

CAP Oral History

Pam Stevenson (Q):

Today is Thursday, June 22nd 2006 and we are at the SRP studios in Phoenix doing an Oral History Interview for the Central Arizona Project. My name is Pam Stevenson and I'll be doing the interview and my videographer today is Bill Stevenson. I would like you to introduce yourself. Please give us your full name.

Richard Shunick (A):

I'm Richard Shunick better known as Dick Shunick.

Q: I like to start off and get a little bit of a background. When and where were you born?

A: I was born in the big city of Monmouth, Illinois about 180 miles southwest of Chicago, 70 miles west of Peoria, and so on.

Q: When was that?

A: In 1924, long before you were born dear.

Q: Did you grow up there also?

A: I went to grade school and high school there and when I started into college in 1942 at St. Andrews in Davenport, Iowa, I got called into the Army in March of '43 at the tender age of 18. I ended up in the South Pacific for about 2 1/2 years and came home, went back to St. Andrews and finished pre-engineering. That's all they offered there and then I went up to Marquette in Milwaukee finished and graduated in '49. So you can see I was very thorough, I started college in '42 and ended up in '49.

Q: Well, that's a pretty important detour though. We could probably do a whole interview of your experiences in World War II. What branch of the service were you in?

A: I was in aviation ordinance. I took infantry training at Camp Roberts, California and then they sent us all out as replacements to various outfits. I ended up with this ordinance company that had serviced General Patton's tanks in the Mohave Desert. We got to Australia and they'd never seen a tank there at that time of the war, so they attached us to the 5th Air Force. And we saw service in Dunnsville, Australia and New Guinea and Bayak, a desert island twenty square miles corral about two degrees south of the equator, north of Elandia.

Q: So were you primarily in the air or on the ground?

A: I was on the ground most of the time. It was a good experience. I came home in '45 and started back to school again.

Q: Backing up a little bit when you grew up, was the town you grew up in was that a farming community?

A: Yeah, definitely. It was called the prime beef capital of the world because they always won the Chicago Livestock Show for prime beef.

Q: What did your parents do?

A: My dad was a farmer, but he died at the early age of 42. I had four older sisters, too. I always said that I would go straight to heaven when I die. It was a good deal. I ended up...my wife used to be a stewardess with United Airlines before we were married. In fact, they couldn't be married in those days and still fly. So we got married in 1949 and we moved to, she had met a passenger on the plane that unbeknownst to her, he was out recruiting engineers and he sent me a letter and offered me a job in Boulder City, Nevada and that's how come I ended up at

Hoover Dam in 1949. We spent five years there. I was scheduling water releases out of Hoover, Davis, and Parker Dams on the lower Colorado. And then we moved to Phoenix in 1954 when Phoenix had a population of, I think, about 280,000 and Scottsdale Road north of the canal was dirt. We stayed here for five years. I took a job back in the Commissions staff in Washington DC. I thought for a year or two. We ended up 12 ½ years. I always say an eighth of a century later, we came back to Phoenix, which we always wanted to do. I came back on the Central Arizona Project and then retired in 1980. So I've been out of there quite a while, so if my memory fails me, you've got to excuse me.

Q: We don't need facts and figures or names; we just need stories about things. Let's back up a little, it sounds like you've had a really interesting career. Why did you first decide to go to college and study engineering?

A: I did go to engineering college.

Q: Why did you decide to do that?

A: Because when I was in high school, I worked for a Country Superintendent of Highways, who was a civil engineer, and that's where I got my lead. I told you with four older sisters, I didn't have much choice. No, I'm kidding. I had a very enjoyable career. I enjoyed every moment of it. I thank my dear wife for running into that stranger on the plane her last flight that got me into Boulder City. Of all the places in the world that I thought I end up, it wasn't Boulder City, Nevada.

Q: That must have been an adventure itself. What made you decide to come out to Boulder City, Nevada?

A: I got married. I got a job and I graduated college all in one week's time. I always had said that I wanted to come out west. I think I was the first one in my family to break the tradition. My mother was one of 13 children back in Illinois. I always said

that the reason I left my hometown was because every village idiot was my cousin.

