendly Southern Pacific. So quite a few fires. I remember on V-J Day, we were amazed to learn of the atom bomb and the rather abrupt stop to the war. On V-J Day we had the day off I remember. By the way, we worked seven days a week during the war and just expected it, so we were working seven days. Although we have V-J day off, we were instructed as we were for all of our days off...you got the day off, but you have to stay right here. So we have the day off, and lo and behold on V-J Day, we had a fire—a railroad fire. I remember that to this day. So off we went.

Anyway, the end of the 1945 season, I went back to high school in Sacramento, finished out my senior year, and continued working for the Forest Service seasonally in 1946. Then in the fall of '46, I entered the University of Montana School of Forestry here in Missoula, and I worked seasonally again all on the Tahoe National Forest—the same ranger district, in fact—all that time I was going to school here at the University. By the time I finished in June of 1950, I'd had...let's see '45, '46, '47, '48, '49. I had five seasons of work with the Forest Service all on the Tahoe Forest in California. So graduation time came, and jobs were very...professional jobs in forestry were very scarce in those days, and there was a great abundance of graduates because of the big bulge of students that came with the GI Bill after the war.

FC: Excuse me, I missed what year you graduated college.

EH: June 1950.

FC: '50. The exact same...I graduated in May '50. Go ahead.

EH: Well anyway, you remember then, Floyd, that jobs were kind of scarce in those days. That is, professional jobs. So although I'd taken and just barely passed the junior forester exam, I was so low on the list I didn't have any hopes of getting a professional job so I went back to California in a technician's job. By this time, I'd gotten what today we'd call a career conditional appointment as a technician. I went back to work as GS-3 technician with my shiny new degree in forestry.

Three or four weeks after graduation, the Korean War started, and I knew that I'd be called up immediately. I had a reserve commission through ROTC [Reserve Officers' Training Corps]—Reserve Air Force Commission—and I was convinced I'd be called up any day. I put off any kind of permanent commitments—that is, personal commitments, figuring I'd get my military service out of the way and then try to do something on a more organized basis. Well, nothing happened in the way of getting called up, so I worked through the 1950 season, this time, just a single fireman. I was no longer on a fire crew. The fire crew, meanwhile, had been moved from Blue Canyon to Big Bend, which is where the ranger station was. I stayed on at Blue Canyon as kind of a guard. Just a lone individual working by myself, and was basically a fireman—a single fireman.

That was another very, very busy year. We had a lot of fires including several in Southern California, and so on. Shipped down there as a crew boss and various other assignments.

FC: Were any of those project size at the time?

EH: Oh yeah, yeah. In fact, that year, 1950, as I recall was...The biggest one I was on that year was something like 25,000 acres, which was on Stanislaw in California. It was called Rights Creek—Rights Creek Fire. There were several on the Angeles too. I can't remember the acreage, but they were all big ones. There was another one on the Los Padres, which was, I don't know, 10,000 plus. By the way on that one on the Los Padres was one of the closer calls I had in terms of danger, you might say. This was chaparral covered and a very, very intense burning fire. It was really romping for day after day. This one particular day, there a D8 tractor had been building a fire break along a ridge top, and it was a rather narrow ridge top and steep off to each side and rocky as most of Southern California was. At this particular point, the tractor operator parked the tractor, and he left for some reason. I forget now why he left. Maybe it was...I don't know what it was changing shift or what, but the tractor was parked with the engine running and the tractor operator was gone somewhere. This other guy and I were at this point, and the fire made a run up the ridge toward this tractor built fire line. When I say made a run, I wasn't kidding. The flame length was more than 100 feet. It was really a spectacular run, and the two of us crawled underneath the belly pan of this D8. The fire roared all around us including right over the top of us, and aside from some smoke and dust and a good deal of adrenaline, why, we came out all right.

FC: You weren't burned or injured at all?

EH: Not at that time, no.

