

Interview with Jim Henness

Intro (Q): I am Pam Stevenson doing the interview and today is Tuesday, August 3, 2004, and we are here in Phoenix at the SRP Studio at 27th Street and Washington. I will let you go ahead and introduce yourself, why don't you give me your full name.

Jim (A): Full name, James Kelvin Henness and I'm from Pinal County, Casa Grande, Arizona.

Q. Tell me when and where you were born.

A. I was born in Casa Grande in November of 1936.

Q. So you are a native Arizonan, when did your family come here?

A. Somewhere in the late 1800's on mother's side and father's side the same.

Q. Did they come here for farming?

A. No, one grandfather worked in the mines down at Bisbee was a driver of those multi-team ore wagons in the mines in Bisbee. And the other grandfather was in the, I guess you would call him a "haberdasher" where the San Pedro and the Gila Rivers come together a little place called Kelvin, Arizona, which was his first name Kelvin. KK Henness was his name, that's my father anyway.

Q. "Haberdasher" is?

A. Well, I had a series stores, dry good stores. They were up there by Winkleman, and Hayden, and Sonoran Town and places like that. Had partner the stores were known as "Henness-Giffin" and later the Henness sold out and came to Tempe primarily I think so the children would have better schools.

Q. So when did the family get into farming?

A. In the Tempe area, they got into farming around 1907 in the neighborhood of what is now known as Hardy and Southern. That was the home ranch and then they had a 80 in the corner of 48th Street and Southern. Across the road from the Lassen Family who have a long history in this valley also.

Q. I've interviewed John Lassen.

A. Quite a guy.

Q. So tell me a little bit about where you grew up in. Did you grow up in Tempe?

A. No, no, I grew up in Casa Grande. My dad made the move out of here. He was a graduate of the University of Arizona in about 1918, I guess, 1919. And then got his master's degree from Ames, Iowa and came back to this country (sic) as County Agricultural Agent first in Coconino County then transferred down to Pinal County. And that's where he made his life and we've made ours.

Q. Why Pinal County?

A. Well, I never asked him. When I sit back and think of the difference in water supplies, it would of been nice to stay in the Salt River Valley. But I think it was probably his employment with the University of Arizona Extension Service. And he worked; oh well he retired in 1952 from the Extension Service and then went to South America and created an Extension Program for the Country of Bolivia in South America. And then did some work in Spain and then fully retired. But it was where we made our homes, simple as that. Opportunity was there.

Q. So he was a County Extension Agent, was he also farming then?

A. Yes. Early years he and mother bought some ground east of Casa Grande, some 400 acres. He didn't farm it himself. He generally leased out but that was the family farm.

Q. So what was your life growing up? Did you grow up on the farm?

A. Yes, absolutely on the farm, you bet, walked out to the lane to catch the bus with my two sisters many, many days. We grew up on a farm with all the things that are on a farm. It was a neat life.

Q. What do you remember most about it?

A. I think the ability, I remember primarily because of the state of the state at that time. The ability to have free reign out in the country and the wilds so to speak the desert was yours. There wasn't much to stop you from doing a great deal of exploring which young people, young boys did a lot of most times. That's what I recall most having our usual chores on the farm and just the neighborhood, good

kids. They were kind of far and few between. There was an old story that our neighbors were so far apart that everybody had to have his own tomcat.

Q. You mentioned chores, what sort of chores did you do growing up?

A. My dad and I milked, when I was big enough. We milked cows morning and evening. I still remember those little bossies' names. I milked the Jerseys and he milked the Ayrshires and we did that morning and evening. We had cattle; we had a few head of cattle that we fed. Corrals and just general livestock, horses to ride but ya . . . gathered a lot of eggs as a kid.

Q. What kind of crops were you growing back then?

A. We were in the cotton business at that time but we grew a lot of milo, maize also and a lot of barley. Not so much wheats as we grow now, but that was primarily the crop mix on the farm. Our farm was in the San Carlos Project. And the San Carlos Project has a history of being a dry project. Huge water shed, but not a high yielding water shed and so consequently we farmed in relation to the amount of water that we received and made available to us. And you had to hope that it would carry a crop to completion, to maturity. But we've had a lot of dry years and we've had wet cycles too. And so, but that's the type of farm we were in.