Q: What was Boulder City like when you came out here?

A: It was a pretty small little town. It was built for the dam, you know, during the construction days. The dam was finished in about 1935. I arrived in '49 so I wasn't in on the construction of the dam. As young engineers, we always had the privilege, I guess you would call it that, of taking the VIPs through the dam. The boss would call you and say this guy is from France or this guy is from Germany or so on and we'd escort them through the dam. They'd always ask is this Hoover Dam or is this Boulder Dam. And us smart-alecks, we would say it depends if you're a Democrat or Republican, there are those who still think that Hoover wasn't worth a dam.

Q: My dad always called it Boulder Dam.

A: In Arizona, in those days was all Democratic and they wouldn't change the road signs for years. They had it Boulder Dam.

Q: What was it like living in Boulder City back then?

A: Well, it was nice. I rented half of a duplex. It was called a six company duplex because it was built for the construction workers. I think we paid \$57 a month rent for this duplex. It was very interesting. You knew everybody in town because the size of it. And most people there worked for Reclamation or the government. So it was kind of an in-house clannish outfit. It was 23 miles from Las Vegas. And we used to go into Vegas and in those days you could go in and see a floor show in Vegas and have dinner for a buck and a half. They had a buffet afterwards for a dollar and a half I think. There were only three hotels: the Flamingo, the Frontier, and I think the Thunderbird had just opened. That's when Bugsy Siegal was shot not too long before that in the lobby of the Flamingo Hotel. But it was interesting. We've always lived in a tourist area.

Q: It's changed a lot. So that was your first job with the Bureau of Reclamation?

A: That's my first job spent five years there, five years in Phoenix.

Q: Why did they transfer you to Phoenix?

A: I was working for a young fellow and he had preceded me and came to work for Salt River Project. Fran Luptin was his name. I don't know whether you recall him or not. He's deceased now but he proceeded to come to Phoenix and I had an opportunity to transfer because of the Parker/Davis projects. So I did. We enjoyed Phoenix very much.

Q: What were you doing in Phoenix?

A: I was power scheduling and water scheduling. I worked with Salt River Project and worked with the City of Los Angeles and Southern California Edison Company who runs the power generators at Hoover and things like that. It was a very interesting job. In other words, I had water scheduling in my first job in Boulder City and the power scheduling when I came to Phoenix and then I went back to Washington and I was in the operation and maintenance division back there.

Q: When you worked for the Bureau of Reclamation in Phoenix, where were their offices?

A: 43rd Avenue south of Van Buren, where the power company is now.

Q: Where did you live?

A: We lived on 21st Drive, south of Indian School, west of Park Central in those days. We had five children. Two were born in Boulder City, Nevada, and two were born in Phoenix, and one was born back in Georgetown in Washington, DC.

Q: You were here five years in the 50's?

A: Yes, '54 to '59.

Q: Any particular events during that time that you remember?

A: Well, it was pretty...they were just trying to get CAP authorized in those days so there were a lot of hearings in Washington and so on. So we were always supplying information for them and that was true when I was back in the Washington office too. Frank Scussel and Les Alexander, who used to work for Salt River Project, they did a lot of testifying for CAP back in Washington and they were good friends of ours.

Q: What was thought about CAP back in the 50's, did people think that, that was going to really happen or was it really a dream?

A: Then there were a lot of pros and cons. The environmentalists hated us. I remember going down to Tucson and talking to the Desert Tortoise Society telling them that we wouldn't drown every tortoise in the state. I told them at one time, I said "I'm glad we didn't have you guys around when the dinosaurs were running around out here because it would have been a heck of a traffic jam with those characters!"

Q: Who were the major opponents to it back in the 50's?

