ORAL HISTORY INTERVIEWS

STEPHEN MAGNUSSEN

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STATUS OF INTERVIEWS:
OPEN FOR RESEARCH

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Interviews Conducted and Edited by:
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Senior Historian
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STATEMENT OF DONATION
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STEPHEN V. MAGNUSSEN

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Signed: Stephen V. Magnussen
Stephen V. Magnussen

INTERVIEWER:_____
Brit Allan Storey

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A note on editorial conventions. In the text of these interviews, information in parentheses, ( ), is actually on the tape. Information in brackets, [ ], has been added to the tape either by the editor to clarify meaning or at the request of the interviewee in order to correct, enlarge, or clarify the interview as it was originally spoken. Words have sometimes been struck out by editor or interviewee in order to clarify meaning or eliminate repetition. In the case of strikeouts, that material has been printed at 50% density to aid in reading the interviews but assuring that the struckout material is readable.

The transcriber and editor also have removed some extraneous words such as false starts and repetitions without indicating their removal. The meaning of the interview has not been changed by this editing.

While we attempt to conform to most standard academic rules of usage (see *The Chicago Manual of Style*), we do not conform to those standards in this interview for individual's titles which then would only be capitalized in the text when they are specifically used as a title connected to a name, e.g., "Secretary of the Interior Gale Norton" as opposed to "Gale Norton, the secretary of the interior;" or "Commissioner John Keys" as opposed to "the commissioner, who was John Keys at the time." The convention in the Federal government is to capitalize titles always. Likewise formal titles of acts and offices are capitalized but abbreviated usages are not, e.g., Division of Planning as opposed to "planning;" the Reclamation Projects Authorization and Adjustment Act of 1992, as opposed to "the 1992 act."

The convention with acronyms is that if they are pronounced as a word then they are treated as if they are a word. If they are spelled out by the speaker then they have a hyphen between each letter. An example is the Agency for International Development's acronym: said as a word, it appears as AID but spelled out it appears as A-I-D; another example is the acronym for State Historic Preservation Officer: SHPO when said as a word, but S-H-P-O when spelled out.

Introduction

In 1988, the Bureau of Reclamation created a history program. While headquartered in Denver, the history program was developed as a bureau-wide program.

One component of Reclamation's history program is its oral history activity. The primary objectives of Reclamation's oral history activities are: preservation of historical data not normally available through Reclamation records (supplementing already available data on the whole range of Reclamation's history); making the preserved data available to researchers inside and outside Reclamation.

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For additional information about Reclamation's History Program see:
www.usbr.gov/history

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Oral History Interview
Stephen Magnussen

Storey: This is Brit Allan Storey, senior historian of the Bureau of Reclamation, interviewing Steve Magnussen on September the 1st, 1995, in the offices of the Bureau of Reclamation in the Main Interior Building in Washington, D.C., at about 10:00 in the morning. This is tape one.

Mr. Magnussen, I'd like to ask you where you were born and raise and educated and how you ended up at the Bureau of Reclamation.

Early Life

Magnussen: Well, I was born August 27th, 1941, in Northfield, Minnesota, you know, of a Lutheran minister and we moved, after being there a couple years, moved to Racine, Wisconsin, and then moved to Fresno, California, where, basically I was raised and went through the school system. I was about seven years old when we moved to Fresno, actually a little town south of Fresno called Easton, which was a little rural farming community just south of Fresno. Went all the way through the school system, graduated from high school there. And then my dad, between my junior and senior year in high school moved and took a parish in Petaluma, which is about forty miles north of San Francisco. And I was ready to go to the University of California, Berkeley after I graduated from high school to be an engineer. And he called up one day and said, you know, there's a little school not too far from where we live in town called Santa Rosa that's a junior college, and, he said, I'm told that they have an excellent engineering program and I hear that they've got scholarships. You might want to check into it.

And so I did, and I found out that all of the engineering courses at the junior college were exactly the same courses at the University of California. They were numbered exactly the same. And when you talked to people at the University of California, they would have had the junior college transfer rather than their own native student, because they did better into the upper division classes. So they flunked out about a third of their own students, but the junior college students, very few of them were flunking out. So I applied and I got a scholarship and so I ended up going to the Santa Rosa Junior College. And then after I had completed my two years there I sort of liked the smaller classes and liked Fresno so I didn't go back to Berkeley, I went back to Fresno State College. And so I graduated with a bachelor of science degree as a civil engineer from Fresno.

Reclamation's Student Trainee Program

It was when I was going to school just in Santa Rosa, though, that I had a couple of friends that were in the engineering program that, of course we were all looking around for something to do in the summer time, and there were applications for what was called a student trainee program. And so I applied along with two other fellows that were there, and lo and behold we got accepted to go to work for the Bureau of Reclamation. And so between my freshman and sophomore year in college, three of us, a fellow by the name Martin Roach, and a person by the name of Ben Everett, the three of us took off to Trinity County up in northern California where they were building the Trinity Project, and in June of 1960 went to work just on survey crews as the Bureau was in the process of building the Trinity Project.[1]

It was kind of an interesting first week that I had. I got assigned to a transmission line crew, and I had–the previous year I had gotten poison oak, and I'd gotten it very bad,. And as I got out and we're kind of trampling through the hills I got it again and so I went to the head of the survey crew, and I said, you know, "I'm not really going to be able to work here in these mountains. I'm very susceptible to poison oak and poison ivy, and I just know I'm going to have a problem. So if you've got something else I could do, I would really appreciate it."

And so I got assigned, and I think I had by far the best job in the whole Bureau of Reclamation. My job that summer was working on the survey crew that was doing the borrow areas for Lewiston Reservoir. And what they were doing, they were excavating Lewiston Reservoir and using the fill to build Trinity Dam, and so in order to pay the contractor you had to survey to determine how much material you had taken out. And when I got there they were using a great big rowboat to go across the river to do the cross sections, and I said, "You know a couple summers ago I worked as a lifeguard, and I'm an excellent swimmer. And I know I could swim back and forth across that river, and we could go a lot faster and do a lot more cross sections if you'd just let me swim. And so they said, "Well, go ahead and try it." And it worked out, and we probably increased our productivity two or three times and got twice as much work done.

1. The Trinity Division of the Central Valley Project was authorized in 1955. Surplus water from the Trinity River basin is stored, regulated, and diverted through a system of dams, reservoirs, tunnels, and powerplants into the Sacramento River in northern California. For more information, see Eric A. Stene, "Trinity Division Central Valley Project," Denver: Bureau of Reclamation History Program, 1996, www.usbr.gov/projects/pdf.php?id=108.

And so my job that summer was then to come to work with a hard hat, and a swimming suit, and a pair of tennis shoes, and I got to swim across the river taking a cross sections of the borrow area working on the survey crew. So I thought that was great job. So I thought, you know, how could you not work for the Bureau of Reclamation when they'd let you do that. You got to work in your profession as an engineer, and learn about surveying, and, you know, get a great tan, and so that was kind of my start with the Bureau.

So that was a little over thirty-five years ago, and so I ended up working every summer, then, after that. So I worked four summers. I worked–the first summer I worked on the survey crew out of Lewiston. The second summer I worked just in Redding, and we were pouring the invert for the Clear Creek Tunnel which connects the Lewiston Reservoir to Whiskeytown [Reservoir]. And so they were excavating and pouring that, and we were up as a batch plant inspector, and lived in Redding, California. Played a little semi-pro baseball that summer and worked shifts there. Then I graduated from Santa Rosa Junior College and went on to Fresno State, but continued to want to work in the summer.

And so my third and fourth summer worked on the San Luis Project.[2] So work went to Los Banos and the first summer worked . . . I think I worked on the fill of the dam. They were doing the, right, well, now, I'm not sure. I'd have to go back and look at what I did. The fourth summer, what I did, was really very interesting. We worked on–the computers were just really getting to get started, and we developed a cross section program that we could do by computers where we can do all of the, do all of the calculations that we'd always done by hand with old Marchant ~~Computers~~ [calculators], and worked on an A-D-P [Automatic Data Processing] group there in Los Banos that was actually developing the programs, you know, to be able to do all this now by computer. So that was kind of the first advent of (Storey: Cross sections of ?) of the dam of the fill of the dam, and, actually the excavations for the canals and so the, everything that came in.

So both the dams and reservoirs and the canal cross sections where now they started to be doing by computer so that the survey notes would come in, and

2. Authorized in 1960, the San Luis Unit is a component of the Central Valley Project and also part of the State of California Water Plan. Reclamation and the State of California constructed and operate this unit jointly. Some features are "joint-use facilities" of the federal government and the state. The principal purpose of the federal portion of the facilities is to furnish approximately 1.25 million acre feet of water as a supplemental irrigation supply to some 600,000 acres located in the western portion of Fresno, Kings, and Merced Counties. For more information, see Robert Autobee, "San Luis Unit West San Joaquin Division: Central Valley Project," Denver: Bureau of Reclamation History Program, www.usbr.gov/projects/pdf.php?id=109.

they would get converted so a keypunch operator could use them, and then that would all be done on a computer. So that was kind of the first start [at] the Bureau. Because when I was up in Trinity County all those cross sections, they were all done on the old Marchant ~~Computers~~ [calculators] and everybody would sit around and (unclear) deafening noises everybody was converting their survey notes.

Storey: The ones with the handles and . . .

Engineering Rotation Program

Magnussen: [They went] ker klunk a choo ka chunk. Yeah, that's right. So that was kind of . . . The I graduated from Fresno State in January of 1964. Went into the Army six month reserve at Fort Ord, and then came back to work for the Bureau on the engineering rotation program. At that time they had a one year engineering rotation program. And so I worked six months more in Los Banos. So that would have started like in July of '64, I guess, yeah, July of '64. I worked six months in Los Banos. Then I went to Sacramento, and I worked in the Design Section in the Regional Office. And then I went to Carson City and worked in their Planning Office. They were planning a project called Watasheamu[3] which was never built. And I also did some water measurements out on the Newlands Project[4] and worked with a fellow by the name of Bob McPhail who later became Regional Director in just in Billings and so Bob and I spent that summer together carousing and all kinds of things. But I remember going out on the Newlands Project, and you'd look around and, since there's mountains all the way around, I never could hardly get oriented, you know, north, south, east, and west–no matter where you looked there were the mountains, and they all looked the same to me. So I always had to have a compass when I went out there. And all those drains. I remember that was really an interesting summer working out on the Newlands Project in

3. Watasheamu Dam and Reservoir was to have been located on the East Fork of the Carson River about ten miles south of Gardnerville, Nevada to develop an additional source of irrigation water as part of the Washoe Project. For more information on the Washoe Project, see Carolyn Hartl, "Washoe Project," Denver: Bureau of Reclamation History Program, 2001, www.usbr.gov/history/projhist.html.

4. One of Reclamation's first irrigation projects, the Newlands Project covers lands in the west-central Nevada counties of Churchill, Lyon, Storey, and Washoe. Water for the project comes from Lake Tahoe, which lies on the California/Nevada border, the Truckee River which drains Lake Tahoe, and the Carson River. It provides full service irrigation water from the Truckee and Carson rivers for about 55,000 acres in the Lahontan Valley near Fallon and bench lands near Fernley in western Nevada. In addition, water from about 6,000 acres of project land has been transferred to the Lahontan Valley wetlands near Fallon. For more information, see Wm. Joe Simonds, "The Newlands Project," Denver: Bureau of Reclamation History Program, 1996, www.usbr.gov/projects/pdf.php?id=142.

eastern Nevada. That was a–Carson City I always thought was a very fun town–it was a good . . .

And then from there I went back to the [Mid-Pacific] Regional Office. I completed my rotation program, and at the time the office was on Marconi, which was across the street from the Old Town and Country Shopping Center and there was a big theater next door to it, and the office–I went to work in the Planning Division in the Hydrology Branch. And they were in the process of building the new building that now is the office there on Cottage Way, and they were so short of space that the cubicle I was given there were like six people that were in there, and the desks literally lined up edge to edge, three on one side, and three on the other. And there was a table in the center, and if somebody wanted to get out from a back desk, the other two people in the front had to get out of the way for him to be able to get out of the office. I mean it was so crowded. I don't remember how long we were there. I don't remember when they moved, but I would–probably a year or so–but that was really a, that was pretty tough duty. It was hard to work, you know. You were in there so crowded, and anybody was on the phone you could hear what they were saying–so that was kind of hard.

Water Quality Branch

I guess the next thing that was really of some interest was still in the Regional Office, and at that time the whole environmental movement was starting. And the issue of water quality was becoming more and more important, and so the Region formed a Water Quality Branch within the Planning Division whose job and responsibility was, you know, to, you know, to do the water quality sampling and monitoring and laboratory analysis and really for water quality within the Region. And they, both within the San Francisco Bay Delta as well as within the reservoirs. And my job was to help design and implement that program. And probably, sort of, [I] probably always had a kind of environmentalist view of things–not sort of the rabid, but, you know, certainly we could do a much better job of taking care of our resources than we were. So that water quality field was real natural for me. And we designed and implemented, really, the first major water quality sampling program in the Bay-Delta.[5] And

5. Referring to the delta of the San Joaquin and Sacramento rivers–often referred to as the Bay-Delta. This is located on the northeast quadrant of San Francisco Bay (San Pablo Bay). The water from the Delta exits to San Pablo Bay through the Carquinez Straits. "The Bay Delta Conservation Plan (BDCP) is a part of California's overall water management portfolio. It is being developed as a 50-year habitat conservation plan with the goals of restoring the Sacramento-San Joaquin Delta ecosystem and securing California water supplies. The BDCP would secure California's water supply by building new water delivery infrastructure and operating the system to improve the

(continued...)

working with the state, just with the California State Department of Water Resources–really worked together very closely. They had a boat, and we had a boat, and we would, you know, design a program so they weren't overlapping and we were working together,

And, in fact, a couple things I thought we did were really pretty unique. We put together kind of a annual planning session where we would get together and one year we thought–there was a fellow by the name of Austin Nelson who's now with the Contra Costa Water District, but he was kind of my contact with the state. And so we did kind of a week-long retreat at Lake Tahoe, and we rented a house up there, and I think they were probably ten of us, probably five from the state and five from the Bureau. And kind of laid out the whole program. Really did some team-building at that time. Kind of the Bureau's Facilitator Program was just getting starting and it was how important it was for people to be able to work together as teams and not just kind of the autocratic boss telling you how it was. As so we actually got the people who were working on a program together on a weeks-long retreat and they kind of critiqued what we had done last year and what had gone well and what hadn't gone well, and did the planning for the future year.

And [it] was a good way to do that. Have the people get off by themselves; get to know each other better; and really built, at that time, which was a good working relationship with the state. In a lot of ways the state/federal relationship on the Central Valley Project and the State Water Project have always been sort of tense all the time, but that was one of the examples where I think we were able to show it wasn't really some competition that was, that we really could work together and was trying to demonstrate to some of the bosses I had that, you know, this was certainly, if we would do more of this Bureau wide, then it would really be helpful rather than fighting all the time about these things. At that time

5. (...continued)
ecological health of the Delta. The BDCP also would restore or protect approximately 150,000 acres of habitat to address the Delta's environmental challenges." See baydeltaconservationplan.com (Accessed June 2014).

the Peripheral Canal[6] was a big issue, and that we had ways that we could work more cooperatively and would really be better.

Delta Planning Branch

From that water quality job then I went to work in one of the planning branches called the Delta Planning Branch. At that time the Planning Division for Reclamation was really very big. When I first went to work in the plan . . . I think there were like a hundred and seventy or a hundred and eighty people. So if you looked at a map of California with all the reservoirs all of northern California was blue. I mean they were just reservoirs all over the place, and people very active planning water projects. In a lot of ways that didn't make a lot of sense, you know, you were, wherever there was kind of a natural depression in the valley somebody had planned a dam site, and it didn't make a lot of sense to me. But the Peripheral Canal seemed–was a pretty important part of the project. So I went to work in one of the Delta planning branches, and my job was to write the first joint environmental impact statement with the state of California. So we were going to write an E-I-R/E-I-S on the Peripheral Canal. It never did come out, and the bosses that we had at that time were really not interested in working cooperatively. They were really more interested in kind of the federal take over . . . we had to do a joint one, but really wanted the federal government to be in the lead.

And so philosophically I always had a lot of trouble with how they were trying to, kind of trying to approach how to solve the problem. And there was a, I always thought with a lot more enlightened leadership with the Bureau at that time, we could probably have done a lot of more development–solving a lot of the Delta's problems than we have now. I mean now we're basically at the same place now that we were when I was there in the early '70s, in the mid-'70s. And

6. In the 1960s and 1970s, another canal was proposed, one that would divert the Sacramento River at Hood around the "periphery" of the Delta region. This canal would have been about 43 miles long and would have delivered canal water directly to the state and federal pumps near Tracy. The 1982 design for the canal would have enabled it to carry 15,000 cubic feet of water per second.

By 1998, the CalFED Bay Delta Program developed three alternatives for moving water through or around the Delta, including a so-called "isolated conveyance facility." This plan called for a canal smaller in capacity than the original peripheral canal (around 5,000 cubic feet per second). The CalFED plan also included an ecosystem restoration plan, a multi-species habitat conservation plan, a levee repair strategy, reservoir planning studies, an ambitious science program to study Delta estuarine and river systems, a water transfer program, an "environmental water account" program to mitigate export pumping losses of fish and of water to contractors, and programs for water use efficiency and drinking water quality. This plan failed to receive sufficient funding, and (with the exception of the science program) essentially has been retired.
https://www.c-win.org/peripheral-canals-way-past-past-and-present.html.

if we'd worked cooperatively with the people then, with the environmental groups, we'd a had in place the facilities necessary to protect the Delta, but we just didn't have the kind of leadership that was ready to do that.

We had a Regional Director by the name of Bob Pafford was pretty good. And then he left and Billy Martin[7] came in as a Regional Director, and Billy was a very closed individual, wasn't, really wasn't the kind of leader that Reclamation needed at that time. Brought in some people that were–they just weren't good leaders and good managers. A lot of the good Bureau people left at that time and they were not . . . There'd been a group within the Regional Office in Sacramento called the Facilitator Group that kind of tied in with kind of using the social sciences and the behavioral sciences and kind of learning how we worked, and I became part of that group. There was an original group of eight and then eventually it expanded to about twenty or twenty-five kind of as change agents within the organization, new ways of doing things.

