MEMOIR HISTORY OF EARL REYNOLDS

CH2M HILL

Interviewed February 2006

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[**Editor's note:** The following is a summary of Earl Reynolds original memoir. The summary focuses on key events and issues that impacted CH2M HILL's history as recalled by Earl.]

Memoir of Earl Reynolds, former chairman of the board and director of the Boise office for CH2M HILL, February 22 & 23, 2006.

Hello, Earl!

Why don't we start at the very, very beginning? Where and when were you born?

[I was] born January 27, 1923, at Hot Lake, Oregon. That's a little sanitarium at a little lake just outside of La Grande, Oregon.

OREGON STATE AND FRED MERRYFIELD


Earl Reynolds

So, you started at Oregon State in 1943— .. that was a good thing for you to go on to Oregon State because that's where the family had gone.

Right, and there was a good engineering school.

And that was something you knew, at that point, that you wanted to do, is that right? You were, again, thinking aeronautical at that point--

Well no, when I went up there I didn't know it was civil engineering.

Yeah, you hadn't really made up your mind.

… first term was general engineering and then we didn't really have to put that decision down until the first term.

So now in the mid-winter of 1946, you returned to Corvallis. You had three years of college under your belt, you had the experience of helping build Camp Adair under your belt, you had the experience of working on the Trans-Canadian Alaskan Railway under your belt, and the experience as a Seabee. I mean, this is a tremendous basis for your career –

And I hadn't even met Fred Merryfield yet.

When did you meet?

Well, we were getting our summer's work done [on the Alaskan Railway] and we had this survey. The 60 miles had to be closed and finished. By the time we got that closed, it was well into mid-September and school had already started.

Now you're referring to the survey for Camp Adair?

No—for the Alaskan Railway. In September of '42, I came back … and came into the civil engineer's office to register. I think it was about two weeks late. I'd heard about Fred Merryfield, but I didn't know what he looked like. So I came in there and he was the one that came out to take care of me. He asked what I wanted, and I said 'well, I thought it was about time to get in here and register for school.' That was the wrong way to approach Fred Merryfield. He climbed all over me and I finally got it out that, "well I've kind of been involved in [the Alaskan Railway] and that is the reason I was getting in here late." That cooled him down but he was a character. Fred Merryfield stories could fill a book.


Fred Merryfield

I've heard that, yeah. So he jumped down your throat because you just were sort of, laissez-faire about it—

I was a smart-ass and should have been really serious.

Did he help you get registered?

Oh yeah, he helped me get registered and we got along fine.

Okay, so now you're there and he gets you registered, did you get to take a Fred Merryfield class?

You know, I'm sure I must have my junior year. That's where I need that transcript.

Did he throw an eraser at you?

Not at me, but I'd seen one thrown! Who gave you that story?

Oh, Sid Lasswell said he was covered with chalk most of the time. So he was a very flamboyant presence—

And he didn't like stupidity.

He didn't suffer fools.

He wanted you to stay sharp and come up with quick ways to give an answer.

Was he the person who introduced you to CH2M?

I say no, because I had been advised by others. I'm sure he was involved before I was hired. That was one of his responsibilities to the firm was personnel.

He picked the talent. In fact, he picked the original three. I got to get another Fred Merryfield story in there. Your senior year now, right?

Yes, this was my senior year. Sunday morning, no time to call up a college student, but I was in bed and got a call. Fred called me to say good morning. Now Fred—(imitating his voice)—"How is it? I been looking for you —I got to see you today. Come here this morning-9 o'clock." So, I went in, and learned that I had to go in the next morning, but he called me Sunday morning. [!]

To make an appointment for Monday morning. So 9:00 Monday morning. What did he want to see you about?

Well, he had it all figured out what I ought to do. I ought to go get a Ph.D. and go into teaching. I said, "Fred, I was really ready to get done and get out-"

And get working, yeah.

(imitating Fred again)—"Well, you should be a teacher," he said. I said, I just can't do that, I'm not sure I'm interested in that, and besides I can't afford it. And he said, "Well there isn't any problem there, we can get you scholarships." Which, basically he did, and he accepted the fact that I'd go on to some Master's degree at Yale with this Professor Cross. That interested me.

So, basically, that gruff phone call from Sunday morning when he said he wanted to see you on Monday morning, that was the beginning of Fred Merryfield encouraging you to go on and get your Master's—

Yeah.

Now he said Ph.D. initially but what he ended up helping you find was a scholarship—

Maybe he was just shooting high.

How did he help you get the scholarship?

I don't know. He just submitted my name and –

To Yale.

Well, to this Tau Beta Pi, it's a national engineering honorary society. They had more than one scholarship to give and they had several people that they wanted to give them to, so they worked out a deal where they gave us half scholarships. Since we were all veterans and we were getting the GI Bill, which was enough to do the job.

So you basically had your education at Yale paid for by the GI Bill and this scholarship. And it was Fred Merryfield that encouraged you to apply?

Right.

Did he help you apply for it?

Oh yeah.

So he really pulled those strings there to get you going. Not pulled strings, but he really—

Well, there isn't any question about it. If it hadn't been for Fred I wouldn't have been going for my Master's.

Why do you suppose he encouraged you to do that?

Oh, I think that's Fred. I think he, if you get on his good side, he'd do anything he could to help you.

Your first experience with him, you very much landed on his bad side.

I think I did.

And you converted back over to his good side.

Well, and we had two years of experience together. I showed up good in his classwork which he probably appreciated and he understood—

Well, you were one of the highest students at Oregon—so, he made that recommendation on the basis or the merits of your grades, how well you'd done in class—

Well, and by that time he knew me, too. That was two years later, almost, or a year and a half.

So, your excellent grades, but also his knowledge of your work as a student and professional, and also as a tutor of other students, that probably impressed him.

If he knew that, well maybe. That was in math and not engineering.

START AT CH2M WITH THE FOUNDING PARTNERS

This was 1946, the beginning of you senior year. The firm was just starting, CH2M -- it was just called Cornell, Howland—

Cornell, Howland, Hayes and Merryfield.

It was over a JC Penney in downtown Corvallis and was just—

They were—when I went with them—this was the summer of 47, after I got my Bachelor's Degree. I went to work for the summer—

As a temporary employee, yeah.

And they were over Penney's then. They had a previous office that was downtown, but somewhere else, I don't remember where that is.

So, you completed your senior year. … and you knew that your way was set and you basically were going to be going to Yale in the fall of '47.

Right.

But you worked at CH2M all summer.

The fall of '46, I graduated in the spring of '47. I worked as a temporary employee at CH2M.

What was it like to be a temporary employee? How many folks were at the company then? Summer of 1947, wasn't it? It was very small, wasn't it?

Oh yeah, there were the six partners, I could probably name them all — and probably not over 20 total employees.

And you were hired to be a structural engineer, is that correct?

I don't remember what the title was.

And it was clear that it was a temporary offer, and that you were going to be going off to school.

Oh yeah, they knew the whole works and I think there was kind of an understanding that I could come back if I wanted to.

That they would have you back after Yale. Okay. What did they have you do that summer?

Oh, I was, I think the main thing was, the resident engineer on the 3 million gallon reservoir for Dallas, Oregon … and I think it was a 16 inch pipeline to connect the reservoir to the distribution system.

So here you were, brand new engineer from Oregon State, walking into what was, in the end, one of the great, bright and best things for CH2M, i.e. water.

Well, that's what they were doing, yeah.

What about the partners? Who did you work with primarily that summer? Who did you report to?

Holly Cornell, mostly. Well, it was small enough, Jim Howland, I think was a managing partner there, and he was a lot of the time. Holly was the structural background.

How about, any memories of the office that first summer, or Corvallis, or working for CH2M?

Well, certainly didn't take long to find out that was a dang good place to get people there to work with.

What made you come to that impression?

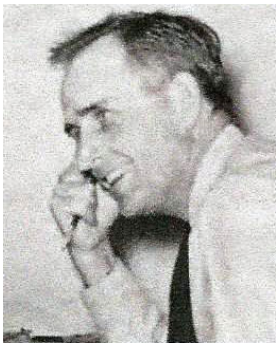
Just that, they were good people. Responsive and friendly and interested in what you're doing. I'm trying to think, there was another job that, I believe this was the next year that I did a real structural job.

I thought what we might do is talk about the time between your return from Yale up to the time before you left for Boise, for some of the things that you did with CH2M, and one of them was that area wide sewer study.

Yeah, I think that was, while I get the chronology, that's probably one of the earlier ones and that was down in the Eugene/Springfield Metropolitan area.

What was that project like? That was a big project, wasn't it? I mean, that's a very large metro area now, a significant metro area for Oregon. And you were in charge, this was a big contract that CH2M landed, you were in charge of doing a study of the sewers. What did that involve?

Well, I had some I think Ralph Roderick was probably my biggest source of support, because I needed it. That was a big job. And the idea was to take a look at the area and see what the most economical way was to provide sanitary sewer service to this whole area. I don't remember now all the alternatives, but we ran through a number of them and came up with a recommendation. We satisfied a lot of people, but some people weren't satisfied and I had some pretty interesting public meetings.


Ralph Roderick

Okay. So, Ralph Roderick was sort of your mentor at that time, or your big support. Describe what it was like to work with him. With Mr. Roderick.

That's the thing that made the firm go, I think, was the support you got was just solid and when you needed it. I hope I'm right, that Ralph was support on a lot of things. I think Fred Merryfield might have been there at that hearing, too.

That was sort of unique, wasn't it? Because Fred Merryfield didn't really get involved in details—

I may be wrong, but Fred's name and image kind of sticks with me.