FC: In '67, I was on the Sundance fire and there were two—the dozer operator and the dozer boss—forest service type, that crawled under a tractor and were burned up themselves.

EH: Yeah, I read about that. I heard about that.

FC: Go ahead and continue.

EH: Well, any rate, the 1950 season went by without me getting called up into the military, and so in early '60...early '51, I beg your pardon, I was converted from technician to forester appointment GS-5 and went off to an orientation school—a professional orientation school—in Southern California at a place called Los Prietos, which was on the Los Padres Forest right out of Santa Barbara. Right near President Reagan's ranch, by the way.

FC: Excuse me, Ed, could you elaborate a little bit on the types of jobs you held before this GF appointment, fire-wise?

EH: Okay, I was a crewman on a fire crew for three or four seasons all on the Tahoe Forest, and then one of the...I think was the season of '48, I believe, I was a district dispatcher at Big Bend Ranger Station, which was a little different view of things. This was a clerk dispatcher job in the office there. I was the sole clerical type, and that was...I was distinctly not a typist, but I typed enough to get by and took the lookout reports and etcetera and dispatched the fire crew and met all the office visitors and did what little record-keeping was done in those days. It was a very interesting job—dispatching. Then, oh, fire crew job, and then after graduation this patrolman job is what it was called at the time—single fireman. Then was converted to the forester's position in early 1951, and at that time transferred to the Downieville Ranger District of the Tahoe Forest in California.

FC: As assistant ranger?

EH: No, I was GS-5, and I was called—what would be called today or at that time—kind of a headquarters guard at Downieville Ranger Station. Some clerical duties and some field going duties. The clerical duties included that of being district dispatcher, but there were somebody else to do most of the typing and so on, so it wasn't exactly a clerical job.

Any rate, in 1951 in Downieville I met the young lady who was a schoolteacher at the time in the Downieville school, and eventually we married in the fall of 1951. About the time I got married, I volunteered for active duty in the Air Force. I wanted to get my military duties out of the way, so I volunteered. I went to a communication school in Illinois and then was reassigned to a fighter bomber wing in Korea in late 1952. Was there not quite a year until the truce was signed, and back to the States in '53 and back to the Forest Service. This time on the old Shasta National Forest in Northern California. It was a district fire control assistant, called in those days. Today, it would be called a district fire management officer, but in those days it was FCA or fire control assistant. On the old Trinity District of the old Shasta National Forest. I say old because it's since been merged with the adjacent Trinity and is now called the Shasta Trinity.

FC: Where is that in relation to geography in California?

EH: It's up in Northern California in...oh, right 60, 80 miles south of the Oregon border. The Shasta National Forest extend...It's a big one, and it extends basically from Mount Shasta on the north down to Redding at the head of the Sacramento Valley on the south end. In the east west direction it extends from, oh, Fall River Mills—a little town out almost in Nevada. It extends westerly, oh, at that time practically to Weaverville on the Trinity River. So it was in Northern California. This district I was on—the Trinity district—was a backcountry district in this day and at that time. Pretty much custodial, which meant, really, the big job was fire and trail maintenance. So I got a real dose of trail maintenance, including telephone maintenance and other kind of things in those days. '51 happened to be a very busy fire year so it was a real, another one, another busy year. More trips to Southern California and other big fires around the state including the Jim Jam fire on the old Trinity Forest 1951, which was at its time kind of

a legend, which by the way included the pack string from Region One—Missoula Ninemile Remount Depot.

Anyway, then into the Air Force and then back out again and reassigned back to the same area Trinity Center. Married at this time, and we had our small daughter, Ann Patricia (?). Then transferred later in 1955 to the Hayfork district of the Trinity into a timber management job, because up to this point my jobs had all been fire, nothing but fire.

FC: How many fires had you been on before this time, approximately?

EH: Oh, as a guess, probably 300 to 400. Something like that.