Q. Growing up you say you caught the bus, where did you go to school?

A. Elementary schools and Casa Grande in high school later. The town is growing very rapidly now fortunately or unfortunately depending on how one looks at it. But no, we all caught the bus. Shucks, that was always a great education riding the bus.

Q. Were you a good student?

A. Yeah, average. Just average, didn't apply myself much.

Q. What subjects did you like?

A. Well, I enjoyed the math courses more than any and English the worst. But anyway, I was a typical young man that was very anxious to get back, get out of school. But I remember we used to, mother would put us in our shoes to go to school and the first thing you did when you got to school was take them off and

tie them to your belt loop and go barefoot all day, so. Life was simple and it was pleasant.

Q. Kids don't go barefoot at school today.

A. They probably don't let them but if you asked them a bunch of them might like to. But they probably don't allow that anymore.

Q. So when you were growing up what did you want, think you wanted to do when . . .

A. Always wanted a farm, always wanted to farm. Just enjoyed the thought of it, enjoyed the idea of putting seed into the ground and watching it grow. All of the things, that's what I wanted to do. And when I went on to college, I studied at the University of Arizona and got a degree in Ag Economics and came back to the farm.

Q. Why did you choose the University of Arizona?

A. Well, at that time and even today probably still has the – well today a lesser degree, but at that time it was the “Ag” college in the State of Arizona – Land Grant School. And it was just the place to go.

Q. When did you get out of college?

A. 1959. 1959 graduated, married at the time. And Janet and I came back to the farm and started farming actually in '58, we were still in school when we put our first crop in the ground. And since that time, we've been farming – still farming the family farm.

Q. And how large is the farm today?

A. We have a farm of our own, but mom and dad's we still farm. It was 420 acres. And then our farm is 710. They're about five miles apart so that's the way it is.

Q. And each of you are part of the San Carlos Water District?

A. Indeed and remain still although part of the farming operation now is served by the Hohokam Irrigation District, officed in Coolidge, Arizona.

- Q. When did you first get involved with the Colorado River water project?
- A. Those of us that grew up in those times, especially on farms, you were – it was kind of breed into you. It was Arizona Agricultural that really initiated the genesis of the Central Arizona Project. Recognizing it early on in life that, and in especially in a drier valley, the need for augmentation of our water supply. I can remember my dad and another neighbor Tom Carlton, riding the train to Washington DC in the late 40's to testify for the CAP. So it was always a part of our lives the idea of augmenting the water supply in the state.
- Q. Did your dad do that as a farmer or an agricultural . . .
- A. As an Agricultural Agent, as well as his farm. It affected his farm. But in those days a County Agricultural Agent was recognized as essentially the Ag Leader from an agency standpoint. In those days, all the farm programs were administrated by the County Agricultural Agent. Now you have different agencies that do that. But in those days, it was key role. And so he was one of the spokesmen, there were others. But those two gentlemen I remember vividly because that was a long ways in those days, you know, to take a train and go back and testify. And so it's just an indication of how many years of people and generations of people worked on the CAP to finally see it come to completion.
- Q. Do you remember in the 40's, when they were talking about it when did they, how soon did they think it could get built or did they really have a plan for it?
- A. Oh sure, you bet. There were actually two plans, two different concepts of delivering water from the Colorado. But the one over time, evolved as the route. But oh no, we worked very hard. Generations before me and then later we all, the baton gets passed and we went on and worked very, very hard. We had, at the time, we had a very influential Senator. Senator Carl Hayden who, very senior Senator and we'd always had high hopes that we could get the CAP built. Varied interest, not in Arizona, Arizona generally spoke with one voice in those times for the CAP. But the California interests had a personal interest in the Colorado and not seeing diversions from it. So we had to deal with those issues for many, many years leading up to a lawsuit where the Supreme Court finally ruled in favor of us, Arizona, and our entitlement from the river. At that point, well we started going down the path to be constructed.
- Q. So do you think in the 1940's that they thought that they could get it done in the next ten or twenty years or was it just a futuristic....
- A. I'm not certain how they felt. They recognized the need long before it became popular in the municipal arena and they had a reason. They knew the water

supply was basically finite and they knew to augment the supply into the central valleys of Arizona. There was a grass roots effort, the local people tried to put this thing together and it was the local people that contributed funds to go to Washington and hire the people that you needed to hire and what have you. They became much more important later on. I would say that probably more in the 1970's that it became where other segments of the economy of the state of Arizona became more interested in the construction and the building of the CAP. It might have moved better but it was certainly agriculture that recognized early on the need for and the relative importance of the need to get this water brought into the central valley.