A: You had the environmentalists and so on. You had Frank Walsh. He was a very outspoken and Caroline Butler. The farmers were for it. They were the ones that originated it. It's done a lot of evolving since the time that I first came to Phoenix. I think Salt River Project had a half of million acres under irrigation in the valley and then as it phased out, why the water use went from agriculture to municipal and industrial water. You know the water rights and the use of the water. So it was an interesting...interesting to see it here. It was especially interesting when I came

back from Washington and the CAP had been authorized and they were trying to get started on the construction and Jimmy Carter decided he was going to shut down CAP entirely. So I've always had a dear spot for him in my heart.

Q: Going back to the 50's, were they talking at that time about building some more dams on the Colorado River?

A: Not the Colorado really, the controversy thing was the Orme Dam out of the confluence of the Salt and the Verde because...we were trying to convince the Fort McDowell Indian Community that even though we would have to flood their reservation and so on, we would get them all additional land up above the reservoir and so on and that they would all end up with standard housing, up-to-date health-wise housing which they didn't have at that time. They beat us back on Orme Dam and as a consequence, the Verde River still doesn't have enough flood protection on it because it would have caught both the Salt and Verde supplies.

Q: Early on, weren't they talking about bridges or dams at Glen Canyon and Marble Canyon?

A: Oh yeah, that was before the Glen Canyon was finished and stuff like that.

Q: But they didn't build the bridge at Marble Canyon either?

A: No, no.

Q: You weren't involved with any of that?

A: No that was before my time.

Q: Why did you go back to Washington DC?

A: Well, I was working for a young fellow in Phoenix and I said I should out live him so I felt it was an opportunity to go back and see part of the country that I had never really known and stuff like that being a Midwesterner. Our daughter was just in the 1st grade when we moved back there and she completed one year of college when we moved back to Phoenix. It was interesting for the kids because they got to see the west coast from Canada to Florida and so on. And there's always something going on in Washington as far as concerts at the Watergate, the Tomb of the Unknown, Mount Vernon and all that. I think I could've been a guide at Mount Vernon for all the relatives I took down there.

Q: You were still working for the Bureau of Reclamation back there?

A: Oh yeah, but then I had a chance to come back to Phoenix. In fact, we were on vacation up on the Saint Lords and we came back and they said if you still want that job in Phoenix, you better bid it in right now because you're going to lose it if you don't. So I took it. We ended up then, our offices were down in the Ellis Building at 1st and then we were on the 22nd Floor of the Valley Center. And I can remember my two superiors from Washington came out to visit me when I was working down there and they looked out that 22nd story window into the northeast valley and they said "I can't imagine why you left Washington for this. It was beautiful offices."

Q: What did you do in Phoenix when you came back? What year was that?

A: '71 and CAP had been authorized but we hadn't had construction funds yet. We finally got construction underway in '73 then the story from there was just a matter of getting annual funding and proceeding. The CAP, you know, is the largest water resource project ever authorized by congress at one time. We spent 20 years to building it.

Q: Were you involved in the plans of the construction and getting it actually built then?

A: Well, I was Project Manager for the Phoenix Office so I was reported to the Regional Director in Boulder City and to the Commissioner in Washington. It was a very interesting job.

Q: What does a Project Manager do?

A: Well, we had a construction...all of our people were supervising the construction. We had about 300 people on staff, I think, at that time. It was good. We used to fly the inspectors out by helicopter from Phoenix, you know, it's 190 miles between here and the Colorado River to check it. It was better than spending half of a day driving out there and the other half driving back. So we fly them out and so on. It was interesting. We had a good construction staff. I brought a fellow out from Washington, Dess Chappelle, as my assistant. Andy Dolyniuk was our Construction Engineer. And they did a bang up job. It was an interesting job because of the size of it. We had a seven mile tunnel over in Buckskin Mountain and we had a mole there would drill a 22-foot diameter hole through that old mountain. And we lined it immediately after drilling; we segmented lining, four segments of lining to the circumference. You couldn't back the mole out once you started, you were going through and we worked from that land end towards the river. And I asked our Construction Engineer when I got done; they used to use a laser beam to keep that mole on grade. And I asked Andy one day, how close were you to the benchmark when we exited on the Havasu side and he said we were off about that far. I said you wouldn't have told me any different. It was interesting. We had Russians and Germans and everybody visiting that because that pipe...that pipe we used when we got to a river, we didn't go over the river. We didn't bridge it over the river. We went under the rivers and inverted siphons. The pipe for that was made by Ameron here in Phoenix. It was a huge pipe. One piece of it weighed as much as a 747. And we had a pipe mobile that walked right into the pipe, lifted it up, and carried it out to the sight. When you were going down a grade to get underneath that river, you had quite a load to hold back. If that thing ever broke loose with 225 tons of pipe and the same amount on that pipe mobile, it would have been a heck of quite a crash on the other end. So they