FC: Any of those stick out particularly as far as severity or hazardous or beyond what you already described?

EH: Yeah, there's one of the Los Padres. It was one of the closer calls I had. The big Rights Creek fire on the Stanislaw was, at that time, the biggest one I've ever seen—about 25,000 acres in heavy timber. It was a white pine timber type. A sugar pine it's called in that area, and it...I remember that there had been a very intensive blister rust control program, had been conducted in that area, to safeguard the sugar pine, which was subject to blister rust. The whole sugar pine management area burned up in this fire, which seemed to me quite a loss—economic loss. Huge trees just reduced to ashes.

This Jim Jam fire was a remote one that we had to walk 14 miles from the end of the road just to get into the nearest part of the fire. Was on that one, I don't know, ten days or so. I remember with some pleasure that this was toward the end of 1951, which was a very busy fire year. We had an awful lot of hiking in those days, and I must have been in pretty good shape in '51 because on this Jim Jam fire there was a Southwestern Indian fire crew. Either Zuni or one of the crews from Arizona or New Mexico. One of the crew members had some kind of an emergency, and I volunteered to walk from fire camp out to deliver the message to this crew so the crew number could come back and return to New Mexico for his family emergency, whatever it was. At that time, I was able without any trouble at all to outwalk this Zuni firefighter, which was quite a mark of pride in those days.

FC: I'd like to kind of add in too...I think it was 1952, I was fired boss on 1,000 acre fire where Sundance overran it later on east of Priest Lake, Idaho. Of course, blister rust crews were the inter-regional crews of those days, but we shipped up two crews of Zuni and two crews of Apache from New Mexico, which were the first out-of-region crews ever used in Region One.

EH: I'll be darned. That was '52?

FC: '52. I was right in your story.

EH: Well, anyway, that was a busy time. Then transferred in '55 to this timber job on the Hayfork district of the Trinity, and the rationale of management was to give me something besides fire. Well I was there just a year and then transferred and promoted to become...By the way, I was a technician again at that point. I was in and out of a professional and technician rank several times. While at Hayfork, was a technician—timber technician—just about a year. Happened to be another busy fire year, and although I was a timber technician, I got on more fires than sometimes I got on as a fireman. Any rate, transferred then in '56 to Southern California to the Descanso Ranger District of the Cleveland National Forest, which is the southernmost ranger district in all of California.

FC: What job was that then?

EH: Assistant ranger. I worked there as assistant ranger for about three years, I guess, and the ranger Lloyd Britton was transferred and promoted to become fire staff on the San Bernardino. So although it was quite unusual in those days, and still is unusual, I advanced from assistant ranger to ranger on the same district right there at Descanso.

FC: That quite an accomplishment in itself. What duties did you have as assistant ranger?

EH: Well, at that time, the assistant rangers were pretty scarce in Southern California, and so I had, what today we'd call, the resources jobs. That is grazing, special use administration. That was a heavy load, by the way, special uses—electronic sites, summer homes. There were about 300 summer homes on the district.

FC: Timber management?

EH: Well, timber management to a degree. There were some timber cover down there, but it was not really a commercial harvest operation. It was more insect salvage, that type of thing, so there was small ranger sales, but nothing at all like a commercial timber operation. And a heavy recreational load. We had a lot of campgrounds and so on, so add all that, but as assistant ranger. In addition, was assigned the geographic portion of the district, which included this mountain range called the Laguna Mountains. There were, in fact, two fire crews and a prevention technician within that unit. Therefore, I supervised them along with the rest of the duties I had as assistant ranger. The period I was down there in Southern California, it was 1956 through '61, and that included a lot of very bad fires, including some tragic fatality fires. One of which comes to mind the Inaja. That's I-n-a-j-a.

FC: Were you're on that fire?