Q. So when did you really get involved with it all?

A. Oh probably starting in the early 1960's being involved in various incendiary organizations. For instance, the soil and water conservation districts have always been major players in and pushing for the grass roots level for the CAP. It's always been anybody in agriculture in the central valleys of Arizona have always had it right on their plate, right in front of you, and you were expected to do your share. And it was, those batons were picked up capably and adequately by a lot of wonderful people and it all eventually evolved into probably, maybe the last great reclamation project ever built in this country.

Q. Did you get involved with it politically? Did you ever go to Washington and testify or anything like that?

A. Yes, on a couple of occasions but always it became more political as it evolved. And then as other interested parties started to become more interested in it, well then it became very political. And it was played, and it was played by a lot of folks for all the political reasons.

Q. Do remember any of the times that you went to testify or got involved?

A. Most of my testifying was in an arena a little different than water. But in Arizona we think in terms of water as power, power being electricity, and the electricity as water. And most of my time was spent working on the electrical side from a testifying stand point on the electrical side because it was the dams on the Colorado River, in this case Hoover Dam, which would assume a very substantial roll of paying for this thing through power sales revenues. So when everybody talks about the Central Arizona Project, the water project, those folks that are in the now recognize that it is a water and power project in the role of each. And so I spent approximately 20 years on the Arizona Power Authority which had the responsibility of Arizona's entitlement of hydro-electricity out of Hoover Dam and still does. Shepard (?) set that resource. But there was comports put on power sales, I think it was 4½ mills and I'm pretty certain that it

has never been changed. I think I'd know about it, if it had. And that 4½ mills on every bit of power that came in from Hoover Dam went to pay off the cost of the Central Arizona Project. It's all hand and glove; water and power.

Q. What years were you on the Arizona Power Authority?

A. Oh gracious, I went on there I guess about 1980 to, then I was off awhile, but I was on there in that timeframe.

Q. Was there ever any power from Coolidge Dam? Did they ever get

A. There's two units there. There's 10 megawatts of capacity at Coolidge Dam but the inconsistency of the water flow on the Gila - one made it very difficult to design those units for maximum output. You didn't know from one year to the next whether it's going to be full and you'd have a head of considerable dimension or so empty that there wouldn't be anything go through the pins tocks and through it and turn a wheel. So that's always been a problem. They are currently, that 10 megawatts of capacity is currently not active at this particular time.

Q. Is that because of the drought?

A. A serious of droughts, the San Carlos is a lot drier than the Salt River lakes and dams. So consequently, poor maintenance on them you know not running this year. And next year you maybe have some water and etc., these things.

Q. Getting back to the Arizona Power Authority, explain a little bit for people who might be listening to this tape about how the Hoover Dam and the power authority relates to the Central Arizona Project?

A. Very much, once again I go back to water is power and power is water. It's very key, it's key to a lot of customers in the central valleys as well as on the Colorado River. But how it relates, in the early days you couldn't hold a gun on Arizona Public Service and get them to bring you any power out in the hinder lands, out in the country. And so, under Federal Law which was created - the Federal Preference Law, an Arizona Preference Law was made. And in that category, electrical districts were formed. Electrical districts 1, 3, or 1, 2, 3, 4, 5, down in my country and their are others around up here but became eligible for what is known for public power. Public power is what was generated at the Colorado River Dam and allowed these districts to contract for the use of this power which allowed the electrification of the valley. Salt River had their own up here but they are a very, very large customer and also being a municipality. The rule, it really

brought electricity and the ability to develop farms through deep wells and turban powered pumps to develop the agricultural industry in the State of Arizona, in the central valleys. Historically, there's always been ag on the Colorado, the lower Colorado, Yuma a fantastic agricultural area. They are also customers of this what is known as public power. And they exist today and are as strong as they ever were.

I remembering my dad telling me the Salt River Valley, I asked him one time – he lived to be 98 years old. And I asked one time what he remembered vividly about life, his life. He was a thinking man, he took his time. And about an hour later, he looked up at me and says, “The night they turned the lights on in the Salt River Project.” They told everybody to get their houses wired and to 25 cycled power, you know, it wasn't the greatest thing in the world but he got to read from the electric, the electricity instead of the corn oil lamps, etc. So power has always been very, very, very key part of the whole mix of water in Arizona.

