

Interview with Herb Schaal at his High Meadows Ranch on May 10, 2007.

By Carrie Gregory

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Ms. Gregory: It's May 10, 2007. My name is Carrie Gregory. Stev Weidlich is our videographer. Stev and I are from the San Diego EDAW office, and today we're interviewing Herb Schaal, landscape architect and founding principal of the Fort Collins EDAW office. We're at Herb's place, High Meadows Ranch, about 8,000' on the east slope of the Rockies, just a short distance from Rocky Mountain National Park.

Ms. Gregory: We'll start with a little biography. Where were you born?

Mr. Schaal: I was born in the Bay area in California.

Ms. Gregory: Where did you grow up?

Mr. Schaal: Same place.

Ms. Gregory: I understand that your bachelors and masters degrees in landscape architecture are from the California State Polytechnic University and State University of New York at Syracuse, respectively. Who or what influenced you to select the profession of landscape architecture?

Mr. Schaal: Well, I think you're getting ahead a little bit. My father was a landscape architect. He came over from Germany on the boat in the Depression period; he came over to build gardens. He knew Garrett Eckbo and Tommy Church. He actually worked some on Tommy's projects. So when I grew up, I had to go into the field with my dad and it was a great experience. I didn't realize it at the time; in fact, I resented it, but I learned how to set a rock and how to build a fence, thread pipe, pour concrete, and dig holes. It was great background for me.

I started helping my father in 1953 when I was a junior in high school. That was the year the State of California enacted the license law for landscape architects.

California was the first state in the country to have a license law. My father was "grandfathered" as a licensed landscape architect because he'd been practicing in California for over 10 years. I presume Garrett Eckbo, Ed Williams, and other contemporaries also were "grandfathered."

In 1958 immediately after high school, I enrolled at California Polytechnic State University – exactly 100 years after Olmsted received the commission to do Central Park. Remembering that date helps me put the practice of landscape architecture in perspective.

Ms. Gregory: Was there ever any doubt in your mind that you would become a landscape architect?

Mr. Schaal: Actually, I didn't want to go into landscape architecture. I wanted to be a forest ranger, but I didn't know where to go to school for that. So I took the next best thing. And actually, I went to the wrong school.

Ms. Gregory: Oh.

Mr. Schaal: I went to Cal Poly at San Luis Obispo. At that time, Cal Poly at San Luis Obispo did not have a landscape architecture program; the program was in Pomona. It wasn't until I was halfway through the first semester that I realized I was in the wrong place. My advisor didn't realize I was in the wrong place. He thought San Luis Obispo did teach landscape architecture. So the next semester, I switched to Cal Poly in Pomona. At that time, Richard Moore, who became the president of EDAW in the late 60s and 70s, was my major professor.

At the time, contemporary design was taken for granted. The modern movement of landscape architecture had already been well established by Garrett Eckbo and his contemporaries – Dan Kiley, Lawrence Halprin, Tommy Church, James Rose, and others. I knew some of the names through my father. He had their books in his library. It was clear that that was what design was supposed to look like in the 50s and 60s.

At Cal Poly, then, classes on the rich history of landscape architecture were nonexistent. We never did any classical design or the traditional Bauhaus system of design, which Garrett Eckbo railed against when he was a student at Harvard. It had already become passé. So we learned design from Dick Moore; and it was about finding a current reason for form, not copying some historical precedent. So, that's just been ingrained in me as a designer from the beginning – finding the rationale for form.

Ms. Gregory: I also read that you taught at North Carolina State University and the State University of New York. What experiences from teaching do you still carry through today?

Mr. Schaal: I should give you a little history of how I got to those places. After graduating from Cal Poly, I went to work in the Sacramento area for Ken Anderson, who did a lot of recreational planning. I worked there for a year and then went into the Army Reserves during the Vietnam War. I did my basic training at Fort Ord, California and then unit training in Louisiana. Dick Moore had become the Department Chairman at North Carolina State, so when my training was completed, I called Dick and said I wanted to do more schooling. Should I come? He said definitely. I felt I needed to go to school for another four years. I didn't feel well prepared for the profession, but when I got to North Carolina State and he asked me to start teaching. Amazing for somebody who didn't feel well prepared to practice! I taught a few classes. And when Dick opened an office with Bill Beron, a product designer from the university, I became the sole employee, project manager, window washer, sweeper-upper, drafter, illustrator, designer, everything. Because the office was a combination between landscape architecture and product design, we did everything. It was a great training ground for me and taught me not to be afraid of any assignment – because Bill and Dick weren't. We did design for the State Capital of North Carolina in Raleigh. We did product design for television antenna rotor control boxes. We even did a design for an idea that the product designer had for a lifesaving device. It was the size of your wristwatch and it had a little CO₂ cartridge in it. If you were thrown off the speedboat, you could push a button and the CO₂ cartridge inflated a balloon that would save your wrist. We made movies. We did jokes and submitted them to hot rod magazines and Playboy. It was just an exciting "free for all" experience for me.

Ms. Gregory: Wow.

Mr. Schaal: After two years, Dick Moore left the school and closed the office to take a job with Castle and Cook in Hawaii, working on big landholdings and developing some of their acreage. Building on my fantastic teaching background at North Carolina State, I decided to go to State University of New York at Syracuse to teach. I taught there for four years as an instructor. At the end of the second year, the department chairman told me that I had a promising career in teaching, but that I would need a master's degree.

He said the department would be happy to support me pursuing a master's and that I could continue to carry a full teaching load and take whatever courses I wanted.