had to edge it down real easy and all that pipe had to be special made because it had to be at the right angle to fit in that "U" shape of that inverted siphon. So it was interesting construction. We had an awful lot of visitors and so on to entertain.

Q: I heard later they had some problems with that pipe though?

A: They had problems with the rebar being exposed and rusting and they did have to replace some of it with cast in place.

Q: So was it the first time they ever done it, the pre-form, like that way?

A: Yes, that was the original deal on that. And it was just a poor construction defect that they weren't aware of until they had experimented and used it.

Q: Why did they decide to do it that pre-form way?

A: Well because it turned out to be allegedly cheaper than the cast in place I believe at that time.

Q: Allegedly?

A: Yeah, allegedly because you had to replace some of it later.

Q: There were lawsuits over that too. We interviewed Ralph Hunsaker yesterday and he talked about lawsuits over that.

A: Oh yeah.

Q: Were you involved in that too?

A: No, I got out before they started the lawsuits.

Q: But you were involved with the drilling through the mountain over by Havasu?

A: Oh yeah, that was the first thing that we did.

Q: How long did that take?

A: I can't remember how long but it was a couple of years. It was a \$58 million original contract which was a big contract in those days. And that mole was made by, up in Seattle. It was shipped unassembled on about eight flat cars into Parker, Arizona, all up the mountain and reassembled and started the excavating. It was a mammoth thing, a big circular head with carbonite and diamond bits and so on.

Q: I've seen pictures of that; I think it was a ceremony up there. You're probably in one of those pictures.

A: Well, we had a kick off ceremony and then we had a completion ceremony when they finally broke through on the finished end of it.

Q: How long did it take to go through?

A: I think it was a couple of years. I can't remember for sure. Senility has set in you know.

Q: Were you involved in choosing the route that the canal was going to go from there all the way to Phoenix?

A: Yes and we did most of that with aerial photography and laid it out that way. It was interesting because we only had to relocate one home between here and Parker, Arizona and that was out here in Paradise Valley. We had a fellow that was building what would be behind the aqueducts in the flood detention basin. And we told him, we tried to buy him out and he said you're guys are never going to

build that aqueduct anyway. So he went ahead and built it and we condemned him and brought it back from him later. In fact, he bought it and relocated it.

Q: What were some of the things you had to consider when you decided where the canal was going to go?

A: Well, we tried to utilize gravity as much as we could because when you have to pump water between the Colorado River and Phoenix it's about a 1200 feet lift. So you could go by gravity for a certain length of time and then you got to pump up and put it in the aqueduct again and go until it seeks its level again and then you got another pumping plant. So you got pumping plants and pumping plants and then when you get between Phoenix and Tucson, it's another...I think it's a total of about 2900 feet elevation between the river and Tucson. So you got another 1700 feet that you had to get down to Tucson with it...a lot of pumping plants.

Q: Did you have to negotiate with the land owners all along the way to buy the land?

A: Well, we were lucky because there was a lot of State and Federal Land in there and we could swap with the Bureau of Land Management on that but we had to condemn a lot of people too.

Q: A lot of them farmers?