Q. He remembers that night, was that in Tempe?

A. It was in Tempe, yeah. The Salt River Project did that. They had their dams on the Colorado, I mean on the Salt and so they were generating some electricity at that time and that allowed them to electrify, better electrify the valley.

Q. They were the ones that provided more of the rural areas that APS didn't want to.

A. That's my concept of it, anyway it's just the difference between the Electrical Districts are run by local people with local, understanding local problems and providing the resources to solve those problems. Where Arizona Public Service is historically is an investor owned utility. There a little different mode than the Electrical Districts.

Q. Getting back to the Hoover Dam and the Central Arizona Project, so the power from that dam went partly to help fund . . .

A. Partly, 4 ½ mills of the basic cost of Hoover at the dam was an adder to the cost of all the customers that used it. 4 ½ mills was devoted to the CAWCD, as a component to help pay for, and they're not the only ones by any means, but a key component to repayment requirements of the CAP.

Q. Do you know when that was added or they just decided that was it?

A. I can remember vividly the discussions about it but that's another story. But to be precise, not exactly what year but it was somewhere in the 80's as it was built.

- Q. What do you remember about the years before it was built? Did you get involved, your dad get involved more?
- A. Oh people, a lot of people and it evolved. And it evolved with folks and more names and more segments of the Arizona economy to when they started to recognize just not the agricultural economy but other sectors that we really needed to import water into the central valleys. It's the reason that, and I'll leave it to you to decide whether it was good or not but it's the reason for the growth of this valley. I thought I'd never seen my born days that we'd be building houses out on the other side of the White Tanks or clear out to the Superstitions. And now I'm seeing it in the Casa Grande Valley. It's pretty amazing. And there's no doubt about it that the power and water that came in here from the Central Arizona Project will play a major, major key in the providing of these resources to the inhabitants of this valley. Like I say, I leave it up to someone else to decide whether that was good or not.
- Q. At the time, when they wanted to bring the Central Arizona – the Colorado River water to Central Arizona though, it was the farmers that wanted it for their agricultural.
- A. Absolutely, absolutely. No ifs, ands, or buts about that. The San Carlos Project for instance after it was built in about 1924, the Gila water shed was over estimated its yield on an annualized basis and so consequently the San Carlos was never, never had a full water supply, a complete water supply. So it was very important to those people that at some juncture or some opportunity came by, for example the CAP that maybe make the San Carlos whole. As it evolved, it didn't. But those are a whole another series of reasons. But primarily the water allocation allowed the San Carlos Project on an annual basis. And the fact that it was unlined system and the people had to make a hard, hard choice at that particular time whether to take CAP and in debt their property, their lands to such a degree with a 9D contract. A limited supply, loved to have had it but the decision they made at that particular time, is that they had to pass it by and that was tough. That was really tough to have wet water come by and not take a piece of it.
- Q. So the San Carlos District decided not to take it?
- A. At that particular juncture in life, they did.
- Q. And when was that?

A. Well, the same timeframes as they built the canal this way. It came in obviously west of Phoenix first and they had to build siphons across the Salt and later siphons across the Gila eventually head on to Tucson. The teething problems of the Central Arizona Project were substantial as this water became available. One of the things that existed is there could not be flow in an unlined canal. And the cost of lining the San Carlos canal system in relation to the amount of water that was allocated to it, just didn't, just didn't fit the equation. It's tough. It was a tough decision. It really was.

Q. There was a rule that CAP water could not flow in an unlined . . .

A. Oh absolutely, it's the rule today. There some classifications of water and circumstances on the river of excess which obviously we don't have right at that moment. But it allowed some water to be utilized in that case and not had to be dealt with. But by and large, it has to be in a lined system. And the San Carlos right now is remarkably close to a settlement in all these propositions with the tribes and Indian and non-Indian rules of maybe getting their system lined finally after all these years. But that will be quite a day and be quite an accomplishment if it occurs.

Q. So the decision when San Carlos had to decide about taking CAP water or not, it wasn't that they didn't want the water, it was that . . .