What was the culture of the firm like in that era? Before you went off to Boise? What were things like in the Corvallis office, describe the culture, the people.

Well, I guess, given my experience, which wasn't much, this was, I enjoyed it, I thought boy this was great.

How did people treat each other?

Very well. I think they had good people there and they were responsible people. I just don't recall word of when somebody

didn't know what he was doing or wouldn't do something you asked him to do.

Lot of respect shown on both sides, kindness. I've heard a lot of folks attribute a lot of that to the tone that Jim Howland set as the first President.

Well, all the partners admired him. Archie might have been the sharpest but he had the ability to contain his sharpness and when he wanted, when it needed to be said, he could say it without really, with enough of a smile that people would still take it.

They said that Archie often played that role in the Board meetings—

Oh yeah, he loved that.

Describe Holly Cornell in more detail. What it was like working with him. You could even, this doesn't have to be chronological, and here you can talk about your impressions of the man.

Well, he's bright. Good judgment, he had the ability to sit down and see both sides of the situation, which is awful helpful if you're trying to work out a solution. He's also usually never speaks till he knows what he's talking about, which is good for anybody. And when he does speak, I can't think of any instances now when he wasn't right.


Holly Cornell

I remember a guy who worked in this office for some time, but when he first came we had some work to do up in the Pasco area. It wasn't really our direct responsibility, but they needed some help up there and I was having trouble keeping this guy busy so I sent him to work with them where he met Holly. When he came back and I asked him how he got along with Holly. This guy was pretty sharp and he could have a different way of expressing things and very colorful. I asked him how he got along and he said, "I'm exhausted. I spent so many hours following Holly Cornell's mind around." He'd put it a lot more expressive than that. He was really impressed with how Holly could size somebody up and lay it out and discuss where we ought to be going. He could see it very clearly and this guy was smart enough to be very impressed that Holly got there as fast as he did.

What about your impressions of Jim Howland?

He's one great guy. I don't know that you can give all the credit of the success of this firm to any one person, but certainly he was key. I think Holly Cornell and Burke Hayes were too, they fit in different places and in different ways. I think they're all very ethical people. Jim was thoughtful and thorough. I think there was a long time there when his wife would have lunch with each new hire to the firm. I think he tried to keep things so that when people had a question, they were not afraid to come and talk to him.

Jim Howland

I had probably done more on a personal basis with Jim than I had with Burke Hayes, even though one thing I do want to mention is that when I said that Archie Rice was the guy I first met, I think the one that actually told me that there was such a firm was my cousin who had married Burke Hayes.

That was your connection that even predates Fred Merryfield—

Well, I'll bet the question, before they made any offer, I bet it went to Fred.

Right, they were probably thinking about you, of course Fred, he got you interested in going to Yale first but there was sort of a promise of 'you can come back here' and work for the firm.

I don't know that I actually had a promise when I left.

But it was heavily hinted.

Well, somewhere along the line, I guess Holly actually did make the offer. When we were talking about it before I left that summer, what will I do on my way back, next year, I told Holly that I was interested. I can't imagine where I got these guts; but, in the long term, I'd like to have the option or have the knowledge of having some ownership in the firm. I'm not that gutsy of a guy, but I guess I'd been told you better say it up front. Holly's response was "well, we got six partners and that may be about all the business we can handle, but we're thinking about expanding" and they'd done some

talking about going into other states. ”We could make you a partner when we move into another state.” And that’s kind of the way it led.

Well, that’s exactly how it turned out, right? In 1950 when you went to Boise--

I wasn’t a partner yet though.

You made partner with that though.

After. I did make it, it was some time after that but they followed through on their promise. I didn’t ask to be named a partner immediately, I just wanted to know that I could get there.

It all stemmed back from that conversation with Holly Cornell, it sounds like.

Oh, absolutely.

You pointed out that there were the original four founders, and there were Roderick and Rice, six partners. There was a seventh man?

I was the seventh man.

Okay, we’ll talk a little bit more about that partnership when that happens when we get to the Boise years. I wanted to ask you about, you already described Fred Merryfield, is there anything more you want to say about Fred? Because you knew him as a professor, how about working with him?

I didn’t work with him in the firm too much. Everybody worked with him in that area. He had quite a personnel system. I think much has been changed a number of times, Fred knew what he was doing and we were talking about personnel, Fred was the guy you talked to. But he wasn’t there all the time, you talked to him when he was in.

He was at the university.

Right.

Burke Hayes—what were your impressions of Burke Hayes.


Burke Hayes

Smart man, and he was a philosopher. He was not a civil engineer, and I think that was one of the main reasons that the other partners felt he would be an asset. At the time, I remember very well with him, I think I was being groomed for other things just as soon as I got into the firm. I don't remember if this was the summer I came back from Yale -- I think it was the year afterwards. I spent basically a week with Burke on a trip and we went to power plant projects and did a big variety of things other than civil projects. We talked a lot about some of his philosophy and what we were doing and what had to be done. It gave me some experience -- good teaching is what it was, mentoring. And, it was in areas I had not had experience with and certainly was going to need in this business. For me that was quite a trip, I'll never forget that.

He's a delightful person, a good speaker, and quite innovative, too. He could apply good basic science to the things that are useful for the civil engineering group that aren't very often used there. One was a graphic solution to complex hydraulic problem. You could actually, by sketching, believe it or not, come up with just how this water would flow over. You can end up getting a pretty good idea of how it's going to flow over a crest and down the dam site. He was talking about how you design a siphon spillway without—you got too much water here, you want to get it there, so you spill it over a dam or crest. … That's, I didn't mean to get so—

No, no, that's good. This is the kind of thing that Burke Hayes would do.

That's what he did for me, obviously I haven't forgotten it. Burke did a lot of other things, just a lot of good. He just had good logic and good judgment. I brought him over here several times to help with the Public Utilities Commission. He also knew electrical engineering very well. And he knew regulative utilities, and he's dealt with other commissions. He was very useful and people over here on the Commission remember him still.

In that time frame, here again, after you returned from Yale and started at CH2M and before you left for Boise, were there any other projects, events or incidents that really stood out in your career?

Well, one that I think I referred to, I think it was this period because I think Dallas took up most of that summer. But this was a first construction job I'd handled. We did the design and I had a job there doing a design to satisfy the Oregon State Highway Department. There was this bridge near Oakridge, Oregon. A big Oakridge Lumber Company had some timberland that they were logging and they wanted to use trucks that were far bigger than were allowed on the highway so they designed and built their own road systems and they had to go under this state highway. The Highway said, "Okay, we'll grant you that, but you have to come up with the bridge. Our bridge engineers are all busy and you got to come up with a design and build it." So they hired us to do that. I was a brand new structural engineer that got that job. I learned a few things on that job, too. Jim Howland signed it up but I got the job of doing it.

So what did you learn on it?

Well, there was a lot of things you have to learn. The product that I was supposed to come up with was a set of plans and specifications to describe what needs to be built. This was so the Highway Department is totally satisfied you can maintain the traffic while you're doing the construction and so you can pay the contractor and he can do it for what he bids for. That includes the bid opening -- you receive the bids they come in with. You have this all done on a public bidding basis and that has to be done very accurately, and have a special time and place for the bids. That's the first thing I learned.

When I went to the bid opening, it was snowing and the roads were pretty bad and I only had two or three bidders show up. There were a couple of others that I thought would have been there. I didn't know whether you opened the bids at the bid opening time or whether you delay it some time. I raised that question and one of the bidders said "It says in your advertisement that you'd open the bids at 4:00 in the afternoon … and we're here." So I said, "Okay that's what we'll do." The owner was kind of hoping we would wait a little longer and get some better ones but I think it worked out pretty well. That was definitely the right answer but the thing is you run into those kind of interpretations.

Any other experiences of your jobs leading up to the move to Boise?

Well, let's see. Let me mention a few, I ought to think about some. One of them was moving a 55,000 gallon water tank from the Port of Portland to Sheridan, OR, I think it was. And that got me up on a tower for the first time.

Describe that.

Well, I was pretty high. The idea was, Jim Howland was the one I think he told me what we probably needed to do. The Port of Portland had said that "We'll give it to you if you get it out of here." We wanted to know if, it was an old tank, was it in good enough shape that it was worth moving out of there.

So, the big question was to see how well had the tank been maintained, is it rusted or is it got its design thicknesses are still there, is it steel or you got half of it rust, and if it's half rust it isn't going to be safe or it won't last that long? So Jim suggested that I better go up there and climb the tower and take some drilling tools and drill some holes and see how thick it was. I think it took me a whole day to do that.

What was it like being up on that thing?

Oh, it was scary. Jim says you don't have to do that if it's going to bother you. I went up and talked to him about it and the guy that was kind of the maintenance guy did a lot of things for him said he's been up there and can help you get up there. Well, he'd already taken down the big center column, but they'd done that by building a scaffolding all the way up to the tank. It looked like that was the way to go up and that maintenance guy said he'll get me the power line and the cable and the extension cords I need. He mentioned something about being up there lots of times and he was older than I was. I was in my early 20s, I think he was probably in his 30s or 40s but I thought he was an old man. You've probably been there, too. Anyway, I started up that thing and I got about 50 or 60 feet up a wooden ladder and got to one rung that was loose and it just (breaking noise). I kind of froze and I grabbed that thing and I said "I just can't do this." Then I thought, "Well, you're up there you got to do something." So I finally calmed down and I guess I even started down and then I decided, "Well, heck, I don't feel so badly now, let's try it again." I did make it on up and I had these

moments where I just didn't like that at all. To make a long story short, after I'd been up there a while, I got so that my fear departed and I could do that. I ended up over a hundred feet in the air. And we found the tank was worth it, the tank was in good shape, and we did move it.