And Bob Pafford had an Assistant Regional Director by the name of Bob Hammond who was also the chief of Central Valley [Project] operations. And was sort of the–he was kind of the mentor of that group. There are a couple of other leaders in the Regional Office. Jake Ossofsky, who later also became the chief of Central Valley operations. The time when I was first there he was the chief of the Hydrology Branch. But these people kind of became in more key leadership positions, saw how important it was for Reclamation to change and to change its culture and to change its way of doing things if it was going to be more contemporary in terms of water management. When Billy Martin came that whole group left. Billy was, like I said, he wasn't–he didn't understand it, he was threatened by it, and so a lot of the young Reclamation people that had come, that had been recruited to come to be part of this effort really all left the Bureau. And there was really quite an exodus; I'd say within two or three years after Billy Martin came.

Looking to Leave Reclamation

7. Billy E. Martin served in multiple upper management positions for the Bureau of Reclamation, including Mid-Pacific Regional Director, 1974-1980, Lower Missouri Regional Director, 1980-1985; Great Plains Regional Director 1985-1988; Assistant Commissioner-Resource Management, 1988-1990. Mr. Martin also participated in Reclamation's oral history program. See Billy E. Martin, *Oral History Interviews*, Transcript of tape-recorded Bureau of Reclamation Oral History Interviews conducted by Brit Allan Storey, senior historian, Bureau of Reclamation, from1994 to 1996, in Sacramento, California, edited by Brit Allan Storey, 2010, www.usbr.gov/history/oralhist.html.

I left in 1976 and came back to Washington on the Department's [Department of the Interior] Manager Development Program. I really felt I was going to leave the Bureau. I was really kind of upset by how everything was going, and I had really thought I was really coming to Washington to kind of on a job hunting expedition and see what kind of other agencies there were here. What I found when I got here was that how well-managed Reclamation really was. Even thought I was bothered by some things it was doing, alls you had to do was to become associated with the Bureau of Indian Affairs or some of the regulatory functions like the Commodities Futures Trading Commission, which I worked with, to really understand that Reclamation was a pretty good organization, and that it had an ethic that was important. It, you know, the people that sort of came from those rural backgrounds, they had a set of values that were consistent and understood. When I went to work for the Commodities Futures Trading Commission, I had an assignments that it was working for one of the commissioners, and what I found out was that everybody who worked for the Commodities Futures Trading Commission alls they were trying to do was write regulations that they could leave to work for the industry because then they would know about the regulations. And I was just bothered by the ethics of that.

And we don't have that kind of thing within Reclamation, you know. We know and understand our mission, and while it's changing, we know and understand it, and people are basically out working for the good. They're not out working for themselves. And so I thought, "Well, maybe I will stay with Reclamation. It's an important thing. It's something that I believe in that we ought to do. So, in that *time* when I was here in Washington 1976 to 1977 was then the changeover to the Carter Administration, and Jimmy Carter was elected president and had the famous "hit list" where he eliminated part or major parts of the western water project.[8]

Department's Manager Development Program

Let me back up just a little bit before I go to the next part of the story. A couple things that I did while I was on the Departmental Management Program here were kind of interesting. That was the year that the drought relief legislation was done, and one of the assignments that I had was I worked for Gene [Eugene]

8. Jimmy Carter served as President of the United States from 1977 until 1981 after his election in 1976. Within a few weeks of the beginning of the Administration, an internal discussion document accidently fell into the hands of a reporter. The document proposed cancellation of a number of water projects considered environmentally or economically unsound. This proposal came to be known as Jimmy Carter's "hit list." For more information, see Andrew H. Gahan and William D. Rowley, *The Bureau of Reclamation: From Developing to Managing Water, 1945-2000* (Denver: Bureau of Reclamation, U.S. Department of the Interior, 2012), 833-837.

Hinds[9] who was called the 400 chief, here in Washington, and wrote some of the initial drafts of the drought relief legislation, the kinds of things we needed. And then I went to work–I had a three month assignment up on The Hill working for Congressman B. F. Sisk who was on the Rules Committee; was a very powerful congressman from the Fresno area. And his administrative assistant was a fellow by the name of Tony Coelho. Tony Coelho went on to become the congressman from that district.

And as I got up there the fellow that did all their water business had had a heart attack, and so they needed somebody to help do the staff work on the water side for Congressman Sisk and Tony Coelho. So that was a really very interesting–so that was the year that the first drought relief legislation went through, and worked on the negotiations between Tony Coelho and John Lawrence who was Congressman George Miller's administrative assistant as they negotiated that. That was also the year of the San Luis Act legislation that went through. And so it was a very interesting three months to sort of see the, kind of politics, and how that developed and how the legislation works. And so had kind of seen the legislation start in the Interior Department and then when it got up to The Hill and got up and got passed. So it was a good year for me in Washington.

The fellow that was the head of the training program, his name was Frank Peckridge (phonetic), he was the Bureau's Training Officer, and Frank had also been one of the people in California that had left when Billy Martin came, and so was back here. So he became sort of my mentor for the year, and, you know, had lots of opportunities to do and explore and to try different things as I was kind of growing as a person and as a Bureau employee. As it got to the end of the year, of course, you had to figure out what you wanted to do, and I really didn't want to go back to Sacramento.

Coming to the Central Arizona Project

I had thought I wanted to leave the Bureau, and didn't want to leave the Bureau, but with the "hit list" then obviously came some opportunities. And one of the things that had happened was on the Central Arizona Project, and on the Central Arizona Project after the project had been authorized in 1968 they figured that the project was now authorized alls we had to do was we had to build it. And so they eliminated all of their planning staff.

9. Eugene Hinds served as Assistant Commissioner-Planning and Operations, 1981-1982, and later went on to become Regional Director for Reclamation's Southwest Region, 1982-1988.

Now when the "hit list" came along, all of the major dams that were part of the project, except for one, were just eliminated, and, obviously, they needed to go back and to rethink and re-plan the Central Arizona Project. So Manny Lopez,[10] who was the Regional Director in Boulder City at the time, and Dick Shunnick, who was the Project Manager in Phoenix came, I think with some of Frank's [Peckridge] help, said, "We would like to have a good planner to come back down here to Phoenix, and we really need to re-plan the Central Arizona Project, and would you be interested in doing that?" And so, I said, "Yeah, that sounds like a very interesting assignment."

It was an opportunity to bring some of the thoughts and values that I had of how you do planning had people that appeared to be more insightful and understanding of kind of the public involvement part of the process: the need to do good environmental studies, the need to explore alternatives and, you know, do good analysis and not just sort of think this was the solution. So I went to Phoenix. I went to Phoenix in 1977 after having completed the Departmental program here. And the job was basically to hire a staff and to re-plan C-A-P. We grew from, guess at the height, the peak, probably had a staff of about twenty-five or twenty-six. We had, it is a real opportunity when you get to hire everybody that works for you, you know, because you sort of pick the people that you want. Also knew that it was a short term kind of project. It wasn't going to go on forever. So people knew that they could come in, could make their mark, and then would leave. And put together really a very interesting team. Quite a few of the people have gone on to, you know, higher management level jobs just within the state of Arizona. One of the fellows, Herb Dishlip, is now the Deputy Director for the Arizona Department of Water Resources.

Orme Dam

We, the biggest project we did was trying to find the alternatives to Orme Dam. Orme Dam was kind of the, I guess was the centerpiece of the Central Arizona Project. It sort of operated like the San Luis Reservoir does. It was a re-regulating reservoir kind of in the middle of the project. It was located in Phoenix, but it had a number of environmental problems. It flooded the major

10. Manuel (Manny) Lopez served as Regional Director for Reclamation's Lower Colorado Region, 1975-1979. Mr. Lopez also participated in Reclamation's oral history program. See Manuel (Manny) Lopez, *Oral History Interview*, Transcript of tape-recorded Bureau of Reclamation Oral History Interviews conducted by Brit Allan Storey, senior historian, Bureau of Reclamation, in 1995 and 1996, in Jefferson County, Colorado, edited by Brit Allan Storey, 2010, www.usbr.gov/history/oralhist.html.

portion of the Fort McDowell Indian Reservation.[11] It eliminated just a recreation resource of being able to float down the Salt River. It backed water up on the face of Steward Mountain Dam which was one of the dams of the Salt River Project, and the concerns about what happened when you had water on the face of another dam. It impacted nesting sites of the endangered bald eagle.

And so the job was to really find another alternative to Orme Dam. Find something else that would be able to regulate the water as it moved from the Colorado River into central Arizona, Phoenix, and Tucson. To find a way to do it in a environmental responsible and just acceptable way to the people of Arizona. It also provided flood control and there had been–the Salt River bed, as it goes through Phoenix, is dry most of the time except when it floods. And then when it floods that water [runs] down the river, and at that time they only had two or three bridges across the river. So the city of Phoenix was completely blocked off from itself. You had no way to get any kind of emergency transportation back and forth across the river. So it was really a mess. So, having some flood control just was important.

Now we put together and designed, at that time, which was the largest planning ever done by the Bureau of Reclamation. Ultimate cost was probably sixteen or seventeen million dollars. It lasted (Storey: For the planning?) four years. This was the planning effort. (Storey: Fourteen to sixteen million dollars?) Right. So this was by far the largest effort. People just couldn't comprehend how you could do this kind of massive effort, but what we did was we went together with the Corps of Engineers who was looking at the flood control and the Bureau looking at the water supply. We hired a major consultant to help us do the environmental studies–Dames and Moore. We hired a major public involvement group to help us design and identify alternatives and evaluate those alternatives. Study lasted four years.

Plan 6

The final outcome is called Plan 6 of the Central Arizona Project. Plan 6 being–it was the chosen alternative of the *nine* alternatives that were finally involved in the E-I-S. You know, hundreds of public meetings all over Arizona. Working with the Salt River Project.

There were three or four people that were really key to making the whole thing a success: Wes Steiner, who was the state engineer from Arizona; Jack

11. The Fort McDowell Yavapai Indian Nation's reservation to the east of Phoenix and Scottsdale, Arizona.

Fiester who was the general manager, I guess, from the Salt River Project; Tom Clark; and a fellow by the name of Bill Matthews from the Maricopa Flood Control District. And so these are sort of the sponsors, and they knew and understood you had to be able to build public support for an alternative. They were very supportive in looking [at] alternatives. They may have individually had their biases, but recognized that you couldn't ever build anything unless there was general public support. You had to deal with the Indian problem, and so finally what was done–the Plan 6 consisted of another reservoir now called New Waddell which was built on another stream, the Agua Fria River. Raise Roosevelt Dam, which was the oldest multi-purpose dam, just in Reclamation, authorized in 1902. Just a masonry rubble dam and ended up raising it seventy feet which then provides the flood control that Orme Dam would have. And had another dam on the Verde River which eventually gets eliminated because of the bald eagle.

But ended up with, eventually, what became a better plan than the original Orme plan. You now had a New Waddell Reservoir that could actually have more water go in it than Orme Dam would have. It was large enough now that it could be a winter-summer operation, and so you could pump all the water in the wintertime and you could sell the electricity from the Navajo Generating Station, so basically you could make more money and you were able to do this and not flood the Indian reservation. You still got the flood control, and you had a better regulatory. So, really, demonstrated from that process that if you had the kind of leadership that was important in the community and you had people that were knowledgeable about how to do good planning, you, in fact, *could* put together a plan, and you could build it. In fact, today Plan 6 is now completed construction. New Waddell's been in and operating for two or three years now. Roosevelt Dam, the raising of Roosevelt Dam is just now being completed. I think this year we'll complete. And so we finally . . .

END SIDE 1, TAPE 1. SEPTEMBER 1, 1995.
BEGIN SIDE 2, TAPE 1. SEPTEMBER 1, 1995.

Storey: You were saying that this is probably the last major construction project that Reclamation will do.

Magnussen: Yep. The Central Arizona Project and Plan 6 as it's now being completed will probably be one of the last large construction projects that the Bureau will do. But really demonstrated that if you follow the process of good planning and good environmental studies, good identification of the problem, and then building the good support and understanding of the alternatives, and then building a process

for selecting an alternative and getting the community behind it then having the right people that knew how to do that, in fact, demonstrated that that could be done. And so it was certainly one of the real highlights of my career of being able to, you know, being able to do that.

Water for Tucson

Other things we did on Central Arizona, we completed the–it was very controversial. The city, when I first came to Arizona, the city of Tucson had elected a no-growth city council and decided they didn't want any water from the Central Arizona Project. Just before I got there, that city council had been recalled. They had raised the water rates for people that lived on the top of the mountain because it obviously cost more to get water up there, but what they forgot to realize is that the people on top of the mountain also were some of the more influential people in the community. So they had a major recall, and so this no-growth city council was elected out of office and brought in a new council and they decided now they really did want to have C-A-P water.

And so we put together an effort, not too dissimilar from what we had done for Plant 6, but it was kind of a whole effort of planning how to get water to the city of Tucson. And where it would go and how it would get stored, and that project now, well, it's not quite complete. One of the very controversial parts was was there to be a terminal reservoir or not. And the original plan had the reservoir in the Tucson Mountains. And we finally ended up with a ban and we agreed that we would never build the reservoir in the mountains which meant the reservoir had to be built out in the desert someplace. Meant you didn't kind of have a natural canyon to build the dam in–you basically had to build a dike around the whole thing. And today that process is still going on–to try and decide exactly where that reservoir goes. But water's being delivered to Tucson at this time, but exactly how does it interface . . . there's an Indian community down there as well as the city of Tucson. And so there's a number of controversies that have not gotten completely resolved yet to this date. But we're able to design it such that we could actually get the water there.

Resolving Indian Water Issues

One of the disappointments I had that left before we were able to get complete–part of the water from Central Arizona Project goes to, I think it's thirteen Indian tribes. And we have never really been able to resolve all the issues about getting the water to these Indian tribes. They're very complicated. The

tribes don't always have all the resources they need. Reclamation doesn't have all the authority that it needs to solve all the problems. You don't have enough of–you don't have enough authority under Central Arizona Project to address all the issues. So you typically have to go get additional legislation. That has been done through Indian water rights settlement acts which help provide additional authority and money to do some of the things that the tribes can't do. They're in the process. They've actually only built one system has been completed to date. They're working on a couple more so, I mean, it's the same way, and there are still thirteen tribes. So we're a long ways away from being able to get water to the tribes. So that was probably one thing we didn't do as well as I would have liked down there.

But when the planning was complete on Plan 6, and it was time to start reducing the staff, we had a new project manager. Dick Shunnick had left and Ed Hallenback came, who had been the Project Manager in Yuma.[12]

Storey: Now, this is as Project Manager?

Magnussen: Yeah. He came to be the Project Manager in Phoenix, and he eventually goes on to become the Regional Director. He becomes the Regional Director in Boulder City, but at that time he was the Project Manager in Phoenix, and was a very insightful kind of visionary leader. He was primarily an O&M [operations and maintenance] guy, and he really liked to tinker with the nuts and the bolts. And so really didn't know much about planning, but was really very visionary in terms of what needed to get done down the road. And he knew and understood that when the bureaucracy was done it was always going to try and find something itself to go on. And some way to keep this planning staff going, but what he realized and understood that didn't make any sense. And so he made it very clear that as soon as the E-I-S [environmental impact statement] was done then the staff needed to be disbanded. There was never any question, but he did in really a healthy way. There was enough advance notice. "You need to know within a year we're going to be done. So you all need to be looking for different jobs." He was very supportive in doing that. And so instead of, you know, having sort of this, you know there'd obviously been a lot of camaraderie that was built among the staff and people feeling good about what they had done and what they'd completed that it would have been, you know, sort of easy to try to perpetuate yourself and find something else to do, but he didn't allow that to happen and was very good.

12. Edward Hallenback went on to become Regional Director of Reclamation's Lower Colorado Region 1986-1991.

Lower Colorado Regional Planning Officer

And so I ended up leaving and went to Boulder City to be just the Regional Planning Officer in Boulder City. And quite a few of the other staff had left, like I said. Herb Dishlip left, went to work for the state of Arizona, and a number of other people left to . . . some of them went to work for the Central Arizona Water Conservation District, which was the entity that hold the master repayment contract. And, I think the planning staff out there probably only three or four people now, but it built up and it went back down. So I guess from that I really learned that it's a lot healthier, you know, to be candid with people. And if they know and understand kind of what the termination of the job is and rather than having somebody sit around and try to make up work you're always much better off being–trying to clearly identify the organization goals and when those goals had been done let's get on and do something else. And the people are healthier for it, and the organization's healthier for it. So I think that was kind of a real learning experience for me there. And it can be done in a real healthy way. Doesn't have to be done with, well, I don't want to say a RIF [reduction in force], but it doesn't have to be done in a kind of a meat ax approach. And that was a real good learning for me.

From there I went to become the Regional Planning Officer in Boulder City. Staff of about probably thirty-five to forty, I think, with all the disciplines. At that time the Reclamation's planning program, G-I[13] program, was probably, well, I would say it was probably in the twenty-to twenty-five million dollar range. So it was a pretty healthy program.

We had a number of really kind of interesting projects that were going on at the time. We had a project associated with lining of the All-American Canal, which was a project which would conserve water, so kind of had that part of it. It was too expensive for the irrigation district. It was operated by Imperial Irrigation District so to line that canal was too expensive for them to do. So the agreement that was put together was Metropolitan Water District of Southern California, the big urban purveyor just in Southern California, would pay for it in exchange for getting the water that was conserved. And so at that time then was really kind of the first of the really major water conservation agreements that they're still trying to be put together today in lots of ways where you could find kind of a common fit for, you know, for people that have different needs. And you can put them together and you can develop, as opposed to building big water projects, you

13. General Investigations.

know, to meet the needs in Southern California which you could line a canal that would conserve water and the conserved water wouldn't get used.