A. Oh absolutely, oh no, it hurt them horribly, but when you sit down and the amount of water that's allocated to the San Carlos, which had in a sense, had an alternative supply water on the Gila not a good supply, but they had an alternative supply. Other districts were strictly dependent on groundwater and the CAP was essentially designed to lessen the impact on groundwater. It was not a project that was designed to increase water supply, it was to replace the water supply. And so the various districts that were solely dependent on wells, fared better in the allocation process than those that had, sort of speak an alternative. All be it not a great one but that was the circumstance. So when you sit down and looked at the cost of those 9D contracts and repayment of them and a sincere approach by the San Carlos Board of Directors to, in other words they didn't have any ulterior motives in mind when they looked at it. They looked at it as it was presented to them and they did not pencil out. They simply did not pencil out and so they did not take water.

Q. What is a 9D contract?

A. A 9D contract was a federal contract from the Bureau of Reclamation that was – where the federal government financed the construction of distribution delivery system, in other words lined canals. And you had to qualify for these 9D

contracts and that was the process that where the San Carlos had a great deal problems doing it.

Q. So if they financed the canal system, they wouldn't finance the lining of the canal?

A. Oh no, if they entered into a 9D contract, the system would've been lined and they would've been in an associated repayment cost. And the amount of water that they received from the Gila River, from the Coolidge Dam, coupled with the relatively small allocation of water there was portion to the San Carlos. When you put all that out across your acres, as a cost, it was prohibitive.

Q. So the Hohokam District is different

A. The Hohokam District is a pump district. It was like the others that I described. And as water tables were going deeper, and deeper, and deeper into the aquifers, it was imperative and short that those districts really didn't have any other alternative but to step up to the line and see if they could qualify for these 9D loans and build their systems. I think it was a full third of those 9D loans, I could be wrong there, but there was a large sum that had to be fronted by the locals in those things. So they had to go out as structured entities and sell bonds. And those bonds were part of their contribution to the 9D process to get their systems built. Those bonds, as well as the 9D's, repayment became very, very, very burdensome to the individual farmer and trying to fit it in a crop budget. In other words the water was very expensive.

Q. When you say very expensive, could you put that in terms of dollars?

A. Well, little vague going back to that particular point in time but for all practical purposes, the cost per acre foot in the early days was somewhat a wash with pumping costs, but you didn't have to pump the water out of the ground. That's why it was there so you wouldn't further deplete the aquifer. As time evolved, while the price of that CAP water escalated to such a point that it became quite a chore to fit those into individual farm crop budgets. And that's a whole another, world.

Q. No budget needed?

A. Well, not so much budgeting but how you devised working with CAWCD, devised efforts to make that water affordable, make it work. And CAWCD at that time was headed by Tom Clark. He did a masterful job of working with ag to make that water affordable. Where it was very political, you had to work with the municipalities, the cities, the City of Phoenix, AMWUA, and all those folks they

had a different view of things. And so consequently, Tom Clark did a masterful job. The current Director out there, Sid Wilson, not Director but General Manager, Sid Wilson, has likewise, doing quite a job and he's got to deal with the drought situation on the river and sharing and distributing that water to all the various entities. But Pinal County being a, a relatively not that inhabited county, when it came to the Directors on the CAWCD Board, we only got one. And so out of a group of about 17 or 19, I don't know, there's a bunch of Directors out there. Pinal County had a single voice, that's all, on that end. So it was difficult times.

Q. Did you ever serve on any of the CAP Board?

A. No. I was over on the power side. I was never on that board. It would have been interesting but no.

Q. Now that you are getting CAP water, how is that working out?

A. It's working fine. It allows us to, we call it restack our water supply. Where you used to be the wells was on the bottom of the stack and then any other form of water that you could acquire on top of that. Why when we got CAP, why then we flipped that where your base foundation of the water supply for your farm was CAP. And you used your pumps sparingly or only as required. As the drought that we're experiencing in Arizona, there is nothing new to drought to farmers. We've been around it since wet years and dry years forever. But it has evolved into a situation now where probably about 50% each, right at that moment. And if the drought continues, I would further expect Arizona agricultural is the most junior of all entitlements in the State of Arizona; a junior to the Indians, and junior to the cities, and if the drought continues in such a form that water will be withdrawn from them, and we'll go back on pumps.