You moved it and you kept it.

That was my job, was to see if that was worth it and I didn't have to worry about getting it over there. There were other, there were quite a few jobs that came up, they weren't very big ones where I was really doing structural engineering jobs like wastewater treatment plant, doing structural design of pumping stations, clarifiers or settling basins or all the structures that you have, did quite a bit of that.

((Next day of interviewing -- off tape Earl suggested he would like to fill in some gaps after he returned to CH2M from Yale)).

One of my first water distribution projects, distribution system, I'd mentioned that Hardy Cross had also been very instrumental in cutting into systems to allow that kind of analysis to be done before computers were available. He developed an approach that allowed you to solve problems in a grid analysis where you tried to determine what your performance of an integrated system of pipelines like you find in a distribution system.

This project was for the Park Rose Water District which is adjacent to the City of Portland. They bought their water from the Portland Water System and distributed it there, their own distribution system was I think a reservoir or two. They were up on a hill and they had had some problems and they wanted us to take a look at it and see if they needed to do some improvements or what to do this to solve some of the problems.

As soon as I got into the thing, it's a very interesting project. It's science to the extent that you have to find out what your problems are and get some pressure measurements or other indications of [current] performance of the system. And know what your flows are and all of which is in a distribution system is really kind of unknowns. To make a long story short, they must have had awfully patient customers, because I got through my analysis of this thing and found that in the upper end of the system some of those people would be completely out of water. Just no pressure and completely

out of water. I think Holly Cornell was partly involved in this and maybe Archie Rice. Anyway, I talked to Holly about it and he said 'well maybe the thing you better do is call the manager and see if he's had any reports.' I called the manager and he said 'I'll check it out.' He called me back the next day and he said 'Engineer, have faith in your figures!' He was a good-natured guy. He said that they'd lived outside the city and they just assumed that's the nature of the service you were going to get and they hadn't even complained. In fact it was happening.

Oh, it was already happening -- they were running out of water because of low pressure?

Yeah. That's bad business, you know, when you get your pressure below zero, below atmospheric, if you have any contamination of ground water or around the distribution system, you could get stuff in your distribution system and shoot it out of there.

How did you resolve that one, though? On that particular--

We just had to increase the pressure to increase capacity from the Portland system, where you can actually use booster pumps and raise the pressure. That's basically what you need to do, is get more water in there.

So that was the real test of something you'd learned from Professor Cross.

It was. We did quite a few of those analyses in that time and then got to the point where we'd still do some but now you can do it with a computer and stuff.

Yeah, simulations.

Very, very simple approach. But the old approach, before Hardy Cross came up with his analysis approach, was essentially impossible, you had so many variables. He even had some formulas on how to solve for unknowns, and have half a dozen unknowns, that's -- before the days of computers -- pretty hard to handle.

I can imagine.

There were some other things that took quite a little time. One of the trips I described with Burke Hayes, we spent some time just

getting me acquainted with what's out there other than just the structures and that you need to know before you launch out in another state and another office. And then, of course, I was hired as a structural engineer and there were a certain capacity for a number of design projects, particularly in the water and wastewater areas.

Is there a story or an example you can think of about the structural engineering side of things?

The big question with Ralph Roderick at the time was that 'round ones or square ones?' I know we talked about that a lot and they were talking about one of the major structures in water or wastewater treatment plant is the sedimentation basins. And there were quite a little competition between manufacturers of the equipment that is used to make these things operate. Some were for round clarifiers in sedimentation basins and some were for rectangular. And that was always a decision that needed to be made early in the planning of a new plant was how we were going to do it, what the structures were going to look like.

Got you. Good stuff. So you were learning about all these different ways to handle that—

I knew how to design something that withstands a given stress but I had to learn why we were building this particular structure. Why it was shaped this way, how it was supposed to perform, and that's you know getting into the sanitary engineering field.

Which was not something you could actually study either at—

I got my, I had a specialty in structural engineering from Oregon State, but it was a Bachelor, a BS in civil engineering, specializing in structure. So I had a shot at all these general disciplines.

Right, right, probably had to. And that was a part of their program was to give you some general exposure.

Sure, sure. I went farther with structures than most civil engineering. And I did some little endeavors, a little project down at Myrtle Creek where we had to draw water out of the stream and have to design an intake and pumping station to deliver it to the city and that was one of the projects in that period. It wasn't a very

big one but it was something new to me. I think that's, a lot of little ones.

But those left a pretty powerful impression on your career, and on your memory. It sounds like that was really only about a year, year and a half, time frame, from the end of Yale to the time you went to Boise.

Yeah, I was a, let's see, back there, probably around the first of July, I went to work on my—

'48?

48, middle of June perhaps. And then, in '50, why, we'd made a couple of trips over to Idaho ahead of time during that summer and actually moved the office. And set up an office in late summer.

Late summer.

Of 1950.

OFF TO BOISE

Now, explain how the decision to have CH2M HILL set up its first regional office in Boise came about.


Young Earl Reynolds

Okay, actually there were, some of the criteria was that we wanted to have there be some potential for work, of course. We knew that we were going to have to have close coordination with the home office so that we'd determine that we'd have a reasonable amount of available work and then be located within a day's travel of Corvallis.

It's about a day's drive, isn't it? About an 8-hour drive?

Yeah. And maybe a little more in those days, though. Not that much difference, though. Less traffic and you could drive a little faster on the same road. But that narrowed it down, really did, to about Spokane and Boise. There were no population concentrations at all and if that they weren't very big, in Boise.

Why not Portland or Seattle?

They thought that there wasn't that potential there. And that they could cover that from Corvallis.

Well, Portland was close enough to cover from Corvallis, yeah, you guys were already doing that.

Seattle was our second office, you realize that.

After Boise, that's right. So it really got narrowed down to Spokane and Boise based on those two criteria. And why Boise over—

I think the final, there were several, but I think the final points was a fairly thin one and that was my dad was, by that time, he'd move to Boise as manager of the Boise Chamber of Commerce. And we'd have some contacts, and we'd were going in cold to either Spokane or Boise, and that might be an issue. I think it was helpful.

The networking with your father basically, right.

Well, he was just able to point me in a lot of the right directions. For example, one, I got assigned to the Chamber of Commerce reclamation committee and even before that I had a chance to state an interest I would attend some meetings on some of the reclamation committee and others. Get acquainted with the people.

Was it decided or was it intended from the beginning, Earl, that you would be the person to open up the office whether it was in Boise or Spokane?

I think so.

Why was that? Why were you selected?

Well, I think it back to my conversation with Holly Cornell that this is our expansion out of the state and I would have a shot at the partnership with that move.

Oh, that's right. So in that conversation, not only was it stated that you might be the first partner behind the original six, but that you also would be the person to maybe help—

I guess that was the course of the conversation. I think, Holly said we could have something when we moved out of state.

And he was thinking, and you'll be the one to do that.

It wasn't a written understanding at all, or even so the firm's terms were just about as I described them. I said I'd like to have a piece of the action and he said we can do it this way.

You'd never lived in Boise.

No.

In fact, you'd grown up and lived in Oregon your whole life other than our time away at school and at the war. Had you been to both Spokane and Boise?

Oh, I'd been to Boise because I'd been over to see my parents, but I don't remember that I'd been to Spokane until after I moved here. I think we may have gone up there, I don't remember that very clearly.

Okay, that's fine. Now, on the firm's time, you had also come to Boise to scout out for projects before the decision was made, is that right?

Yes.

And, what was there, one or a couple of projects that seemed to indicate, yeah, there's going to be some work here.

We really didn't, had one thing going, and that was we were doing some work in Ontario, which is a pretty small project, but it's still, we had a contact there that was an engineering graduate, but he hadn't been licensed yet. And, was serving as the city engineer.

And where is Ontario?

Just right on the border between Oregon and Idaho—it's over 60 miles from Boise.

…. the first job we actually got was a $400 study which was pretty small for the time in Idaho. That's on the Snake River about midway through the state, the southern part of the state.

Jim Howland had come over here and we spent a couple of days talking to people, calling on city engineers and made the trip into southern Idaho.

What was the project? Wastewater?

No, it was drinking water. … They were so small, I think two or three hundred people in the town and they just had individual wells and they weren't all that satisfactory. … We did the study to see what it would take to put something together on a municipal basis. They did that but they didn't go ahead on it. That was a little bit more money than they wanted to spend.

What did they in fact do?

They didn't put in a water system then. It was much later, and we didn't do it.

You got paid $400 to essentially explain how it might take place. And CH2M had a flag in the ground in Idaho.

Well, it wasn't a very big flag, I don't think we'd gotten much notice from that. … The first significant job was a wastewater treatment plant for Caldwell. Which was probably about eight or ten thousand people then. … That was a study first and led into design, supervision and construction.

Then close to that, in one of our very early jobs was an appraisal for the Jerome Water Company. … That was a privately owned water company that served the city of Jerome. I think it was four or five thousand people or something like that. They had a competing engineer that had been working for the city and was trying to promote a new water system that the city would take it over from the Jerome Water Company. They came to the conclusion that the city could only afford to pay $35,000 for that distribution system and that upset the owners substantially so … I think they wanted to do something about their revenues and raise their rates and they were informed that they had to supply the public utilities commission with all the information that they had. So, they decided that they needed an appraisal and they wanted us to do that.

Now, there were a lot of little towns this part of the Intermountain west that did not have a drinking water supply or did not have a wastewater treatment system.

Wastewater treatment was a real problem in most of them.

For how many years were you the one man in the office?