Now what was complicated then was no longer the engineering part of it. What was really complicated was the, you know, the negotiations that would go on and how much was involved and who got what. And they were very difficult negotiations because Imperial always sort of felt kind of one down to the big city boys, and so they were always afraid that they were not getting the best deal. So they would come up, and they would agree to a deal, and then some of the farmers weren't sure they'd gotten such a good deal. Then they would back of. So negotiations had a very long history, and today the All-American Canal hasn't been lined yet. You know, the concept is there, but all of the institutional agreements all still have yet to be put in place. But we did the E-I-S when I was there, and they have basically the basic framework for doing the project.

We also worked on a project called Spring Canyon Pump-Storage Project, which was a pump-storage project associated with Lake Mead. The reservoir was up above Lake Mead. It would be completely funded–there wouldn't be any federal funds involved at all. In fact, the whole planning effort, well, half of the planning effort was funded by nineteen utilities throughout the West. Reclamation paid for half, and they paid for half. Completed the planning study; completed a feasibility engineering study; and did an E-I-S. Worked at that time the economics of power were starting to change so the utilities did not exercise their option to go forward with the project. But it was a relatively environmentally benign project. It had–the only real major environmental impact was the crossing of some bighorn sheep that were going to be affected from kind of the normal migration pattern, but that was really the only environmental issue. So it was way out in the desert and had very little impact.

It also show that what you could do, is you could put together an effort where you could develop projects and it didn't have to be all federal money. So each of those projects, kind of in its own unique way, you know, showed water and power development being done in kind of a non-traditional way from the way that Reclamation had done it historically and so on. So I guess that was the–then Ed Hallenback then moved up–had been the Project Manager in Phoenix and came up to be the Regional Director. And, like I said, he was a very unique, very unique individual. He was–we became very good friends. I'm very fond of him, but he had some quirks that were really difficult. As soon as he got there he–there were three assistant regional directors, and, trying to remember, two of the three retired right away. They were sort of more the old school traditional, you know,

assistant regional directors, and he was kind of looking for some new management and new management style, and ended up with only one assistant regional director.

Ed Hallenback

So kind of, to a large degree, some of the concepts that Dan Beard[14] has tried to put in place or kind of reducing, you know, the big bureaucracy. Ed also believed strongly that the power ought to be in the area offices, or, at that time, the project offices; regional offices shouldn't be doing work; they ought to be sort of a–they ought to be playing a role of oversight and, you know, providing help and guidance and resources to the project office when they didn't have them. But clearly the project offices is where the work got done and its where you produce the product. Regional offices didn't produce products. So he knew and understood that, and I've often said to him "Too bad you didn't stick around until Dan Beard came because you guys really tended to think about things in a very, you know, in a very similar fashion." And, of course, you know, the Regional Office they didn't really like that. I mean, here you had this big bureaucracy that had been built there, and people'd been there for years. And certainly to think about moving their job to these project offices–the employees didn't think, you know, they didn't think very highly of that. So there was a lot of resistance within the Regional Office to do that.

But, also, what happened for me, then, at that time, was some of the expertise that I had built up in Sacramento in terms of the Facilitator Program and, you know, people working together in teams was also something that was very important to Ed Hallenback. And so we started, then, at that time, within that Region, probably the first of kind of a try to manage with a much larger view and had what we called the Total Management Team meetings within the Regional Office which were probably the twenty-five to thirty top managers within the Regional Office or within the Region, including project offices and the Regional Office, where you would get together in a relatively open and candid dialogue about what was working, and what wasn't working. And how things ought to get changed, and how we could change, and how we could do a better job, you know, how we could provide resources to people, and so we worked on that.

14. Daniel Beard was Commissioner of the Bureau of Reclamation, 1993-1995. Mr. Beard also participated in Reclamation's oral history program. See Daniel P. Beard, *Oral History Interview*, Transcript of tape-recorded Bureau of Reclamation Oral History Interviews conducted by Brit Allan Storey, senior historian, Bureau of Reclamation, from 1993 to 1995, in Washington, D. C., edited by Brit Allan Storey, 2009, www.usbr.gov/history/oralhist.html.

Ed also had a management style where he would kind of walk around, and he'd see two or three people and he would just see something that was of interest to him and he's say "Well, why don't you just go do that." And then he'd see somebody else–"Well, that's a good idea. Why don't you do that." And what would happen is the rest of the organization, the rest of the managers would never know. All of a sudden they would find out a couple days later that one of their employees was working on a special project for the Regional Director. They didn't know anything about it. And so we finally went to Ed and said "Well, what we don't want to do is we don't want to stop your creativity because, you know, you walking around and seeing things and interfacing with employees, that's good and healthy. What we need to do is we need to have some kind of system that in place because just a few of these ideas you got, frankly, aren't very good. Some of them are good, but we don't want to lose them. What you need, is you need some additional support that sort of keeps track of these assignments you've got out or different things that you've got. And that institutionalizes them in some way so that the work gets done, and it get's managed, and it's accountable, and it's done at a certain time. And the ideas, frankly, that don't make any sense, are really kind of a waste of time, have some way of getting put off to the side and we don't waste a lot of resources on them.

So what we proposed was that I go up to work for him as a special assistant. And so I left as the Regional Planning Officer and went to work as a special assistant for Ed Hallenback with sort of ill-defined, un-defined duties, but in a large part to be Ed's, oh, what's the term, when you reflect off of somebody, his alter ego, and be his alter ego, sort of his conscience to keep track of assignments that he'd given to people and to manage and you have to have deadlines to work against to try and put a little bit of structure in his unstructured management style. And in large part it was a very rewarding assignment, working with a very creative guy, also able to be involved in lots of regional activities that went across the Region, able to help manage kind of that change within the Region and do it in a kind of a healthy way. We hired a consultant to come on board to–people with behavioral science backgrounds to help do some team building and things like that throughout the Region–so helped do that. Special assistant jobs also come with some baggage. The rest of the bureaucracy doesn't necessarily see you being legitimate, and so there's always some natural tension in things like that. And so, in hindsight I'm not sure from a career standpoint whether that was such a good move or not. It was something, I think, in hindsight probably Ed. Hallenback needed, and the organization needed and something that I probably didn't do too bad. But probably never really got the support from the

rest of the organization that . . . So, Ed had been there for a couple of years, and probably the need for the special assistant was starting to go away.

Dennis Underwood[15] came then in as the Commissioner, and Dennis and Ed really didn't see eye-to-eye. Dennis was a incredibly detailed kind of guy. He never saw a letter that he wouldn't change. Expected his expectations of himself was that he knew everything, every project, and somebody could ask him a question and he could rattle off the fifteen things about it. He just knew that. And expected his people to kind of be of that mold. He expected if he asked you a question you ought to know it off the top of your head. Ed Hallenback was exactly the opposite. Ed Hallenback never read a letter that I wrote for him–said, "Well, you wouldn't have put this letter together if it wasn't any good." Give him a letter, and he would just sign it. And so the management styles were, you know, incredibly different.

You know, the good about Ed's management style was the fact that, you know, he really put the pressure on the staff because you would never bring him a letter that he wouldn't sign. And so, as a result, he always got good work products out of his staff. You know, the contrast with Ed, the fellow that preceded Ed was a Regional Director by the name of Bill Plummer[16] who was sort of also like Dennis, and they–everything they had to do themself and to be precise. There was never a letter they saw they didn't rewrite in some way. Well, when that happens, the staff says, well, why should we spend a lot of time on this. They'd just put something down and say "He's going to change it anyway." So the staff that support that people that manage that way, you know, isn't as good as the way you do.

Now, I guess from my view there's probably some happy medium in those two extremes, but the end result was that Dennis and Ed just didn't see eye-to-eye. And Ed was kind of knew and understood and said "Well, it's just time to leave." And was probably, of the people I've been with, probably the most honest about those kinds of things. And, you know, it was going to be hard to work for Dennis. Dennis is going to have expectations that I'm not going to be able to meet, so rather than just sort of stay on here and hang, it's time for me to leave. And so he found another job with Eastern Municipal Water District and left and went to

15. Dennis B. Underwood was Commissioner of the Bureau of Reclamation, 1989-1993. Mr. Underwood also participated in Reclamation's oral history program. See Dennis B. Underwood, *Oral History Interview*, Transcript of tape-recorded Bureau of Reclamation Oral History Interviews conducted by Brit Allan Storey, senior historian, Bureau of Reclamation, from1995 to 1998, in Los Angeles and Ontario, California, edited by Brit Allan Storey, www.usbr.gov/history/oralhist.html.

16. N. W. (Bill) Plummer was Regional Director of Reclamation's Upper Colorado Region, 1978-1981.

work for Eastern. And about that time also was recognizing, you know, the need for special assistant wasn't as much. The new Regional Director came in, who knew what would happen.

Regional Liaison Group

And so Dennis had come back here, and there had been the reorganization that had sent people from Washington to Denver, and as a result the Commissioner's Office didn't really kind of have the staff support that it needed. Don Glaser[17] had come back here as the Assistant Commissioner and was kind of managed that interim before Dennis came in. And he and I had talked a couple times that I'd been back here that there was a need to get additional staff support in the Commissioner's Office. And so we talked about a program where regional offices could send in people on detail, not too dissimilar from what B-L-M [Bureau of Land Management] does. And so we put in place, then, what now is the Regional Liaison Group where each Region has a person that comes back on detail of a, just a senior level person, comes back, spends a couple years working for the Commissioner, but is still an employee of the Region so really has two bosses. Works for both the Regional Director and works for the Commissioner.

So I came back and did that for a couple years. Bob Towles[18] then became the Regional Director in Boulder City, and Dennis was the Commissioner. And I used to tell people, you know, the job is to convince both of those people that you work sixty percent of the time for them. And that you were loyal to them; you had to, there are obviously times when the Region and Washington don't see the issues the same, or the Regional Director and the Commissioner have different views about things, and so the job, as *I* saw it, was to be able to, you know, be able effectively to bridge those communications; let the Regional Director know some of the Commissioner's views, perhaps come up with different alternatives or suggest ways that they might approach each other or different ways of doing it. And so really become that effective communicator between the Region and the Commissioner. Do staff work for the Commissioner when you had things that he needed and wanted. And so did that for a couple years. That was a good–got my

17. Donald Glaser held a number of high-ranking managerial positions within Reclamation, including Assistant Commissioner-Program, Budget, and Liaison, 1990-1991; Deputy Commissioner, 1993-1994; Director Program Analysis, 1994-1995; Regional Director of Reclamation's Mid-Pacific Region, 2008-2012. Mr. Glaser also participated in Reclamation's oral history Program. See Donald R. Glaser, *Oral History Interviews*, Transcript of tape-recorded Bureau of Reclamation Oral History Interviews conducted by Brit Allan Storey, senior historian, Bureau of Reclamation, from1993 to 2013, in various locations, edited by Brit Allan Storey, and further edited and desktop published by Andrew H. Gahan., 2014, www.usbr.gov/history/oralhist.html.

18. Robert J. Towles was Regional Director of Reclamation's Lower Colorado Region, 1991-1994.

first real detailed exposure to Washington. I'd been back on the department management program, but did quite a few really interesting projects.

The Central Arizona Project then comes back into fray at that time. There are financial problems with difficulties with C-A-P. So, having been familiar with C-A-P when I was out in Phoenix, could really play a good effective staff role here to–with understanding of the project and different alternatives and how to approach those problems. And lot of the problems that hadn't always been resolved when you were out in the field still tended to be here and you could sort of bring that Washington perspective. There were a number of Indian water right settlement acts I was talking about in Arizona that were–had difficulty getting them water, and so those were coming to Washington at the time. So [I] kind of helped manage some of those through. I guess I did that for couple years, and then it was time to go back. It was supposed to be two year program, and it was time to go back to the Region, and the boss of the Regional Liaison Division's name was John Anderson, and John retired. And so they asked me to stay on as the Division Chief in a acting capacity because it then was–well, you really knew you were going to start to downsize and eliminate some of that middle management layer, and so probably that Liaison Division Chief in the long term scheme of things probably wasn't going to be necessary, but needed to kind of manage that in the interim. And then eventually it would probably go away.

Working in the Washington, D.C. Office

And so I acted in that position for a year, and then again was ready to return back to Boulder City, and Dan Beard came and said, "No, I'd like you to stay. You've got the kind of experience that we need back here, and I don't know exactly what you're going to be doing, but I'd like you to stay for awhile. And then Betsy Rieke was confirmed as the Assistant Secretary, and she called and said "Well, I'd like you to come down and work for me." And so I spent about a year and a half as the Reclamation liaison between the Assistant Secretary and the Commissioner. Not too dissimilar a job as what [I] was doing as the regional liaison working between the Regional Director and the Commissioner. But now you were doing kind of the same thing between the Commissioner and the Assistant Secretary.[19] So you were the staff assistant for the Assistant Secretary

19. Elizabeth (Betsy) Anne Rieke was Assistant Secretary of the Interior for Water and Science, 1993-1996. Ms. Rieke participated in Reclamation's Newlands Project oral history series. See Elizabeth (Betsy) Rieke, *Oral History Interview*, Transcript of tape-recorded Bureau of Reclamation oral history interview conducted by Donald B. Seney, edited by Donald B. Seney and further edited and desktop published by Brit Allan Storey, senior historian, Bureau of Reclamation, 2013, www.usbr.gov/history/oralhist.html.

responsible for Reclamation issues that were of importance to the department. Probably the most outstanding year and a half of my life. Working for Betsy Rieke was a great experience. She, probably *by far*, the smartest, the nicest, most creative, hardest working person I've ever been around. You know, periodically, you know, you'll be in contact that are the real stars, and when you're there and, you know, around them it's a real, it's a real satisfying experience. And so Betsy was a real unique individual, and we became really good friends.

We accomplished a lot of things together, and so when she left, this past year, then some additional moves–Austin Burke goes to Denver.[20] And so then Dan asked me to come up here and to be acting in Austin's position–a little uncertain what happens now. I guess my whole career sort of been dealing somewhat with ambiguity, not sure exactly what's going to happen next. I'm acting in Austin's position. Dan has said if he was here he wouldn't fill the job. He wouldn't even have it. And so you're acting in a job which the old boss says "I'm not sure I'd even want it." But, basically, will be a decision that Eluid Martinez, the commissioner-designate will eventually have to do–decide how he wants this Washington office to be staffed.

Dan's leaving–next Friday is his last day. Patty Beneke, the Deputy Assistant Secretary put out a letter last week designating me as the Acting Commissioner. So after Dan leaves next Friday I'll be the Acting Commissioner until Eluid Martinez gets confirmed, which hopefully will happen fairly quickly. So it's been a really interesting last six months, I guess, (Storey Um-hmm.) both in terms of getting ready for–Betsy had a lot of things she wanted to accomplish before she left, and so it was a real intense. Let's she, she announced, I think, like early January she was going to be leaving by the end of May, so those four months that we had were tough. I thought, boy, it'll really be nice when she's gone, now things can kind of slow down. Little did I realize that Patty Beneke, then, came as the designate to be the Assistant Secretary, and briefing and bringing somebody up new is harder work than working with somebody leaving.

So I spent a few months with Patty trying to get her briefed and up to speed. Her confirmation hearings, hopefully, will be in the not too distant future. And I'm sort of doing the same thing. Dan's going to be leaving and have a new

20. J. Austin Burke served as Assistant Commissioner-Program, Budget, Liaison, 1991-1994, then moved to Director of Program Analysis in 1995. Mr. Burke also participated in Reclamation's oral history program. See J. Austin Burke, *Oral History Interview*, Transcript of tape-recorded Bureau of Reclamation Oral History Interviews conducted by Brit Allan Storey, senior historian, Bureau of Reclamation, from 1993 to 1997, in Denver, Colorado, edited by Brit Allan Storey, 2008, www.usbr.gov/history/oralhist.html.

Commissioner coming on board that we're just in the process of starting to brief him, been with him on Tuesday. And so he's in here as a consultant to the department; and in the process of him learning and understanding who we are and what our culture is; and learning and meeting somebody new; and trying to figure out what is it that they need to know; what is it that you want to impart to them that's important; about our culture and how we do work.

New Commissioners

Obviously they have their own ideas that they want to bring in. You want to know and understand that, and so I find the transitions very difficult. They're, you know, they're interesting, but you're never sure if you're on the right mark or not until you start to build a relationship with the people. So far in my relationship with Patty Beneke's really been very good. She seems to trust me and values my advice, so that relationship is building. Eluid Martinez is new, you know, and so it'll be interesting to see how that develops and what kind of support does he want in this Washington Office, and he's asked some very interesting questions that were some telling. And no–eventually what they portend, but at least there is some of the thinking he had. He had–he asked, on Tuesday, when I first met with him, he said, "I understand that Dan Beard, the idea was to have a Commissioner's Office in Denver, and Dan Beard decided he didn't want to do that." And he said, "I think there's some advantages of having the Commissioner's Office closer to the constituency." So here is sort of the idea that, you know, obviously, wasn't Dan Beard's. It happened much before that, but certainly at the time when, you know, when Commissioner [C. Dale] Duvall [21] was here and the thought about, you know, there'll be a small Commissioner's Office was still here in Washington, but it was very small. It was going to be, like, five or six people. And then everybody else is going to be in Denver. But sort of that, you know, had that idea. So try and spend a little bit of time with him about, you know, what thoughts had gone on in the past and why those decisions didn't go. But, you know, sort of his thoughts about where the Commissioner's Office ought to be. So that was sort of and interesting and kind of a telling question, I thought in terms of his. . .

END SIDE 2, TAPE 1. SEPTEMBER 1, 1995.

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21. C. Dale Duvall was Commissioner of the Bureau of Reclamation under the administration of President George H. W. Bush, 1985-1989. Mr. Duvall also participated in Reclamation's oral history program. See C. Dale Duvall, *Oral History Interview*, Transcript of tape-recorded Bureau of Reclamation Oral History Interview conducted by Brit Allan Storey, senior historian, Bureau of Reclamation, January 26, 1993, in Washington, D.C., edited by Brit Allan Storey, www.usbr.gov/history/oralhist.html.

BEGIN SIDE 1, TAPE 2. SEPTEMBER 1, 1995.

Storey: This is tape two of an interview by Brit Storey with Steve Magnussen on September the 1st, 1995.