A: A lot of them like out in, as we came across the valley a lot of there and so on, a lot of them were. They just wanted to move out into the country. They didn't realize. I can remember Tom Chauncy, who was on our Board at that time, called me one day and he said, "Dick, I didn't give you the dickens when you built those darn dikes across there and shut off my city light views but now you've got a flood out here and the mosquitoes are killing me!" I said, "Tom we'll take care of it." I find out one thing that mosquitoes do grow in Arizona and it takes them about 72 hours to mature and start biting people

Q: Was that a problem in other places too?

A: Well, when we got to Taliesin out there, I thought we were going to have a problem because Mr. Frank Lloyd Wright didn't like the transmission lines we put through there a long time ago for Hoover, Davis and Parker dams. I said man we're gonna have a fight on our hands here when we put this canal right in front of Taliesin. Well, he wasn't alive at that time, but his successors they were thrilled to death. They said this will be just like the Biltmore; we'll have a moat out in front and we can stop these darn motorcycles from crisscrossing our land. So we put in a fancy crossing for them, put in a stone of button-ups, and they went away singing Dixie.

Q: Did you know Frank Lloyd Wright?

A: No, I never met him.

Q: But you were here in the '50's when he was alive?

A: Oh yeah.

Q: I hear he was a very interesting man.

A: Right.

Q: It would have been interesting if he still had been alive.

A: That's for sure. They were pretty happy with us though after that.

Q: One of the people I talked to said that the CAP had its own air force because you mentioned you had to go out and look at things by air. Were you involved with that?

A: We utilized the helicopters of the Bureau that they used to patrol the transmission lines from Hoover, Davis, and Parker dams and from Navajo Steam Plant into the valley and so on. You know, like Salt River runs Navajo for us. But anyway, I used to fly everywhere on the project because of the distance involved. We'd take VIPs up and so on. I can remember having a lot of Senators, that's a quick way to show them the project, take them up in the helicopters. But we used to...those guys used to call it my air force. It just shows you the magnitude of that project when you've get up there and you've got 190 miles this way and another couple of hundred that way, 336 miles of aqueduct, major aqueduct.

Q: That's a lot to keep track of.

A: You bet.

Q: How many planes and helicopters did you have?

A: We just had a couple. They utilized them pretty efficiently.

Q: As you think back, what were the greatest challenges in constructing this project?

A: Getting the good will of the people, the environmentalists. And a lot of people thought it would never work because of the magnitude of it and so on. Oh, I can remember when we were fighting the battle of Orme Dam because my telephone was ringing off the wall morning, noon, and night.

Q: Who were the people that were really your allies that were helping you?

A: The farmers and the cities too. The cities realized that they were running out of water and the subsidence was terrible between here and Tucson, down there near Picacho Peak. Why there was a vertical subsidence of about 12 feet. That's kind of hard to keep the highways in shape too. And we had to build an aqueduct along the edge of the mountain. When that subsidence occurs, it's like

the edge of a saucer and up near the mountain that's where you get all your fissures. So we had to have a lot of safety checks on the canals in case you did get a big landslide or a failure, why you could shut it off. You wouldn't have all that canal flowing wide open. You had gates periodically that you could control the flow and shut it down if you had to.

Q: You mentioned some of the opponents. You mentioned Frank Walsh, were there others that you remember?

A: Well, Frank headed a group, the Audubon Society, and Carolina Butler from Scottsdale was very active. A lot of people you could sit down and reason with them and we made a lot of provisions too. We had deer crossings across the aqueducts so the deer could cross. There's nothing sadder then to see a poor deer in an aqueduct with his skinned knees trying to get out of there. They (the canal) get algae growing on the side and it gets so slick so we put crossings in for the deer and put a lot of environmental things in to help people escape. Every 750 feet there are escape ladders one on one side of the canal and then on the opposite side so if people did fall in the canal, they could escape.

Q: You had to think of all those things?

A: Oh yeah.

Q: Looking back over your career with the project, what is it that you're the proudest of if you think about it?

A: Just this past year or so when we were so, a hundred and forty days without any rainfall, we would've been up a creek without a paddle sort to speak if we hadn't had some CAP water coming into the valley. With all due respect to Salt River Project, which I think a lot of, in fact I have a son that worked for them for 20 years, but I worked very closely with all those guys out there at Salt River and they're a great team. And we are proud of Salt River as the first Reclamation Project too.