EH: Yes, I was. Some good friends of mine were among the fatalities on that fire, and that was a very grim scene all the way around. Not only immediate time but the aftermath. There were a number of congressional and other formal investigations of the fire action, and out of that, among other things, came the ten standard firefighting orders and national fire training as we



know it today and any number of other innovations. Some of which had been brewing for a while, but this in Inaja fire was the catalyst that produced those as formal programs. I was in on the beginnings of that situation.

Another development that occurred in 1956 that I was involved with right from the beginning was the air tanker program. I remember in 19...It must have been August or so of '56. We were on one of the fires down there on the Cleveland, and here came this fleet of bi-wing airplanes. They were going to drop some kind of strange material on the fire, and supposedly the fire would go out. Of course, all of the regular suppression action just stopped while we all watched these airplanes.

FC: Where they Stearman?

EH: The Stearman and N3Ns both. They had come out of the Mendocino National Forest in Northern California and had flown on a couple of fires before they got to the Cleveland. I must say they were effective. They were dropping a material called sodium calcium borate, which was soon called just plain borate, and it was very effective. It really did put out the fire. It had some other characteristics one of which is the soil sterilant but...and very, very abrasive on pumps and so forth, but still in all, it was a good fire retardant.

FC: You are saying it's pretty effective. What was their capacity?

EH: Stearman, as I recall, all about 200 gallons or maybe 250. A small capacity, but of course, they can get low and slow, and they were very very accurate. They were basically crop dusters who had converted into dropping fire retardant.

FC: But you say the borate was pretty effective in retarding the action of the fire.

EH: Very effective. In fact in terms of fire retardants, it was among the most effective things we have used so far, but the other disadvantages, the soil sterilant capability and the abrasiveness and so forth kind of outweighed its performance as a fire retardant, so other materials have been used in the meantime. Later in '56, in fact, on the [unintelligible] fire, it was what we today would call air attack laws. It's called leap...It was called bird dog in those days, and this involved a lot of flying and developing some of the tactics that are used today because there weren't any guidelines in those days. We had to invent our own rules as far as how to apply the retardant, so I was in on that right at the beginning. It was really interesting, I must say.

FC: That sounds like a rather hazardous job. Were you involved in any incidents...near collisions or—

EH: Yeah, we had a lot of near misses. The radios and all the rest of today's traffic control situation weren't there in those days, and things were pretty primitive, so we had some near misses, but survived. But just as a news note I...Following the kind of grim scene on the Inaja

fire, most of us in Southern California took another look at our own personal insurance programs. I tried to get life insurance through the New York Life Insurance Corporation, and they said they'd be glad to have me but they would exclude any accidents occurred through aviation. In those days, aviation was a big part of my job, so I had to take a life insurance policy with an aviation exclusion, which was a little sobering, but at any rate survived all that. At any rate in 1961, then after five years or so in Cleveland, I was transferred to the fire staff job on the Shasta-Trinity National Forest. That's two national forests with one administration at Redding, California. I reported to duty in early July as I recall 1961. The day I came to work it was a bright sunny day—hot temperature of over a hundred degrees—and I was assigned the job of driving some visiting dignitaries around. While this went on during the day, a lightning storm occurred, and at the end of my first day on the job, there we had over 120 fires that we knew about.

FC: Did you put the dignitaries to work on fires?

EH: Oh, yes.

FC: They were Forest Service types?

EH: Yes that's right. Anyway, that was a good welcome to the Shasta-Trinity. I stayed there for, let's see, through 1967, and that was another very busy period. A lot of big fires and some fatalities and so forth. A lot of air work. Aviation work, I should say. Because of interest and just circumstance, I wound up doing a lot of air attack work. Then in 1967, I was transferred to the National Fire Training Center in Marana, Arizona, as the very first director, and that was a new one for me. I hadn't particularly thought of myself as a training type, and here out of blue I was supposed to be one.

FC: Well, what type of training did they give you after you received that assignment in order to perform as director, center director?

