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**Interviewee:** Dick Hingson (DH)

**Interviewer:** Tom Martin (TM)

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TM: Today is Saturday, September 7th, 2019. This is part seven of a Grand Canyon oral history interview with Dickson "Dick" Hingson. My name is Tom Martin. This oral history interview is happening at the dinner table at our house in Flagstaff, Arizona. Good morning, Dick. How are you?

DH: I'm doing very good. Got the car to drive over here this morning.

TM: Oh good.

DH: And that shortened the trip by 15 minutes.

TM: Okay.

DH: So helped us all.

TM: Good.

DH: We were finished ...we finished off part six in the early 1990s, as you were becoming more aware of and certainly educated in the Grand Canyon overflights and sound metrics. And there

were some sound studies that were starting; there were some hearings and Finding the Balance, and empires being threatened. So can you pick it up from there?

DH: All right. I'm glad to. And it was yesterday I referred to a controversy that arose soon after I arrived at this Sierra Club employment in Los Angeles, where some threatened -- seemingly threatened -- staff had brought a number of allegations about me, one of which was that I had in some way expressed inappropriate advocacy concerning the Grand Canyon National Park and its wish to restore some of the original cabins on the North Rim of the Grand Canyon. And the research on this further shows from that I actually did have my first meeting--had had my first meeting--with a Grand Canyon superintendent sometime right around the end of '89, or maybe it was early '90. And that was with Jack Davis. And interesting why I wanted to meet with him... Because it wasn't centered on as much on the overflights at that moment, as it was on the closing of a hostel on the North ... eon the South Rim. Up until then, there had been a hostel where people could come who didn't have money to pay El Tovar and Bright Angel Lodge. And it was appropriate, I thought; and very good facility to maintain, but they were closing it. And I requested a meeting with the superintendent to inquire into it having just stayed in the hostel while I was there, 'cause it was about to, soon going to close. So I got an appointment with Jack Davis and there was not much, it turned out, about closing the hostel that could be done because this was pretty much a *fait accompli*. However, he brought up an issue with me that he wanted help from maybe from the Sierra Club about, and that was about the restoration of the North Rim cabins. So the issue had been elevated, not from just my experience, but also from the superintendent of the park as a concern of his. And I expressed, of course, in talking to him, no particular reservation against the restoration of the cabin. That was ... but I wasn't representing the club at that time ... I just ... and certainly not on that issue. But I expressed interest in what he was saying.

TM: And what was his point about the cabins?

DH: Well, they needed this ... they needed to accommodate visitors, and it was appropriate to restore the historic ... go back to the historical ground base that they had in visitor accommodations.

TM: It's funny in the one point they were going to do away with low-cost hostel on the South Rim.

DH: That's correct.

TM: And add what would not be low-cost cabins on the North Rim.

DH: Well, it's ... you know, it's hard for me to remember. I think they would have been the lower-end not the higher-end cabins that they wanted to rebuild.

TM: Lower-end would...

DH: Well, lower-end meaning the price, I think? But you know, this would have to be researched, which end. (laughs)

TM: Yeah. Yeah. And lower-end for a cabin is still way above a hostel. Those look kind of interesting... Anyway. This is a...

DH: Yeah, it's an interesting side note to history. But it was how I first got to talk with him. But he did not at that time bring up overflights. And I may ... we may have, but it didn't, you know, it was this particular time in my preparation and so forth. I don't think we were able to develop any conclusion ... we were--in fact, this will be a segue into information that eventually came out to the public four years later.

TM: You know, I should ask you, because I'm totally unaware of the South Rim hostel. And you actually stayed there.

DH: Yes, I did.

TM: Can you tell me about it? Where was it? What was it like?

DH: You know, the memory kind of fades. (TM laughs.) It was up there somewhere with that group of...right near the rim accommodations, but memory has faded as exactly what were the arrangements of that.

TM: Okay. Hmm.

DH: Someone might want to research that. I did Google it and could not find it. If you Google Grand Canyon hostel, you're going to wind up with a hostel in Flagstaff (laughs) Any Grand Canyon, oh boy, that's fear now is spread far and wide ... That's search engines ... Yeah. So I could not find it. But it could be researched.

TM: Okay. So Superintendent Davis ... Jack Davis -- I think Jack had been head of interpretation at Grand Canyon and was ... took the superintendent's position after Dick Marks left?

DH: I assume we could look at that.

TM: Okay. Okay. All right. Well let's move that on then. So you started working for the Club then in 1989?

DH: That's right. I started ... yeah, the February of 1990 -- February 1st was the official start date. And I wanted to say that I have learned from this report to Congress about what was happening simultaneously in terms of sound monitoring of the Grand Canyon, which is worth just for the coincidence. The coincidence is that ... It turns out in the months of October and November of 1989, just two or three months before I started, the first team of researchers from Harris Miller Miller & Hanson -- that's Nick Miller and Dick Horongeff -- arrived to do the monitoring at four points: Bright Angel Point and Point Sublime on the North Rim, and Separation Canyon and Hermit Trail on the South Rim. We have to get that exact -- I do have a reference to which points, just to check that. Well, Hermit Basin, looks like it was -- Hermit Basin ... Hermit Basin and, yeah, and Separation, and some other points. But these were for ...

the note actually says it started with four points and then they folded others in. So those are the first four, the first four.

TM: In October and November, when you started this ...

DH: ...study ...

TM: ... study, the main tourist season had ended. And one would assume that the number of tour flights would have greatly decreased. Just simply stated on the visitation for the park typically peaks in the summer and drops off in the fall and into winter and into the spring again. Did they take that into account at all?

DH: I don't know what their calculus was. It certainly showed very high noise.

TM: It did?

DH: Oh, yes. They got plenty of noise out at, say, Point Sublime. Oh, yes. But the measurement that they're recording is the measured percent of time that the aircraft are audible. And then it was broken down by tour, commercial jet, GA, and military. And so, if we take Point Sublime as a perfect example here, you can get to Point Sublime then — and in fact, that's when the Union Pacific Railroad movies said you should go, when aspens are out, which was in that time. So what you got was a ... the measured percent of time that Point Sublime was audible was 76. And then of that 76, 69 was owing to tours. 12 to commercial jet, GA zero, and military one. In contrast to Bright Angel Point. where it was 6 tour, commercial jet 13. Of course, the jets are about the same in their measuring periods back in the end of '89 and early '90. Except it's increased greatly on the jet sense.