Q. Why would you be junior to the cities?

A. It's just the way the thing evolved. Like I say, in the early days it was ag that carried the ball on this thing but it got to the end. It got to the end. There was a lot of other players that just had more political clout than the ag in the central valleys. As it evolved, why where at one time it was designed as an ag project, it ended up not being that in its entirety.

Q. Are you surprised by that?

A. Well, no not when, if you are a political realist. I'm not surprised by it. Am I disappointed in it, I think I have - I continue to be disappointed and I'll probably

be very disappointed in the near future unless we get some heavy rains on the Colorado shed which would lighten the pressure.

Q. When did you first start getting CAP water in your area?

A. In the 80's.

Q. In the 80's?

A. Uh-hum.

Q. Has it changed the way you farm?

A. Well it allows us, it allowed us earlier on to farm our farms instead of having to lay out large blocks of it. That was pretty neat, frankly. You know every acre has a tax bill associated with it and the cost of ownership associated with it, so the CAP water when it started to flow into the valley, yes ma'am, it made quite a difference. Now we're seeing that supply dwindle as the drought on the Colorado continues.

Q. So are you changing the way you're farming?

A. Absolutely, absolutely, you have to. You have no choice. But at this juncture, we're still receiving some CAP water and Arizona agricultural does a remarkable job of using water in a very conservative way. Arizona farmers have historically always been committed to the wise use of the resource and they've reached that through various means but primarily from leveling and concrete lined ditches so you don't lose so much water from seepage. And so the Arizona farm people commitment to the conservation, to the resource has been a strong ethic from clear back in the 40's. And so consequently, most farms are probably today operating at its pre-peak capabilities as far as efficient use of the water.

So anyway, we do our part and I'm sure the cities are pushing very hard to their residents to use the resource wisely but then you got a lot of folks that average, they told me an average citizen has been in Arizona seven years. A lot of those folks you know as long as water comes out of that hydrant they're not too concerned. People that have been raised in the desert and dealt with the resource recognize its importance in how you have to care and shepherd carefully.

- Q. What about the kinds of crops that you grow, has that changed?
- A. Somewhat, somewhat. You're always looking at what crops can best repay you for your efforts. And because of the cost of water, you've seen some more - less cotton being planted and more in the vegetable arena. These are high risk crops. There's circumstances where you could grow a complete crop and just have them put a disk in it and disk it up if it doesn't pay to harvest it. And so yes, you're seeing a slow change in cropping pattern.
- Q. What are you growing now?
- A. I'm still a cotton farmer. It's Old King cotton that brought me here and I'll probably go with. We grow a lot of durum wheats, which are your spaghetti wheats, your pasta wheat. In the winter time, we grow feed for dairies and then we always are around some vegetable crops; sweet corn and melons. You can grow, it's wonderful, it's wonderful what we grow here where you can farm 365 days out of the year. Not all of this country can do that.
- Q. So do you still use irrigation or regular canal irrigation? The Wuertz Farm was on a drip irrigation.
- A. Mr. Wuertz has done a magnificent job of that concept. It's a valid form of wise use of the resource. It's not for everyone and it's not for every soil type. But it's an alternative to one - growing slowly, I think. Growing slowly as an alternative, but it's very, very expensive. It's like buying a farm again to install it. So people look at it carefully.
- Q. When you read a headline like last Sunday "Del Web is building another Anthem at Florence", what do you think when you see that?
- A. I shutter. I shutter. We don't have, this is a desert. We don't have the water supply that other places have. But everybody likes, appears anyway to like to come to the desert. People tired of snow back east, or up north, or what have you, they want to come to the desert. But I shutter at that because I'm concerned over time of the availability of water supply to provide for all of these folks. A great deal though, now I don't know exactly where that particular piece of property is going to be located, but in my opinion we have to stop the development or at least really curtail the development, when I talk about development I'm talking about houses and what have you, on land - desert land in my opinion never had a water right, never had water run on it. It is my opinion, very poor public policy to allow - let's say those houses are built and it's built out and then they leave and go somewhere else these folks. I have a great deal of concern, maybe not in my lifetime, but in somebody's near lifetime. It doesn't

make a lot of difference whether you're putting water out on a fruit and fiber crop or whether you're providing water to five houses on every acre; it concerns me to answer your question.