EH: Well, at the beginning, none. When I first got there, my immediate boss had just been transferred and his boss had just been transferred, so there was a period of several months there where I was pretty much on my own. That was also...that is without any real guidelines as to what to do, and that was kind of a trial and error period on my part. Eventually, it must have been in four or five or six months later, through my boss, I was sent to the University of Michigan at Ann Arbor. It was a kind of an industrial seminar on training systems. That was the first training I had ever had in how to a trainer, and it was an excellent course. It was, I don't know, three or four weeks long, and it was very, very well done and really gave me quite a new perspective on what training should be.

FC: I have two quick questions. What types of training sessions did they put on at Marana, and secondly, what—

[Break in audio]

FC: What types of training sessions did you put on at Marana, and secondly, how long were you there before you transferred again?

EH: Well, the type of training put on at that time at Marana was the national fire training, and that time, there were anywhere from one to three courses a year, which were such things as fire generalship, advanced fire behavior, advanced fire prevention, and other national level courses. These were quite often the first version of those being put on and developing the initial content and picking the instructors and so forth was what I was supposed to do. That was a real challenge because again there weren't any tracks as to previous performance, so I had to invent some of that. That was real interesting. I was there from February '67 through May of 1970.

FC: That was a little over three years, Ed. What was your position after this, where did you go, and what were your responsibilities?

EH: Well, after Marana, my next assignment was that of assistant regional forester—so-called ARF in those days—in the eastern region at Milwaukee, Wisconsin. I was the ARF for fire control and aviation in those days, so I reported to Milwaukee in May of 1970, and stayed there as ARF through June of 1974. Then in late June of 1974, I was transferred to what, by this time, had become director of aviation and fire management in the northern region here in Missoula. So, from 19...that is, May 1974 through my retirement in March 1984—in other words, just shy of ten years—I've been here in Missoula. By the way, this is the longest I've ever lived anywhere in my whole life because as a youngster and then later on, why, we moved so often that I'd never ever been anywhere more than the few...In fact, the longest hitch I had, as I recall, was in Redding, California.

FC: Ed, during your approximate ten-year stint here in Missoula, can you elaborate on any particular things that stand out in your mind?

EH: Yeah, one thing that really stands out in my mind was during this period while I was here in Missoula, I had the privilege of putting into action the kind of visionary ideas of my predecessor Bud Moore [William "Bud" R. Moore]. That was Bud's idea, really, to allow fire to play a more natural role, for the time being, mostly in wilderness type situations. That concept of Bud and others had gotten pretty well accepted, and it was just coming off the drawing boards just at the time I moved here to Missoula. So, with a lot of other people, I was able to see that concept put into action.

FC: What can you explain as to what the natural role of fire means?

EH: Well, that means first that you have to understand what the natural role really was before the intervention of mankind, and this is no small task. It means a rather rigorous investigation

of, for example, the periodicity of fire. How often did the fire burn a given area? That means understanding the plant response to fire. In other words, what happens when a fire burns through a given type of forest, and what are the effects of fire on, not only plants, but the animals and all the rest of the creatures who live in the forest, including such things as water production, for example?

FC: Well, that, so to speak, is not the total devastation that we've heard about before so fire is not necessarily all bad then.