You were talking about Eluid Martinez asking about the location for the Commissioner's Office as to why not in Denver. Is he actually on government staff, then, now?

Magnussen: Yeah. He's on as a consultant. So the Department has hired him as a consultant. He's physically on the sixth floor, downstairs. He can't have any involvement on any kind of policy matters or decisions that Reclamation's going on. But he obviously needs to get briefed and understand issues to get ready for his confirmation hearing. and so we spent a great part of this week having various staff people go down and meet with him and explain to him kind of where things are in status and all things like that.

Storey: The reason I'm interested is I'd like to do an interview with him as early as I can so that we can capture his sort of immediate reactions to the process of nomination, and confirmation, and so on, but *I don't want* to do it when I'm not supposed to be talking to him either.

Magnussen: Ok, well, let me check. Let me just check and see if there's any reason, I mean, right now it wouldn't appear to me that there would be any problem with doing it now. But let me check.

Storey: I would appreciate it.

Magnussen: Yeah. In fact, I think that would be very interesting. Yeah.

Storey: Well, I have never before taken five pages of notes in a two hour interview.

Magnussen: Only an hour and a half, huh.

Storey: Let's go back and start over now. If I understood you correctly, your Dad was a minister. So, you were not actually on a farm in the Fresno area?

Growing Up in Fresno

Magnussen: No, that's right. Yeah we lived in a . . .

Storey: Were you aware of the Bureau of Reclamation when you were there?

Magnussen: No, no.

Storey: I imagine you were aware of irrigated farming.

Magnussen: Yeah. Right. In fact, we swam in the irrigated canals. You know, we would work in the fields picking grapes and cotton and things like that. So certainly we were aware of the irrigation, but we didn't know about the Bureau of Reclamation at all.

Storey: It's actually rather interesting. Even people who have been raised on irrigated farms often are not really aware of Reclamation (Magnussen: Um-hmm. Yeah.) until later in their careers.

What interested you in engineering? Why did you pick that?

Decided Early to be an Engineeer

Magnussen: Always liked math, I think–is kind of what was the key for me as I went through and . . . I just thought fairly early I wanted to be an engineer. It was pretty early in high school as I knew and understood that I liked math and had some abilities and skills and really enjoyed doing it. You know, if you like math, one thing you could do was to be an engineer and being able to build and see things. That always had a real fascination for me. I did have one experience that I guess was probably was the, maybe it wasn't so much engineering, although to some degree it was. My Dad, between my junior year and senior year in high school, my Dad had a speaking engagement in the Midwest, and so we went back to Iowa, and his family grew up in Iowa, and so we had quite a few uncles and aunts in southwest Iowa.

So I ended up having a job in a little town called Audubon, Iowa, which was in southwest Iowa, after his speaking engagement, and spent the summer there. Lived with, not really an uncle, kind of a, well, the parents of one of my aunts, however that would be relative. And worked on a construction crew, and about three weeks into that experience they had a big flood and wiped out the project that I was working on. And so was out of work for two or three weeks. And the only really job there was was to help in the kind of the flood clean-up. It became really clear for me was that I didn't want to work construction. I mean, *I* really needed to go to go get an education, get a college education and I don't

have to be dependent on doing day labor or being a laborer on a construction project because that was, you know, you were really the subject to the vagaries of the weather, and you could be out, and if you had a family, how would you feed them? And I was pretty lucky, I thought, you know, I had an uncle and an aunt that would help take care of me, but what happens if I had a family totally dependent and I was out of work for three weeks. I said, "Boy you got to do better than this. Plus, this is really hard work." (Storey: Um-hmm.) And so that really kind of solidified–there was no question now that I was going to go to college and get an education and become an engineer so I could be on the other side of this and not down digging those ditches.

Storey: Was there a lot of pressure for you to go to college?

Magnussen: Well, I don't remember that there was.

Storey: Was it just always assumed you were going to college?

Magnussen: Probably. Both of my parents were–course my Dad, you know, had, you know, had a couple degrees, and I guess my mother had two years, but, you know education was always . . . and I think probably always assumed that you'd do it. Or at least I assumed that there was.

Storey: And was there a teacher or somebody in high school who influenced to toward engineering. (Magnussen: I don't remember there was.) Any one incident or anything like that?

Magnussen: No, I don't remember that there was. Well, I had a roommate, well, when my Dad moved to Petaluma, between my junior and senior year, I stayed in Fresno and finished high school, and I stayed with a family whose son was the class valedictorian who was also going to be an engineer. And so, I think more that association–so you were with people, you know, who were very bright and, you know, had clear goals, and you just sort of kind of pick it up with that. So I probably got it more than that way than a specific teacher if I remember right.

Storey: Um-hmm. What about at the Santa Rosa Community College? Was there anybody there who particularly influenced you?

Magnussen: Yeah, there was the fellow also that I went to school with. His name was Dewey Ravenscroft, and his dad was a professor there, and Dewey eventually goes on, when he leaves Santa Rosa, goes on to University of California, Berkeley, and

then goes on to work for Lawrence Radiation Laboratory.[22] So goes to work for them–very major laboratories. And I used to go over to his house, and we would study together because these guys were always much brighter than I was, and the were *always*, you know, way ahead, it seemed to me like, and I was always scrambling to catch up, but I, you know, tried to associate myself with the, you know, people that were, well, that were doing well that I could learn from. And so I . . .

Storey: As you were studying at Santa Rosa and then at Fresno, did you develop a particular interest within civil engineering?

Interest in Civil Engineering

Magnussen: No, I don't remember that I did. Certainly I had kind of the association with Reclamation for, you know, starting to work with them in the summers, so the water part, and that seemed very interesting. And so the–but I was not a–like I wasn't mechanical. I didn't do very well in mechanical or the electrical engineering classes so, you know, working on the pumps and the pumping plants, that wasn't something that had much interest to me. Certainly the civil parts did–things you could see and you could touch. The construction part, always liked the construction part of it, you know, that, you know, the rolling of the earth out on the dams, you know, the cutting of the canals and excavating those and, like I said, you know, the new A-D-P processes where, you know, you could, you know, compute all the excavation of borrow areas by computer that you could kind of see and do. I always understood that a lot better. The electrical and mechanical thing, that always seemed kind of way above me, and I had . . . so probably the civil part of it. I don't know that I necessarily, you know, was interested in the hydraulics or any of that kind of stuff, but, you know, kind of the big construction– in fact, I thought early on in my career with Reclamation probably construction would be the way I would go. And as you got to the Regional Office you realized that all the grades were in the Regional Office. They weren't out with an inspector, the chief of surveys out on the crew. I mean, you could get ahead, and you could advance a lot quickly if you were in the office environment as opposed to the construction environment. Although I think when I got out of school I thought the construction part of it was probably where I would end up.

Storey: Was there anyone who was a particular influence for you while you were at Fresno State?

22. Apparently referring to the Lawrence Livermore National Laboratory in Livermore, California.

Magnussen: You know, I don't remember. I was in a fraternity there. That probably had more impact, probably had more impact on me. Was one of the very few engineers that was in a fraternity. Most of the engineers were off, you know, kind of studying and working, and I was a member of Delta Sigma Phi, and that probably had more impact on me in Fresno than the actual engineering school.

Storey: Yeah. You sort of have this image of slide rules and things like that.

"World Isn't Revolved Around Engineers"

Magnussen: We had a professor, when I was at Santa Rosa. Well, you know, I probably never did associate that greatly with the engineers. I always probably had a more of a social, you know, part of me than most of the engineers did. We had a professor just at Santa Rose that would say, you know "Don't go off on that part of the campus where the L-&-S students are," what he called "loafers and slackers." (Unclear) He called them loafers and slackers. Don't have anything to do. All they do is sit over there and play hearts, and the just don't, you know, they don't know how to do anything. The whole world revolved around engineers. I said, "That doesn't make any sense to me. I mean there's a lot of nice people over there that I need to know and get to meet." And the engineering stuff is great, and I think there's a lot of things you can do, but the whole world isn't revolved around engineers.

There's a lot of things engineers don't do very well, you know, don't write very well, don't communicate very well, and, you know, you had to fight tooth and nail. I mean, they only wanted you to take one English class because that was all that was required. And I was never really very good in English, but I knew there was a lot more to being successful than, you know, being able to do the formulas. So I probably didn't have a lot of really good friends as engineers. I had a few, but by and large I was not–I didn't think of myself as a typical engineer. Fact, probably didn't want to be seen as the typical engineer.

Storey: Um-hmm. And then you found the Bureau of Reclamation summer program. (Magnussen: Right.) The summer trainee program. And let's see, the first summer, as I recall, was working on Lewiston Reservoir, the borrow and fill areas. (Magnussen: Right.) And was that also when you worked on the Trinity on the river doing . . . (Magnussen: Right. Um-hmm.) I'm a historian, explain to me why you had to go back and forth across the river so many times.

Surveying the Cross Section of a Borrow Area

Magnussen: Okay. Well, what they did, was they would do a cross section. So they would come in and they would excavate up so much dirt, and they would take it up to the dam. And the way the contractor got paid was he got paid by cubic yards of material taken out of the reservoir area. And the way you determined that was you would run, every forty feet you would run, a survey across. And so you would start out, and if you plotted it ~~and went~~ the ground would be flat, right? Then as they excavated it would be, it would get concave and so you would survey that every forty feet, and so you would move down the river so the river's coming along here. So every forty feet all the way across you would do a cross section every day. And you would know exactly how much material had been taken out. So you had to move this line up and down so somebody had to get across the river to be able to move the line on the other side of the river–to be able to move it all the way down and that was sort of my . . .

Storey: But wouldn't you have just crossed once and stayed on the other side of the river?

Magnussen: Well, yeah, you did, but then there were other things you could be doing. You know, so you just, you know, they would, perhaps have other things they needed to do. They'd need you to come back so you have to come across the river back to help them do that. So, yeah, but then alls you would be, if stayed on the other side all you'd be doing was helping to move that line across. Well, you could do more than that, and you could, and you didn't have to be doing that the whole day. So go back and forth and help them. But, yeah, there were some times you could just sort of stay over there, you know.

Storey: Well, how did this work? You would go out in the morning, say what time, do you recall any of this?

Magnussen: Well, you started, probably 6:30 or 7:00. I don't remember not specific–6:30 or 7:00, say.

Storey: You'd go out fairly early.

Magnussen: Right.

Storey: From? Lewiston, was it?

Magnussen: Lewiston, right.

Storey: How far out was it?

Magnussen: Oh, not very far. The town of Lewiston to the reservoir's not very far. It's two, three miles, maybe.

Storey: So it's a real short commute.

Magnussen: Right. You lived in a government camp just in Lewiston.

Storey: Yeah. And was the commute done on government time, or did you get out there and start work.

Magnussen: No, you went to the Survey Office which was in town, and then you would get in a survey vehicle, it would be a big carryall, and the party chief and whoever there was, how many there were on that crew, there could be anywhere from three to six, depending on what you were doing. You would all drive in that vehicle to where you were going to work. So you actually reported to work and then drove to the site.

Storey: So you drove out from the camp on government time? (Magnussen: Right.) That little dab of space. (Magnussen: Right.) Then you would be surveying. Okay, then you had to do calculations at some point. Did you participate in that?

Magnussen: No, really got the field books ready for the people. Then they had a whole office staff that used the big Marchants that did the cross sections–that actually did the calculations. So I didn't do a lot. Actually helped prepare the survey books, but then there was an office staff that actually did the calculations themselves.

Storey: So this was a typical Reclamation set up (Magnussen: Right.) with an Office Engineer and a Field Engineer. (Magnussen: Right.) And you guys worked for the Field Engineer.

Lewiston Reservoir Construction Camp

Magnussen: Worked. It would be like a Field Engineer then there would be a Chief of Surveys then there would be a number of survey crews each headed by a party chief. But you would be on one of those survey crews. So your boss, then, would be a party chief.

Storey: And did your party chief change often?

Magnussen: No, I don't think so.

Storey: Do you remember who he was? I'm presuming "he."

Magnussen: Yeah.

Storey: Because back in those days I presume that's a . . .

Magnussen: If somebody said his name, I'd say that–but I don't recall off the top of my head. But it was a pretty . . . they were pretty well known all throughout Recla . . .–they had their own sort of culture. All these surveyors and, you know, construction, they all knew one another, and they were, you know. But the party chief was only a G-S-7, you know, if you start to go back, and you start to think, and you say, well . . .

Storey: And what were you?

Magnussen: G-S-3.

Storey: G-S-3. Do you remember how much you earned?

Magnussen: About a hundred dollars–I think the take home pay was just under a hundred dollars a pay period. And it was tough because when you first showed up it was three weeks or four weeks before you got your first paycheck. So the first month was pretty slim. Fact, we lived in a silver trailer. We called them the silver bullets. They were twenty-nine feet long, and I think there were three of us in a trailer–Ben Everett and Martin Roach, and then the trailer next to us was a guy by the name of Robert Walsh who currently is John Keys's construction guy. The Bureau has a construction office in Bend, Oregon. (Storey: Uh-huh.) Bob Walsh was in that trailer right next to us. That where I first got to know Bob. So he was (unclear).

Storey: And this was a government-provided trailer.

Magnussen: Government-provided trailer. You paid–they took the money out of your paycheck.

Storey: Uh-huh. Do you remember how much?

Magnussen: Wasn't very much–probably less than ten dollars a pay period. I'm going to say like three or four dollars or something. It was pretty inexpensive. They were pretty Spartan, too, though.

Storey: Tell me more about them. Tell me about the camp.

Magnussen: Well, so we drove up. The three of us brought–I didn't have a car, but Martin had a car, so three of us went up in Martin's car, and we showed up in Lewiston and found somebody that could tell us what to do–it was late at night. We were always little later than we shoulda been, because I think it was like after dinner. It was probably eight or nine o'clock at night, and so the Administrative Officer found us a trailer and found us a place to stay. I'd say there were probably, well, there must have been twenty or twenty-five of them. I mean there was a pretty big crew, and then there were houses for the people who were like the party chiefs and chief of surveys, and they actually had houses. And in a lot of cases their family was with them. (Storey: Uh-huh.) So, and I don't know how many student trainees there would be. I don't know, I bet there may have been, there may have been twenty of us. Little vague for me now, but I wouldn't be surprised if there were maybe fifteen to twenty of us that showed up that summer. Working on different jobs. The Field Engineer, I think, was a guy by the name of McGinnis who had a daughter who was a junior in high school. And so there were, as you would find, and an awful lot of this was the people that had families there, you know they had daughters, you know, there was a really popular thing. And, then of course, there was good swimming, good fishing, you know, lot of activities that were really pretty good.

And then you had the people that worked for the construction crews that actually worked for the contractor, and they just made so much more money. It was just unbelievable how much money these guys made. I mean it just seemed like they were rich beyond belief. It seemed to me these guys that were, you know, sort of concrete finishers made more money than the chief of surveys, you know, the just–so we felt, "Boy, you know that's . . ." but then you realized that they were out of work half the time. They made a lot of money, but it wasn't as steady, and so it seemed like, you know, the Reclamation thing, for me, made more sense because, you know, it was a career, it was something you were going to be doing all the time, and, you know, you weren't in and out of work. I'd kind of had the experience in Iowa of knowing you're sometime in and out of work. But boy those guys sure made a lot of money, I thought, you know. That was one thing I remember from that. That summer was also–my Mom died that summer. They were in an auto–they were still in Petaluma, but they were visiting in Fresno. And they had an automobile accident, and she died in an automobile accident just in late August and so that was a–that kind of was very disruptive for the summer for me. That was . . . (unclear) (Storey: Yeah, I imagine it was.) And then I think

I came back and probably only had about one week left before I went back to school. So it was kind of a–that was kind of hard. That was a hard summer.

Storey: How many folks altogether would you think were in the Reclamation camp?

Magnussen: Employees or total people?

Storey: Total people.

Magnussen: Boy, that's a good question. Five hundred, maybe. I don't know, I just . . .

Storey: Were there any tensions in the camp that you saw?

Construction Camp Adventures

Magnussen: Well there was tensions around us and the girls (Storey: Okay.) and the fathers because I remember McGinnis coming around one time looking for his daughter. So there was tensions that way. Let's see. You were aware, sometimes, of tensions among some of the employees, but I don't remember anything specifically. I think anytime you're in kind of a close camp like that there probably were. There's nothing that really stands out for me that . . .

Storey: Nothing like somebody who was noisy every Friday and Saturday night or . . .

Magnussen: Well, I'm sure there was. In fact, we got–oh yeah, I just forgot one–did we get thrown in jail? Yeah we got thrown in jail for buying beer underage. We'd gone to the Hoopa, the Hoopa Indian Reservation is down the river. And we had gone out and had gotten somebody to buy us beer and had gotten stopped, and they put us in jail, and we got–I'm trying to remember even how we got out. I guess some of our friends got enough money together to bail us out. So you had things like that that happened.

Storey: But nothing very serious.

Magnussen: Oh, had some automobile accidents. Had a really bad automobile accident. Fact a guy that becomes a really good friend of mine later on, his name, his dad worked for the Bureau. His dad's name was Art Cramer (phonetic), and when I go to Los Banos his dad then in charge of constructing San Luis Dam. He's in charge of building the embankment. And his son's name was, what was, something Cramer, and he was down that summer. He was going to Oregon State

University, and a bunch of them had gone out and probably been drinking too much and they rolled a car over. I think one of the guys, I trying remember if he was, I think one person was killed or injured very badly, and this Cramer kid was hurt pretty bad too. Although, and then later on when I go to Los Banos and his dad's there, then we become really good friends that one summer. The two of us spent the whole summer together. But, yeah, there were some things like that that happened that were pretty, you know, they weren't very good.

Storey: You mentioned the Field Engineer, was it, McGinnis. Do you remember who the Survey Chief was.

Magnussen: No, I don't remember.

Storey: Do you remember anything about their management styles.

Magnussen: Oh, very autocratic. Very autocratic. Very top down. It was a very–it was very militaristic I think I'd say. I mean the Project Construction Engineer's word was god, you know. I mean whatever he said you just did. I mean you would never think about, you know, doing anything differently.

Storey: Did you ever interact with him?