Q: So you came back and worked with the Bureau here from '71 until, when did you retire?

A: In '80.

Q: Did you retire or did you go do something else?

A: I had 55 years. I had 33 in years of service. Jimmy Carter was trying to kill the project at that time. Cecil Andrus was my big boss in Washington as Secretary of the Interior under Jimmy and I said I'm not going to sit here and watch my blood pressure soar. I was eligible for retirement so I took my retirement and walked away. I left it in good hands. It wasn't long after that that they had water in Phoenix; in 1985 for the first time.

Q: So that was a hard time for you then during the 70's when they were trying...and Jimmy Carter?

A: Oh yeah, it's pretty hard when your big bosses in Washington and you're on a federal project and they're opposed to it. But I do give the State of Arizona credit. And I'm talking about Moe Udall and John Rhodes and all of those guys that closed ranks and went to fight for Arizona and they did a marvelous job. And they saved CAP at that time, for which we were most thankful.

Q: Why did they want to stop it?

A: Just for disturbing the environment and stuff like that. I guess I consider myself an environmentalist too, but I think God put all these resources here for us to utilize too, like coal, and water, and gold, and silver, and all of those things. So I think Reclamation, you can spot Reclamation in any of the 17 western states. And you can see up in the Columbia Basin in the Central Valley of California, the Provo Project up in Utah, and all of them. They've meant growth to the cities and so on. This would have been an awful small community here. Maybe we shouldn't be

fostering growth a lot of people think. I think people should be free to go where they want to in the United States and live where they want too. And I think it's an obligation of the government and the cities to provide water supply for them.

Q: So it was more environmental than funding costs that gave you the roughest time?

A: It was mostly the environmental that gave us the roughest time.

Q: So when Jimmy Carter and them wanted to shut it down, some people said it was the finances. They were trying to save money.

A: They would've saved money because CAP started out \$832 million I think was the original estimate and it ended up three point something billion dollars cost, but what hasn't gone up.

Q: Did you feel bad though leaving before it was finished?

A: I did, but I wanted to spend more time and I thought I would be around a lot longer getting out from underneath a lot of that strain which I did. That was 26 years ago that I quit.

Q: And you're still here.

A: And I'm still here.

Q: You think you might not be if you stayed at that job so it was a stressful job.

A: Right, very much so but it was a very rewarding job too.

Q: Did you stay involved with the project at all after that?

A: I still get monthly meeting notices and stuff like that. I try to keep in touch with them and be aware of what's going on.

Q: What about Bruce Babbitt what role did he play? When they were trying to shut down the project, he was Governor at that time.

A: Yeah, Bruce started that Groundwater Recovery Act and stuff like that. It was hard at times to tell what side Bruce was on because of his environmental leanings and so on. But all and all, he was favorable to CAP.

Q: I don't think I've ever heard of an Arizona politician that wasn't favorable of CAP.

A: Right.

Q: No matter which side they were on.

A: That's what I meant when Rhodes and Moe and those guys that closed ranks. They really fought a unified fight for it.

Q: You were back in Washington then during the years when Stewart Udall was Secretary of the Interior. What were those years like?

A: Oh yeah, those were good years for the Bureau and so on. Of course, you always had to fight for your appropriation and stuff like that. Washington is interesting because when you work for the government that's still the home office. It's interesting, because you read about all these guys in the paper but tomorrow you may be meeting with a Senator or this Congressman or you're over at the White House, so it really is interesting. My office in the Interior Building was on the 7th floor. You could look out and see the south lawn of the White House and I used to see that helicopter land there all the time with various presidents. I said why do you guys want that job? Harry Truman used to call it, I think, that prison on

Pennsylvania Avenue. And in essence, that's what it was because it was so restricted and so confining.

Q: You saw quite a few presidents go through there. You were there in '59?