Ms. Gregory: Great!

Mr. Schaal: So in two years, I got my master's degree. As a graphics teacher, I was disturbed that the students weren't using graphics and perspectives in their design work. Actually, it

was typical of universities at that time. Students were asked to do design and then support the design with some illustrations to sell the project. That's important, but there are people who can illustrate much better than most landscape architects. What landscape architects need to do is use their ability to draw to understand design and to evolve design. The way drawing was being taught was not suitable for this. So I came up with a new method of drawing accurately in perspective that was quick, easy, and taught the students how to visualize design. It's called the proportional method. The method's been published widely and is taught now in most schools. I've certainly introduced it to EDAW. Everybody who's worked with me uses the method and I still use it a lot.

Ms. Gregory: Excellent. You joined EDAW in 1970. What inspired you to join the firm?

Mr. Schaal: Well, 1970 was the end of my fourth year at Syracuse. I'm a western boy. I like the wide open spaces and the clean, dry air and smell of the pines. The east just wasn't home to me.

Ms. Gregory: Okay.

Mr. Schaal: I was determined to move back west. I didn't have a place that I knew I was going to end up. We just packed up the car, three kids, and the U-Haul truck and drove west. I stopped in every office I could find along the way, starting with Ted Wirth's office in Billings, Montana. Ted did a lot of National Park Service work, which appealed to me. But before making a commitment, I wanted to see what else was available.

Ms. Gregory: Right.

Mr. Schaal: I went to Seattle and visited several offices there, including Richard Haag's office, and then worked my way down through Oregon and ended up in the San Francisco Bay area. I interviewed with several offices in the Bay area. When I got to EDAW, the office had a whole different flavor and atmosphere than any place I'd been. It was like a hippy commune, which, of course, appealed to me. Everybody in that office was passionate about doing something important; and doing things that were socially relevant and environmentally relevant. You could just feel it. You could walk into the office for two minutes and you would get it. That interested me a lot. They had just gotten a big land use planning commission and needed to staff the work. They needed me and I liked them, so I signed up.

Ms. Gregory: Great!

Mr. Schaal: The project was the power plant and transmission line siting study for Pacific Gas and Electric Company (PG&E), the biggest utility in California at the time. The challenge from PG&E was to site a nuclear power plant on the coast, and to determine what to do with 8,000 acres of undeveloped land. We also had to figure out how to get the power from the coast over the Santa Cruz Mountains, around several state parks, over state scenic highways, through areas of people who had high environmental concerns, and back into the interior valley.

When I was doing my master's work at Syracuse, I took an ecology course. For my term project, I did an ecological environmental study of an area in upstate New York using an overlay information system, like Ian McHarg was doing.

When I showed the piece of work to the folks in the office who were just getting introduced to this way of doing work also, they put me in charge of the transmission line routing study covering 385 square miles.

Ms. Gregory: Great!

Mr. Schaal: That study proved to be a very important, successful study for EDAW and won a national ASLA award. The company had done some really big studies, like a Hawaii Land Use Law Review. Dick Moore was doing general plans for all the Hawaiian Islands. He was doing big environmental studies for Castle and Cook using overlay techniques, also.

Ed Williams and Howard Altman were doing the Open Space Plan for California, which not many people know about any more. But that was one of the studies that impressed me, and still impresses me of all EDAW's work. Its purpose was to set aside open space for the growing metropolitan areas in Southern California and the San Francisco Bay area. The work that they did ended up committing billions of dollars to set land aside for public use for all time. It was inspiring work. They set the bar high for whatever else was to come along.

The PG&E project was that next major project, and I think it's because of the big work that PG&E came to EDAW. We engaged Jack Dangerman, the founder of Environmental Systems Research Institute (ESRI), a very famous, big firm now that everybody uses for GIS. PG&E was one of Jack's first projects. Jack had just graduated from Harvard, and he was computerizing geographic information systems and looking for some place to apply this technology, which was mostly academic at the time. PG&E liked the idea. They gave us access to their mainframe computer to do the computing. There were no laptops or polygon systems like we have now. It was all key punched card cell systems. Every stroke of the typewriter represented a certain land area and the descriptors went along with that key stroke.

Ms. Gregory: Wow!

Mr. Schaal: That's how we did the overlays. We typed an 'X' over an 'I' to get a different pattern, and that represented two different types of information. We studied PG&E's 8,000 acres with all the information we could get to base the land planning decisions on. I think we were probably the leaders in that technology at that point in time.

I applied the GIS to 385 square miles for transmission line routing, which the old transmission line studies never did; I believe this revolutionized the way routes are selected. This was really cutting edge. We did things like overlay soil color with vegetation color, because in the coastal chaparral, if you have dark vegetation and you go through a light-colored soil to create an access road to build the transmission line tower, you leave a white scar on the hillside. We mapped land value, growth rates of forests, population density, and archeological sites. We did computerized "seen area" analysis to determine every piece of land that could be seen from the state highways and from the state parks. It became clear that there were certain places that were not seen; were not environmentally sensitive; were not culturally sensitive; were not economically sensitive – and those were the places that we studied detailed alternative alignments. This was a big deal at the time. We take that kind of work for granted now.

I wrote an article for *Transmission Distribution* magazine showing the technology. My colleagues would have preferred to see the article published in *Landscape Architecture* magazine. It just so happened that a young Navy officer by the name of David Blau picked up that article back on the East Coast. Dave was a student of Ian McHarg and was working for the Navy on Project Sanguine. He was the project manager for a proposed antenna grid system that would send long wave radio signals to the atmosphere and then back down through the ocean to submarines, which was to be a huge strategic advantage because U.S. nuclear submarines would not have to surface to communicate and could avoid being spotted by satellites, thereby keeping their location a secret.