Oh, I had some part time help pretty soon. I think the first one that came over that was on a permanent basis was Roy Taylor. And another one, I may have the order wrong, Don Lloyd was the second one. And I had a few local hires and some for the summer. For surveying projects I would usually hire temporary people. That's something you couldn't very well bring over from Oregon very well.


Roy Taylor

So surveying was still basically running out of the Corvallis office?

Well, I'd hire people here. But we weren't big in the field [of] Subdivisions, or land surveys, that wasn't our major business.

Okay. What would you say was the major thing that the Boise office was good?

Well, we were trying to do anything we could do. … Once the wastewater thing got going, we were putting a lot of emphasis on that, that first year. But we didn't find major wastewater work, we did some road work for the state highway department or some of the counties, we even tried to do some detailing work, structural steel detailing for our local steel plant—Gate City Steel.

How did you get jobs?

I had to go look for them usually. After we opened the office there was a piece in the paper that emphasized my structural engineering experience, and the city building inspector got a hold of me right away. He said, 'gee, you're the first structural engineer we have in town' and he put me on a building committee. Made a few acquaintances and some of them were local architects. We did quite a few structural jobs for the architects.

Did you get these jobs from word of mouth primarily?

I called on them, some of that first work was from that initial article in the paper, and I think the building inspector had some opportunity to tell people that you ought to get a structural engineer on this and there's one in town now. A lot of people did structural design, but they didn't have the qualifications that were quite as good as somebody who'd been to Yale. But the size of the jobs we were doing was pretty small, and there wasn't very good long term potential in that kind of work. But you know, that was some that was immediately available.

So would you say that the more lucrative jobs, if you will, were the wastewater and treatment, municipal wastewater and water treatment?

Well, our wastewater treatment, there was one related to irrigation that was a big job at the time, that we did for the Irrigation District by Crane Creek Reservoir Administration. It was actually … the state engineer raised questions about the safety of that structure and so we did some work for them to determine what the problems were and to correct those. And we ended up designing the spillway which was a fairly major project at the time.

Roy Taylor, first one to come over full time or on a permanent basis. And how many years had you been there when he did that?

ER: Oh, within the first year or two.

Oh, so you were only on your own for about a year or two.

Yeah, couldn't really do much, I could do a little structural engineering, but then I needed some drafting, I'd have to hire somebody to do that and it wasn't that easy to do and it wasn't big enough to really ship it over to Corvallis. That just didn't work. I learned a lot of things that worked and some things that didn't.

Now the idea in the home office in Corvallis was that you would generate work, they wouldn't put you on projects, you would basically be the one to sort of tell them what's available in Idaho.

Well, we'd manage it from the local area, but yes, the idea was that we were going to try to provide another source of projects for the home office.

Describe the relationship in those early years that you had with the home office.

It was always very good. I mean, it was essential. It just didn't work any other way.

What I mean by that is not so much the question of how the relationship, but what was it? What kind of communication did you have back and forth? Who was the partner that you worked with principally, was it Jim Howland, or--?

Oh, not necessarily, I think this [was] kind of the birth of the discipline system. I would call the person that I needed help from. I knew everybody over there. We had a system that … we didn't want to run all the communications through one person, we wanted to communicate with the person you need to communicate with. It's a responsibility of both of us to let others involved know what's going on.

Sid Lasswell, when he got there, was somebody I relied on a lot on sanitary projects and he would tell the guy that he reported to that 'now I'm doing this for Earl' and so that everybody was familiar with just what limitations were placed on the staff they sent us. That

worked really quite well, particularly when we all grew up together and the relationships were direct and well known. If you've got a job and need to have the people that know what they're doing involved with it, you have to be able to do what they need to do on the schedule that's required to meet the commitments you've made to the client.

How often would you say in that first year or two, were you talking to people in Corvallis? Daily, maybe two or three times a week?

Oh, at least. Yeah, very frequently, depending on what was going on. Not daily, but I would go over there … periodically. I don't think it was as often as once a month but it was pretty often. I spent a lot of time on the road.

Every six or eight weeks then you probably were—of course now some of your time on the road was driving to locations in Idaho when you were managing projects.

Oh yeah, or trying to find them.

What did you guys think of Boise right away? That was a small town back then, wasn't it?

Well it was bigger than Corvallis. It was about 34,000 and I remember Corvallis was probably ten [thousand]. And Boise … had been the metropolitan area in the area for a long time so there were a lot of things that were available in Boise that weren't available in Eugene or Corvallis or Salem, or close to Portland.

Really, it was one of the, for that time, one of the major cities in the northwest. Boise, Portland, Seattle were really it.

Well, and Spokane. Spokane was actually bigger then than it is now.

So what was it like? What impression did the city make on you, by the way?

I'd gotten so I kind of liked Corvallis, too, but it was an opportunity and a little after the start, a couple of years, I kind of wondered if it was ever going to get going and, I think Jim Howland probably had the same worry. We learned a lot in just what it took to get a new operation started and—

Of course, coming here, you also had to learn a little bit about business management principles.

Yes, that was an interesting thing, we ran the … Boise office just basically on my expense account. Which was—well, we learned a lot of things—we learned what expenses you have and what you have to do, I had available a lot of help but we didn't have a very sophisticated business management structure in Corvallis either.

A man named Milt Hickey came into the firm to help with management fairly early. Now when he came in … I remember he had a lot of communications directly with Jim Howland. Jim didn't have all the help at that time that you've got now.

So, those guys were learning business management principles too, back in Corvallis.

Yeah, and they were doing a good job of it. The communications were one thing, this didn't happen until, oh, two or three years until we got over there that we determined that there are probably better ways to keep in good communication other than telephones and we put in teletypes. That was, we struggled with that for maybe a year.

How did that work? What's teletype?

It took an operator that knew what they were doing. By that time, we had half time stenographers, secretarial help. But it meant that somebody had to run it when the teletype calls came in and we'd end up by saying, "Well, hang up, I'll give you a call on the phone."

So teletype wasn't necessarily a form of superior communication?

No. Well of course a lot of things came up at the time, copiers and the first reports that went out were typed, and ten copies. I did a lot of typing myself. We located the [first] office next to a woman that had a little stenographer shop, so she was available to answer the phone when I was out and do what typing I needed to do. But as soon as we'd got a little, I'd opened the office in August of '50, and then '51 …

Well, let's describe, first of all then, the first office. You said you opened the office in 1950 and where was that one?

It was in the Rennie building, I believe was the name of it, but it was above JC Penney's on the corner of 9th and Main St.

Now, you're talking about Corvallis?

No, Boise.

Oh, okay, so it was also above a JC Penney's. There was a Corvallis office that was above a JC Penney's—

First Boise Office

I forgot it was above—yes, it was. And others actually, that was in that buildings, JC Penney's on the first floor. Actually, we were closer to be over a photograph shop which is more important in what comes up later, I guess.

So that was the office here in Boise. At 9th and Main, over a photograph shop.

Well, several things, the building was pretty good sized. We were on the 2nd floor and I think it was just after we'd been there maybe, Christmas of 1950, we came over to the Christmas Party for Corvallis, so we had just a good excuse to get together and maintain relationships. While we were there, a Montgomery Ward building across the alley burned. My dad called and wanted to know what we had in the office and we'd need to get out of there and so forth. In it we learned that one of the things that we'd overlooked was, well, we better have some fire insurance on our place. We didn't have it.

But you got it, I imagine, when you got back to Boise.

You bet. And the reason that's important, we did get a fire in the Rennie building the next year. … We had insurance by that time, we also put together a good inventory which is both good luck and it wasn't too hard -- it was easy to do. I was very meticulous about it, I named all the books in our files and put a value on them and the insurance company honored all that. … Which was the only reason we made a profit that year.

Thanks to the fire, huh?

We depreciated more than we got paid for (by insurance).

And that, again, was 1951? How big was the Boise staff at that point?

Not very big, … after the fire, we moved to the Idaho building where an attorney had some extra space that he offered to make that extra space available—very attractive. So we moved in there and after we got some other vacancies showed up in that Idaho building, we moved in there and were there until 1961, I think.

So that location worked out pretty well.

Pretty well. It was okay except for our field work, it was right downtown.

But that was kind of a philosophy of CH2M's, wasn't it, that it ought to be downtown? And it was the same philosophy that drove the decision to put the Seattle office downtown so you could kind of be in the heart of things?

I think that's right, though in Corvallis when we decided to move, we went out where there was some space—

Okay. What would you say in those early years, Earl, was the chief difficulty or challenge facing the Boise office?

I think just getting known and finding the work was probably the…

And in those early years, I'm sure both you and Jim Howland wondered if this thing was even going to work, financially.

Oh, they were certainly patient. Though I think there was a time after about two years that, we had annual interviews, Jim Howland expressed the feeling that maybe I wasn't pushing quite enough. I didn't quite understand what that meant but I think it was just the fact that things weren't really happening as fast as we'd like to see them. And I think that wasn't as fast as I'd like to see it either.

Was that your answer to the question?

No, I don't remember what I answered. I knew what his reaction was and I was going to see what I could do about it.

So when he suggested maybe you weren't pushing hard enough there, was he talking about trying to find business, or—

Pushing the operation. And, I think that was probably the right analysis that nothing's going to happen, you can't just sit and expect the business to come. At least that's what I took it that we were going to have to do to make anything else happen. We would just have to go be sure we located the work and could get it in.

So how did you go about that when you got back to the office?