TM: Okay. So trying to figure this out then. So 76percent of the time, there was audible noise from aircraft. And there were 69 tour flights and ...

DH: 69 percent of the ... the tour flights were 69 percent time audible.

TM: Okay. And so then when I add 12 percent commercial jet, I get 69, 79 ... 81.

DH: They were audible 12 percent. Well, you don't add them in. You ... it's hard to say how they did that. You'd have to read the report.

TM: Oh okay.

DH: You ... there are ways that you have to have a ... you establish a dominant sequence. So if you're really interested in the air tours primarily, you give ... you assign, that value is the one you have got to have as your primary recognition designation ... when you enter the log ... enter into a log. However, I don't know their protocol at that. You know, I worked with them a few years later, but I don't know exactly what that report says.

TM: Okay. And this report went to Congress with the data just from October and November?

DH: Well, no -- they went back in 1992 and got some more there.

TM: Oh, they did? Great.

DH: So there was a ... it is backed up by another ... it says that one of them ... it says that one of the measure ... [Reads] 'The consultants used methods that permitted separate identification of maximum sound levels.'--Maximum sound levels? — 'of different aircraft types and ranges of non-aircraft sound level. One of the measurement sites chosen, Point Sublime, was also a site where NPS had acoustic information collected in September of 1992.' And there's a reference to a Footnote 3, it says Site 19.0, reported in NPOA; that's capital letters N as in Nancy, P as in Paul, OA 93 dash four page 150 following.

TM: Okay.

DH: I don't have that study.

TM: Well, no, just because I would assume that the number of tours per month is variable. And so you would really want sound studies throughout the year. And clearly, somebody's got to pay for it ... Somebody's got to be out there, at Point Sublime. It was a lot of ...

DH: Or model the noise somehow. I mean that's what you'd have to do. This is just the beginning.

TM: Yeah. So the work done by Harris Miller Miller & Hanson, that then resulted in this study, is that right?

DH: That's ... well, that's correct. And any other. The official title is: *Report to Congress on Effects of Aircraft Overflights on the National Park System.*

TM: And what year was that?

DH: And it was released in the fall of 1994. And I realize we're jumping ahead a bit.

TM: Mmm-hm. Let's back up, 'cause I was wondering ...

DH: That's fine. That's just reciting it though.

TM: Yeah. Yeah. So they started in October, November of 1989.

DH: That's correct.

TM: Just about the time you were gearing up with the Sierra Club, February of 1990.

DH: That's correct.

TM: And you met with Jack Davis. Okay.

DH: That's right. And we'd had the overflight fly through Joshua Tree. Which had also been part of this report, DH: because military was part of the report. Yeah. So it was a very seminal time -- it was on the edge of a new thing.

TM: So at that time, the tours had defined FAA routes, is that correct?

DH: Yes, they had, had done that as early as when the SFAR was put in there ... already was in place by 1988. And you see my objection through their map. My first communication about an incorrect FAA map shown to the public had been in 1986, when they were ... or maybe it was '88. Or during that ... it was during the public comment period on the establishment of the SFAR. We'll just put it that way for now.

TM: All right. And then you mentioned ... so the sound studies were ongoing. So ... there were hearings involved?

DH: Yes, there were hearings. And I believe the first hearings, the record will show ... the administrative record that the park has will show. And I've sent that to you.

TM: Mmm-hm. You did.

DH: Both of us again ... so you can look back as to when. But it's in that record that there were public hearings on the establishment of the SFAR. That's correct. And so you had late, late 1980s public hearings -- middle and late 1980s -- public hearings had happened.

TM: And let's ... just for clarification -- SFAR, is it short for?

DH: Special Flight-rules Area Regulation ... something like that. I think that's right. We can double-check the glossary. There is a ... sometimes you find these things in glossaries of acronyms, but we may have to look a bit. But that's what it means.

TM: Okay.

DH: Special flight rules area. That's what it pertains to. Yeah.

TM: Okay. Did you attend any of these hearings?

DH: Not ... I can ... No hearing in the 80s. I wasn't ... I just wasn't wired enough to the information or to Arizona, where they would have held them. And I just didn't attend. But then of course, it'll be a different story as I fold in with the Sierra Club, and begin to understand how government regulation actually works. My first assignment with the Sierra Club, the very first week or two that I was there, they sent me to a special three-day training on the analog to NEPA, which was the CEQA -- the California Environmental Quality Act -- which was modeled after NEPA. And so that was the first thing they sent me to, was to understand how to engage with the regulatory process. I didn't know NEPA though. I mean, I'd come from ACLU.

TM: Mmm-hm, mmm-hm. You mentioned Wes Henry?

DH: Right.

TM: ... and the Finding the Balance workshops. Roger Clark, you mentioned, was there ...

DH: Yes, that's correct.

TM: This was in 1994. So it sounds like there were ... to kind of put this together ...

DH: All right.

TM: there were studies. There were hearings. There was the report that came out of the studies.

DH: That's correct. But I engaged before the report, with things that were informing those studies. And I had found Wes Henry much earlier. And as you know, just by the usual ways you would try to find out what's going on. And so I probably had identified him maybe with the military issue, because that was part of this report and part of their concerns. And that the Grand Canyon was right there, and my experience with the Canyon. So, there began some collaboration with Wes Henry, about what we're going to do. And now he knew I was Sierra Club. So therefore ...

TM: Well, so between 1990 and 1994, 'cause I would like to ask you about the Finding the Balance Workshop. Is there anything else you want to bring in about that time period? Because it sounds like ... Hearings had been done; the ongoing sound studies were going. The park was trying to address the noise issue. And the flight rules--the areas where the tourists could travel--had already been established.

DH: In Grand Canyon.

TM: Yes. Yes.

DH: You were referring to ...

TM: I was just talking about Grand Canyon.

DH: Never mind.

TM: That's right.

DH: All right. We can put to the side my work with sound studies 'cause I wound up working on that, but not in Grand Canyon.

TM: Well, okay. Then let's talk about that then. Where was that?