Magnussen: I think my main contact was with McGinnis. I remember having seen the Construction Engineer, but I don't think I ever had any contact with him.

Storey: Not somebody you'd go up to and start a conversation.

Magnussen: No. Oh, no. No, you really wouldn't. If somebody said their name, I'd probably say "Yeah, that's who it is." I just don't recall.

Storey: Now, if I recall, the second summer you worked in the batch plant as an inspector.

Batch Plant Inspector

Magnussen: Yeah. Lived in Redding, California, and worked shifts. We worked two weeks swing and two weeks day and two weeks graveyard. That was really hard. So every two weeks you were changing shifts. They poured concrete in to build the tunnel twenty-four hours a day, five days a week. (Storey: This was the Clear Creek Tunnel?) Yeah this was the Clear Creek Tunnel. It's already been excavated and now what they were doing was they were doing the concrete lining.

(Storey: Uh-huh.) And so it was an inspector in the batch plant that was mixing the concrete that went in the trains–they had trains that came to the batch plant and then went in the tunnel. And then had a big machine that, you know, formed all the concrete around it. So our job was to make sure that the concrete was up to specifications that went into the train. So you were sampling it all the time and making sure that it was up to the quality that was necessary to go into the tunnel.

Storey: And how would you make sure of the quality?

Magnussen: Well, you did [what were] called slump tests, and you had temperature, there was a whole series of tests that were required under the specifications that Reclamation had.

Storey: So you were going around with a thermometer.

Magnussen: With a thermometer, and you'd have a slump cone, and you would take test periodically and make sure it had the right kind of water content, and had the right additives that had been added to it. Ultimately you end up finally in the engineering school later on, you know, you go through these tests, and you learn how to do them. "Oh, I've done all that. I know how to do all these tests." So that was a good experience.

Storey: Did you take samples that were then taken to a lab for testing also?

Magnussen: Well, one of the things you did was, you made cylinders, and then the cylinders were stored for seven-, fourteen-, twenty-one days, and after that period of time they were crushed in a compression machine, and that was one way to find out also if they were to the proper strength. But most of the tests I think we did on site. I think the only thing that I recall was done with the lab was actually where the cylinders are made . . .

Storey: It's always intrigued me how you could deal with a problem in construction if twenty-one days later you test the cylinder and you find out the concrete isn't up to spec.

Magnussen: You take and go back and you take it out. Go back and take it out. In fact that's why the contractor always wanted to make sure that's why he was always supportive of what you were doing because he wanted it to be a good product. Because the consequence of it not being a good product was the he had to go *fix* it, and that was really going to be expensive. So I guess the quality control, you

know, you sort of understood why there was kind of a tension always between the inspectors and the contractor because obviously he'd like to go faster, and what you're doing probably slowed him up. But recognized that those tests didn't pass, it was going to cost him a lot of money.

Storey: Did you have a counterpart on the contractor's side, somebody who was checking on their side.

Magnussen: Well, yeah, the guy that ran the batch plant so the actual contractor the brought in the rock, and the cement, and everything like that, that mixed it and to make sure, you know, that it actually set it was sort of, while he didn't do any tests, you know, he was the guy that you worked with most closely. But it wasn't, there wasn't somebody from the contractor that did the same test, if that's what you're asking.

Storey: But he was there trying to make sure the quality control was taking place in the mixing.

Magnussen: Yeah. The batch plant operator who was doing it wanted to make *sure* that's right because if he didn't do it right and the test showed up bad later on, they had to go fix it. Well, it was that batch plant operator who actually mixed it and put it together.

Storey: Could you describe for me a slump test?

Magnussen: Well, it's a cylinder that looks like a, kind of like a megaphone. (Storey: It's a cone, then.) It's a cone, and what you do is you take the concrete right out of the mixing, or they're just ready to dump it into the train, and you just grab some, and you put it in there. And I think in my recollection stands eleven or twelve inches high. (Storey: Um-hmm.) And then you take the cone off and then you use a stick and you measure how much did the concrete slump down. And so if it slumped three inches or four inches or five inches. And what this is, it's a measure of how much water is in the concrete, and the specifications would call for it, you know, to be two-, three-, or four-, or five inches. And how much tolerance there was. And so you would do this test, I don't recall, every couple hours, perhaps, or something like that. Or periodically through the day, and this would tell you if the concrete was meeting the right specifications or not.

Storey: What kind of a week did you work? Was it a five day week?

Shift Work

Magnussen: Yeah. The five day week, eight hours a day. So you would come, there would be somebody on a shift before you. So there were–actually we, there was the Chief Inspector, so we weren't–so we were just students, okay, we were still student trainees. So there was an inspector that was there too. There was really two of us. So the Bureau had its inspector, and then you had us, and, if I recall, there was a student trainee on each one of those shifts. One of my counterparts would be there on the shift in front of you, and then there would be one behind you. So if you were, so if they start out with day shift and you work swing and somebody else came graveyard. And you pass on the information and what had happened that day and you'd pass on the notes, and we all, three of lived, in fact I thought it was the same three guys.

Three of us lived in the same room in Redding. We lived in Redding and we rented a big hotel–we were in a big hotel, and it was a huge room, and all three of us lived in the same place because there weren't any of us there at the same time. So we could sort of rotate. I think we had three beds–I guess we had two beds. But you were never there at the same time so that was never a problem.

Storey: Uh-huh.

Magnussen: And that was, probably from Redding to the site was probably was probably twenty miles. Now there you reported to work at the site. So you lived in Redding and you drove your own car or somebody picked you up and car pooled in, and then you would go to the site. So you didn't actually get paid until you physically got to the construction site. So that was some different than like it was at Lewiston.

Storey: Well, now, I would assume, if you're working twenty-four hour days that the construction was going on seven days a week, too.

Magnussen: Well, no, I think they mainly cleaned up on the weekends. I think Saturday and Sunday were the–they had people . . .

END SIDE 1, TAPE 2. SEPTEMBER 1, 1995.
BEGIN SIDE 2, TAPE 2. SEPTEMBER 1, 1995.

Storey: So mostly on the weekends it would have been clean-up, and equipment maintenance, and that sort of thing.

Magnussen: Equipment maintenance, yeah.

Storey: Okay, so you wouldn't have needed to fill in the weekends and that kind of stuff?

Magnussen: No.

Storey: Did the government provide you a housing allowance or anything like that? (Magnussen: No. Hmh-mm.) You just had to find you own accommodations in Redding. (Magnussen: Yeah.) Okay. Well, I'd like to keep going, but we've actually completed two hours already. (Magnussen: Yeah, we have.) And it's a good place to stop between your second and third summers' work for Reclamation. I'd like to ask you, now, whether or not you're willing for the information contained in these tapes and the resulting transcripts to be used by researchers inside and (Magnussen: Sure.) outside Reclamation.

Magnussen: Sure.

Storey: Good. Thank you very much.

END SIDE 2, TAPE 2. SEPTEMBER 1, 1995.
BEGIN SIDE 1, TAPE 1. APRIL 9, 1996

Storey: This is Brit Allan Storey, senior historian of the Bureau of Reclamation, interviewing Steve Magnussen in his office in the main Interior Building in Washington, D.C., on April 9, 1996, at about two o'clock in the afternoon. This is tape one.

Last time I think we were still talking about you being in Sacramento, and my notes say start with Bob Buchanan and his influences on you while in the Sacramento Office.

Bob Buchanan

Magnussen: Bob Buchanan was the head of the Data Processing Unit and was very knowledgeable, and kind of in contemporary management and new ideas, the computer and all those things were just getting started. He had taken like a Dale Carnegie class. I don't remember. Maybe we were like in Toastmasters together or something like that. Anyway, he highly recommended this Dale Carnegie class. He said this was really good, it was good for self-confidence. I am, and

have always been, a stutterer and it does have some impact on self-esteem and how you communicate.

So, anyway, I took this Dale Carnegie class. He was right. It was really very good. I tended to do pretty well in the class. I won a couple of awards. You learn some techniques about how to talk and communicate and talk extemporaneously and remember people's names, some of which are kind of–well, they're gimmicks. Maybe that's not quite the right word, but they're techniques that you can learn, and they're not complicated. But once you learn them, they're really very helpful, and they provide that. He was very well versed in the computer and that, as I got more involved in kind of computer technology and how important it was.

Then the other thing was is sort of aside, but we became very good personal friends. One summer he had bought like a fourteen-foot runabout boat that he had up at Folsom Lake. My wife was a very good water skier, and neither one of us could water ski very good. So we spent the summer with his boat and my wife, the three of us, she teaching us how to water ski. (laughter) So that was kind of a fun summer, learning how to do that. So that was good.

Storey: That would have been about '64?

Magnussen: No, that must be later than that. I didn't graduate 'til '65, see. Then I was in the Army in early '65, and so I came to work for the Bureau in–I think it must be like '67-'68, probably.

Storey: Sounds as if he was trying to give that Region sort of a head start with the new technology.

Magnussen: Yeah, he was. He eventually leaves the Bureau and becomes a trainer for O-P-M [Office of Personnel Management] in their training classes and teaches computer technology. Moves to the Bay Area and then kind of teaches computer classes and things like that. He was a bachelor and really very good-looking guy and wise to the ways of the world and sort of that had bachelor's life, which was kind of interesting, too.

Storey: In our first interview, you mentioned that while you were in Sacramento, the environmental movement was just beginning to take hold.

Magnussen: Yeah, that's right.

Storey: Let's talk further about that. You had mentioned water quality. And a branch was established?

Mid-Pacific Region Water Quality Branch

Magnussen: Yeah. I had originally gone to work after I got off the rotation program in the hydrology program. I can't remember, but I was probably there like a couple of years, then the water quality. A portion of the Hydrology Branch had a Water Quality Section that were doing water quality analysis and establishing a laboratory and going out to the different reservoirs and collecting samples and analyzing them and doing the same thing in the Bay Delta.

As that program grew in importance, it then was spun off and formed a Water Quality Branch. The branch was formed. I don't remember if I went as soon as it was formed, but not shortly thereafter when it was formed into a branch, then I left the Hydrology Branch and went to the Water Quality Branch. It probably operated six months or a year or something, and then I actually went over there.

Storey: What were the pressures that were operating on Reclamation for us to establish this branch? What was going on?

Magnussen: Well, the National Environmental Policy Act passed in, I'm going to say, 1968 or something.

Storey: '69, yes.

Environmental Movement Becomes a Factor in Reclamation Activities

Magnussen: '69? Okay. So National Environmental Policy Act passed, so that was certainly an important component. And salinity standards in the Delta and fishery in the Delta were always components to the operation of the Central Valley Project. There was the November 19, 1965 agreement which established salinity standards in the Delta. That meant that you had to operate the project so there's so much Delta outflow. It couldn't be diverted at the pumps. There was a channel constructed in the Delta. I don't remember when. But that allowed water to be transported across the Delta as opposed to going out and reversing the flow of the San Joaquin River, and then there were fish screens that were built in the Tracy

Pumping Plant[23] to keep the fishery out of that. So those all were recognized as important components for operation of the project.

Then I think as the environmental ethics within the country even became more important, some of those things that had been done were still seen as being inadequate. They weren't strong enough. Maybe they were the right idea, but they weren't strong enough. So there were movements afoot in the state to put stronger standards on and make the projects operate in different ways. So I think that recognition. Then the other thing that was always very strong around that time was the Peripheral Canal. That was seen by lots of people as the solution to those environmental problems. So rather than taking water through the Delta, you actually took it around the Delta and you provided positive flows through all the streams and you got fresher water at the pumps. So it was seen as kind of a win-win. It appeared by the water developers as being a win-win.

Lots of other concerns were expressed by environmental groups. As that movement became stronger, those voices became stronger. It used to be water decisions were sort of made by the water people. The National Environmental Policy Act then starting to require public review and comment, really started to open up that process procedurally. So while they had wanted voices at the table, that act allowed them to be able to participate in water decisions in a much more meaningful way than they had in the past.

Storey: The Peripheral Canal decision was made about this time, if I recall.

Magnussen: It's hard to remember which decision you're talking about, but it was certainly–

Storey: I was just thinking of the vote by California.

Magnussen: Well, that was later. That had to be a lot later, because I was in Arizona. I'd already left California and I was in Arizona, I think, when the actual proposition vote was taken. So I went to Arizona in 1977, and I think it was after that that the voters voted it down.

So when I was there, after I left the Water Quality Branch, I actually wrote some of the first drafts of the Peripheral Canal E-I-S/E-I-R [Environmental Impact Report], which would have been in the early seventies. In fact, I think the state had public hearings. We had public hearings. At one point, it was a joint federal-

23. Constructed in 1951, the Tracy Pumping Plant takes water released from CVP reservoirs and lifts that water into the Delta-Mendota Canal.

state project, and the federal government pulled out and the state was going to build it itself and it had its own hearings. So that had to be in the '72-'73 time frame, and I was still there when that was going on.

Storey: Tell me more about the Peripheral Canal and Reclamation's involvement in it. That was after you left Water Quality Branch, is that what I heard you saying?

Water Quality Branch Activities

Magnussen: Yeah. Well, I was in the Water Quality Branch. I probably ought to kind of finish the story of the Water Quality Branch. We established a fairly strong operation of sampling in the reservoirs, and then at that time a very detailed sampling program in the Sacramento-San Joaquin Delta, where we in the state had boats and we and the [California] State Department of Water Resources set up joint monitoring programs. So we had a joint coordinated program with the state, and we would have annual planning sessions where we'd get together and plan the whole year out, some of the facilities they would use and some of ours. It was probably one of the real cooperative efforts between the Bureau and the state to do that.

I would think by the time I left, I would think that branch had grown quite a bit. It was probably up fifteen, twenty people, and it was a very active field program. It had a large laboratory. By that time, we had hired fish biologists that were helping doing some of the analysis of the striped bass and some of the other entities there. In order to build the Peripheral Canal, one really needed to understand the Delta and how it worked, chemically and biologically, and the fish life, and you needed to understand the hydraulics of the Delta, the tides and the flows and reverse flows. It was very complicated. So there had been some mathematical models that had set up. Even for a period of time, I worked pretty extensively with the modelers to work up models, one that would actively represent what happened, and then the E-I-Ss like on the Peripheral Canal needed to be able to model and to predict what was going to happen as a result of the operation. So that whole activity.

The Bureau decided it wanted to come back and wanted to do some more things in the Delta. I then left Water Quality and went to work for one of the planning branches called the Delta Branch. The chief of that was a guy by the name of Jim Cook, who becomes a really controversial figure throughout Bureau history. Jim Cook. So we did a number of fairly innovative things there. We did a demonstration project of using waste water from the city of Fairfield and putting it into the Suisun Marsh to demonstrate that you could grow the right kind of duck

food. Because one of the problems in the Suisun Marsh was that if you took too much water out of the Delta, it got too saline and it didn't keep the prime duck food there. So it was going to have a negative impact on that. So what we were trying to demonstrate was that we could use other technologies to be able to do that. So those are the kinds of things we did.

At that time, we also did work on the Peripheral Canal. The federal government had pulled out. The state had decided it wanted to go along. Jim Cook and some of the people felt there really was a legitimate federal role. So I was given the job also to see if there was some way that we couldn't do still kind of a joint effort with the state and federal government. It never did come to any fruition, but we did work on some documents and things like that.

Storey: While you're in the Water Quality Branch, what direction were the activities taking Reclamation in that branch? What were we trying to do at that stage of the game?

Examining Operational Impacts

Magnussen: Well, I think we were, one, trying to be conscious of the fact that the reservoirs and our operations did have impacts. So when we were trying to establish a baseline for what it was and where there needed to be changes in operation. We knew what they were or we could so some modeling and predict them, and where there were negative impacts being caused, or we wanted to build some future things. We sort of knew what the baseline was, and we could predict future activity. As an example, if you're working in Folsom Lake, if you're going to do something with Auburn [Dam], you need to know and understand Folsom and how it worked and its impact and things like that that you had to know and recognize.

Storey: But we weren't, say, releasing extra water to improve the Delta or planning structural things or anything like that at that time, or were we?

Magnussen: Well, I mean, they were certainly planning things on the horizon. I think we were still planning Auburn-Folsom South [Unit],[24] which was a canal that took water

24. The Auburn-Folsom Unit was to provide supplemental water for irrigation and municipal and industrial needs. Project benefits were to include hydroelectric power, flood control, fish protection and enhancement, and recreation. As planned the project consisted of Auburn Dam, Reservoir, and powerplant: Folsom South Canal; Sugar Pine Dam and Reservoir; County Line Dam and Reservoir. The unit became a target of the Carter "hit list," and Auburn Dam became the subject of controversy and was never constructed. For more information, see Jedediah S. (continued...)

out of the American River. It was certainly controversial in terms of its impact on minimum flows in the American River. The Peripheral Canal or other solutions to solve the problem of moving water across the Delta were certainly being investigated and looked at. Anything south of the Delta, certainly you were taking more things out and you had to understand. Like the Mid-Valley Canal was under planning at that time, you know. So there were some.

Storey: The Mid-Valley Canal?

Magnussen: The Mid-Valley Canal. It took water over to the east side of the valley. At one time, there was a big East Side Project that went down the whole east side of the valley kind of like north of where Friant [Dam][25] was. Of course, that never came to fruition. It was one of the big projects on the drawing board. But there still some users over there that wanted water, so it was kind of a smaller facility, I think, probably took water off the Delta-Mendota and brought it over. I think it was called the Mid-Valley Canal. It actually took water across the valley over there to the east side.

Storey: Were we, for instance, planning anything in the Delta to try to improve water quality other than the Peripheral Canal?

Magnussen: Well, no, I think it was mainly the Peripheral Canal. It was trying to solve the problems. And there's all kinds of alternative peripheral canals. I mean, there was something that was just on the southern part of the Delta and some things on the north, and we were doing lots of studies on fish screens and different ways that you could do it.

You were involved in lots of activities associated with the state setting water quality standards. I mean, there had been a whole series of hearings and meetings and decisions out of the state board in terms of what were the appropriate standards to have and, of course, we had our positions that we would take or we would have standard we thought appropriate and what impact they would have on future facilities. So those kinds of discussions were all related. I think the main goal was still to try and move water across the Delta. I mean, it

24. (...continued)
Rogers, "Auburn Dam, Auburn-Folsom Unit, American River Division, Central Valley Project," Denver: Bureau of Reclamation History Program, 2009, www.usbr.gov/history/projhist.html.