Oh, it was a matter of doing the same thing, but more of it. Then, I think, about that time we figured we needed some help, too, one person can't do everything. Can't be out looking for work and getting it turned out at the same time. That's about when Roy Taylor and Don Lloyd [came on board]. We [later] lost Don from the firm. We had a job over at Idaho Falls, things were going better by this time, and their city engineer retired and they wanted a new city engineer and they hired Don. He'd made a good impression on them.

Why don't you name a job or two, a project or two from those early years, early 1950's, that really stood out in your memory.

Well, I think the Caldwell job was one because it was significant … we were learning a lot as a firm with how to handle major projects when we had a design project that wasn't here in town, didn't have the staff here. And that was close to a million dollar project. In those days that was some major sewer work. They had some sewers that discharged into drain ditches and Indian Creek. They needed to gather that all up and get it to the treatment plant site. We had to locate a site and deliver it there. And we had some significant industrial waste: a big milk processing plant in town, the domestic load and a meat packing plant. And there are still problems today, they're just significant loads and it's hard to find out what the loads are, the sampling, collection of data that you need in order to come up with the right answers. And then supervising the construction. I had some help by that time, but most still weren't permanent help …

… we moved our office in 1961, I think that was only designed for 5 or 6 full time people. We'd use some others, but…

I'm sorry, this was in 1961? Yeah, when you moved to another new office?


Second Boise Office

Yeah, we'd built an office, we bought some property over near … the edge of downtown … we bought three houses on small lots but we used one to build the first office and we had place to expand, which we did several times at the same location.

So, when you opened up the 1961 office, how many folks were there?

Oh, I think we had five full time ones then.

How long were your offices there?

Well, let's see, I can figure that, the Greenbelt was started by that time because we had it built for us and leased to us. The location on the Greenbelt. And it was, well, around 1970.

You were the manager of a regional office from 1950 to 1980. … just looking at that time frame, 1950 to 1980, … highlight … two of the really big projects.

I think that's important because we had some significant ones that were significant to the firm as well as the Boise office. Idaho Falls project was one of the first ones … The Idaho Falls project was another million dollar plus project and it involved quite a few sewer jobs, sewer connections and big interceptor sewers. It was expensive because that's lava rock country. We had to do a lot of shooting, blasting, to get that installed. And we had three or four potato processing plants that were big loads there. The city was bigger than anything we'd served before. So it was a population equivalent of 100,000 people or more. And that was designed not only for a primary plant, but for primary and secondary full waste treatment.

And this was roughly the middle 50's. That job in Idaho Falls, what was that like?

Well, that was an area where we were seeing more growth than we were in the rest of the state and a lot of that was due to the fact that INEL had established there. Atomic Energy Commission … was established early in the 50s [so] we kind of grew up together. We didn't get anything significant from them … until just this last year or two that we've done some things that were good entrees. We did quite a little work for Argonne National Laboratories that got us one of the steps towards nuclear stuff, that I think was experience that the firm needed and certainly we did.

So, let me just follow up on that. The decades long relationship between the CH2M office and Boise and INEL, then the Atomic Energy Commission, you think that was an entrée to some of the nuclear work you got later on, a lot of which was headquartered in Denver, including Rocky Flats.

Oh, it certainly helped. Those things we did there were reactor supporting. Archie Rice knew somebody that was involved I guess with Westinghouse, who was designing a submarine test reactor, that was out at the National Reactor Testing Station. They had a problem and that friend of Archie's looked me up and got me out there to handle a water problem. They had some hexavalent chromium -- a bad pollutant -- some was showing up in the well water around the site and they were needing to know where it was coming from and what to do about it. That was a small job, and that was actually the first thing we did out there at the site.

I'm skipping a big one, probably, two big ones, I think by 1961, the time we moved, and we had obtained the Bench Sewer District project. At that time Boise was still only 35,000 or something like that but there was a big block of population outside the city. It was about 5,000 people in the city and maybe 15,000 out that were not served with sewer service at all. It was up on the bench and … that whole bench area was unserved. That was a big plum to get that job.

How so?

Well, it was just that big. Everybody wanted to do it but we got that project. It was the biggest sewer job in the firm at the time. And it was the first that we used significant use of computers in the design. And the first one where we did all of our elevation work was done based on aerial photography. A lot of new stuff was used in that approach.

Describe how you snagged that job.

Oh, just by learning how to do it a little bit better. That was certainly part of it, and part of it also was we had a good team. The basic formula was starting to develop that we had a good team to back me up. I could provide something that nobody else in Idaho could. It took a while, I had just a little one-shot office in a building, hard to get people to appreciate that. Matter of fact, I have to go back to the Caldwell job. That took some doing to get that done but we had good hard work and I guess good people on the city side and I think we, in effect, could offer them experience that nobody else was in a position to do.

Which they found to be very attractive.

Yes. And there were some mistakes made. The first thing we did for the city of Caldwell, … [was] a study that analyzed the problem and laid out what alternatives there might be to solve it, came up with cost estimates and our recommendation of what you should do. That's pretty key, that's the [study] that council listens to and they expect you to take the ball and go ahead if they hire you for the next step. Well, we had a good relationship with a number of suppliers in Corvallis [office] and one of them was a print shop that would put our reports together. We could always count on them to work Sundays, so if we'd get it in there Saturday night, they could get it out Sunday and I could make a Monday night council meeting. This happened too many times.

That was the formula for success, huh?

Well, you be sure you get it out on time. And that really helped, we always used every minute we had to get it together seemed like. We need to get it out and their working Sunday was just a Godsend. Anyway, we had to send the report over on a bus, came here on a Monday and we had it presented to the council on a Monday night and the covers were marked 'City of Caldwell, Oregon.'

Whoops!

Whoops!

Is there in fact a Caldwell, Oregon?

No-

Okay.

It was just an Oregon outfit and that, most of everything we'd been doing over there was for Oregon and it slipped by somebody. It looked natural but it wasn't right. That had been preceded by the city attorney from Caldwell came over to bring me something and his comment was, 'boy, what a funnel this is!' He recognized that all we were was just a funnel for work to get it to Corvallis and the cover didn't help one bit. But we survived that.

What did the city council have to say about that?

Oh, I had a pretty good story worked up and didn't let it be a problem. I made the announcement we'd had a problem getting it out and would certainly get that corrected. I talked about the Caldwell project a lot, but that was an important one. Another one touched on the diversity area that we were expanding. One of the first jobs we did in Idaho, Idaho Falls, before we did that wastewater treatment project was a swimming pool.

A swimming pool?

Well, I was looking for jobs anywhere I could find them, and [I knew] Ralph Roderick had designed swimming pools. So I said, gee this is something we can go after if it comes along. There was a lot of talk about [one in] Idaho Falls, and I just hadn't been able to get up there. By the time I had, it got to be kind of a fight between all the equipment suppliers. These people were coming in and here's what we can offer you at so much cost and here's what we can offer you and it's better. The council was all confused about what all these options so the thing [pool] was kind of sitting. By the time I got over there, I said, 'well, I'm not here to sell the equipment. We're here to help you design it and get it located and in the first place I think you need to know how big it should be, whether what you want is enough, how you're going to properly serve the city.' That was an entirely new approach [for them] and they liked it.

Good.

So we came up and said we ought to locate it. Where they wanted to put it was a pretty good location and we described some others but it looked like that, with the money they wanted to [spend], the

one location would be a pretty good idea. So it looked like we had the job lined up and they said the mayor would like to see you. I hadn't even met him yet, I'd just been talking with the people in Public Works. So, I went in and said, 'here it comes.' I got in there, a big office, and he had a mayor's chair, one of these big ones with a back that go up over your head and he's a big man with a booming voice, not necessarily loud, but authoritative.

Right.

Well, anyway, Ralph Roderick came over and helped get that swimming pool put together and it was built. That was really our original project for Idaho Falls and then the bigger job, was our wastewater treatment.

Sure.

Then, I started to tell you about the Bench Sewer District. The Bench was, by far, the biggest sewer job we'd had up to that time firm wide. And we used some new approaches of putting it together. I think it was a tough project that was one where we were doing something backwards. Ordinarily, if you're going to serve 15 to 20 thousand people in the sewer system, you'd build the sewer system first, then you'd build the water system, then you'd pave the streets. And here we were putting the thing that goes on the bottom, putting it in after everything else. It was kind of messy. Our approach to it provided us with some other [work]. Jim Poirot may have mentioned there was a big one up around Olympia, WA, that came right after that. It opened the door to some new things.

In other words, the Bench Project here in Boise was the entrée to other—

It was the biggest one we'd done—

The firm must have been pretty proud of you on that one.

Well, I hope so, I think they were. And I had all sorts of help, too.

The sewer district continues to this day, right?

Yes.

So that was the largest one at the time—

Up to that time. We've done some much bigger ones since then. But anyway, I'd rather go on to the highway thing, because the highway opened us up to a lot more work that is still pretty big to the firm.

Please describe that.

At the time it was by far the biggest. That was the first one we'd done as a firm. In Idaho and in the country, we're doing some big stuff. The highway job was the first one that we'd done for the state. It was the first one, I think, also, one of the first ones that the highway department had contracted out. The first one where they contracted the structural design as well as the highway design. … the only things we did even then was the box girder structures. They had no capability in the highway department to do that and we had a pretty good man. So, we designed the roadway and the box girder structures, which most of the time were curved or can be curved and a long span. Concrete structures, there were still some precast structures that the highway department went ahead and did so we didn't do all the structures. But that was the first interstate project we'd done for the highway department. And that was about ten miles of interstate through Boise and the structures on there, and you see some of those are still on, they had to expand things several times but some of those are still in service.

Amazing.