EH: Exactly right. As a matter of fact, fire exclusion is probably a very harmful practice. It allows an unnatural accumulation of fuels and therefore, sets the stage for fires that are maybe much more disastrous and more destructive than those that would have occurred under a natural regime, which would burn more often and less intensively. So therefore, fires are both good and bad. Now, the real trick to this is a prescription that allows a fire to do the good things without doing the bad things that can occur. Yet another trick in this whole program is to achieve public understanding. This is no easy task given the Smokey Bear message for the last 40 years. A lot of people don't understand that fire is kind of like a sharp knife. It can be both good and bad depending on how you use it. So achieving public understanding has been a major challenge, but that's pretty much in hand more or less. The program is well on its way now not only in this region but elsewhere in the country. That's been a real privilege to be a part of that breakthrough, I guess you'd call it. At the same time, there have been a lot of other events occur—technological in nature—all the way from infrared materials, for example, to computers, all of which have occurred...really accelerated in the last few years. So looking back to the beginning—1945 for me—at that time I was working for some of the early...I mean, real early, like literally the first rangers in some ranger districts in California. These were people who were pistol-packing rangers and still were. I had the privilege of working for some of those real old-timers all the way through the years where radios have become more commonplace, chainsaws, for example, have come into being. I mean, practical being. Helicopters and air tankers and all the sophisticated technology that goes with it, all the way up to today's computerized management. So it's been a real interesting career. One that to me kind of spans the beginnings of the Forest Service with a much more modern and sophisticated computerized and public involvement and all the other things that we think of as routine today.

FC: We're near the end here, so I'd like to divert you back to the natural role of fire. I think most Missoulians are familiar with the 1979 Pattee Canyon fire.

EH: '77

FC: Or '77, beg your pardon. Could you elaborate a little on that and how it's good or bad? Of course, the bad part obviously was the burned up homes, but the natural so on.

EH: Well, the fire started in July of '77 under pretty severe burning conditions and made its run basically all the first day. What was it, 17, 1,800 acres, something like that?

FC: Sixteen [1,600 acres].

EH: In the process, it burned up six homes, and fortunately, no one was injured in the process. Well, that whole thing is a natural phenomenon. That's occurred in the very same area probably dozens of times before mankind decided to settle in Missoula, so it's a really a completely natural phenomenon. We have made that into more of a threatening situation by building houses in that kind of environment, and some of those houses did not have the prudent safeguards in the way of fire reduction...I mean, reduction of fire hazards around the house.

FC: How do you mean reduction of fire hazard? What would some—

EH: Well, for example, instead of having trees built right up to the of the building and hanging over the roof perhaps, one could thin out the trees for a distance of, well, the more the better, up to a couple hundred yards, maybe, away from the house. I don't mean completely bare, but just to thin them out. Prune up the lower branches, maintain some kind of lush vegetation on the ground surface—a lawn for example—or low vegetation that doesn't burn too readily for a distance out, perhaps, 60, 80 feet out from the house itself.

FC: That would be too intercept the horizontal and vertical ladder of flame is what you're trying to say.

EH: Exactly, it would interrupt the spread of fire before it got too hot or too close to the house. That's an example of reducing fire hazard that was not done around some of the houses that burned up in Pattee Canyon. That's one of the lessons we can learn, by the way. The other one is, no matter what you do, eventually a forest is going to burn. It's probably from, at least from the natural standpoint, an essential step and probably better done more frequently instead of less frequently, which therefore would tend to reduce the accumulation of natural fuels and therefore reduce the intensity of fire.

Okay, anything else, Floyd?

[Break in audio]

FC: Well, Ed, having known you for 15, probably over 15 years—20 years—and that you're retired now, what are your plans for the future?

EH: Well, I intend to stay more or less active. I have some volunteer projects around town, for example, helping the Society of American Foresters on a lookout restoration project, for example. I've joined a consulting forestry company based in Boise, Idaho, which offers a technical fire consultation on an international basis. So far, no assignments, but something may come of this eventually. And I may go back to school and take some additional classes and

things that I haven't learned. For example, archeology and some other subject matter, so I intend to stay busy do some traveling, but not all the time. So I'll be around town.

FC: Obviously, you have a lot of things to do in your new house too.

EH: Oh yeah, including a lot of landscaping. All that's yet to do.

FC: What types of course is, again, would you like to take at the University?

FC: Well, perhaps archaeology. That or some history courses. I'm quite interested in both, what you might call, prehistoric as well as historic activities, and I would like to learn some more about that. I don't have any illusions of a second career.

[End of interview]