25. Completed in 1942, Friant Dam, on the San Joaquin River, is an important component of the Central Valley Project in the Sierra foothills of Fresno County, California. For more information, see Robert Autobee, Friant Division Central Valley Project," Denver: Bureau of Reclamation History Program, 1994, www.usbr.gov/projects/pdf.php?id=103.

wasn't like our main goal was to fix the Delta. Our main goal was still to move water, but recognizing that the Delta was a critical piece of trying to solve that puzzle.

Storey: At that time, Bob [Robert J.] Pafford would have been Regional Director?

Magnussen: Well, Bob Pafford had probably left by then.

Storey: He left in '73.

Magnussen: Really?

Storey: I think, yes. No, wait a minute.

Magnussen: He had to leave before that.

Storey: Yes, that's right, '63 to '73 he was Regional Director.

Magnussen: And then Bill Martin came?

Storey: And then Bill Martin, yes. '74 to '80.

Regional Transition

Magnussen: '74. Okay. Yeah, so it was sort of in that transition. Under Bob Pafford there were a couple of Assistant Regional Directors that were pretty forward-looking, that recognized a number of these issues and their importance. A fellow by the name of Jake Ossofsky, who was the Chief of Central Valley Operations, certainly recognized that. Bob Hammond, the Assistant R-D was also called Chief of Operations, I think, kind of had a dual title. And they were very forward-looking people that recognized that these movements were coming, and if Reclamation was going to be successful, you had to kind of look at that. And I think in their recruiting of people they brought people on board that both were kind of recognizing that through the internal movement, as well as they were involved in kind of an internal change effort called organization development, in terms of kind of people using their potential and being able to work more teams and things like that, and they were involved in both of those.

That all stopped when Billy Martin came. There was a real culture change when Billy came and he got rid of those Assistant Regional Directors, sort of

brought in his new group. Then most of the people that I was associated with left. So I left in 1976, and it was primarily because of Billy Martin and the attitude and environment and sort of his view on how Reclamation ought to be run, which contrasted mainly with mine, and it was really time to leave.

Storey: The groups that were interested in the Delta back in those days, you mentioned environmentalists.

Delta Water Agencies

Magnussen: There were really strong groups. There were three Delta water agencies that had been formed under state law to negotiate with the Bureau and the state, their water-supply contracts. While they weren't necessarily environmental groups, per se, their big leverage in those negotiations were the water quality standards. So they were a very powerful and strong group. In fact, I headed up the Bureau team that did the negotiations with the South Delta Water Agency and was involved somewhat with the ones on North Delta Water Agency. The North Delta Water Agency one got signed. The South Delta one was close but never did. And the one that was called the Central Delta Water Agency was really the one that was the big conflict-ridden one that we never were able to–they were the toughest negotiator, I guess.

Storey: What were their primary concerns?

Magnussen: Salinity.

Storey: Fish and Wildlife?

Magnussen: No, salinity, I think.

Storey: It was salinity, because they were irrigating crops?

Magnussen: They were agricultural users, right.

Storey: What about state agencies? Were they involved in all of this at that time?

Magnussen: Right. Yeah. The State Department of Water Resources, of course, was the water development agency, and the State Game and Fish Department was the entity primarily looking after the fishery. At that time, the primary focus was on striped bass. So those were the two. Those were the two. Well, and then there were

what they called the Reclamation Boards. They were not so much involved in these negotiations, but they were still kind of a major player in the Delta, and they were the ones that took care of the levees and all the kind of things like making sure the levees were in good shape and worked and things like that. And you were always having island failures, which complicated the water projects considerably, because when one of those islands failed, it took a lot more water releases to keep the salinity standards the way they were. So it was in the water project's best interest to make sure that they were good levees.

In fact, there were a number of plans that were put forward, not necessarily as alternatives to the Peripheral Canal, but part of it was that you wanted to make some strong levees. Maintaining all those individual islands was incredibly expensive. So it made some sense to go to a system like they did in Holland, and maybe you'd do a levee around three or four of those islands, and it would be a lot more cost-effective to do it that way. So there were plans like that that were being put up and being evaluated.

Storey: How were we involved in that? Out there they call these flood control groups, the Reclamation groups.

Magnussen: Well, we were involved just both in terms of evaluating them as alternatives as well as–I mean, if something was going to go, probably there would be some federal dollars then in some way. They weren't necessarily the preferred alternatives, but put forward were all the institutional mechanisms were being put together, but you could anticipate that if they were, there would probably be some federal involvement, because they would want some federal money, probably. Now, would that be the role of the Corps of Engineers or would that be the Bureau? You know, those things still had not yet been sorted out. They were still conceptual plans being evaluated. You're talking about players. So another player would have been the Corps.

Storey: Any other federal agencies? I'm wondering specifically about Fish and Wildlife Service, for instance.

U.S. Fish and Wildlife Service

Magnussen: Yeah. Oh, yeah. The Fish and Wildlife Service or the Fish and Wildlife Coordination Act Agreement were certainly major players. They were not the kind of major player that the [California] Fish and Game Department was. They weren't as heavily involved in the Delta. They weren't quite as visible. But

certainly they were players, and had there been any kind of federal proposal like a joint Peripheral Canal or whatever, I mean, then the Fish and Wildlife Service, by law, would have been a much more major player. They weren't staffed really very highly. I mean, it's not like they had a lot of resources, you know. They were certainly there, but, I mean, the Game and Fish Department, they probably had a couple of hundred people working on this. But the Fish and Wildlife Service probably had a handful. So the kind of resources that being put on it was quite a bit different.

Storey: What kind of evolution did you see in these different groups' involvement while you were active in the Water Quality and the Delta branches?

Magnussen: The outside groups, you mean?

Storey: Yes. How did they change? How did we change? Or did they?

Evolution of Outside Group Involvement

Magnussen: Well, I think they became more vocal. I think as they understood the system, they understood how to impact it more. You had people that were kind of at different levels of sophistication, as they understood the system and how to coordinate and how to build coalitions among themselves to have more impact. As an example, there was a guy that was sort of the head guy on the Suisun Marsh, whose name was Dan Chapin, who was a wealthy landowner in the marsh, and a duck hunter, but sort of took this on and sort of knew how to bring groups together. Then there were some Delta groups. There were some Delta groups of environmentalists that were starting to be put together that they state was using as advisory boards to them. As these influential people from different parts of the Delta, the Suisun Marsh, or the agricultural users, or the fishery people, would get together, they would see how they could use each other to help accomplish more of what they were trying to do.

So I guess I think those kind of changes took place. They were sort of coalitions of groups, of interest groups, that would start to get formed together. Some of which were formed sort of by the state and Reclamation to sort of focus the public input, to the degree you needed to do public involvement and have public meetings. If all you did was have public meetings, and they were sort of scattered, so kind of coordinating these groups would kind of help focus, to get everybody in one room so you could have a dialogue about options or alternatives

and what kind of analysis needed to get done. So I think there were those kinds of changes that were starting to take place.

Storey: One of the things I've never understood about the Delta issue, and I've forgotten the exact percentages, but my recollection is that, combined, the State Water Project and the Central Valley Project take only a small percentage of the water that actually comes down the Sacramento and the San Joaquin [rivers]. Why was it such an issue? I've never understood that. If we were taking 20 percent or 15 percent, or whatever the percentage was, of water, why was it such a big issue?

Understanding Delta Issues

Magnussen: Well, you probably have to understand the Delta. You have to understand the San Joaquin River comes in from the south, and the pumps are in the south part of the Delta. The San Joaquin River gets stopped by Friant Dam. So there's very little flow coming down the San Joaquin River. So the pumps pump more water than what's coming down the San Joaquin River. So that means in order to get that water, then water has to come across from the Sacramento, because the pumps are on the San Joaquin River. You have to take water across from the Sacramento [River], which means that those channels on the southern side of the San Joaquin side of the Delta are now flowing backwards. If you've got salmon that are trying to migrate or striped bass that are trying to migrate and they go against the flow of the water and the flow is going the wrong direction, then they can't migrate to where they want to go. So that's the big issue.

If you pumped it large enough and you didn't have what was called the Delta Cross Channel, you actually took water where the Sacramento and San Joaquin rivers come together. You actually take from the Sacramento River and wrap it around, the whole San Joaquin River flows backwards. So what they built was they built what was called the Delta Cross Channel. So you would just reverse the channels in the eastern part of the Delta in the San Joaquin River. So you wouldn't actually reverse the flow of the San Joaquin River. But depending on the time of the year and what the flows were, you could actually do that, too. So that's why the salinity standards were set up early on in that 1965 agreement, to force that positive flow so that the pumps couldn't pump the flows that they would make it flow backwards. So it was really the reverse flow problem that was the environmental problem.

Storey: The reverse?

Magnussen: The reverse flow of the rivers.

Storey: Flow, I see.

Salinity Standards

Magnussen: And the salinity standards were an easy way to make sure that that didn't happen. Now, salinity was also important for crops inside the Delta. If salinity got too high, then you couldn't irrigate those crops. So the salinity standards were important from that standpoint. But what happened, the early ones, they were just set for crop growth. They weren't necessarily set high enough to keep the reverse flow out or to keep the fish migration going. So through the period of time, those standards got set in different times for different parts of the Delta to preserve different uses, and it was sort of that beneficial use.

That was also the time the state had passed its own water quality act and the state board setting water quality standards to protect different beneficial use which comes out of the Clean Water Act. So the state had responsibility from E-P-A [Environmental Protection Agency] to set standards under the Clean Water Act, and they were acting for that. Whether you're protecting agricultural uses or you're protecting fish or what you were doing, that was sort of the–

Storey: How were we monitoring the water quality, the salinity?

Magnussen: Well, we had just like you have tidal gauges that measure the water up and down, you could put a probe, you could put a conductivity probe that just measures the conductivity of the water. And then on these we would go out and sample every other week on a boat that would go up the Delta, and then we would actually do both conductivity as well as T-D-S sampling to–

Storey: T-D-S is?

Magnussen: Total dissolved solids, which is the actual measurement of the salt. The E-C, or the electroconductivity, is a way of measuring the resistance in the water, which is kind of a surrogate to determining what–it's a lot faster to determine that. You can just stick a probe in the water. You do T-D-S, it's a complicated process in the laboratory that takes some time to do. So it was more expensive to do it.

Storey: Did you actually do any of that work?

Magnussen: Yeah, I did all of that. That whole program was under me. We trained people on how to do it. I went out on the runs, you know. We would go out for twenty-four hours straight and do these kind of sampling runs. So, yeah, we did all that.

Storey: If we were trying to deal with issues of salinity and so on, and we were only checking every other week, I think you said, every two weeks, isn't there a long response time?

Magnussen: Well, like I said, there's a probe that's in the water that had a chart that measured it every minute. But what you would do, you would go on weekly standpoints where you would do more sophisticated sampling. You would determine for dissolved oxygen and you would do other kinds of tests. You would also do the salinity tests to help calibrate your meters that were there, but you had stationary measuring places. You probably had twenty of them throughout the Delta that measured it on a continuous basis. Then when you went by that station, you would take the chart off and you'd take that chart back and–

END SIDE 1, TAPE 1 APRIL 9, 1996.
BEGIN SIDE 2, TAPE 1. APRIL 9, 1996.

Storey: I had asked how we did in meeting the standards.

Magnussen: I think we met them. I mean, it was the law and you operated the project so you'd meet them. I don't recall that we ever violated it. We might have, but I don't recall that we violated standards and it was ever a problem.

Storey: So I guess moving more into the future out of this period, if we were meeting the standards, why do we still continue to have such big problems with the Delta?

The Delta's Continuing Problems

Magnussen: Well, because the standards continue to get tougher. You know, the initial standards that were set were seen as lots of people as not being strong enough, not tight enough, they needed to be tighter. So every time the state board would do another decision, the standards would get more and more stringent and would be more difficult to meet, or they'd take more water to meet, and then there was less water for export. And, of course, that became sort of the debate as to what kinds of standards do you need to have, and what do you need to protect, and how much water does it take to be able to meet those, to be able to meet those standards. I

mean, clearly you could set the standards so high that you couldn't export any water at all.

Storey: Yeah. But that would be politically impossible probably.

Magnussen: Right. So the debate was sort of on the margin as to where to set those standards, and the argument is what are you setting the standard for. And that's continued on for the last twenty years. I mean, they're still going through that process. We just did the Bay Delta Accord last year.[26] [1995] We finally agreed on some new water quality standards that E-P-A did less and now they're back in place in the Delta. Some of the things that they do that the earlier standards didn't do, they now have some standards on the San Joaquin River. But 'til now they primarily dealt with the Sacramento River and there became more stringent standards on that other side of the Delta.

Storey: Would I be right in surmising that there's been an evolution of knowledge and technology that's gone with this?

Magnussen: Oh, sure. Right. In fact, there's different fish. Like I said, when I was there the big fish issue was striped bass. You don't hear anything about striped bass at all.

Storey: Is that because they aren't there any longer or because they're doing okay?

Magnussen: No. They're not the endangered species or the focus. The flow when I was there was the endangered species. After I left, the Endangered Species Act came and was passed and then there became new issues. Salmon weren't an issue when I was there so much as they were kind of migrating the reverse flow, but they weren't so much a problem in terms of the–after that, I mean, the decline of the salmon was significant declined after I left, and so they became endangered, have been listed. The delta smelt became–I don't think we ever heard of a delta smelt. (laughter)

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26. "The CALFED Bay-Delta Program is a unique collaboration among 25 state and federal agencies that came together with a mission: to improve California's water supply and the ecological health of the San Francisco Bay/Sacramento-San Joaquin River Delta. It was the Delta's importance to the economic stability of California and the nation that led to the drafting in 2000 of a 30-year plan for its management and restoration. Implementation of the plan was ultimately pledged by 25 state and federal agencies with expertise to manage the complex program. This plan, set forth in a programmatic Record of Decision, laid out a science-based planning process through which the participating agencies were able to make and implement better, more informed decisions and actions on future projects and programs. Two years later, the California Bay-Delta Authority was created to oversee the program's implementation and Congress adopted the plan in 2004." See "CALFED Bay-Delta Program Archived Website," http://www.calwater.ca.gov/calfed/about/ (Accessed 8/2016).

Storey: Back when you were there.

Magnussen: So there were other fish species that became important and significant, and the Endangered Species Act probably plays more of a significant role now than other kinds of things probably do. But that wasn't an issue when I was there.

Storey: So how long were you with the Delta Branch?

Magnussen: Oh, I'd say two, three years probably.

Different Responsibilities between the Water Quality and Delta Branches

Storey: How would you distinguish between the responsibilities of the Water Quality Branch and the Delta Branch? How did your responsibilities change?

Magnussen: Well, in the Delta Branch, you were more of a project development, to bring projects on line, to do work associated with new projects–feasibility studies, appraisal studies, environmental impact statements–that would lead to the development of some facility. In the Water Quality Branch, your job was more monitoring predictive modeling kinds of things specifically oriented to water quality.

Storey: I would surmise that this is sort of a nontraditional activity as far as Reclamation was concerned that you were involved in.

Magnussen: What? The water quality?

Storey: Yes, water quality, the Delta issues and so on.

Magnussen: Sure.

Storey: Did that cause you difficulties in working with more traditional aspects of Reclamation's programs?

Magnussen: Maybe not that so much. When I was involved in the Facilitator Program. Probably that in combination with working on the Facilitator Program probably did. But both of those were sort of new ways of doing things, kind of challenging the traditional Reclamation way and, yeah, was seen as being out of the mainstream.

Storey: Tell me about the Facilitator Program. What are we talking about here?

Facilitator Program

Magnussen: Well, the Facilitator Program started as the result of the Job Corps. The Bureau came up with some Job Corps Centers, and I don't remember when this was. I bet it had to be late sixties, probably. In the Job Corps Program, they developed a training mechanism for managers that they called the Managerial Grid.[27] The head of the Planning Division at that time–I guess the Assistant Division Chief's name was Rod [Rodney J.] Vissia.[28] Rod attended that training session and came back. I remember his presentation at Toastmasters, and he did a presentation on the Managerial Grid and what this was. As a result, it kind of came into the mainstream management of Reclamation and was seen as a training tool to help train managers. So it moved into kind of a Bureau-wide effort of training managers.

The Managerial Grid is set up to be sort of self-administered. I mean, they're training people to give assignments, but then people go off and work in groups without anybody else in the group. They're given instructions to do certain tasks and assignments, give each other feedback on how things worked, and then to report back out. There were some concerns that you could probably do that better. So the Bureau decided that it was going to train facilitators to work in these Managerial Grid seminars to help enhance the quality of the discussion and the teamwork and the feedback.

There had also been a couple of incidents where some guys had gotten fairly angry with each other, and so by having a trained facilitator in those groups, the thought was that you would lessen the chances of–I think they may even have had one or two people that had left the seminar. They got really upset and they left the seminar, which didn't portend very good. And so by having a facilitator within the group, they would help reduce the chances of that happening. So the

27. "At conception, the managerial grid model was composed of five different leadership styles. These styles were a relation between a manager's concern for people, concern for production and his motivation. The motivation dimension really provides the underlying motive of the leader behind a successful leadership style." For more information, see Leadership-central.com, "Managerial Grid Model–Also Known as the Leadership Grid," http://www.leadership-central.com/managerial-grid.html#ixzz4bV7ZMyUa. (Accessed March 2017)

28. Rodney J. Vissia served as Regional Director in Reclamation's Pacific Northwest Region, 1974-1980, before becoming Assistant Commissioner Engineering and Research, 1980-1982. Mr. Vissia also participated in Reclamation's oral history program. See Rodney (Rod) J. Vissia, *Oral History Interviews*, Transcript of tape-recorded Bureau of Reclamation oral history interviews conducted by Brit Allan Storey, senior historian, Bureau of Reclamation, in Ocean Shores, Washington, edited by Brit Allan Storey, 2011, www.usbr.gov/history/oralhist.html.

regions selected a number of people to train as facilitator, and I was one of kind of that first group of people that they decided to train to do that, and it was kind of under the sponsorship of Bob Hammond, who was an Assistant Regional Director, and Jake Ossofsky, who was the Chief of Central Valley Operations. So they were sort of the management people. Bob Pafford was never directly involved but certainly was aware of it and sanctioned it. He never personally was involved himself.