DH: Yeah, because of the concern and beginning of ongoing discussion with Wes Henry, I learned that he had a project that might ... could use me. And the project was to do eight weeks of sound monitoring in Zion and Rocky Mountain National Parks. And so, that sounded quite exciting to me. And then I would get to work with the Harris Miller Miller & Hanson team that had done the Grand Canyon work, and use the equipment that they invented. Which was called LOWNOMS. L-O-W-N-O-M-S. Having to do with low noise monitoring system, you know, down to zero decibels. So there was discussion that started ... had started somewhere with Wes, well before the publication of that report [drums fingers on report], which we were formulating a way I could do field studies to beta test LOWNOMS. I mean, that would be the first actual field use of it. And I'd have to do that in consultation with an oversight from the contractor, which was Harris Miller Miller & Hanson. But it had to be done with the full cooperation and knowledge of the two park superintendents, at Zion and Rocky Mountain National Parks.

I think Rocky may have interested them partly because of the push for a ban that had been started by the League -- Colorado League of Women Voters -- do have a ban on overflights. So that undoubtedly informed that. And then, Zion would have been of course a more representative area of the Southwest Region park with special, you know, implications from its name, you know. And ...

TM: Did Zion and Rocky Mountain have tour flights at the time?

DH: Well, yes. It ... there were tour flights going on over Zion. They could ... they understood that. And Rocky Mountain did not have a ban yet. So there were ... Yes, and in fact, I remembered. I'll bring back a memory there in Rocky Mountain and just from, you know, when I was getting ready to be positioned there, that there were mom-and-pop helicopter outfits on the outskirts of the park, ready to take people up. Oh yes. So I saw those. I even got photographs, there, of them doing that. And there were obviously people interested in Zion. We know who they are. I mean, they had all that kind of stuff starting up out there, too. So, hence, choosing these two parks ... I guess Bryce had been in their minds because there were Bryce operations there. And so, when I first met Wes Henry, it was, I think, the year before the summer ... I believe it was the summer before. Must've been the summer of '93, when Wes actually wanted, you know. And so we arranged a first meeting at Bryce, where then I experienced the calamity of the woman breaking her leg in Bryce. So Bryce was on their map too.

So this led to, then, a proposal to bring me to these two parks. But I'd have to get time off from the Sierra Club if I was going to do that. And I very much wanted to do that. Well, naturally that ... Fortunately, we had resolved the personnel questioning. And I was in the clear with a supportive conservation chair at that point. And so ... but when they offered me the chance to come out there, I took it without even knowing whether or not the Sierra Club office would allow it. I just wanted to do it, and my mission. And in fact I remember I left at the end of July, and they hadn't yet formally voted the permission, although were about to. And I won on a four to two vote. So I found that out after I left (laughs).

TM: So this would've been July, August of 1992?

DH: Well, no, by the ... the time I was ... this wasn't ... this had happened in 1994. This was -- the summer of 1994. And I learned later that, or at the time even, that that was a first big field hearing on, you know, the park overflights too. But I ... at Grand Canyon. But of course, I

couldn't go because I was involved now day by day. So, the adventure of getting installed at Zion and Rocky Mountain certainly was a memorable chapter, which I probably ought to talk about at the right time for you ...

TM: Let's do it right now. It seems appropriate.

DH: That was ... yeah. I would just say, of course, that's the start of a grand adventure and I'll never forget. I had ... I think I had with me even a young ranger that I'd met at a symposium... historical symposium at the park 75th birthday. But his name was Mark Wnner. He's still, W-N-N-E-R. I met him at a historical symposium on the South Rim, and we struck up enough of a friendship that we'd even hiked down the Horseshoe Mesa together. And he had actually rendered conservable service in getting me out when I fell sick. The one rare time with stomach flu. But out of that, we had a good solid alliance. So Mark has always been a stalwart supporter of me personally, and of this move towards silence in the park. And so I ... you know, I had ... he and I met at Zion in the high country for just our own campout, on the eve of my going down into the park to meet with Wes Henry and Don Falvey. Don Falvey was the NPS superintendent of Zion at the time. And so he and I and Wes ... and I think Mark got to listen to. We sat in the superintendent's office at Zion and set the parameters of how this was going to work. And that meant choosing location sites. It also meant, of course, a little logistics of where was I to be put. And I remember we were at a very pivotal moment there, because the default thing was to put me in trailer out on the west side of Zion where the new addition was, near interstate -- the interstate. There was an extension of Zion up there. And I would've been 40 miles from the center of the park and everything else.

But then I remember questioning that a little bit, and pointing out that there were a lot of logistical issues that might be involved with being put way out there. And Don Falvey thought a minute and he said, "You know," he said, "The ranger who was in the Grotto Residence had just vacated. And so why don't we put you in the Grotto Residence?" I had ... I didn't know what the Grotto Residence was, but it sounded better than what being in that trailer way out there, 50 miles away. And so he and I and, and Wes Henry got in some kind of car and went over and looked at the Grotto Residence, which is a half mile north of Zion Lodge. That was the first park building, when the park was established. So it's a historic building and had been occupied by the ranger, but this ... that was the end of the ranger time. And here's this moment. And so we looked that over and Falvey decided, well, no ... All right. Oh, this was wonderful. What Wes Henry's observation of that was I could ... that's gorgeous. He says, "I couldn't find a place like that to stay in Washington." (laughs)

And they put me in the Grotto Residence. Well, that was ... oh my. What a side benefit that was, you know, right there by Zion Lodge where I'd worked summer of '63. Access to that and the Virgin River and Angels Landing and everything. So they put me there and then we had to choose ... start choosing location points. So we chose a number of location points at high and low levels at Zion. There were 10 or 11 of them. And so every day my job was, once we got the equipment in and assembled, which had to be done with the help of an HMMH consultant flown out from Boston, we got the equipment up and running. And so I began, after the selection of these 11 sites, to just work on them day by day, according to a protocol that HMMH ... a careful protocol that HMMH had set up, with the types of log sheets and sound button on the meter, you know, the push buttons to push and things like that where you heard things. But the idea was to get percent time audible. So they had to have audibility measurements in addition to the LEQ

measurements, which are the sound power level, the intensity level, so you could ... and the machine ...

TM: What does LEQ stand for?