And then as a result of that, we'd gotten a number of other structural designs for the interstate projects in Idaho, most all of them. I-84 south, it was I-80 at that time, but its I-84 now. We did some work too on I-90 in north Idaho. That was more environmental, I guess. But that's just probably going to go and confuse the thing. It was the first major structural design, or interstate design project we had. And it was followed by some very major ones across the Columbia River, we did some foundation studies on interstate structures, across the Columbia River. But that was an outgrowth of this, it helped to have this one on our list when we went after that one.

In the 60's, when you were working on some of these big projects and the office was starting to do really well, and the relationship was always good between the two offices, Corvallis and Boise, but there was a sense that Boise was up and humming now, doing quite well.

Did Boise carve out a reputation within the larger firm … for having expertise in one or two different areas?

Oh, I think it certain had a respect. I know that probably the one example I would treasure the most was … the merger between Clair Hill and CH2M. Clair came up here one time and he said just wanted to sit down and see how it was and we sat down here and kept telling him how we're turning out these projects and making a profit at it. He thought we were doing a good job.

So the reputation had already gotten to him at the time of the merger—the merger was in 1971?

I think so, you probably have that there. We had a lot of respect for each other and I worked with his people, some other jobs we'd, there were some rough spots…

How so? Where were the rough spots?

They were big into irrigation and reclamation projects and they'd done quite a few. They'd done dams and all sorts of irrigation projects. The city of Baker, Oregon, which was my area of responsibility, came up with a project that required a dam to store water up in the Elkhorn Mountains. The Glacial Lake existed there and there'd been a dam put there two times before just to raise the capacity of that natural little lake and it had failed twice. Well, we had a good soils department, Jim Howland had a background in soils, too. I thought that a regional manager has the authority in the way we had it laid out that would say who was supposed to do certain projects if one discipline, they were both involved, somebody had to channel it, and I said, 'gee, our soil people should be taking that on.' Well, Joe Patton, a great, great friend of mine now, been long in Bureau of Reclamation, thought that should have been an irrigation project or dam project under their jurisdiction. Well, I made a firm decision there. Joe didn't like it at the time but we got those things refined as we worked them out. But this is one of the things you do sometimes.

Had Joe come over from Clair Hill?

He was with Clair Hill. After we merged, we did work together on a lot of projects. But this is one that the Boise office had never really worked with them before and I go ahead and say, 'gee, this is what we're going to do' and Joe didn't like that.

He didn't like it. You guys are good friends now?

Oh yeah, we were then.

Now the merger probably didn't really have, as you said, much of an impact on this office.

Not too much, we weren't competing. There wasn't much going on between us here.

Did any of the Hill people end up relocating here?

We used quite a few of them at the time. I think one of our key people, our surveyors, had come from them.

I guess a big question when you look back on all your time in Boise as the regional office manager, from 1950 to 1980, what impact would you say that made on your career as an engineer?

Well, I think it was just a part of my career that I guess was my career.

It's inextricably tied to the Boise office, isn't it?

CENTRAL DISTRICT MANAGER

And what I was doing here was tied to the firm, too. … We had a district system for a while, maybe you heard about that. … I was district manager of the Central District for some time and under that I had the responsibility for the Denver office as well. And even for the project office in Minneapolis and Milwaukee. I did—boy, that's something that ran itself but that was still within my jurisdiction and I made a monthly trip to hit Denver and Milwaukee and we had something going in Cleveland, and sometimes we had some stuff going down in St. Louis, too.

That was travel most times?

Yeah, I went about once a month. I made that, ran up my mileage. And I think it helped our top officers, our President and Chairman just couldn't hit all those places all the time and he needed to keep things tied together. So I had kind of a direct tie with what was going on there at the time. The Milwaukee project, you've probably heard about that—

Oh, yeah.

That was a big project and it was an office unto itself, so I had very little to do with that. We had [a] regional office in Milwaukee also that took more when they were trying to do other jobs, kind of like what Boise was doing here. They were trying to go do things and, oh in the Midwest it was mostly in the Milwaukee area. It was a geographic thing and saying here in this region we need to keep everything coordinated for this district and not be going here in one direction and the opposite direction somewhere else.

But that was a huge responsibility for you to take on this office and how do you [think you] were viewed in the full scheme of things by the partners and others at CH2M HILL for the work you did in Boise?

Gee, I assumed that they thought I was okay here or I wouldn't have been Chairman.

A lot of things were pioneered here [in BOI] as you pointed out. The Bench project was a precedent setting one, the highway project and some things that were tried in Boise had not been tried anywhere else.

Well, I hate to take [credit] because gee, I could never have got the Bench Sewer District project here [without a lot of help]. We hadn't done something that was approaching this or we were using computers in this design or, and we had the personnel that had done this kind of work, but this happened to be the biggest job that we'd done at the time. Highways, we'd done highways before, but this was the first Interstate we'd done. I don't want to take credit for something that isn't due, but it was a milestone, but it wasn't a breakthrough and the only thing that had ever been done, just another step ahead. But we were doing it all over the firm.

And as you point out, the partners were going back and forth and help was going back and forth between Boise and Corvallis and it was a good—

…. We used to have District Manager's meetings, [but] at first they were regional office meetings. We got all the regional office managers together and that really, really was quite a building opportunity. Each manager had the opportunity to make a pitch for what was going on at his office and gee, those got pretty well done, they—

Maybe somewhat competitive, I imagine.

You bet. It gave people to be proud of what they were doing in their office. And it gave them an opportunity to say, 'hey, look, we could do this if you need it,' so all the rest of the people had an opportunity to get a different view. Let's see, oh gee, this is going on over here, that's the kind of thing we could do over here and just made the experience in each section of the firm available to the rest of the firm. Had some great presentations in that thing.

Can you remember one that stands out?

Oh, one, I guess. An Alaska manager wanted to show just how big Alaska was compared to the rest of the territories and he had some beautiful displays in the slide and flashed them up and showed Alaska covered half the rest of them.

And he was also trying to say, this is a big area for us to cover, yeah?

It was a good experience, good experience for each regional manager and certainly broadening so people were up to date on what our capabilities really were.

In the later years, getting closer to 1980, I guess it was all planes and computers in terms of communications in terms of travel.

Yeah, I don't remember exactly when we curtailed the regional managers. We realized it was just getting too big and we couldn't find places to meet and it was expensive to get all those people there and so we waved good-bye to it with the understanding that gee it was great while it lasted. We're going to have to do something else. We did retain … how we kept the thing going without those regional manager meetings.

In those 30 years, what's the one thing that you would say you're most proud of in your time as manager of a regional office?

Let's see, what … the office on the Greenbelt was something, was a nicety—

Oh, putting your office on the Greenbelt. When did you guys do that?

Well, that was about 1970, didn't we say, somewhere in there?

Yeah, you built the one there.

The one we left, outgrew the office on 1st Street, we had this one built down on the Greenbelt. Of course, I'd been championing the Greenbelt. I thought that's where our office ought to be. We were down here on a little special street they call Clearwater, which was something we had some suggestions for the name of the street, and not too much in view of the general public. But boy in the summer, the traffic of the floaters down the river is something then of course people walking on the Greenbelt. Lot of people see the people from that side, so we ended up putting our building sign out on the river side rather than the street side.

Folks from the other side and the folks who were floating in the river could see it. What were your options off the name Clearwater?

I think somebody suggested that, and that sounded good to us. That was kind of our—what we're in business for.

Oh, you helped name the street then, you say?

Yeah. It was a private street.

Oh, I see, so you all named it that. Good name.

Yeah, kind of our business.

CHAIRMAN OF THE BOARD

We're bringing it up 1980 and when you became Chairman of the Board of CH2M HILL. Why don't you start with describing how that came about? How was it decided you would be the Chairman?

Well, actually, when Harlan came in as President, which was about three years earlier or something like that, I'd thrown my name in the hat, I think there were three of us in and Harlan was selected which I think was the right selection, but I guess I was encouraged to have a slate in there in case somebody said 'no, that they didn't want to do that.'

So you were among the names that were considered. Jim Poirot was also one.

I think so, yeah.

Right. There were four or five of you and the Board discussed it all. But wasn't there a pretty strong sense that Harlan was going to do that?

I think so. I don't think none of us I know of had any problem with it at all. Then just a little while later, Holly Cornell decided it was time to retire, and that the Chairman's position would come up. And, I was encouraged to put in my name, and I did.

By whom? Who encouraged you?

I don't remember. Holly, I think.

In your memory, how was a headquarters move being considered? It was something that was thrown out—we really ought to have a different headquarters than Corvallis, is that how it began?

Yes, and I think there wasn't a whole lot of discussion about it on the Board. I think the people that were really seeing where the firm was going and planning and making the decisions of the direction and where the resources went, and how we handled it, could see that we just weren't in a position to manage what we wanted to … From Corvallis. But we were running our present wild and having problems develop because we didn't have instant communications or better communications to the rest of the country. We already had

offices all over the country and it was just difficult to get plane service out of Corvallis like—or isn't like.

So the discussion about the Denver move, this was one of the first things that you had to contend with –

Yeah, with the Board. So it wasn't the first meeting, it was very soon afterwards. Very early, a decision was formally made … to make the move to Denver.

So you were explaining how Holly had decided to retire as Chair, step down as Chair. So how were you selected to be Chair?

Well, by election. But Holly was Chairman of the Nominating Committee. I don't know who all else was considered, maybe none were. I pretty honestly don't remember.

When was that, that was 1980? And had you already stepped down as Boise Regional Manager?

No. No, that was part of a succession that happened after that.

You stepped down when you became Chair? As Manager?

It was very shortly after, I think we probably waited until after the election and then did it. This had all been discussed.

Okay. But you remained based in Boise though?

Yes.