Storey: You only did that in the Region?

Magnussen: No, the other regions did it, too, I think. Oh, you mean me, personally?

Storey: Yes, you personally.

Magnussen: Yeah.

Storey: Your other answer is fine, though. (laughter)

Magnussen: No, I only did it within the Region.

Storey: But it was done Reclamation-wide.

Magnussen: Yeah. It was a Reclamation-wide program. I'm trying to remember. Did I? Well, we did some work outside the Region. We actually had two full-time staff people in the Region, and one fellow's name was Carlos Donatelli [phonetic], and I recall he and I went out and did some work for the Forest Service one time. We did a team-building with the personnel office in Oregon for a Forest Service office or something like that. So basically the agreement we had with management was that we could spend up to 25 percent of our time in this organizational activity.

As the training went forward, you did the Managerial Grid and did some of those seminars. They were probably held–gosh, I can't even remember now. They may have been held three or four times a year until you had a significant amount of your managers that had gone through. We eventually redesigned the Managerial Grid seminar. As we got more knowledgeable about it, we actually designed our own and brought in new activities and things to do. We actually hired outside people to come in and help train even more. There were two or three more groups of facilitator groups that were added. At one time, there may have been as many as twenty facilitators that were in different stages of training. Did team-building within existing organizational units, take a boss and his boss

and subordinates and take two or three days to go off site someplace and talk about issues that were facing that group. But those were primarily all within the Region. It was very little outside the Region.

Storey: One of the places that was in the region was the Newlands Project. Did you do any water quality work over there?

Magnussen: I was there as a rotation engineer, but I never was. Other than that very short stint I had as a rotation engineer, I didn't spend any time over there.

Storey: So we weren't paying attention to Pyramid Lake that you were aware of in your activities?

Magnussen: No.

Storey: You mentioned, in the first interview, Wilson Nelson, one of the state employees, I think, that you worked with in water quality. Was that it or was he a Delta activity, or can't I read my notes?

Working with California State Department of Water Resources

Magnussen: Austin Nelson.

Storey: Austin Nelson. Okay, I must have misunderstood.

Magnussen: Austin Nelson, yeah.

Storey: What was he like and what was going on?

Magnussen: Austin was probably like my counterpart at the State Department of Water Resources. He was sort of in charge of the state portion of the water quality monitoring program. Doing the modeling of the Delta, trying to find solutions to the Peripheral Canal, either demonstrate the Peripheral Canal would work or looking at other alternatives.

So we together, the two of us, I think one of the more significant things we did, we actually brought the two staffs together on like a retreat, sort of did a mini team-building within. The staff itself got together and cooked and kind of planned the year's activities coming up. That was a pretty insightful and meaningful experience to get the two agencies together that, in lots of cases, were

rivals. And getting together and not being rivals and working together to solve a problem, which I thought kind of brought the whole idea of the managerial grid, getting together as a team and solving problems and kind of taking the Bureau patch off your sleeve, which I always thought was a real problem. People being advocates for their own position and driving it to an end was really destructive.

I always thought if you're going to solve the Delta problem, people needed to get together and try and find common solutions, and all this fighting and–and that's why I thought Billy Martin really went wrong. I mean, he was really an advocate for a position and was trying to drive for solutions, which divided people as opposed to trying to find commonalities to bring them together, which I thought the whole Facilitator Program and the Managerial Grid, that was all kind of trying to teach you to do it that way.

Storey: This was when you went to [Lake] Tahoe for a week?

Magnussen: Yeah. Right, yeah. We went to Tahoe for a week.

Storey: Five state employees? Five federal?

Magnussen: Yeah.

Storey: What did you talk about? What were the kinds of issues that you were coordinating?

Magnussen: Well, I guess you were going to do the kinds of things you were sampling. Were there some new things that we ought to be looking at? Did you need to do new equipment purchases and, if so, did the equipment you had, was it up to snuff? You only had limited resources in terms of boats. You know, were there other ways that you could do this sampling that would maximize your better use of it? Got together and analyzed the data to see if there were better ways of doing things. And just having people learn how to work together and kind of know each other as people as opposed to this body over here, what his job was.

Storey: Tell me how you progressed through the grade system when you came to Reclamation.

Moving Up Through Reclamation

Magnussen: I started out as a GS-3, student trainee, and every summer I got a promotion. So the first summer I was a 3 and the second summer I was a 4 and third and fourth summer I was a GS-5. Then when I graduated as a rotation engineer, I was a GS-7. I probably got a GS-9 in the Hydrology Branch. I probably became like an 11 in the Water Quality, when I was in the Water Quality Branch. GS-12 when I was to the Delta Branch, a planning engineer.

Storey: Was that as a Branch Chief?

Magnussen: No. The branch chiefs were all 13s. There were like section chiefs. Like section chiefs were 11s and 12s, kind of depending on the responsibility. I was probably a 12. I was probably a 12, Section Chief in the Water Quality Branch. I probably went from an 11 to 12 in there, probably. Planning engineers were 12s, typically, so I would have stayed as a 12 there.

Storey: And then I think you went to the Departmental Managers Program.

Magnussen: I was just trying to remember what grade I was when I was on the Departmental Program. I'm going to say I was a 13.

Storey: That's typically what it would be, a 13 or a 14.

Magnussen: I was a 13, because I got a 14 when I was in Phoenix. So I must have got a 13 in that Delta Branch or something. I don't remember.

Storey: What made you decide you wanted to go to the Departmental Management Program, Development Program?

Department of the Interior's Management Development Program

Magnussen: Well, a couple of guys had applied. Dan Fults[29] had applied and, I think, was like the year ahead of me, spoke pretty highly of it. I also saw it as a way of just getting out. I mean, I got pretty sour about the Bureau and the way things were being done. So I was looking for a way out. This was a chance to get away, do something different. Also, one of the people that had been on this Facilitator Program with me was Frank Peckrich [phonetic], and Frank left. Frank left

29. Dan Fults participated in Reclamation's oral history program. See Dan Fults, *Oral History Interviews*, Transcript of tape-recorded Bureau of Reclamation Oral History Interviews conducted by Brit Allan Storey, senior historian, Bureau of Reclamation, on November 17, 1993 and August 30, 1994, in Sacramento, California, edited and desktop published by Andrew H. Gahan, 2014, www.usbr.gov/history/oralhist.html.

Sacramento and came to Washington as the Training Officer. So we knew each other pretty good and were pretty good friends. So it was sort of his program that was being run back here. So I think probably both of those were probably good connections. It was a really good year for me.

Storey: Do you remember what you had to do to apply for the program?

Magnussen: I don't remember. I had to apply somehow. I mean, I probably wrote some things and sent in a thing. Oh, I know. We did we take–no, we didn't that year. When I was on the Departmental Program, though, we designed and set up an Assessment Center. I think the year after me they did an Assessment Center. I actually went through an Assessment Center while I was on the D-M-D-P. The following year, I think, was the first year that actually you had to go through an Assessment Center to do that. I didn't have to go through that. Or did I go through one? No, I didn't. I went through as we helped design it, and then the next year they actually did the selection using an assessment program.

Storey: And so you had to pick up your family and move, or did you do that?

Magnussen: No, I picked up the family and we came back here for a year.

Storey: How was the program run at that time?

Program Functions

Magnussen: Well, it was a combination. It was a combination of working in different offices and different assignments. It involved some academic classes, and it involved kind of group meetings of the participants and lasted for nine months, ran from September to June. So it was the school year, which was good. My kids were kindergarten and second grade, so that you could go through a whole school year. So that was convenient from a family standpoint.

Storey: Who designed your program for you and what was it?

Magnussen: Well, I designed it, I guess. I think that was the idea was you designed your own program, with Frank's view and help. Then there was a woman in the department who probably did a little bit of that, too. But I worked here in the Bureau. I worked for Gene Hinds, who was head of the 400 Group, the water and operations. I worked for the Commodities Futures Trading Commission, which, interestingly enough, I actually worked for Frank's wife, Pam, who was the head

of planning for the Commodities Futures Trading Commission. So I had an assignment with them.

I had an assignment with B-F Sisk up on the Hill, who was the Chairman of the Rules Committee of the House of Representatives. His Administrative Assistant was Tony Coehlo. So actually I worked with Tony Coehlo. Their guy that had been their water person had just had a heart attack, and so they needed a staff person to do the water. So I worked with Tony for a month or six–no, it may have been longer than that. It was probably a couple of months. 1976 was the big drought and there was a drought relief bill that was put through. So I worked with Gene Hinds on kind of the first concepts of the drought relief bill,[30] and then when I was up on the Hill, we negotiated some of that. It was also the first San Luis Agreement and the negotiations between B-F Sisk and George Miller on what would be constituted in the San Luis Agreement. So there was quite a bit of legislative activity that was going on during that time, so it was a very–you know, you were working with what were very good, capable people. I mean, Tony Coehlo becomes a very successful congressman later on, and you were really working with topnotch people, and it was really an exciting time.

Storey: Tell me more about the San Luis Agreement. What was that about?

Magnussen: It had to do with Westlands Water District and some of the issues associated with the San Luis drain and how they would operate. This was pre-Kesterson.[31]

Storey: Before they understood that issue.

Magnussen: Before they understood that or knew that they had a selenium problem. But you'd always had a problem with the drain and what happened to the drainage water and how it would operate and things like that.

Storey: Where it would go and all that, yes.

Magnussen: Where it would go and things like that.

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30. Referring to the Emergency Drought Relief Measures (P.L. 95-18), April 7, 1977.

31. "Completed in 1971 by the Bureau of Reclamation, Kesterson included 12 evaporation ponds for irrigation drainage water. The reservoir, a part of the San Luis National Wildlife Refuge, was an important stopping point for waterfowl. In the 1960s officials proposed a 290-mile drainage canal to the ocean known as the San Luis Drain. Only 85 miles were completed, however, and work on the drain halted in 1986 after scientists discovered bird deformities due to drainage at Kesterson." For more information, see Water Education Foundation, "Kesterson Reservoir," www.watereducation.org/aquapedia/kesterson-reservoir (Accessed 5/2016).

Storey: When you were working for the House, how did they use you as a staff person?

Magnussen: You did correspondence, and there were legislative proposals being made, and so you would give them your ideas and thoughts as to what was good or not good. You would go to meetings with them, help keep the minutes and notes and records of what happened.

Storey: Any other assignments?

Magnussen: Those are the three major ones. That was probably half of the time of that year. Then the rest of it was academic courses and things like that.

Storey: Your experience had been in Sacramento for the most part.

Magnussen: Uh-huh.

Storey: In that Region. Did it change your perspectives on Reclamation and how things work?

"Reclamation had a Defined and Clear Culture"

Magnussen: Well, yeah. In fact, I had really thought that I would leave Reclamation. So this was sort of a job-hunting year for me, too. I figured there had to be something better around. And what I found, especially like the Commodities Futures Trading Commission, the regulatory agencies, there were no ethics with those people at all. What I found was that Reclamation had a defined and clear culture. It had a clear mission. It was one of the few agencies that actually produced anything, and from an engineering standpoint, that's what you sort of liked and did. And while you're sort of unhappy with how they were doing it at the time, compared to regulatory agencies where you'd have these lawyers that were coming in and writing reams and reams of regulations so that they could quit two years later and go out and make big bucks for a law firm interpreting those regulations, I just thought was repulsive. (laughter)

As you saw that or you saw within Interior working with the Bureau of Indian Affairs or working with the Fish and Wildlife Service in terms of their management's abilities and the ability to deal with issues wasn't anywhere close to what Reclamation could do. So I thought, well, maybe Reclamation wasn't such a bad place.

Storey: Did it change your view of how business is done in the federal government?

Magnussen: Well, I think it certainly gave you a broader perspective, you know. You've been somewhat isolated. You didn't necessarily see things from the broader management viewpoint. You were still narrowly focused on projects and planning them, weren't necessarily operating projects or you weren't dealing with a lot of the broader financial, personnel issues and a lot of the other kinds of things. So that management program also exposed you to a number of those broader management things that managers have to deal with that you hadn't necessarily done a lot of in the early part of your career.

Storey: Were there other people in the program from Reclamation at the same time?

Magnussen: Yeah, there were. I think there were three of us. Bill Seth [phonetic], who was from Amarillo, the Regional Office in Amarillo, and John Parker, who was from Denver, and he was the guy, I think, that designed and did papers. So he was sort of an administrative computer guy. Bill Seth goes on to become–I think he becomes the Planning Officer in Amarillo and then has been selected to be an Assistant Regional Director in Billings and decides not to go and then quits the Bureau. I think he's given his reassignment to go and his wife doesn't want to move. So he leaves the Bureau and sets up his own business, and shortly thereafter dies of a heart attack or something.

Storey: I wonder if there's a lesson to be learned. (laughter)

Magnussen: (laughter) I don't know. Toward the end I think he was pretty unhappy. I don't think he left the Bureau very happy.

Storey: You were here in Washington, I think, when the hit list was announced.

Carter "hit list"

Magnussen: Right. Yeah. So '76-'77. So this was the end of the Gerry Ford and the election of Jimmy Carter and the hit list. So that was the tail end.

Storey: How did Reclamation react to that here in Washington?

Magnussen: Well, they quickly pulled in people to bring in–I wasn't directly involved in any of it, so sort of saw it from afar. But clearly this was a big attack. In fact, I attended the hearings when–who was Secretary of Interior?

Storey: That can be found out.

Magnussen: Well, Keith Higginson. Keith Higginson was the Commissioner, right?

Storey: Yes, Keith had just become Commissioner.[32]

Magnussen: He's the Commissioner. So who was the Secretary?[33] Guy Martin was the Assistant Secretary. [Thomas] Kleppe had been the Secretary under Ford, I guess. So he left.

Storey: Why can't I find the correct list? I try and keep these cheat sheets somewhat organized.

Magnussen: Anyway, I went to the hearings when the Secretary went up to testify on the hit list. It was just brutal. And those guys were really mad.

Storey: The congressmen were really mad?

Magnussen: Yeah, the congressmen were really mad. They had gotten blind-sided, you know. It was unethical. It was wrong. It was really a real blood-letting. So the administration had to significantly backtrack on what was in the hit list. It was kind of the Saturday night massacre or whatever it was characterized. They had sent it out without consulting and it was unconscionable.

I think they put the entire Central Arizona Project on the hit list, but they ended up negotiating with Mo [Morris] Udall, who was the congressman from Arizona, was that they eliminated three dams of the Central Arizona Project, but they would continue to fund the rest of C-A-P. They made changes like that in lots of projects where they had to go in and kind of back off kind of their initial list of what they were going to do and how far they were going to be able to get.

Storey: Of course, the Commissioner was in a funny position, I would presume. He had to support the President.

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32. R. Keith Higginson was Commissioner of the Bureau of Reclamation under the administration of President Jimmy Carter, 1977-1981, and participated in Reclamation's oral history program. See R. Keith Higginson, *Oral History Interviews*, Transcript of tape-recorded Bureau of Reclamation Oral History Interview conducted by Brit Allan Storey, senior historian, Bureau of Reclamation, March 22, 1995, and April 19, 1995 in Boise, Idaho, edited by Brit Allan Storey, www.usbr.gov/history/oralhist.html.

33. At the time of the release of the "hit list," Cecil Andrus was the Secretary of the Interior.

Magnussen: Yeah, right. And, of course, what role he played, I don't know. I was never in those discussions, so I don't know how he may have done.

Storey: We covered a lot of ground in that first interview. Where did you go after you left Washington in '77?

Goes to the Central Arizona Project

Magnussen: I went to Phoenix. In fact, I even left the program a little early. So C-A-P had been put on the hit list. Manny Lopez was the Regional Director in Boulder City. Dick Shunnick was the Project Manager. When C-A-P was authorized in 1968, they basically said, "Well, we just need to construct it now." So they let all their planning staff go. Of course, when the hit list came and they eliminated three of the dams, the way that the project was suppose to operate, it wasn't going to work that way anymore, and they needed to come in to kind of re-plan it, reformulate.

I was then hired by Dick Shunnick and Manny Lopez to come down to help re-plan C-A-P now that it had been changed. All those things had been eliminated. You didn't know what you were going to do instead of, if anything. So I went down there to head up the effort to, what they called, advance planning, which is kind of the Bureau terminology for the planning that you do after a project's been authorized. Typically, it was to do D-P-Rs, Definite Plan Reports, and things like that. Of course, in this case, it was almost like going back through a new feasibility process, because you had to go back and look at alternatives. It wasn't putting the final details on anything. It was going back and starting from scratch and sort of re-planning it. So while the project had been authorized, you were back looking at the project from its infancy again.

Storey: So this would have been after, for instance, Orme Dam had been killed?

Magnussen: Right. Yeah. So Orme Dam was eliminated. So one of my jobs was to find–it was identify Orme Dam or a suitable alternative. It was to find a suitable alternative. Of course, went down there, had carte blanche to hire people to come help do that. So that was probably the best job a manager can ever have is to walk into a brand-new situation.

END SIDE 2, TAPE 1. APRIL 9, 1996.
BEGIN SIDE 1, TAPE 2. APRIL 9, 1996.

Storey: This is tape two of an interview by Brit Storey with Steve Magnussen on April 9, 1996.

You were saying it's sort of a wonderful situation where you get to set up your own organization, pick your own people.

Magnussen: Yeah.

Storey: First of all, tell me what the position was.

Named Chief of Advanced Planning

Magnussen: Well, it was called Chief of Advance Planning. The job was to do the planing for those parts of the project that obviously needed to be planned. They might not all have been known clearly at that time when I went down there, but Orme Dam clearly was the problem. Orme Dam was no longer there. They felt there was still a need for the regulatory storage component. A couple of years after I was there, there was a major flood. And, of course, everybody, "Had there been Orme Dam, we wouldn't have had all these problems." So there was a demand for flood control.