In order to accomplish this, the Navy needed an antenna grid that was 35 miles by 35 miles on Precambrian rock. The Navy had done an actual test of the antenna in Wisconsin. When Secretary Laird of the Defense Department resigned his position, he said we will build the system but not in his home state of Wisconsin. Wisconsin was a good site because of the Laurentian Shield, which is all Precambrian granite.

The Navy then decided to site Sanguine in the Hill Country of Texas, where there was another big dome of granite. Texas being a very patriotic state, the Navy figured this would be readily accepted.

Anyway, Dave Blau and his department saw my article in *Transmission Distribution* magazine and came to San Francisco to interview us and see if we might be right to help them site the antenna grid using GIS. I hung 20 3'x4' hand colored GIS overlay maps in the conference room; they liked what they saw and hired us. That was EDAW's largest commission at the time. I forget the amount, but it was over \$1 million, and I was a hero.

We did the study, but in spite of patriotism, the people in Texas didn't want it. The Navy then decided to move the study for the project to upper Michigan. The people in upper Michigan didn't want it either, so the Navy decided to focus on all public land. They identified 18 areas of public land that might be suitable, including Nellis Air Force Base, White Sands, New Mexico Missile Range, as well as a lot of national forests, some of which were in Colorado. Now we had 18 sites to study. I devised a methodology and mobilized teams to go out and study those sites.

By that time, Dave Blau had finished his career in the Navy and asked if he could get a position with EDAW. Fortunately, Dave took over that work and left me to go on to do other things.

Ms. Gregory: Now shortly thereafter, you founded the Fort Collins office.

Mr. Schaal: That's right. Although I really enjoyed my chats with Garrett Eckbo commuting across the Bay Bridge from Berkeley, I hated the traffic. I hated what it was doing to my personal life, coming home late, never having time for anything, and I wanted to get back to a more bucolic setting. I had an offer to return to teaching at Cornell University, which is in a beautiful landscape on the Finger Lakes in upstate New York. I envisioned a nice little cottage on Lake Cayuga, a sailboat, walking to campus, and so on. The leaders of EDAW said, "Oh no, we can't lose Herb," and asked what it would take to keep me in the company. I said I'd have to live in a place that I was comfortable in; not in the city. And they said, "Well, we'll do it. Make us an offer." It's always nice to be wanted!

Ms. Gregory: Yes.

Mr. Schaal: So I worked on an offer. I looked at lots of different places in California and in adjacent states, and it just seemed to turn out that everything that seemed to be the quality I wanted was beyond our means as a company. So I thought I'd find a smaller place and start an office in a small university town. Colorado State had an emerging landscape architecture program with a lot of beautiful mountain land around it, close to the forest and the Rockies, the scenic Poudre River on one side and the Big Thompson River on the other. I thought that might be suitable. So I wrote for farm and ranch listings in the area. I got them, came out, checked them out, and found this place.

Ms. Gregory: Wow!

Mr. Schaal: I made an offer on it; I got some partners because it was a little more than I could swing personally. We bought it, and then I told the company that I wanted to open an office in Fort Collins. Oil shale was big then. Energy was really big and there seemed to be a market here for our work. I said I could start out by finishing the work on the study of Colorado national forests in the Rocky Mountains for the Navy. This proved to be a great introduction to Colorado; we rented small planes and flew up and down the Rocky Mountains to see it all from the air, which is something that most people have never done. We flew over this Ranch more than necessary.

Moving to Colorado was a pretty bold move. Although the company said "your plan

sounds good" and encouraged me, they could not make it official until the board meeting in September. I had three kids of school age and had to get them in school in Fort Collins by September. I told them I was buying a house in Fort Collins, putting our house on the market, and moving. I'll call you in September to see if we can start work. Fortunately, they voted to open the office. I started work in the basement of the house because we had a little trouble finding office space. We finally found office space in the Rocky Mountain Bank Building.

One fellow from the Sanguine team came out with me. His name is Dan Sundquist. He's still a good friend of mine, and is now science director and heading up GIS studies for the New Hampshire Forest Society. He was actually one of my students at Syracuse. Dan and I opened the office and started work. I immediately went to Platte River Power Authority, who was interested in siting a new power plant near Fort Collins. I showed them the work we had done on PG&E. One of the main guys at Platte River Power Authority was an ex-PG&E man and knew of the work; he said there's nobody else doing this kind of work, you're on.

Ms. Gregory: Excellent!

Mr. Schaal: So that really created the critical mass for us to have a going office. I also proposed on eight parks for the City of Arvada, which is a suburb of Denver. I had only done one park in my life. I did that park in California for San Pedro County. San Pedro was my first real marking success outside of the GIS land planning area. I felt so proud of that because I was selected over Bob Royston's firm. If you go back in history, EDAW used to be Eckbo, Royston, and Williams. Royston split off EDAW and formed another great firm. I admire his work very much.

Anyway, I had done a park and was able to speak to all of EDAW's history and experience in design in that interview. The client said they'd like to see something new in Colorado as opposed to people who had been doing their work for years. So that got us into the design of municipal parks.