A: Yeah. I stayed until '71. Ike was president when I went back. But Jimmy Carter, with all due respect to the past president, he was the most inept president we've had as far as knowing what was going on in the Congress. Now when old Lyndon Johnson came up, he'd been the majority leader in the House, and he knew politics backwards and forwards. But Jimmy was just the opposite. He was used of raising peanuts down in Georgia and that was a long way from the White House.

Q: Did you get to meet all of them? The presidents?

A: No, but you worked so close with them that you felt you knew them. I can remember when I went to JFK's funeral and John Foster Dulles' funeral. There was always something going on in Washington. If you wanted to go to a reception every night, you could. Our kids used to go the White House Easter Egg Hunt on the White House lawn. It was interesting and a good experience for them too.

Q: It was a good time to be back there.

A: Right.

Q: Looking back at the CAP and the project, is there anything that you would've done differently knowing what you know today?

A: Hindsight is always bad. I think we should've been more assertive at times then we were maybe, and fight more openly then we did. We tried to be nice to everybody and tried to get along with everybody because we didn't want to ruin our PR as far as that goes. But it takes a lot of patience at times I'll tell you that. I

used to enjoy working with Rod McMullin, Salt River, Carl Able, and those guys. They were a swell bunch.

Q: I interviewed Rod McMullin quite a few years ago. Where there any surprises for you about how the CAP has worked out? Did it work out the way you thought it would?

A: Well, I didn't...I was a little upset, and I say this in all sincerity, with this Indian water deal lately. Because I think CAP was not authorized and the Indians have benefited a lot from this water deal. CAP was never built to satisfy Indian water rights and I think that it's going to end up with the Indian tribes selling water to the cities and I don't think that's the way it should've been. I worked with the Ak-Chin Indians down there and they did a good job of...we had small projects on their land and stuff like that and they were an interesting tribe to work with because they really got in there and did the work themselves. And they didn't just lease out the land to somebody else to farm.

Q: So during the planning of it, you really weren't thinking about the Indian rights that much?

A: Well, their rights were vested in other than the Colorado River is what I'm saying. There are Colorado River Indian Tribes and so that are serviced by the Colorado River, but I can't see bringing Colorado River in here and satisfying Gila River rights with Colorado River water.

Q: It's pretty complicated the way it's gotten. You mentioned the Orme Dam issue. That changed a major part of the construction

A: Yeah, when we didn't get the job opportunity to build Orme Dam, they did a deal on Lake Pleasant and re-built that dam out there. During the off season, we would pump water into Lake Pleasant. It's a pump storage type of deal and when we need more water in the high irrigation season, why we could let water out of Lake

Pleasant and into the canal. It's an alternative to Orme but I still said that the Verde River flooding is still a threat to the Metropolitan area and there's not enough protection on the Verde the way it stands right now. Orme Dam would have provided a lot of protection to the City of Phoenix and the valley.

Q: Lately that hasn't been an issue, there's not enough water there.

A: No that's right but when it comes, it comes you know. I can remember when there was 200,000 acre-feet of water in the Salt River down there in 1980 when I retired.

Q: Did you retire right during that flood period?

A: I retired February 22nd and I remember Howard Wuertz and those guys from Pinal County. They couldn't hardly get up here to my farewell dinner because of the flooding and so on.

Q: You've seen a lot of changes in Arizona over the long time you've...50 years, more than 50 that you've been here.

A: Oh yeah, that's right. My wife and I have been married for 57 years June the 2nd, really 114 I tell her; 57 a piece right?

Q: Did you ever think you would see Phoenix grow like it has?

A: No. It's amazing the growth. I hate to see it get too big to be honest with you, because I'm still a small town boy I guess.

Q: It was kind of a small town in the 50's when you came here wasn't it?

A: You better believe it. I told you there was no road north of Camelback. It was just a dirt road on Scottsdale Road. Our boys used to take their motorcycles and they'd go from our house, we lived out in Paradise Valley below Doubletree, and

they could get on their bikes and ride right out to Pinnacle Peak right across the desert. There wasn't a house in site.

Q: These are different times.