DH: LEQ is just a sound intensity averaged over unit time. And I think the machine averaged it over every second. So every second it would come up with a value of what was the LEQ for that second and it flashed on the screen. And I could watch that. And so that meant I could also see maximum sound levels from any given event. I could also see what it was if the deepest levels of quiet. And then my ... I had to just push a button and enter a code for what type of sound that I was hearing, whether it was several kinds of background sound, such as, say, wildlife or thunder or aircraft or no sound audible. According to that protocol, after each ... and each hour had to be restandardized and recalibrated. So you had to be ... it had to be very carefully done according to this protocol. So you know, I wound up using these log sheets and what I heard for about four hours a day, we would have worked for four hours each day, separated by a little break, usually. And as long as I did that, then everything was fine. And so, that went on.

We had of course delays because ... a couple of points -- the equipment it was being beta tested. I mean, you know, problems arose and twice, I believe, they had to send a consultant out from Boston to work with me. The first time it was for reasons I didn't understand, but it ... Of course, what that meant for me was I got time off, because then I could do things I wanted to do in the park. And, so that was a side benefit. There's no loss there for me ...

I remember one of those interruptions was caused -- and they didn't know either -- see ... They were still learning about this equipment. You had to put up the balloon ... black balloon up over to protect it from insects and very near stuff and so forth, and wind and dust and bloom. And I was told I could leave that out, but ... and leave the machine out. And it was all right if, you know, some kind of intermittent rain came through. I mean, it's not like I had to take it all down. But we did ... got us into trouble at one point because I followed that direction and left it out on Scout's Overlook Viewpoint in a larger storm. And that did stop the recording. I mean, it couldn't handle just being left out like that overnight in rain. So that created another trip, help to fix it. You know, in retrospect, of course, you would say maybe I should've carried it back down and not left it out. But they didn't give me direction what to do ... So they were learning; and I was learning. But that extended time in Zion, because we didn't finish till later than we thought. So I had to stay in Zion in the Grotto Residence, no less (laughs), six weeks. And no skin off my back, you know? And then move to ... drive to Rocky Mountain National Park, where I was put in employee dorm. A little more austere (laughs) than what I had in the Grotto Residence, but still nice enough.

And then out there, I had the most memorable thing about that was, by now, I was late enough in the season, and I'm sitting at Upper Beaver Meadows, which is a prime listening site. And I was surprised by -- elk coming, and the first elk bugles of the season, recorded on the tape. So it was a very dramatic thing. Now I can say, on terms of sound levels at Zion, we actually had one reading of 11 decibels. So I saw that happen -- 11 decibels for one second. That is pretty extreme, natural quiet. You're ... There are many people do not hear anything at 11. I couldn't hear anything at 11. I found that usually, you didn't really ... I wasn't able to push the audible button until it was approaching 20; usually that was the place. So effectively I was beginning to hear it at say 18. Now I'm a certain age. This begins to fail as you get older, but then I was in my late forties or about 50 ... right around 50 ... right around 50 ... yeah, 42 to 92. So I was 50. But

anyway, I was hearing it, and it ... you started hearing it about 18 or 19 and you really got ... I noticed, too, really, it was ... no matter what, you would definitely be aware of stuff at 35. So I was learning, just in the field, what these levels mean.

I was also getting remarkable, anecdotal types of experiences with the silence of the kind that make poetry. And you know, all of this kind of thing. Because that, you would get all of that, because there's always going to be ... each hour was its own surprise. I mean, it's a story that you know, and most people don't take the time to attend to. But I had to do it in a structured way, which meant that, you know, various kinds of combination of things would happen. For example, in fact, in one of my very earliest session was the ... I was up in that Petroglyph Canyon, up above the tunnel, or near the tunnel, and the pines started to sing. In certain levels of wind, low level, there's tonality in the pines. And so I heard the music, which John Muir had written about, too. And so that was all such an amazing memory, you know, to hear that. And you only hear that if you're attending to it. Although, if you were fooling around building fires and climbing up rocks ... a rock fall or something, you're not ... you may not hear that. So I was just ... I was getting educated in the course of things, to what you might call the ... another part of the ... both the science and the romance -- spiritual side of this -- which is not available, if you don't ... do attended listening. So they're very powerful enlightenment.

TM: At Rocky Mountain, how many sites did you have set up in?

DH: There must've been five or six.

TM: And who was the superintendent you were working with?

DH: Steele. I think his name was Steele. We'd have to research that maybe, but Steele, I think the name was Steele. Oh, he was all right. I mean, I remember talking to him, but he wasn't ... Falvey was the one I had the better, long-standing relationship to. But Steele, I believe that's the name ... and, you know, we have different kinds of, you know, unexpected things.

But I will say that the Rocky Mountain work ... I reported that work, myself, at a symposium on science in Rocky Mountain National Park. A year or two later, I got to give a seminar on that, as part of a day-long seminar of all kinds of science. And the ... I think it was the *Boulder Daily Camera*, whatever that reporter was, there. That presentation was banner headlines. It overwhelmed everything else that were coming from the Park Service researchers or anything else in terms of what the reporter was interested in. That was the news. Showing the elk, the elk bugles, in the midst of the, you know, those slides. And they put that in the paper and all this. So it was a, it was quite a moment for me, you know, to have the ... see how the press might elevate the work.

TM: Yeah. Were you able to appreciate the sound difference between the two parks, between Zion and Rocky Mountain?

DH: Yeah, you could. It depended on the site, of course. For example, in Zion -- no, both of them -- one of the commonalities was you that, I'll have to talk about commonalities, too ... Because they reinforce learning. One of the commonalities, first of all, was that both of them were plagued by the noise of the high-level overhead, commercial jets. The commercial, point-to-point flights. We were still in the end of the phase-out of stage two at that time, which were

noisier engines, because they were required, soon after that, to have them phased out in favor of stage three engines.

TM: Okay. Explain that.

DH: While stage three is a quieter, technically-certified level of engine noise.

TM: So these are for commercial airlines?

DH: These are the commercial flights in New York to Los Angeles, for example.

TM: Okay. And when did all that come into play, stage one, stage two, stage three?

DH: They were phasing in ... two to three was required during those years leading ... We'd have to research exactly what was the drop-dead date. It might've been the end of '96 or something like that, but it was phased-in a couple of years later. But they were not phased in, when I was in there. And so I heard a fair bit of stage two and some stage three. I mean, it was in process just ... So I, yes, I ... the intrusion of jets was pretty annoying, or noticeable, shall I say, especially in the higher back country of Zion -- very noticeable. You got a boat 'way from the Virgin River and out of the Canyon, and you're up there, above Scout Lookout and on the West Rim Trail is just one after another. So that educated me.