The next thing I did was to immediately go to Denver Botanic Gardens (DBG), because Garrett Eckbo, Tim Downy, and Jerry Loomis had done the master plan for the gardens in the late 60s. It was the first real modern design of a botanic garden in the country, and the only botanic garden master plan the firm had ever done. I said, "Don't call those guys in San Francisco any more, I'm right here to serve you." DBG first hired me to do a few band-aid designs for things that didn't work. After awhile, they hired me to do bigger projects. Ultimately, I got to do the Rock and Alpine Garden. I had never done anything like that before, but was always very interested in creating a natural design. I read everything about rock and alpine gardens I could get my hands on. Every such book at the DBG Library has my name on the checkout card. That garden won a national ASLA award and is considered the best rock alpine garden in North America.

Ms. Gregory: Excellent!

Mr. Schaal: My work at DBG gave me a foothold to venture into public garden design nationwide.

Ms. Gregory: What other kinds of projects did you work on then?

Mr. Schaal: When the office got started, I was the only principal and marketer. So everything we worked on, I had to market. But I think the kind of training I got from those early days at North Carolina with Dick Moore in his little company (doing everything) and then teaching at Syracuse really oriented me to be a landscape architect first, and to have a particular focus second. When you're starting an office up, your main concern is to have enough work to build the office and not to lay people off. So just like that work in North Carolina, we didn't turn down any opportunity, and I even taught my perspective drawing method at night to help pay the bills.

We were into a little bit of public garden work with DBG. We were into municipal parks. We were into regional planning and major facility siting work. And I'd always wanted to work for the National Park Service with my forestry interest and my interests in being in nature.

One of my priorities was to try to get a project with the National Park Service. Their design headquarters was in Denver. When the RFP came out for a project in Yellowstone National Park that was mostly related to water treatment facilities and sewage treatment facilities, I teamed up with Bill Taggart of the firm Wright McLaughlin Water Engineers. Bill had done the engineering for the DBG and another project on the Platte River that I worked on. They had never gone after a Park Service job; but I convinced them that EDAW's 255 would look great with all the federal work we had done on the West Coast for Yosemite, Angeles National Forest, and Lake Tahoe, and that together we would be a strong team.

They went after the job and got it. I was their landscape architect, and helped with the siting and restoration of all those projects in Yellowstone. It was the most wonderful job. For over three years we'd go up to Yellowstone every spring and every fall, before the tourists and after the tourists, and work in the park. We'd drive to our project sites through herds of buffalo and elk, and see bears, moose, and trumpeter swans on the Yellowstone River. I was in heaven. That work turned out very well and gave both our firms good credit with the Park Service.

So when the project came up for the Grand Canyon, we went after that as well and got that job. We had the same wonderful experience in the Grand Canyon. We hiked down to the bottom of the canyon many times. It's over a mile down you know. And a mile back up, which is more relevant. We worked on new trails, restoring areas disturbed from water pipeline construction. We were now firmly established with the Park Service, which is still paying off today. A major portion of our work in Fort Collins is not only with the Park Service, but with all of the federal agencies, who are also centered in Denver. We do work for the BLM, National Forest Service, Bureau of Reclamation. We do resource studies, campgrounds, visitor centers, and trails. It was great getting that started. Today, that work is being carried on by Phil Hendricks, who worked with me in the Grand Canyon. Jana McKenzie has taken over most of the municipal park work. We've done over 50 municipal parks, and Jana has become our principal park planner and park designer, one of the best in the state and nationally recognized.

When we were doing the Platte River Power Authority work, Tom Keith was on Platte River's staff. I convinced Tom to work for EDAW. Tom's taken over that area of work and has given me the opportunity to develop a more focused path for myself, which has been in the public garden area. I'm very proud to have done everything, including urban design, but at heart, I'm mostly a garden designer like my Dad.

I forgot to mention that one of our very first projects was the downtown design for the City of Fort Collins. We teamed up with Johnson, Johnson and Roy (JJR) out of Michigan to do that project. This was a project the city thought the whole country would be interested in. They interviewed Halprin, Sasaki, Ed Stone, and other big names. We were able to win that job with JJR, partly because of EDAW's work in the 50s and 60s on urban malls in California.

We've done other urban design since then. At first, Charlie Rapp focused on that area. Charlie joined the office in the late 70s as the second principal. Charlie was a great designer and Rome prize winner. He is one of the other owners of the Ranch and moved here from San Francisco. It was Charlie's idea to buy our historic building on Mountain Avenue and renovate it to an office. I think we are the only EDAW office to own our building, and we are one of the first new investments in Old Town Fort Collins, which was part of our downtown plan.

Charlie moved on to head up design projects in EDAW's Irvine office, and I hired Russ Butler to carry on the urban design work. While in Cleveland, Ohio, Russ read an article that I wrote about the office in *Landscape Architecture* magazine. He liked the sound of a big time office in a college town in the Rockies. He shared many of my

values, and it was no trouble recruiting him after cooking a couple of steaks on the campfire here at the Ranch. Russ also brought superb graphic design skills with him, which we were able to market firmwide. Eventually, Russ moved to Evergreen, Colorado and opened the Denver office.

In the late 80s, EDAW acquired Aqua Engineering, the state's foremost irrigation design firm, so we could offer fully integrated irrigation and water conservation design with our projects. Greg Hurst, who was with Aqua Engineering, is now our principal engineer.

Other key people I've recruited include Ted Johnston, Michael Bowie, Jana Knezovich, and Bob Komives.

Ted was working in EDAW's Irvine office and became the third principal in Fort Collins. Ted headed up a very successful land development group.

Michael and Jana both came from the San Francisco office. Jana was the original office manager and took care of all the administrative functions and marketing.