A: Different times.⁹

Q: People knew people more too didn't they?

A: Oh yeah, just like any big city. It's hard for me to realize that Phoenix, what is it the 5th largest city in the United States now, surpassed Dallas in the last census.

Q: What about relating to water, do you think there's going to be enough water for all these people?

A: People, they've got to learn to conserve water more. I always told them when I was on the project; I said there's only one way that people will conserve water and that's in the pricing of that water. If you price it high enough, they'll conserve it. If you don't, they'll waste it. And it irritates me when I can drive up North Central any morning and see water running down the gutter, you know, because that's just pure waste. I can't appreciate that at all. We're hauling it too far to do that. Salt River is doing a lot of work trying to conserve and so is CAP.

Q: So what do you think in the future the challenge will be for the water here?

A: Well, I don't know whether...one of these groundwater deals you know where they inject the ground, the water into the ground, the underground. For one thing, you've got to pump it back out. And for one thing you don't know what you're doing with it when you put it down there. It may be contaminated when you go to bring it out too. While I'm all for using our share of Colorado River water, I think we should use it wisely. I get mad at California for taking the lion's share of the Colorado River and not contributing a drop in so far as the watershed goes. But

you have to give California credit when Hoover Dam was built; they stepped forward and said we'll take the power and we'll take the water. They built Parker Dam and diverted into the Colorado River aqueduct and they built transmission lines to haul it down to coast. They were smarter than we were. Arizona was the backward cousin in those days. In fact, do you remember we had the Arizona Navy over there to stop the construction of some of the dams and so on? That just wasn't good thinking. We contributed a lot to the Colorado and we should be entitled to more than we're getting as far as I'm concerned. Poor Nevada with three tenths of a million is all their annual allotment was under the Arizona v. California decree. Who said everything was fair in this life?

Q: You were in Nevada in the 40's; there's been a lot of growth.

A: That's right. Boulder City was 2,800 people when we lived there. Las Vegas was about 16,000 and it doubled on the weekend to about 35,000 people.

Q: Would you have any advice for the people that are running CAP today? What would you advise them to be doing or thinking?

A: I think they've got to appreciate the fact that until we can replenish and import more into the Colorado River Basin, we better be as frugal as we can and as saving as we can with the water that we do have. It is just disheartening for me to see water being wasted here. I don't think we should try to make a greenhouse out of a desert for one thing. We are a desert and I think our desert is beautiful by itself too. My advice to them is play it wise, think it out. Don't just think that we have an endless supply.

Q: That pretty much covers the questions I had for you. Was there anything you thought I would ask you and didn't?

A: You covered the field pretty good Pam.

Q: Is there a favorite CAP story that you would like to tell?

A: I can't think of anything off hand.

Q: Do you still get together with any of the old times or anything like that?

A: Not as often as I would like too. I broke my hip this past year and that really curtailed me. The first broken bone I've had in my life.

Q: You seem to be well now. We appreciate you coming down today.

A: I appreciate the invite.

Q: You've given us some good insight with some periods when you were involved that goes way back.

A: It was a good career and I enjoyed it.

Q: Did you ever think as a boy that you'd have a career like that?

A: No, but for some reason, I didn't want to stay in my home town. I was born on a farm but it wasn't for me.

Q: I think the military gave you a little taste for travel and seeing the world.

A: Yeah, I spent 21 days on a confiscated German tanker heading getting to Australia in 1943. That old German tanker, they converted into troop transport and it held about 2,000 guys and we broke a piston out in the middle of the Pacific. We went around in a circle for about five days while they grouted out another one down in the machine shop. Talk about a sitting duck for "Jap" subs we were. We're lucky to be here.

Q: Sounds like an adventure, not what you were planning. Do you have advice for young people today? What do you tell your grandchildren when they ask about what they should do with their lives?

A: Well, I'm real proud of the fact that I got a grandson at the University of Texas in Austin taking Civil Engineering.

Q: Probably a little different then when you took it.

A: Yeah, it is. It's interesting. It's a good career.

--- End of Interview ---