All right. So now, on the change of headquarters, which cities were considered?

… I'd thrown Boise in just for…but the serious choice was Denver. We'd pretty well been through that.

But wasn't … Seattle and Portland given quite a bit of efforts?

Not that I was aware of. Maybe were mentioned, but Denver looked like it was the place, it was central to the country and—

A more central location was probably its chief asset.

And, closer to developing areas. That was one of the problems that we had, that the President particularly was having to spend most of the time in the newer offices. And they weren't in the Portland and Seattle area, they were in the rest of the country. And Denver was in a far better position to serve these developing areas of the firm.

Well, you had also two big projects going on in Denver, the Foothills District project, the Denver Water Board project, you also had Milwaukee and you had the acquisition of Black, Crow, which was in Gainesville and that primarily an east/southeast kind of thing, so Portland and Seattle are pretty far away from all that.

Well, and actually where the President has to spend his time are the newer acquisitions of the newer developments. That's where he needs to be spending his—

And of course the Upper Occoquan was going on which was a DC thing—

And that was, farther away again—

And Harlan was personally involved in that one. What would you say were the … some of the immediate challenges you faced as Chairman of the Board?

Well, getting that [Denver move] done and getting the people that were concerned about it convinced that was the thing to do.

How did you do that?

Oh, I think just by outlining the things we're talking about now, what the President was having to do now, looking after the needs of the expanding company.

Okay. How often did you go to Denver when you were Chairman?

… I did that once a month. And … the corporate body didn't move that immediately, I mean, it took time to get that done. That was Harlan's responsibility, I didn't have much to worry about. I was in a position of making a corporate decision and the Chief Executive Officer had to do it. And that's where the nuts and bolts [of] what do we move and how do we move it and who goes and who doesn't have to and—

Initially it was decided that accounting and business support functions would remain in Corvallis, but a lot of the groups, the disciplines, would be in Denver. Is that right?

Well, some of it. It didn't really disturb the disciplines too much initially. But I think things gravitated almost naturally to the place where they made the most sense.

Was it challenging for you to be based in Boise with a company that had predominantly been based in Corvallis and was now shifting its Headquarters to Denver. It was sort of a three city arrangement for you as Chairman?

No big deal, as the people knew where they were and knew how to get in touch with them and that's all that mattered.

So where were Board meetings held?

I don't know when we officially, we didn't even have a headquarters there for some time, it took us several months before that was done. I guess, within the first year, as I remember it.

Okay. Name a couple of other standout events that occurred while you were Chairman.

I think one I spent as much time on was the Washington, D.C. office.

Yeah, tell about that a little bit.

… We'd been dealing with some of these high powered consulting firms, most of them attorneys. When they needed to have something done in Washington it wasn't all that effective. And it was really expensive. We felt that we could do it better ourselves.

So, this is where Burke [Hayes] had an interest, because he'd had the assignment of, maybe more informally, but he was a big help and had the main contacts with some of the firms we'd retained to do this. But Holly had the initial idea … the concept was that here's this guy, Dick Corrigan, he's the head guy at the Consulting Engineers…of USA I guess it's named now, but it was a nationwide consulting engineer's organization. He knew the consulting engineering picture, he worked with them, and he certainly knew Washington. He had a very interesting background which equipped

him very well with contacts with government for accomplishing those things that Washington offices we needed to have done and could have done.

The big trouble was just in details that we had kind of a novel approach for compensation. Ownership is a big thing, to pull somebody in that wasn't an engineer and didn't fit that criteria, we couldn't initially come up with an offer that would be sufficient for his purposes. Because he was a valuable man … we had to fiddle around with that, we got it done, worked out a way to get it done. And he's been a very substantial addition to the firm in my estimation.

Where is Dick Corrigan now?

He's still there. He's retiring this year. Gee, that was 1980, I think it was right after I came in we got that thing going and got the office established.

And that was called the National Governmental Affairs office for CH2M HILL in Washington, D.C. Of course you'd had a regional office there to work on Upper Occoquan in Reston, Virginia.

Yeah, but … that was an operating office. The Governmental Affairs office wasn't involved in that at all.

The Salt Lake City office also opened while you were Chair.

Yeah … I wanted to do that for years. Salt Lake was a big market and we weren't very successful, but we'd done a few things down there. … it wasn't until—the name of the firm escapes me now—another firm that had a Salt Lake City office … was going to terminate that office and we basically picked it up. … They were mining engineers for the main part and that had never been a thing that we did too heavily or seriously … so we brought them on board. We did have some [other] real good moves and I guess that's still going, a very good capability in irrigation, water resources that had come to us from Clair Hill's acquisition. He's actually been in the Boise office for a while, moved him to Salt Lake—and we were very successful in some water resources government problems that were a whole lot better than that mining thing.

Good. What were some of the other standout events that occurred during your three year term?

… There was a lot I could do and the Chairman was supposed to kind of maintain the ownership program and keep the troops happy. I really enjoyed that. Well, there were a couple of other things that I've mentioned, too.

Describe the ownership program. Why do you think that that was such a benefit to the firm?

Well, I think just like my own personal reaction was with Holly Cornell, 'gee this is a great firm but I'd sure feel a lot better about it if I had an opportunity to be an owner, be a part of it'. I think that's a natural feeling for people that think they are contributing a lot to the firm. They'd like to have the satisfaction of knowing that they can participate in the rewards.

We made a number of changes to that as we've gone along and I'm not even really the one to talk to about how it ended up because I know there have been some major changes since I was there. When I left, the rule was, and I think it still similar to that, but you turn in your stock when you retired. They gave you a note and paid it off and you didn't have any voting rights or any—you were entitled to the assets of the note that you signed, but not stock value or stock growth. And the object is, they can still sell.

A lot of the desires and the needs of the active people in the firm aren't necessarily the same as those that have retired. Particularly when it comes to what risks may be involved in expansion and looking ahead. I'm not sure where that philosophy stands now. I know we can buy and sell stock now under certain circumstances, certain conditions. That's one of the things I think Dick Corrigan had to do some work on with the national legislation so that we could still preserve the benefits of the employee ownership without being just thrown in the mill of the public corporations.

From 1980 to 1983, when you were chair, was the culture of the firm changing at that time from when you first worked the firm in Corvallis, or describe the culture then.

I don't think it was much different, but now maybe it was, in my mind. My perception was … we wanted to preserve what we had, as far as the culture is concerned. There's some changes as far as eliminating the districts, I didn't think that interfered much, the culture was fair reward for your contribution. As exemplified in the

ownership program. We had always some tinkering on that, but I think the objective was the same, anyway it was trying to be sure we were achieving the ideal better. How we just turn the profits of the firm has always been something we've been talking about and we'd done and a number of things in that.

But it wasn't terribly different from how things were back in 1950 or the late 40's when you were first starting in Corvallis?

I didn't think so.

The size, of course, was—

Oh, yes.

But the people were the same. Very good.

Let me talk about some other things that I think were interesting and fun. About this time, we decided we might benefit from having an outside Director or two on the Board. So, we spent quite a little time chasing down people who … could contribute to the firm and we might want there. … Got to meet some interesting folks.

That was a priority of Jim Poirot's as well, wasn't it?

Yes.

Did the two of you work on that together?

No, I worked on that and got one of them in, and then I think Jim continued and brought in another.

Who did you get?

Cox. He was the first one.

And you met some interesting people. Who did you meet?

I met with … two Standard of California, Chevron … Chairmen of the Board or co-Chairmen—and then met with him and he was very helpful. Out of that came some opportunity to meet with people farther down the line that might be interested in probably doing some work for Chevron, which of course is always something on their mind. But that happened also with … the national oil firm.

BP?

> Occidental Petroleum Armand Hammer, CEO. I met with them, and I think I used the example that this man was a buddy of mine in the service that had all these connections and I wondered if he really did. He proved he did when I went with him on a business development [trip]. What they might do is represent to these energy and petroleum businesses the sort of the thing that we might do for them and he got on with the people that you'd want to meet with on their Board and then their executives group.

Now this idea of outside Director's was another thing that was resisted by some of the top brass in the firm.

> Yes, I guess it was.

For reasons very similar to what you just said about going public, the idea that you'd bring somebody in from outside to learn the nature of the things that were going on in Board meetings. Why did you think it was a good idea?

> Oh, I thought it was just a question of perspective. … I think Jim Poirot … did an extremely good job, I thought, in bringing in his outside man. … I was surprised and pleased that he was able to make such good associations with so many people. He would hear a lot of things that I think were useful if we want[ed] to be a 15,000 firm corporation which I guess we're a little better than that now. … We better know what some of the problems are out there or opportunities we want to be aware of [that] we don't have going internally. There may be some whopping good things we ought to be doing … because we've never done them before.

Where did he come from—Ralph Cox?

> He was Union Oil. By the time we got him, he was with another, but it was a subsidiary or spinoff.

So you asked Ralph to be on the Board? You got him on board.

> Well … the final may have been after I'd got Harlan in on it too. We both asked him.

I think Jim Poirot discussed it a little bit, too, about his involvement in that.

Very good. We're working up to 1983 when you stepped down as Chair, you did some projects, but shortly thereafter you retired from the firm. Before we get there, are there other things you want to talk about there in what essentially is the final years of your full working career with CH2M HILL.

Well, I enjoyed those, I enjoyed meeting the people on the Congress, and working with Dick Corrigan … was a real pleasure.

As you mentioned, he's about to retire.

Yes. Yeah, I think that's, he just told me that on his Christmas card. I'm not sure a lot of people know that.