Michael is an avid outdoorsman, so I took him cross-country skiing for his interview. He ended up managing most of our regional planning and environmental work.

Bob came to us from a planning position at Martha's Vineyard. I took him crosscountry skiing also. Bob headed up our city planning work and subsequently wrote Fort Collins' nationally known *Land Development Guidance System*.

In the 90s, Tom Keith stepped up to head the office, and I was finally able to focus on public gardens.

Ms. Gregory: Before we get into that, could you tell us a little bit about your vision for the office.

Mr. Schaal: I wanted to establish an office that had a great atmosphere, that had flex time, and that was about people and families, fun, and about really enjoying work. I wanted an office that was always trying to push the innovative and creative envelope, which is really the root of the company – what the company was like when I joined up in the 70s. When I started the Fort Collins office, we would sit down for every new project and have a little council, and determine what we were going to do on the project that we had never done before – what we were going to do that would make it special. What we were going to do that would make us happy and make it worthwhile. We do that second nature now.

When people ask me what EDAW stands for, my answer is Every Design A Winner. When I start a project, I still try to figure out what it is about what we're going to do that will make it a winner. I believe that's why Fort Collins is the most award-winning office in the company. It's all in the attitude.

Ms. Gregory: What award are you most proud of?

Mr. Schaal: I don't think I have an easy answer for that. But one that would certainly be on top of the list is the ASLA President's Award for the Summer Student Program. And that's actually a good segue to telling a little bit about EDAW's Summer Student Program. In the late 70s, after I had the office going, I wasn't getting to the Ranch enough. I had always been interested in camp counseling from my early days as a camp counselor before college, and dreamed up this idea of having EDAW have a summer program with college students. SWA had already had something like that, but their program was an all summer long program with weekly events. I wanted to do it differently, mostly because I wanted to utilize the assets of this place and realize the idea of having an office and practice that was integrated with the mountain environment. So I put out the idea to EDAW's Board of Directors – that we could get students for two weeks and we would have a workshop with them. They said, "That sounds like it might be okay, but how would we pay for that?" I did the math and said if we have a dozen students and they work all summer long, they will generate the income it takes to put the two weeks on. Can't we look at it that way? The board agreed and set a budget of \$35,000.

I bought teepees for the students to sleep in. They made their own tables out of the woods. We cut trees and made sawhorses, and then we bought a bunch of damaged doors for tabletops and used the old cabin as a studio. It was great for my family because my kids all served as cooks or cook's helpers.

The first week of each year of the program was input week. Second week was output. The first week was like school, and it was wonderful because EDAW was so interdisciplinary that I'd have archeologists, historians, engineers, foresters, and biologists. They would all come up here and not only give background information on the project, but demonstrate things right there in the forest with the students.

Ms. Gregory: Can you relate any stories to us?

Mr. Schaal: One year we put a tripod up in the lake out of lodgepole pine poles, with the idea that we were going to make a swimming and diving platform. Wind kept blowing it over, so we hung a line down from the middle, with a big rock (like a plumb-bob) in the middle to hold it down. Bill Taggart, the engineer that I did the NPS work with, came up during that summer program and he saw that tripod in the lake; it looked like something a surveyor might construct. He said, "What is that?" And I said, "Oh, we did a couple of sun shots and some star shots, and we determined that that's a spot exactly 20 miles from the center of our project area." He was just amazed. "Landscape architects can do that? I don't even know how to do that." He was amazed. Then I said, "It's right on, give or take 100 yards." I could see him thinking and then he said, "You fools, you didn't need to put it in the lake then." We were always joking around.

Ms. Gregory: How many years was the Summer Student Program?

Mr. Schaal: We did it for the first five years here at the Ranch. Many of the principals had been here to participate in the program during that time. Dennis Carmichael, Roger Courtenay, and Russ Butler always played a big part, and Joe Brown was very good at mentoring the students on their presentation skills. They would each have to present to him before presenting on the final day. It was always a highlight to be coached by Joe. I have some pictures of Joe canoeing out in the lake and getting tipped over; and another picture of him wading through the sedge from his canoe experience.

Ms. Gregory: Please talk a little bit about your projects. Where do your design ideas come from? What inspires you?

Mr. Schaal: I was always looking for a source for form, not going back to copying stuff or relying on tradition. So that was always in me to search for a current reason for form.

A search for that reason always comes out of research in the project. I've found that to be one of the most rewarding parts of the practice – the research before design starts. Whenever a new project comes along, the first thing I do now is to go to Amazon and Google, put in the subject, and find all the literature that's available. I buy the books and read them at night before I go to sleep and learn as much about the subject as I can.

Our public garden work is scattered throughout the country, so it causes us to have to go to new places. We always research those new places before we go. We always include a week-long workshop there with the client so that when we come back to the office, we know exactly what we have to do and we don't have to reiterate with the client. We do all that in that first week. But in order to get that first week right, we spend a month preparing; researching the client; researching the place; researching the ideas; talking to as many people as we can; doing interviews. When we come to do the work, we are prepared. We always show up a day or two early. And we spend that time exploring the area, visiting the museums, visiting other projects that are similar. We always stay at B&Bs so we can talk to people who know the area and see how visitors are reacting to the area. When

we start the workshop, we know more about the area than most locals. It's a great process. We're always learning stuff. A lot of times these projects are also multidisciplinary, so we learn from the other disciplines.

Ms. Gregory: What do you design for? Your legacy, the public, yourself, the clients?

Mr. Schaal: Well it has to be satisfactory to the client. It has to be satisfactory to us. But our goal is to make it satisfactory to the users. But we don't compromise on any of that triad.