TM: When did you become aware of the restrictions that the high flyers were dealing with from military reservations, that would funnel them into certain flyways?

DH: From the military ... you mean military flights?

TM: No, no. Let me rephrase that question. Because we, you know, we sort of think, okay, we have a national park here, and we're interested in that soundscape above the park, up to the heights of aviation. So that includes general aviation -- people in their own little planes -- military flights and commercial flights, along with tour flights. These four different groups of flights. When did you become aware that the coast to coast, high-flying commercial planes actually had to stay out of military reservation areas? That regardless of the parks, these were ... this is Nevada testing sites and these sorts of things that drove these flights into certain flight paths.

DH: It was later. I didn't understand these things at the time. But it came later, because we were building in the, you know, you were forming the California Desert Act was in fact beginning to highlight three big parks, you know: Joshua Tree and Death Valley and Mojave. And the fact is that there ... I learned later, I think it was a few years later, but I learned, in the 90s probably, that I learned that Death Valley or a large part of it had a ... there was a restricted area from the military, where they were not allowed to fly. So, if you go out there even now, to say around the Armargosa Springs, you will not hear a jet all day long. So that, that over time I learned about them and about those military restricted areas.

And it is true that they compress the flights. Therefore ... because your LA to New York flight is not going to be allowed into that area north of Las Vegas. That means you're going to

funnel them in over Bryce and Zion and the Grand Canyon National Park Airport in a very unfortunate way, aside from just the volume of traffic anyway.

TM: Yeah. When did you first realize that?

DH: Probably once they ... there were people who were trying to develop the flight patterns online. And I don't think that I learned the full extent of that until sometime in the 2000 to 2010 decade. And that's where I learned it, because they began to project that onto the Internet. Before I didn't realize it. It wouldn't have been before 2000. I didn't realize that constriction. Or concentration.

TM: Right. And did you notice between the two parks, Zion and Rocky Mountain, differences in aircraft volume?

DH: It was pretty bad at Upper Beaver Meadows, and certain times a day would be bad. Like you'd get a tremendous ... like a bunch of stuff coming in towards the end of rush hour, late afternoon you ... you knew when the times were where there were more and less. You saw patterns began to, you know, you could pick up that there were patterns.

TM: Were those patterns similar in both locations?

DH: Well, a little different, because you've also ... see, at Rocky Mountain, you're near the ... you're not ... you're nearer the Denver Airport. So that's going to create another set of circumstances and flight patterns, coming into Denver in the afternoons. Yes, you'd get very incessant and clearly recognizable shape. And it is a certain recognizable jet shape -- that you could see the jets, just from the pattern they made. You could always see what they were. It was a sharp increase followed by a tailing off, whereas the tour flight would be more symmetrical. Low level tour flight would be more symmetrical flight.

TM: And the high flyers were powering out of Denver International. So they were trying to gain cruising altitude?

DH: There's more coming in. You'd get a lot of the noise coming in, as they were coming in from somewhere. And I don't remember ... I think maybe they weren't taking off over the park, out of Denver. I think the intrusion must've been mostly the ... either the *en route* -- and there's plenty of *en route* — or, approach probably, coming in over, say, Upper Beaver Meadows, which was the best site to hear that because Upper Beaver Meadows had a kind of a ... it was surrounded by acres of grassland without so many trees, in a similar way to the big park that we call The Basin, on the North Rim of the Grand Canyon. Those are similar kinds of environments where you're going to hear the jets loud and clear because the background ambient is below 20. The North Rim is spotted with meadows like that. So is Rocky Mountain National Park. Zion doesn't have as many of those kind of ... it has some, but the high country there is just higher. And it's more rocky and you ... maybe you're exposed out on ridges — yes, you're going to hear that kind of low, ambient ... Yes.

TM: Were you doing these sound collection data machines at night as well, just to get the night noise?

DH: Yeah, we ... for example, ordinarily not, I mean, my basic routine was to close up at five o'clock and get the equipment down. But they did do a special ... this is very memorable too. It was a 24-hour listening session, at Upper Emerald at Zion. Upper Emerald Pool. And it was on 9/11, but it was 7 years before the awful event. It was 9/11 of 1994. And they closed the whole trail for that day. There were a big sign placed at the bridge, across the bridge and river, that the Park Service needed to close that site for one, 9/11, in order to do research. So I was the only one allowed to cross the bridge and go up there and camped out.

TM: ... Monday through Sunday? You remember the date? Was it a Saturday or a Sunday or a Tuesday?

DH: Have to look it up. I don't offhand remember the date. That had to be announced in the paper ... One of their press releases. So people knew that they weren't ... And nobody did go up there.

TM: Well, again, I was just thinking that, weekend travel for commercial aviation versus a Tuesday travel, and weekend commercial or general aviation versus weekday military, et cetera. So that ...

DH: That's right. And you could match it up on the calendar and see, but then you'd have to do some other analyses to figure out what correlations you were dealing with.

TM: Right. Okay. Okay. So that was in September of 1994 -- closing date. That was at Zion. Did they do that at Rocky Mountain as well?

DH: They didn't close anything at Rocky Mountain. So I just went through it. It was a little more compressed probably than they originally had envisioned, 'cause I didn't have as much time, you know? And it was getting end of the season, you know -- it start get cold up there.

TM: Yeah. Yeah. So this would've been the sixth year that HMMH is doing the sound studies. Had they refined their equipment by then? Were they getting better at this, as far as equipment how it worked?

DH: Well, they were beta testing it. And so then they would've ... See what they had ahead of them was an extensive study, what they were faced with -- we had the Overflights Act at Grand Canyon. Which are included, especially (laughs), Grand Canyon National Park problem. And the law of 1987 had not been specific about which kind of aircraft. It was nonspecific. It just said aircraft. And until, or unless that was changed, you had to deal with all aircraft. So that meant that they ... we were going to be inevitably faced then with ... after a big battle about it with the air tour industry itself, about the technology. They were going to have to get measurements on the jet traffic over the Grand Canyon National Park, which was done by HMMH in a study published around 2000. But in the late nineties, I think it was, that they had extensive studies of the jet traffic over the park using this equipment. But probably with some certain kinds of

improvements that they would have made based on my beta testing. However, my beta testing was certified by Nick Miller of HMMH as valid data. They considered what I did valid. And the Park Service and the air tour operators knew that.