The contacts I had in talking with people about who might be interested on the Board … was an education to me. While it was much value to the firm, I'm not sure. When you [have] the opportunity … to talk to so many CEOs … there are a lot of things you can't talk to them about but you say 'hey, I'd like to talk to you about really high level things … they listen. You can sit down and talk to somebody you'd never have an opportunity to any other way. A lot of that led into 'well you ought to talk to these people on the firm and they'd have an interest in you.' It was just a whale of a good approach that I'd never been in a position to be able to do before.

You enjoyed that as well.

Yeah.

So in 1983, as promised or as planned, you said I'm going to retire at the age of 60, and you wanted to—

Oh, there is one thing that would be of interest. And I think I mentioned that both Jim and Harlan—on my retirement, Harlan would like very much to have been Chairman and Jim Poirot wanted to be President. And I thought, and I still think that was right, either of them could have done either one. I'm convinced of that. I have a lot of confidence in both of them, but I thought the best combination was Jim as Chairman and Harlan as President.

And while you were Chairman of the Board, Holly Cornell was President and CEO, is that right?

No, we didn't have a President and CEO. When I was Chairman, Harlan was President and CEO.

Oh, Harlan was President.

Good. So you retired in 83.

Right.

REFLECTIONS - EASING IN TO RETIREMENT

Good. All right. Sid Lasswell said, when he was talking about his retirement, finishing his career at CH2M HILL, was that he felt lucky because he felt like he was able to wake up every morning and enjoy going off to his job. Did you feel that way during your working years?

Oh yeah. I'd put it in a little different terms but trying to influence others and so on, my kids, I loved my work and I have to work so isn't it great that my work is something that I love to do.

You guys also worked hard, very hard, the original founders and partners and early partners. Long, long days and a lot of travel, lot of time away from family.

Yep.

There were sacrifices, too, I imagine. How did you feel about the balance between the hard work you had to do and the sacrifices you had to take?

Gee, I never, it just seemed like it was a necessity, there wasn't a question about whether I could or whether I couldn't, I knew I had to.

Probably a little also, of a hallmark of the times, was it not?

Yeah, I don't think I was alone in that.

Okay. Some of the final questions here. The Boise office being the first regional office, and your leadership of it for 30 years led to many ramifications for CH2M HILL's business in this area. There's a lot of work going on right here in your backyard because of the office's prominent geographic location in Idaho, is that not true?

True, I think maybe that's one of the prices that you pay for moving big, is that we don't do as high a percentage of Idaho work as we did here 20 years ago.

I see. You've moved beyond Idaho.

We've moved to bigger jobs and there's a lot more competition here than there used to be and a lot of that's been because our effort has

been devoted elsewhere. … We're designed to go for the big jobs and a lot of jobs in Idaho haven't got that attention.

There just aren't that many big jobs?

No, not the size that we're going after.

And that's the role that CH2M HILL now plays in the world, is to go after the big ones.

Yes, that's true.

There are two big jobs that the firm recently scored, actually one's an ongoing one but it's ramped up considerably and that's the Idaho Highway project.

Well, that's the one, we don't know where that's going.

You don't know where that's going. Do you have any idea what's involved in that project?

It's supposed to be a one and a half to two billion dollars of highway work.

Is this a revamp of all the highways?

New highways, improvements—

Interstates as well?

Yes. I think all state highways.

Gosh. And CH2M HILL landed that.

In conjunction with Washington Group International, that's a MK successor.

INEL—also a new thing, that's a two billion dollar project, and that's a cleanup.

Right. Our track record has been pretty good at that.

With the Energy Department as the primary client?

Yes.

Indeed it has been, in October, Kaiser-HILL closed down the cleanup of Rocky Flats. The most successful cleanup of a nuclear weapons plant.

Right.

Any familiarity at all with what's going to happen with INEL? That's a relationship that started on your watch.

Our relationship was mostly with the subcontractors, like Argonne National Laboratories. They were a big operator and INEL, I guess they had contracts similar to ours but for a little different purposes. We worked with them on improvements that they were making, test reactors and so forth, got familiar with the window and the language and our recently retired manager of this office, Manager, David Bennion, was the one that was really active in that, with Argonne. So he had a good relationship with people around there.

What was INEL's vision?

I wish I knew for sure. Initially, it was a national test reactor facility. What they call the Idaho National Engineering Laboratory, people were scrambling for ways to make it look relevant and as our interest in nuclear energy dropped the Idaho National Engineering Laboratory came out. And they were doing some stuff that I didn't think, in my mind, was all that essential. I think now they have the cleanup and they know what needs to be done there, or think we do.

Very good. Any other thoughts or views on CH2M HILL rolling forward to the future? You may have heard that Ralph Peterson said he would like to see a company that is now 16,000 employees—three and a half billion in revenues go to 35,000 employees and $15 billion in revenues in ten years.

Is it head-spinning for someone like you, whose employee number was number 8 and look at this company and seems to have become a worldwide industry player, from its perch in Denver, CO? I mean, is it something that you imagined back when you started from Oregon State in Corvallis in 1948?

Not really. I think that as soon as I was involved pretty closely in the firm … we would be projecting and seeing … what we had been doing and we'd say 'well, we don't know quite what it's going to be but this is happening, we better be ready for it.'

And I guess the question isn't really any different now, but boy the magnitude sure is. And the thing that, five years ago, I probably wouldn't have had this concern, now I really wonder if we fully understand what globalization means. All its aspects are something that might be helpful and there might be some things that come around to hit us from behind that we haven't been prepared for.

Like what?

Well, like, right now I think we're seeing that globalization is… producing a … population of technically trained people than we ever had before and boy they're a whole cheaper than what we have right here. So, all of a sudden we've got outsourcing …. And with that, I have a great question about how we can maintain our leadership.

If we outsource overly?

Right. The number of technically trained people that are being prepared globally just totally outshines what we're doing. I have a little concern about how it will come to rest [here and] that we won't have the strength here locally to do what we've been doing historically. Globally, others are going to have that option, the technical staff is overseas, maybe some of the professional staff are going to come from overseas, too.

And by local, you mean nationally, in the United States.

Yeah.

Is there a concern that it seems as if young people in high schools and colleges and universities in the United States are behind—

Very much. I think we really need to hop on that problem.

You were educated at a time when there were a lot of opportunities for science and engineers, but it was very nascent, all very new, I mean as you pointed out you were the first structural engineer to move to

Boise. And, now it seems like the opposite has occurred. There were a lot of engineers, but now no one's getting trained in that anymore.

> And maybe it's another field of engineering that needs to be at the cutting edge. But we aren't really … keeping up with our overseas competitors with how many engineers are being turned out. And it isn't just numbers. … We're passing out information on how to deal with projects that we're producing overseas on the basis of original ideas [developed] here. Now the people are telling them how to use it overseas, and those same people are just as capable of the ones that we're turning out to work on the new stuff—at a third the cost of what we're doing. Somehow that has to be addressed.

Well, I promised you I'd ask these two final questions and I'm asking these questions of everybody, Harlan, Jim Poirot, Sid Lasswell. And you can probably only address your perspective of the culture of the Boise office at CH2M HILL. But, my question is, how in your mind has the culture of the firm changed over time, compared to where it was in say, 1948 to 1950, up to now, the 21st century, at CH2M HILL?

> Well it just can't be possible that we have the close personal associations that we did then. But I think my impression is that a very good job has been done at that. And that it's still pretty good. The culture is going to change as the people have changed, and very dramatically in that same period. The whole country has different expectations and different standards.

You mentioned that there was kind of a consensus style of management and leadership back then, and people treated each other with great respect and confidence.

> Yes.

That's a good way maybe to refer to the roots of the firm, do you feel like the current firm is connected with those roots? Certainly, consensus management, you can't really do that anymore. That probably went out after the years of the merger, but…

> Well, it can't be as direct and effective, but maybe it's as good as it can be. I think it's certainly important to keep striving with all our might, and maintaining it as close as we can under the current conditions that we find ourselves in.

You told me about this gentleman who said that people ought to have experience before they go away from the firm for a while and then come back. Is it your sense that there probably is more of that obeisance to the kindness and respect, similar to the atmosphere that occurred in 1948 in Corvallis? That there's still some lingering presence of that in the firm today?

I'm not sure I can say, I think when I was still traveling around to various offices and I'd get a feel and touch, I had more confidence in them, maybe it wasn't any good, I'd still talk to relatively few people but I was getting the feel for what was going on at that time and that place.

But now you feel a little bit disconnected from that?

Yeah.

Do you think it's important for a firm like CH2M HILL to remain true to its roots? Have some connection with the past?

Oh yeah, I think so. I think we should continually examine to see, under the present conditions, if those roots are getting us where we need to be, if there's some changes that need to be made. I don't believe in rigidly adhering to something just because that's what we've been doing.

How do you think a project like this, delving into the past of the firm, can be useful to the firm today?

I guess that's why I asked you the question at first, what are we going to do with this? Well, I guess I'd say that you can't use anything unless you do it. So …, I think you could do a number of things. If just a few people read it, they may have some ideas of something that 'hey, maybe it worked ten years ago, but this is kind of off the wall, we need to re-examine this.' It's a good outline of where we are, where we think we are, and maybe we see some things we like, some things that maybe we don't like and unless we do this, we don't have that skeleton to work with.

When you look back at your career at CH2M HILL, what would you say is the thing that you are most proud of? Your whole career.

Well, I'm glad I headed this direction …. and made the whole trip, don't see how I could have made a better trip.

If you don't feel like there's anything that we haven't covered—your years in the Boise office and as Chair, I think we covered pretty comprehensively.

I think so.

Good, well this has been good.

Certainly enjoyed it.

So have I, very much.

End …….