Ms. Gregory: What projects best represent you, or how would you like to be thought of?

Mr. Schaal: I would like people to think of me as a landscape architect, not as a public garden designer or a regional planner or an urban designer or a park designer. A landscape architect. I don't regret working in any one of those areas. And I think I've been so fortunate to be able to work across the board. I think that's one of the things that EDAW has offered to me. EDAW is so broad and allows us, as a firm, to go in any direction that we want to as long as we're creative about it. I've always shined on projects where there's no precedent for, no matter whether it's a region or somebody's backyard. That's what I'm interested in is breaking new ground.

These days, I probably most enjoy working for public garden clients and residential clients. They both have something in common. They both value landscape architects as artists more highly than the public sector does. They are probably the most dedicated to the outcome. They are very involved in the projects. And they're probably most like me. Many of those clients end up being good friends. Many of them have been up here just one on one, and also on an annual get together that I have up here for friends and clients, because I like to serve as the catalyst for their getting to know each other.

I've often thought "what would it be like if I was a sole proprietor as opposed to being in EDAW?" Maybe I wouldn't have to do all the paperwork and deal with the management structure. But when I think about all the things I've been able to do over my 37-year career with EDAW, it's amazing. I've gotten to go inland in China. I've gotten to go to Australia a couple of times to work on projects in Australian National Parks. Before starting that project, I spent an entire week hiking every trail in the Blue Mountains National Park. I've gotten to do work in 90% of the United States, and I could never have done that with a more narrow focus of a small firm.

I've become friends with governors, American ambassadors, the Rockefellers, really important people, but all great people. I did work for the Betty Ford Alpine Garden and got to meet Betty and Gerry. The summer program has allowed me to meet new blood, excited students, over 100 people that are upcoming leaders in the profession. What more could you ask?

Ms. Gregory: Do you have one or two favorite breakthrough ideas in your design work?

Mr. Schaal: Every project has something, it doesn't have to be huge. A big part of the Grand Canyon project was a directional drilling concept, which wasn't our idea. The problem with the Grand Canyon is that all of the usable water comes from the other side via a pipeline hung on the walls of the canyon. Every time there was a rockfall, a portion of the pipeline could get torn out. That could be serious and cause the water for millions of visitors to be shut off.

The NPS wanted a permanent, low-maintenance solution. Someone had the brilliant idea of getting a Texas slant driller on the rim of the Grand Canyon to drill a hole down through a couple of billion years of rock layers. 3,000' down with a drill path of 5,000' actually curving to come out at a point that I got to pick on the side of an escarpment that was not visible to visitors. Our concern was what visitors would think when they saw an oil drilling rig on the rim of the Grand Canyon. So using our graphic design capabilities, we developed a series of interpretive panels to place along side the NPS

geological panels that explained the project, i.e., how do you direct a 5,000' long drill path, where the water comes from, what the pipes are made of, etc. It was a very successful program and won a CCASLA award.

Ms. Gregory: What do you want to be remembered for in your landscape architecture work?

Mr. Schaal: The diversity of it all.

Ms. Gregory: Where do you see landscape design going through the young leaders?

Ms. Schaal: I don't see the approach to the source of design changing. It comes from humility, learning all the time, trying to be socially responsible, trying to be ecologically responsible, and trying to be artistic. I don't see how we can do any better than that. Now our tools keep developing, of course, to help us with those areas and to integrate science better into what we're doing. But I don't see why or how we can get beyond that basic agenda of learning, art, society, and ecology.

Ms. Gregory: I'd like to talk about your children's gardens, what inspires their design, and how did you get started designing children's gardens.

Mr. Schaal: The first project was for the Children's Museum of Denver. This was a project with the architectural firm of BRS in Denver. They had the job and we were subconsultants to them to do the landscape. As far as I knew, there was no precedent for this type of garden. We were trying to figure out what would make an interesting children's landscape. We had lots of wonderful ideas of tessellations in the paving patterns, including a stegosaurus, because the school kids got the legislature to designate the stegosaurus the state dinosaur. Of course, kids love dinosaurs. So we designed a dinosaur fountain that rose out of the pavement where kids could splash among spitting stegosauruses. Unfortunately, all our great ideas got slashed for budgetary reasons.

The only thing left in the design was a row of pine trees. But we were very excited about what could be done and were just waiting for another opportunity to come along. So when the Denver Botanic Gardens (DBG) decided to build a children's garden, I thought this would be my opportunity. I put together a very artful proposal with the kinds of ideas that we were proposing for the Children's Museum. Also, I had done some reading about how kids play and how kids learn according to Howard Gardener's research on eight parts of the brain – the eight intelligences. I learned that educators should be developing all eight parts of the brain. There's a musical part, mathematical part, linguistic part and so on. Lately, they've determined that there's also a natural science part. So we used that as part of our checklist of trying to develop elements and landscapes that would appeal. DBG ended up selecting Hyatt, Raines, Vitek, which is a firm that we merged with later on to expand the Denver office. So in a way, we got the job anyway through Hyatt, Raines, Vitek, but I wasn't involved in it. Just after not getting that job, I got a flyer in the mail from the American Horticultural Society. They were putting on a national symposium in Washington, DC and were looking for speakers on the design of children's landscapes.

Ms. Gregory: Perfect.