TM: So this was ... so in September of 1994 this was right about the time of the Finding the Balance Workshop. When did that happen? Do you remember was it before or after that?

DH: Well, let's see what happened here. There was a hearing. First of all, the record shows that there was a field hearing while I was engaged in this work. So I couldn't ... seem like I couldn't go to that hearing, because even though I knew about it, I would like to have gone to that hearing. And so, what went on at that hearing I have less personal knowledge of. Although there is a report on it, you know.

So, then comes the Finding the Balance Workshop, which was in March. I'm pretty sure it was in March. It must've been after I got back to the ... resumed work at the Sierra Club, because I had to, you know, I had ... it seems to me that ... What happened in between then and the hearing was that the ... this book (thumps book) was released in 1994. I don't know if there's a date on ... but, interesting there's not a date on it. But it was, oh, yeah. All right, so the story on this was, it was dated September 12th, 1994. And, I received a copy of that hand ... specially delivered to me by Wes Henry at my office after I'd returned. We went to Congress first. I didn't see it at first, but it came after I got back. There it was -- suddenly. So we have that, and then of course, they needed then to proceed with this as the basis. This becomes the foundational document. So then, yes, you would then move ... I'm pretty sure that's right ... They had to bring the parties together, not a public hearing. But a meeting of the ... public hearing was held during the summer of '94. But the three-day workshop, they were going to bring people together, and inform them of the need to get rules going. They had to do rule-making then.

So they brought them together in Flagstaff with the Finding the Balance workshop. Which, if my memory is right, is ... or beginning of March. And I had to ... I kind of had to wangle my way into that, but I never forget the conversation with Mike Ebersole at the park -- getting permission to come on behalf of the Sierra Club. Also, I had to have my chapter people behind that, but I had credentials by then. And Ebersaul thought, well, that sounds like you're the right person to come in here and be with the environmental representatives. And of course, that's where I met Roger Clark, who became the kind of de facto leader of that agenda. For the environmentalists, I mean, he became -- oh, you had caucuses -- Park Service had its caucus, just like we did a decade later. I mean, you had these caucuses that formed out of special interests. And the environmentalists, which would have included me and Rob Smith and, you know, representing the chapters ... I represented Angeles in my knowledge, and we had this thing. So we had the three days, and my comment on that was it was sometime very contentious. The money side will get quite riled up if their interests are threatened. Remember Ralph Cameron ... this was threatening to them.

TM: So who was there representing the flight industry?

DH: Well, I suspect it must've been Halverson and Stevens -- Alan Stevens. It was the tour association, whoever, you know, there's a documented ... I don't remember all the names of ... First time I'd seen some of these people. I just remember they were angry. They didn't like their turf invaded here. Not welcome news. And they were going to fight. That was clear.

And I remember ... well, you know, we had three days. And so you had to come out with recommendations. And I remember Wes Henry having to stand up in front of that angry crowd at one point and telling them, he said that, you have an opportunity here to come out with something that might be somewhat, or moderately, acceptable or in your interest. But, he said, if you don't, he said, then the Park Service is going to take up its own pen and we are going to write on paper with that pen. And those will be the rules.

Well, that settle them a little bit because they understood about, then, the authority. It's the Clinton administration. And, they understood, but it was still very contentious. So we had Roger Clark dealing with ... trying to pull together the environmentalists in a difficult situation here, in terms of standing ground and coming up with recommendations as to what we thought was a minimal acceptable standard of noise. And of course, I could help inform that, because it was going to be about audibility ... What is substantial restoration, and all this stuff and how you measure that.

And so we ... Roger actually, had a difficult ... that was a very difficult time for him because he was being, you know, we were being ... We were under attack there, by very determined commercial interests. And so it ... We wound up with a position paper, as to what we thought substantial restoration of natural quiet should mean. And of course, it had the 50 percent or more, as the law standard, but what was the aural bar? And we came up with the idea I ... if I remember right, it was either restoring that ... restoring the natural quiet -- by the definition of natural quiet -- to at least ... it was either 85 or 90 percent of the park ... That the "or more" represented acreage to the degree of 85, or maybe it was 90 percent, of the park. We'd have to look at that paper. That was our standard. That's what we thought substantial restoration meant.

TM: Which makes sense. So I just want to clarify this, that ... so for 85 to 90 percent of the park ... So here's an area -- it needed to be naturally quiet, half or more of the time.

DH: Three quarters or more.

TM: Oh, okay.

DH: Yeah. 70 ... less than 25 percent time audible. And there was a secondary argument there, about whether that part that was restored shouldn't be 100 percent ... quiet. And a couple of years or three years before he died ... And Wes Henry only had 10 years to live; he didn't know that then. But he got cancer and died. But he told me at a workshop a few years later, just as an aside ... He said, you should've gotten a hundred percent time. You should've got ... That's the way he felt. He was very disappointed that ...

TM: Was he disappointed that you didn't ask for that?

DH: Well, no, we asked for it.

TM: You did? Oh, you did.

DH: But we didn't get it. We asked for it. That was part of the position paper, that we wanted that 100 percent of the time. Not for the 75 or more, percent or more, but 100 percent quiet in that acreage that was going to be restored.

TM: In 85 to 90 percent of the park?

DH: Yeah, that's correct. So that's the acreage ... That's right — 85, or maybe 90 ... We could research it. But the ... that, we meant 100 percent of time. Well, that was our recommendation. Now, of course, we weren't gonna .... If we could've got consensus out of this group, in some magical way, you could have had something then reported out of the Finding the Balance Workshop, as the balance. But they were not about to agree to anything like that ... And they wouldn't.

TM: Right. Because they're ... I would assume ... and trying to speak for the industry, that they wanted to increase their flights. More flights.

DH: (phone rings) Oh yes. Well, every decibel (laughs). Just like this overflight here (laughs), was money lost, or money gained. Money gained. So that noise was money. That's just money. They're translating that into dollars. Coin of the realm. To us, coin of the realm is silence; to them, coin of the realm is flights. The noise.

TM: Right. And so, finding a balance would have been a chance to say, can you agree on some limitations here?

DH: No, there's no way. They were contesting the noise science. How you get an agreement then? And so they ...

TM: Oh, okay. So they were attacking the work that ...