Q. I've heard it justified by saying an acre of houses takes less water than an acre of cotton?

A. I would tell you that developers like to put a lot of houses on an acre that's how they do their thing. And if you're in the four and five house per acre range, with the way Arizona's farmers utilize their water supply very carefully now. You're talking about a wash. Now if you are talking about one house per acre and its desert landscaped and what have you, they would probably use less water than an acre of farm land. But if you'll take a look at these subdivisions and drive around, they're pretty snug and that's how they do business but to answer your question – I'm very concerned about that.

Q. Did you ever think growing up that you would see the City of Phoenix growing out in and possibility build in Casa Grande?

A. No, not to that degree, not at all. I can remember the cottonwoods along Southern, okay. I can remember those very clearly how we'd drive. . . it was water in this valley and air conditioning that's allowed this massive development. No, I could not.

Q. The future of farming in Arizona, how do you see that?

A. I see the, in time, agriculture in the Central Valley's will virtually disappear. They'll always be probably some open land, not a great magnitude of it in my mind that will allow some truck farming. It concerns me a great deal. I've always been a firm believer in close farm to market endeavors, fresh foods. You know we're going to, it appears that we're going to a world market place where so many commodities are imported into this country. I think the loss of the agriculture will at some juncture in the future will pay a very heavy price for these farms that are now being turned to asphalt. But it will be another guy's worry.

Q. What do you see that it is the challenge for the state in the future in concerns of water?

A. Oh I think it's very simple. It's the wise use of the resource. It's trying to have enough to go around. You know, we talk about it and we've done it to a degree here, we talk about that life is Phoenix, well it's not. There's one full life in this state that's outside of the Salt River Valley and as up in Northern Arizona were

you see a lot of folks down here like to go up north in the summer time. They're putting heavy, heavy loads on available aquifers in those areas. The state's role in this thing is to encourage, in my mind, the working of local people out there not top down but work with – from the bottom up with the local people to solve those problems and those growth issues that exist: Prescott, Flagstaff, the White Mountains, to a lesser degree south eastern Arizona. But water is a huge problem in the desert, the availability of it. And so I'd like to see the state provide leadership, but work with their local people to solve it and not just come down heavy hammered on people.

Q. Wrapping up, is the Central Arizona Project delivered what you expected you know 40 years ago when it was just getting talked about?

A. Early on, early on it made a tremendous impact. I never thought I'd see the day where we'd have aquifers or static water levels rise. And they rose remarkably fast, one reason we're using CAP water and not our pumps. It was just amazing to me and so that, you know, farmers when they irrigate a field a lot of that water eventually gets back in to the aquifer. You don't see that much on asphalt streets and so consequently, we saw just exactly what the CAP was supposed to do. Unfortunately with the drought situation and fortunately with all the growth that's going on, as we see less and less of that water made available to ag, you'll see farmers have to go back on their pumps and I think we will see again a draw down of the aquifers. But at the start, it worked like a champ.

Q. All we need is to get rid of the drought.

A. Well, you know we lost a whole civilization here a thousand years ago to drought. There's a great deal of studies going on right now the SRP, University of Arizona, regarding tree ring studies. It's amazing what they tell you. Who's to say it can't happen again? It'll be interesting times.

We fought for the CAP. We got the CAP and it has a great deal of capabilities. Mother Nature has to help us out a little bit but ag people, farm and ranch people understood Mother Nature very clearly over time.

Q. I (the person filming the interview) have a question for you sir and that is about your children, are they going to stay on a farm?

A. One did, the oldest boy farms with us. And he will probably continue to farm in his future. The other two daughters and the youngest boy left the farm. We have a way of saying you know there's so much room under the covers. So when you make those decisions, they're very fortunate. They're all well educated and made fine careers in other ways.

But you are going to see less and less. The average age of the farmers in this country are going higher and higher – older and older. The young people are leaving the farms just because of the tough times. You know it's a business that you buy everything retail and sell it wholesale and it's just the nature of the beast. And so consequently, and then with the new world order of importing things from all over and everywhere and the trade tariffs, it's getting incredibly complex.

Q. Do you think your farm will continue to be a farm or will it . . .

A. Highly doubtful, highly doubtful. It's pretty hard to turn down a good sale, to a farmer it's his 401(K) you know and if you understand what I'm saying. And so consequently, is it by choice. Not really, not really, not at all. It's truly difficult for me personally to envision myself not in the farming business.

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