Mr. Schaal: So I took my DBG proposal, reorganized it a little bit, and sent it in as the paper. They selected me to be a speaker at this national conference. I had a year to prepare. During that year, coincidentally, Russ Butler in the Denver office got a call from a Saint Louis architect about teaming on a new science school requiring educational gardens. They needed the best designer of children's educational facilities in the country to be on their team to help win the job." Russ told them that Herb in the Fort Collins office was the best they could get. So

they called me up and explained the same criteria, and said, "You know we want the best we can get." I said, "Well I'm speaking at the National Symposium on Children's Learning Environments in Washington, DC." And, they said "you're our man." We participated in an interview and won the project. It's funny how these things get started.

Ms. Gregory: Yes, it is.

Mr. Schaal: We did some design work and I presented that design work at the national symposium. That project was the Gateway Science School; Bill Clinton gave an address there on the future of education. Part of his message was that this was the most innovative thing that has been done in education in a long time. It set the standard for new schools, and won a national ASLA award.

Ms. Gregory: Fantastic.

Mr. Schaal: So in doing that school project, we did a lot of research and a lot of learning. We had no one to learn from in the school district because it was a brand new school. They hadn't hired a principal or any of the staff yet. So there was no one to say, "What do you want?" It was all what do you think they might want.

Part of it, though, was very instructive to us because the school was a product of an integration court case in St. Louis. In order to meet their integration requirements, the school district agreed to develop this science school. It was 75% state or nationally funded, so they had sufficient funds. The Harris Stowe Teacher's College was involved. They said it should include a garden where you could teach natural sciences, physical sciences, and mathematics. They said there ought to be an apple tree that the kids can sit under and the teacher can explain how Newton came up with the idea of gravity, and many other ideas.

So we built on the Harris Stowe program and created this educational landscape where everything in it had an educational metaphor. The paving patterns had the golden mean. The sandbox was a three, four, five triangle. Adjacent to the edges of the triangle were squares, so that the sum of the square of the sides equals the square of the hypotenuse. You could actually count the squares along the sides, add them together and sure enough, that was the number of squares that came off the hypotenuse. The garden was just full of stuff like this so they could teach math outside. We had a 50' meter and the equivalent 50 yard scale, side by side, so you could compare the English system with the Metric system. We had the orbits of the planets to scale in the garden. We had an Ozark forest, a map of the lifezones of Missouri, and a prairie.

The prairie was so great because you have to burn a prairie to manage it. It's the highlight of the school year. The kids all sit in this big amphitheater that holds the entire student body, and the fire department comes. They love firemen. It's an exciting time at the Gateway Science School.

Ms. Gregory: That's amazing.

Mr. Schaal: It was built in the slums of St. Louis on the site of the old Pruitt Igoe Public Housing Project. Many planners know about this. It's been on PBS. This is a 2-acre courtyard inside the buildings with a lake, a stream, wetland, prairie, forest, and all the geology of Missouri presented here. One of the features is a walk through time where every 15' represents 100 million years in time. It takes you back to Precambrian time. We simply contacted the St. Louis Paleontological Society and they gave us all the fossils, and we placed them in the right sequence in the walkway, at no cost to the project.

Ms. Gregory: Wonderful.

Mr. Schaal: There were dozens of great things like that, so you can see how we could get excited about doing these kinds of gardens.

Our next project followed on the coat tails of a very successful garden for Red Butte Botanic Gardens in Salt Lake City called the Terrace Gardens. This garden included a culinary garden, medicinal garden, and fragrance garden. It was another national ASLA award winner. The director asked if we had any experience in children's gardens. And, of course, I was a national expert by that time. We got another commission to design a children's garden for the Cleveland Botanical Gardens. Those were two of the earliest children's gardens in the country. Both of these gardens were huge successes. They more than doubled the membership of each institution and, in some cases, quadrupled the visitation to the gardens because they changed the demographics of the people who come to botanic gardens.

The whole idea of children's gardens at botanic gardens was to give young urban families a safe, accessible, nature experience for the whole family. We've done over 20 designs for children's gardens now. Every one that we have built, and some that haven't been built, have won design awards. These projects have allowed us to be innovative.

The size of these gardens is typically around one acre. These environments are action-packed with things to do. We learned from others and through reading on how children play and education that appeals to kids. I've written a lot about this, but more important than anything is they had to be interactive.

Botanic gardens are typically places to look at and meander through beautiful compositions of plants and flowers, but not to engage them. Of course, that doesn't work for kids. Kids have to engage. They have to dig in the dirt, touch the plants, tear the flowers apart. They have to use all their five senses. They have to taste, hear, smell and touch, as well as see. We actually have developed checklists for engaging all the eight intelligences and engaging all of the five senses. Every time we design a fence, railing, bridge, boardwalk, planting composition, or a water feature, we ask ourselves how many of the five senses can we engage with the design. We ask ourselves what families are going to be doing. For every element, we complete a matrix that lists what children and families are going to be doing. For example, they may be skipping, hopping, climbing, tasting, getting together as a group, or singing. Activities are mostly spontaneous, and that's the secret. We try to discourage over interpreting and too much signage. We've done children's gardens from as small as the Betty Ford Garden, which is an eighth of an acre, to 4 acres at the Morton Arboretum; and from budgets of around \$300,000 to \$7 million.

Ms. Gregory: That's amazing. How do you compare the complexity of designing children's gardens with your other design work?

Mr. Schaal: It's like designing a dozen gardens at once because there's a dozen themed environments within one garden.

Each one of them is a major design effort. And we're not satisfied with making these like a dozen different gardens. They all have to weave together artfully, so it's one garden expression with a lot of parts all integrated artistically. I believe that sets our work apart from what others are doing in this children's garden field. It's very demanding, but it's a lot of fun.