DH: Oh, they contested the noise science all through the last part of the 90s. Oh, they had their own noise consultants, you know. Who wrote bogus papers, and -- what I think were bogus papers. And they attacked everything that the Park Service tried to do, once it got to, you know, having to put out ... start rule making.

TM: When did the air tours start that noise ... their own noise studies? And who did they use to do it? Do you remember?

DH: It's ... there were papers that are researched in here, about the ... where there ... you ... Yes, it was called the Air Access Coalition, which is an association of air tour operators. And it says here, that they retain Bennett dash Cox. This is the reference for this is on ... right under the Table 9.3, about percent time audible under the air corridor. So, they had a Bennett-Cox Consultants to sample sound exposure at 22 flights ... sites ...22 sites. And they did that in 1988, and then after SFAR was implemented. So they went back and did that again in 1990 ...1993, and publish their paper as Bennett et al in 1994. The consultants used methods that permitted ... well, separate, you know, maximum separated notification, maximum sound levels for different aircraft types and ranges of non-aircraft sound levels. And one of the measurement sites shows, and interestingly was Point Sublime, which was also a site where ... This elevates Point Sublime as important. And that was the site where NPS had it. So ... it goes on and on, about the findings of the Bennett study. But this was the forerunner, then, of a big controversy because in the ...

you're now mixed up with the Air Tour Coalition. By the time you get to the rule making in the middle 90s, there's other names of people coming in here on behalf of the helicopter association and so on. But this is how it started with Bennett-Cox.

TM: Well, so this is interesting, because I just didn't appreciate this -- that the Harris Miller Miller & Hanson group, in 1989, was starting to do monitoring, but it sounds like, at the same time, so was Bennett-Cox.

DH: Yeah, they were into it in '88.

TM: So they got there first.

DH: It looks like. It does look that way. Just ...

TM: And so someone must've been concerned about the work they were doing, to bring in another group. And that sounds like maybe it was the Park Service that was concerned about this.

DH: Yeah. They get Horongeff and those people in in 1989. Into '89, and that all takes lead-in time, you know? To ramp it up. So you can see the timeframe where they were developing a contract, which takes a year, maybe, to get HMMH involved.

TM: Okay. Yes. Sure. All right. Interesting.

DH: It is. (laughs) Just to get refreshed. Yes.

TM: Yeah. No, no, no. To sort of sort this out. So, finding the balance would've been difficult, especially with, you know, groups looking for 100 percent natural quiet.

DH: Over as much as 85 or 90 percent (laughs) of the park. That's right....

TM: Or even just 75 percent or more ... in 85 to 90 percent of the park.

DH: Yes.

TM: Which means that, 10 percent of the park is going to be loud all the time.

DH: Oh, yes, you could have 100 percent audible, in that 10 or 15 percent of the park.

TM: Right. And it would be ... I think for the ... What you're saying ...

DH: So that's your sacrifice zone. That's right.

TM: That's the sacrifice zone is going to be there. Of course, there's going to be spillover into quieter zones, and so you have to be careful with that. But the other side of that, the push back of that from the industry is, no, we're looking for a different standard.

DH: Well, that's right. So you had an impasse, really. Nothing could come out of this. All you would wind up with were, would be ... a volume -- probably that thick -- of meeting notes. And who said what? And then, it's going to ferment, obviously, because you've got to get through to where there's going to be any announcement of rule-making. The next step would be some kind of...to implement the Overflights Act. You would then have to go to federal rule making, with the FAA as lead agency.

And so, we can go to that, if you want because, I mean, from my perspective. I mean, how does this impact me, Dick Hingson, at a desk in the Sierra Club or a Rob Smith, for example, in his desk in Phoenix or a Roger Clark. So you come out with this ... first, you've issued this report in '94. However, for some ... there was a reason that this did not become official until '95. There was some reason -- it had been submitted too late, or rather the Congress had closed, or new committees or something like that. And maybe it was, but in any case, it was resubmitted in essentially the same form a year later.

TM: So the rule making was supposed to be based on this National Park Service report to Congress?

DH: Yeah, that's right. You're basing it on the recommendations of the Park Service. That's right. You had the definition of substantial restoration in here.

TM: And so this was almost a plea, if you will, by Henry to ...

DH: Yes, who was the lead author on this.

TM: ... to the tour industry to say, come up with something. We're going to write the rules. We are going to write these recommendations.

DH: Yeah, that's right. That's right.

TM: And so come up with something for us.

DH: That's right. And of course, the law also included some stuff that had to be done about other parks too. And it wasn't only Grand Canyon. But the crisis was the Grand Canyon. They had the air crash, you know, then in late, late, late, you know? So, something was going to happen. Federal... the Sierra Club were already in court, before the Overflights Act was signed. And we were in court in '86.

TM: On what grounds?

DH: On the grounds that the park was being impaired by the noise and that ... yeah. That letter, I think was in March of '86, or had already gone in. We were in district court. They filed that in district court, in Phoenix because that's where you would take a Grand Canyon case. The need to court in Washington yet had not been established yet for matters involving the FAA. You could ... at that time, you would show up in district court and file your complaint. So that had happened in '86. This is while I'm still at the ACLU, and didn't know about that. You know, I found out about it though. But ...

TM: Who was working the issue in March of '86 for the Club? Who was working this issue enough in '85, '86 to push that into court? Do you know?

DH: Gee, we could get to the ... we need to go to the ...

TM: No, I'm just ... if you know anything that's fine, but if you don't ...

DH: I don't offhand, have this name in front of me.

TM: But this is interesting because it ...

DH: It's in the record.

TM: ... shows that the club was working the issue in the 80s.

DH: Oh, yes, we got it all documented. Club worked it starting in '86 with the Wilderness Society filing, and the Club in concert, and filed in district court in Phoenix. We'll just say that for now.

TM: Yeah.

DH: We can get back to detail.

TM: No worries. Okay. So the courts would be driving a request for settlement as well?

DH: Well, yeah, as you know, that's right. And that drove the Overflights Act getting passed. You see, that was pressure now on Reagan to sign the bill, and so forth and so on. And so ...

TM: So, oftentimes, litigation or attempts at litigation, with the basis of non-impairment of the resource, can prompt legislation to counter decisions that might come out of litigation. Meaning if you have a pretty good case in court, special interests can go to Congress to try to attempt to pass legislation that neuters litigation.