Ms. Gregory: Have the design techniques that you've learned or the innovations you've developed doing children's gardens followed on to some of your other work?

Mr. Schaal: Yes. In fact, I gave a talk to the American Public Garden Association last year on trying to get directors to think of their facilities as more interactive and using the same principles that we use in children's garden design, to make the entire public garden a more fun and interesting place. So you can touch, modify, and you can get involved with gardens, not just walk through and look. We're trying to carry that attitude through into parks and zoos, stressing family experience.

Ms. Gregory: What other kinds of projects are you involved in?

Mr. Schaal: I don't discriminate about the type of work I do. I base my involvement on the nature of the clients. I'm personally not trying to expand the quantity of work I'm involved with, so I'm limiting work to clients that I have an excellent relationship with. In addition to select clients in the public garden area, I do most of the campus design work at Washington University in St. Louis and the University of Wyoming in Laramie. I also do a lot of institutional work with Mackey Mitchell Associates in St. Louis and large residential work with Don Ruggles' architecture firm in Denver. I've been working with Mark Rockefeller on his 5,000-acre ranch and commercial fishing lodge in Idaho for over 10 years.

Ms. Gregory: How does your work influence your personal life?

Mr. Schaal: Well, the two blend. And that's by intent.

When I was working in San Francisco, there was no interconnection. It was work like heck at the office, commute, and salvage what you can of your personal life with the little bit you have left over when you're at home. The idea of starting the office in Fort Collins and having the Ranch was that I could bring work and personal life together. I could come home at 5:00 pm, have dinner, throw the football around with the kids, put them to bed, and if necessary, go back to work if I needed to because there was virtually no commute.

We could have functions up here at the Ranch and I could integrate this place and all that nature gives us with work. There's no boundaries. When we do projects in the national parks, we always put in extra time to make sure that we take advantage of enjoying the place. Sometimes we can include our families and we have fun. I've tried to carry that fun and playful attitude into the office also.

Ms. Gregory: What have you done in that area?

Mr. Schaal: We've done things in Fort Collins that other offices haven't, like celebrate Valentines' Day. I don't think another office celebrates Valentine's Day. On Valentine's Day, we have a big party and I get the women to do something for the guys and the guys to do something for the women. In the old days, we'd get together as guys and we'd develop skits and music and songs, and we'd even sing to the women. And the women would do something for the guys. The guys pretended like they hated it. "Oh, no, Valentine's Day is coming. He's not going to do this to us again is he?" they'd say. We've slowly transitioned out of putting people on the spot. Now, I have Fort Collins Opera come into the office and sing famous love arias. Then we always have some red juice, cake and that sort of stuff.

We had cowboy poets one year and have had musicians come in and play. It's always fun. We have an annual Christmas tree hunt here at the Ranch in December. I also invite the Denver office. My wife cooks up a big pot of chili and we play games on the ice. We were the first to do a major Earth Day event. Now it's a very solid tradition in Fort Collins. We invite the community to join us in the afternoon. We have a speaker. We display all of our sustainable projects for the year. One year we had all the graduate students from the University of Colorado – Denver come up and present their sustainable design work for the semester. We presented our work to them and critiqued each other. The last two years, we've had the event at the Fort Collins Spring Creek Community Garden, which we master planned and then designed the first children's garden.

Everyone brings their kids. There are activities for the kids. We talk about sustainability. We have an environmentally conscious quiz. Everyone takes the test and the people with the highest scores get plants that are given away by Fort Collins Wholesale Nursery. Their chief propagator talks about each plant, how the plant was developed, where it's to be placed, and its water use. It's a great event. We do many

more things; we don't have time for me to tell you everything. I've tried to make coming to work playful and fun. I've always tried to do that with my kids and with my family as well. I've always tried to integrate the kids with my work and make it fun for them. My wife is also a landscape architect. She doesn't practice now, but we are both avid gardeners. We have a great home garden. She grows all our produce and we enjoy that very much. When I'm not cutting trees up here at the Ranch, doing forestry, enjoying this place or on vacation in the mountains somewhere, we're gardening at home. It all flows together.

Ms. Gregory: You've done well integrating fun and play and work with family and passion.

Mr. Schaal: I think that's the only way to be at the cutting edge, to be inventive, and to do the best projects that our society offers – we need to be intense. It's so easy to get lost in that intensity and let everything else go. Unless you integrate it and make it fun, it's a wasted life. I always try to get people in the office to see it that way too.

Ms. Gregory: For someone who's trying to achieve that, what would you advise them to do?

Mr. Schaal: The same thing.

Ms. Gregory: Do you have anything else you'd like to add?

Mr. Schaal: I just think that I probably couldn't have done everything that I've had the privilege to do without being a part of this company. EDAW has been remarkable about giving freedom to those that are passionate and innovative. What company would have allowed somebody, unproven, to go out in the Rockies and start an office and do what I've been able to do? That spirit is still there. I think the new people need to appreciate that it's there. We need to be better as a company in reinforcing that message, because that's really so basic to the company – going right back to Garrett Eckbo and his deciding not to do anything ordinary.

Ms. Gregory: Well, Herb, thank you very much. That was fantastic. I'm inspired.

Mr. Schaal: Good. Let's go for a swim.

Ms. Gregory: Yeah. I'm thinking, what, 50° on the top inch?

Mr. Schaal: Do you have time to take a canoe spin around the pond?

Ms. Gregory: Sure.

Mr. Schaal: Let's get the paddles.