DH: Yes. Well, that's correct. And in this report are very legally focused recommendations from the Park Service citing their authorities.

TM: Yes. Okay. I get that. But I'm trying to tie in then with the Overflights Act of 1987. Do you think there was language in there that was trying to counter the litigation that had been brought forward ...

DH: Oh yes. Because ...

TM: ... the prior year?

DH: ... that was in court. I mean it's pretty logical that they were ... they had to do something 'cause it was announced in court. And so the Reagan administration, or Congress rather ... and what committees ... who was in ... who had the ... Democrats, if I remember, had control of Congress. They were ... they saw this as a heavy crash. People died off Point Sublime. So you had a congressional move to get out an Overflights Act in there. And I ... Depending on who was running Congress at the time, that's who drove those committees.

TM: So it sounds as though in this case, the Overflights Act of 1987 wasn't an attempt so much to counter litigation that that might be productive in preserving natural quiet in the park, but more to get ahead of the need for a regulatory authority of the Park service on how to control their natural quiet, how to control their sound. Does that ...

DH: Well, that's right. It ... I mean ... but yeah. And as I say, I wasn't part of this negotiation or any of this behind-the-scenes stuff. So it's hard for me to speak to it.

TM: But the language that came out of the overflights act wasn't a gift to industry. Or was it?

DH: Well, in, no ... Strangely, the Interior Department, under the successors of, you know, the different Reagan Interior secretaries, opposed even the Overflights Act. They didn't like any, they didn't want any regulation, but Reagan was in a box and had to sign it.

TM: Okay.

DH: And chose to sign it, but with a warning to the ... to the Park Service, that they had to listen to the FAA.

TM: Well, now this is maybe where we want to consider stopping this interview, at part seven (laughs) because I think it's going to be another, much discussion about ... one would assume that the national park would have control of its airspace and management thereof, and yet, the Federal Aviation Authority has control of the skies.

DH: That's correct. That's the main collision here ...

TM: And had that control when they were the Civil Aviation Authority before the 1956 air crash that ...

DH: established the FAA. Yeah, that's right. Or in '58 ...

TM: And that, that tussle over control of air space was happening in the 40s and 50s, between the Park Service and the regulators of aircraft. So maybe now's a good time to wrap this up, and then we'll pick this up again and talk about, you know, the pros and cons of having a government agency set up to promote aircraft, be responsible for the rule making for an agency responsible for non-impairment of resources. Those are two very different ...

DH: Well, that's an obvious conflict. Yes.

TM: Two very different issues.

DH: And obviously created tension over that.

TM: Mm. And that came out of this report to Congress in 1994, 1995. So the next step, again, was this federal rule making, which had to be done by the FAA.

DH: It would have to be done by FAA, but the Executive ... that is, Clinton, had to do something first to kick off the rule making.

TM: Okay.

DH: I mean, Clinton is under ... increasingly under pressure. At this point, this report's out. So, whose initiative ... this an agency of -- put out by an agency of the Interior Department, is a report to the White House. So the ... that's ... Now it wasn't FAA put this out. This is great needs expressed to the administration and power.

TM: Well, this FAA report went to Congress.

DH: And also to Congress and to whoever was running the Congress, and Clinton. Yes. And you think about who ... Clinton had a Democratic ... it was all Democrat from '92 to '94, but then Gingrich comes in 1994. And so now you've got Clinton and a Republican Congress.

TM: Okay. Yes. Okay. Because then, you end up trying to manage a resource dictated by congressional efforts that supersede the local park service on the ground, what would be their perceived regulations. Now they're being mandated to or dictated to by Congress.

DH: Yeah. Congress got a heavy hand. They would have the hearings, you know, or whatever you wanted to do about this, whenever you issued a rule. I mean, then there are going to be congressional hearings. One would predict that. Senator McCain will come to the forefront again. That's what's going to happen.

TM: Because there had been hearings, and there was the overflight act of 1987. So, this issue is moving along, except that in this quest for rule making ... for regulatory rule making, out of the overflights act.

DH: Well, the first thing, the FAA did establish a special flight rules area. I mean, that had come in the late 80s. They had done that.

TM: You talked about that.

DH: I wasn't part of that at all. Unfortunately, I got annoyed by it. But I didn't have any influence in it at all, and they ... that was pretty well a *fait accompli*, along about 1988, if they already ... you already had the outlines of the air ... stuff, that they got right in there while they still had Reagan and Bush, and did that. That's right. And then there's this ... there are gaps, of course, and even my knowledge of some of the material that was happening under the scenes right around

the late 80s and the early 90s, I hadn't been able ... I only got some of it out when I did my paper for the historical association. But this ... what was happening around in this period while I was trying to learn Sierra Club ropes (laughs), you know, in LA, was not really being transmitted to me. I didn't know. Wes Henry knew more about it than I do.

TM: Right. And Roger Clark. And ...

DH: They would've known more. Yeah. Roger ...

TM: And Rob Smith.

DH: Roger ... Rob Smith would ... they would've known more of it. They ... I have files that Rob Smith left me. I can go into them at any time, but I still haven't had time to dig through all those boxes.

TM: Right. Right.

DH: But I could; I have them. We can look even in the course of our interviews, if it's useful to dig into one thing or another ...

TM: No, I just ... getting the broad brush ...

DH: Yeah, that ...

TM: of this whole ...

DH: broad brush is important.

TM: I don't want to drill into the details.

DH: You want that broad brush. That's right. That's correct. That's correct.

TM: Well, maybe at this point it's a good time to wrap up this part seven interview. And, we'll pick up part eight when the FAA comes in to make the rule making.

DH: Well, FAA ... but Clinton has to ... there's going to be a big move that Clinton will make.

TM: Okay.

DH: Clinton ... actually, the next move came on April 22 of '96. And that was Clinton's birthday. Executive director -- Parks for Tomorrow -- that will be the next shoe to drop, once this is out and formalized ... certified ... into the Congress.

TM: All right. So let's ...

DH: That's what's going to happen next.

TM: ... pick that up then. We'll use that for part eight.

DH: That's a perfectly good way to go on.

TM: Great.

DH: Yeah.

TM: Okay. Then in that case, this will conclude part seven of Grand Canyon oral history interview with Dick Hingson. My name is Tom Martin. Today's date is September 7, 2019. And Dick, thank you very much.

DH: Okay. Thank you.