The part of the project that was to take water to Tucson was the Charleston Dam and Aqueduct. Of course, that was eliminated, so you had to find a new way to get water to Tucson. There was plans for distribution systems for both Indian and non-Indian farmers that hadn't been planned that had to be done. And there was a component of the project up in New Mexico called Hooker Dam, which is sort of what New Mexico got in being able to support Arizona for the project. So they got a feature of the project, and it was eliminated. So it was to find some other way of providing water to New Mexico that couldn't be done with this Hooker Dam anymore.

Storey: I think you had a fairly large staff. Twenty-five, twenty-six people?

Magnussen: I think at one time it got up, yeah. But to the peak we were probably about that.

Storey: You were doing this as a 13 still?

Magnussen: Well, I got a 14 while I was there. Maybe halfway through or something, probably 1980, something like that.

Storey: Manny Lopez told me there was a man named Pugh who had been the Project Manager. I think maybe in those days they called them Project Supervisors?

Magnussen: Yeah. I don't remember.

Storey: And that nothing had really been planned in the sense of detailed out. Was that a problem, a benefit? Was it true, or did you have a different vision of it?

Magnussen: Well, I don't know. That's interesting. I mean, there was a feasibility report that was done and presented to Congress. So, I mean, to a degree there was that planning. I think, though, that once they were getting close to authorization, they pretty well quit and just figured all they had to do was to go build it. So probably in the really true sense of real planning. Of course, NEPA comes along at about then. So to a large degree, a lot of the planning then sort of takes place in the NEPA context as opposed to sort of the feasibility D-P-R, which had sort of been the traditional way. Because NEPA really becomes the driving force for what's going to get done, not necessarily your planning reports. What we did was we called them–They were combined planning and environmental impact statements. We actually produced both documents.

Cliff Pugh had left by the time I had got there. Cliff Pugh was, I guess, a legend in his own time. He was more powerful than the Regional Director. I mean, you hear stories about the Regional Director wanted to fire him and couldn't get rid of him, because he had stronger congressional support than the Regional Director did. Cliff was still around, I mean, he worked as a consultant. So you tended to see him around. But I never did–

Storey: Well, he's still there.

Magnussen: Is he still there? (laughter)

Storey: I think I'm going to be interviewing him week after next.

Magnussen: Are you really? Oh, that would be really interesting.

Storey: So if I heard you correctly, your branch was doing both the detailed planning and the NEPA documentation. Is that what I heard?

Magnussen: Well, we actually had probably another group that had responsibility for NEPA, but they really had to work very closely together. Actually, we did the planning.

There was another group that did the E-I-S, but they were well coordinated, I guess, is how you'd probably say it. In some cases, all they had to do to the NEPA. As an example, the Granite Reef Aqueduct, which was the portion of the canal that went south of Phoenix halfway to Tucson, there really weren't any major planning issues involved. All you really needed to do was do an E-I-S. So they pretty well did the E-I-S independent of the planning people.

When you got to the Tucson Aqueduct, as an example, there were lots of controversies involved, where to take it into Tucson, did you have terminal storage and, if so, where did you have it, which were really planning issues. So we would be involved in doing the planning and public involvement and kind of working toward what would appear to be some consensus, and then the environmental people would pick it up and actually produce a draft environmental impact statement.

Storey: Part of this planning was Plan 6.

Magnussen: Right. Plan 6 was the preferred alternative that came out of the Orme Dam or suitable alternatives. There were nine alternatives. The one that was selected was Plan 6.

Storey: Plan 6 is the one that was finally selected.

Magnussen: Yeah. So there are nine alternatives.

Storey: And these nine alternatives were developed after Orme Dam was eliminated.

Political Pressure Concerning Orme Dam

Magnussen: Right.

Storey: Were you there at the time when, "There aren't any alternatives to Orme Dam." I'm told that the area office, for a long time held, "There are no alternatives. You can't do it any other way."

Magnussen: After the hit list? After the hit list, you mean?

Storey: Yes.

Magnussen: Well, it depends on who you were talking to. I mean, I came down there right after that, and they hired me to find the alternative to Orme Dam. I mean, so clearly the Regional–

Storey: It's the wrong question.

Magnussen: So clearly the Regional Director and the Project Manager knew that they had to do something. Now, I think there were certainly people around at that time that certainly held that view and very strongly in the congressional delegation. I mean, I think John Rhodes–I think John Rhodes, up until the very end, we were ready to select Plan 6, publicly said there aren't any alternatives except Orme Dam. I mean, "You guys are having to do all these studies, but we all know the answer is Orme Dam." Okay? So that was certainly a view that was held by some pretty important and influential people. I think the more enlightened people in the community that made the process work were Governor [Bruce] Babbitt, who was Governor at the time; Wes Steiner, who was a State Engineer; Jack Feister, who was the General Manager of the Salt River Project, all knew that you had to go through some genuine exploration of alternatives and you had to build community support and consensus, which there wasn't for Orme Dam. And there were problems that needed to get solved and you had to find solutions to those. They pretty much were able to keep the focus of the effort on what really did get done.

In fact, from my view, I think it was really Governor Babbitt that really set the stage that allowed it to work. He's a scientist. He understood the science. He understood the planning process. He understood the political process. And so when we were getting this process started, he formed a Governor's Advisory Group. The issue was, how long was this study going to take. I can remember the first PERT[34] chart we did I think we said it was going to take fifty-four months to do this. Well, that was way too long. Finally, they got us down to thirty months. We were going to do this in thirty months. It was too long to be planning. So Babbitt had said, "Okay, you guys get this thirty months to put it together, build the information system to do that, and I'll keep the politicians off. When you get to the point where you know what the solution is and you need to come to help sell it, then I'll come in and do that."

So during this whole planning process, there was never any political second-guessing, people coming in and trying to push their kind of thing. And they let the process go and do the analysis and develop the information and data so that you had a fair comparison of those alternatives, then the choice could

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finally be made. And the fact that Babbitt knew and understood that and understood how you could really muck up the process, I think, was the key to making the whole process work. Final answer, it's really interesting, from the time that we started until we filed the final environmental impact statement for Plan 6 was fifty-five months. So we were within one month. I mean, we put it together. We know how long it takes to do these things. We know how long it takes to do the analysis, to build the public consensus, and to do all that kind of stuff. And we were within one month of exactly how long it took. (laughter)

Storey: Was he willing to hold off the politicians after you'd gone past your thirty months?

Magnussen: What happened was the process is designed in phases. I mean, it was like three phases. You develop all the alternatives. You do the analysis. You eliminate them to a smaller group. And then you come down and you spend a process to figure what the selected alternative is. Well, if the original design was that that first phase is always suppose to take twelve months, and you get to the twelfth month and people knew that were close enough to the project, knew and understood it was either more data or there were some issues and it was going to take a little bit more time, then they would agree for that to go.

So incrementally it got stretched out, and people along the process that you had clear milestones of what you were going to be able to do and when you got there you say, "Well, we want to try and force it."

"Well, no, we don't want to do that."

"Well, what should we do?"

"We should keep working through the file."

So you would bring them along and they would agree that the process was getting extended. While it was controversial, as you would try to keep it on schedule because we had to find a solution, you brought those influential key decision-makers along for the process. So they agreed. When you had to extend the schedule, they agreed. You did kind of a public involvement around the schedule, and they agreed. Okay, well, the alternative is to do something now or extend it out. Well, what should we do? Well, let's extend it out.

Storey: So it was a little over four and a half years.

Magnussen: Yeah.

Storey: One of the issues, as I understand it, that affected Orme Dam was the fact that it was sited on an Indian reservation.

McDowell Indian Reservation

Magnussen: Yeah. In fact, it affected recreation on the lower Salt River. It flooded the Fort McDowell Indian Reservation, also the sites of the bald eagles, which were endangered species then. That was just starting to come into–it was identified as endangered species. And it backed water upon the face of Stewart Mountain Dam, which you really didn't know what the impact of that was going to be. Those are the primary issues.

Storey: Did you continue to have Indian issues as you worked thorough the alternatives?

Magnussen: Sure. Now, there was a real coalition that got built. Like I was saying, in California they started to build a coalition. So there was a real coalition that got built between the environmentalists that were concerned about, say, the bald eagle and the Indians. You know, they had a very common purpose, and I don't think the environmental community cared about the Indians one hoot except to the degree that they would sort of help push forward their cause.

But, sure, the Indian issues. In fact, right up until the very end we hired some sociologists that went out and really got to know the Fort McDowell Indians and their needs and concerns. I would say right up at the very end as we were trying to indicate how much better Plan 6 was, say, than Orme Dam, and really had a meeting with John Rhodes and–I'm trying to remember, there was another congressman that was there. But it was sort of that presentation by the social assessment people that the Fort McDowell Indians were never going to give up, that this was so important to them, this land. I mean, to think that you could buy them off, which was sort of all we–"Well, we'll give them some land over here. You just have to figure out much land it is." And when the sociologists could sit down and present the data, not just feelings, okay, but present the data and the results of the interviews and how they felt and could present that to the congressional people, did it really become clear to some people that there was no way that Orme Dam was every going to happen, and what we needed to do was to go find some other alternative.

That really started to turn the plan toward Plan 6. And it's having the data. It was having the scientific analysis, in this case the social assessment of the Fort McDowells, that was a very key component. But you had to have time. You had to have time to be able to design the study and hire good professionals that could go out and do it, gain the trust of the tribe, that that data could come back in and start to be significant and important in the decision-making. That's not something you can just do in just a few months, you know. It took time to do that.

Storey: My understanding is that part of the water is to go to the Indians to settle water claims. How did that figure into the planning process?

Indian Water Settlements

Magnussen: It didn't. It was all later. After that whole process, and really unrelated, desire on the part of the administration to settle Indian water rights claims and started the negotiations. And they really started with the Salt River Pima-Maricopas, which is the tribe just downstream from the Fort McDowell, to settle their water rights. The only relationship is in the project when they were allocated water by the Secretary of Interior, the water that they were given from C-A-P in the contract, it was acknowledged that if there was an Indian water rights settlement that the water that they get from C-A-P would count against the settlement. They wouldn't get water in addition to C-A-P.

When the settlements are finally crafted, if the Fort McDowells had like 4,500 acre feet of C-A-P water and their settlement was for, I don't know, 35,000 acre feet or whatever it was, 4,500 of that 35,000 came from C-A-P and then the rest of it was part of the settlement. That was the only relationship that there was. Part of planning Orme Dam didn't have anything to do with the settlement.

Storey: You mentioned a little while ago that while you were in Washington you began to realize that Reclamation was an agency that got things done. How did you feel about your work down there in the Phoenix Area Office?

Phoenix Area Office

Magnussen: It was really good. We had a highly motivated staff, we hired good people. They weren't going to be there forever. They came in and did a job and they would leave, probably would do pretty well because they were very visible and how they're doing the work and people would see them. We also had an advantage. We had a project that was authorized. It's not like we were dusting off some old

planning study for some congressman's favorite area or didn't have to go to Congress and fight all those battles.

I mean, we had money, which is certainly an advantage. I mean, I think we spent 15, 16 million dollars. This was by far the biggest planning effort the Bureau had ever done, which means we had the resources we could put on it. So we weren't constrained. I mean, a normal planning study in those days maybe cost 300,000, 400,000 dollars. You should do a whole feasibility study for that. I mean, to think of spending a million dollars on something was mind-boggling. Now, an awful lot of that was on the feasibility design, but probably on the E-I-S portion I bet you we were probably around $10 million, which was really unheard of.

Storey: In addition to the fifteen or sixteen?

Magnussen: No. No. That was part of the fifteen or sixteen was probably the E-I-S and then another five or six million on your feasibility investigation. You know, drilling and all that kind of stuff gets pretty expensive. But the whole effort was on the order of 15, 16 million dollars.

Storey: How did the office function socially?

Magnussen: In Phoenix?

Storey: Yes, in Phoenix.

[Visitor Interruption]

Storey: What was the social life in the office like in Phoenix at that time, or was there any?

Magnussen: I think the planning group did some things together. I don't recall. There were picnics. You know, there was office picnics probably once a year, something like that. I don't remember that there was a lot more than that. I think the planning group periodically got together and had some of its own functions at people's houses and stuff like that. But it wasn't anything active like it was in Sacramento.

Storey: Tell me about what it was like in Sacramento.

Magnussen: The Bureau had hired lots of people that were about the same age. There were probably thirty engineers at about my age. So we–

[Visitor Interruption]

Storey: They hired a bunch of people about the same age.

Magnussen: Right. So we played sports together. Did a lot of softball. We played a lot of softball. I think one year we probably play fifty, sixty softball games, which is for amateurs. (laughter) But you didn't have any money and you were young. All the wives could get together. They all had young kids they were raising and be supportive and stuff like that. I would say probably some of the best friends that I had were from kind of that Sacramento time. You know, that was kind of your social life and we did a lot of things together.

Storey: There's still some stuff about the Central Arizona Project or the Arizona Project Office, but I think it's time.

Magnussen: Yeah, probably.

Storey: And it looks like somebody's looking for you. So–

[Visitor Interruption]

Storey: Let me ask if you're willing for the information on these tapes and the resulting transcripts to be used by researchers.

Magnussen: Sure.

Storey: Good. Thank you very much.

Magnussen: All right. Thank you, Brit.

END SIDE 1, TAPE 2. APRIL 9, 1996.
BEGIN SIDE 1, TAPE 1. JULY 30,1996.

Storey: This is Brit Allan Storey, senior historian of the Bureau of Reclamation, interviewing Steve Magnussen in his offices in the main Interior Building on July 30, 1996, at about three o'clock in the afternoon. This is tape one.

I think last time we talked we had gotten you to what would then been the Central Arizona Projects Office, I believe, and we were talking about C-A-P and about ready, I think, to start talking about Tucson and its no-growth policy and all that kind of thing. You went over this quickly in our first interview. Tell me more about Tucson. What was going on there and when did it change and why did it change and what part did Reclamation have in all of that, if any?

Getting Water to Tucson

Magnussen: Well, let's see. I came in 1977. It's my recollection it may be like a year before that, Tucson had elected a no-growth city council, and part of that included that they didn't need Central Arizona Project. And that they could rely on their existing groundwater if they were to manage it wisely and put in appropriate conservation measures and pricing policies and things. One of the things that they did fairly early on was to put lift charges on. So the people that had to have water pumped to them high on the mountain got higher bills, but I think what they forgot to realize that also the people on top of the mountain were also very powerful people. So there was a recall election, and I don't remember, three or four of the no-growth City Council people were recalled and there was a new City Council put in place, which then sort of changed kind of the politics of Tucson in terms of their attitude toward C-A-P. But there was a period of time there, and I'm trying to remember how long that was, but I don't think it was very long, maybe a couple of years, before they sort of had that.

There was a mayor down there. I think his name was Murphy, and he was a good Irish politician. He was certainly in favor of the Central Arizona Project. The Planning Division, which I was heading up, which was looking at kind of the Orme Dam alternatives, also had a major effort then to figure out how do we get water to Tucson and how was that all going to work and how was it going to hook up. That was a major effort.

The early plans on C-A-P included getting water to Tucson from the San Pedro River and Charleston Dam. And, of course, Charleston Dam was one of the dams that was put on the hit list by President [Jimmy] Carter. So there had to be an alternative way of getting there. Generally, the conclusion was that probably water ought to come from the Colorado River. So that meant extending the Central Arizona Project aqueduct all the way to Tucson as opposed to terminating in Pinal County, which was the original plan in the feasibility reports. We had a planning engineer by the name of Jay Franson [phonetic], who we hired from the

Upper Colorado Region, and he came down and headed up the planning effort for how to get water to Tucson.

There were a couple of major activities that were involved in that. One is where it came into Tucson was some controversial, and there had been an area called Cat Mountain, which was a potential good reservoir site. The thoughts of certainly the water development people in Tucson that that would be a good place for the aqueduct to terminate. But given the fact it was in the Tucson Mountains, more from the environmentalist viewpoint that it was not a very good location. So it appeared that we were going to have a real difficult time to try to figure out how to design the Tucson Aqueduct.

The upper end was ready to go to construction. So we had a meeting, and at that time Steve Lanika [phonetic], who later goes to work for George Miller and is on the Natural Resources Committee, but at that time is here with the Department, and comes out and we have a fairly major meeting and try to figure out how to do this. Then we bifurcate the Tucson Aqueduct into what then becomes Phase A and Phase B. And Phase A is an extension of the Salt-Gila Aqueduct taking the aqueduct down to about the Santa Cruz River where it wasn't really very controversial and you could deliver water to the most southern irrigation district, which is Central Arizona Irrigation and Drainage Ditch. So you need to get water to them, and if you didn't start doing this you wouldn't be able to get water there. So you have a Phase A and then Phase B which then became how to get the water into Tucson.

The other real major activity was that issue associated with Cat Mountain. We did a fairly major planning study on what were alternative reservoir sites that were around where water could be taken. The conclusion of at least the first phase of that study was that we would not use Cat Mountain itself, that there would be some other alternative that would eventually be chosen. There was a Citizens Task Force that was formed with the city of Tucson and a fairly major effort probably lasting over a year to determine kind of the conclusion.

Finally, what they finally ended up with happened after I left even was the reservoir–well, in fact, I'm not sure it s even done today. I guess what they do is the aqueduct now connects directly up to the city of Tucson, and there is still a proposed terminal reservoir site which still has not yet been completed. I think the Bureau's completed its environmental impact study on it, and it's sort of out in the middle of the desert and it gets formed by making a hole in the desert and

using the dirt to build the berms around the outside. So there's no natural reservoir site that's used.

So it's a pretty expensive site, and I think the Bureau planning people have always really thought that the city of Tucson could manage its water supply by, you know, using existing groundwater and managing C-A-P, and they really did not need a very big reservoir site. The city of Tucson and Pima County have always taken a position that they needed to have this large reservoir. It's been always pretty contentious. In fact, the city itself–this is a couple of years ago, I guess–even had an election to whether or not how they wanted to take C-A-P water and some water quality things associated with that. So it's always been pretty contentious in Tucson, how they got their C-A-P water.

Storey: When you went down there in '77, that was before any deliveries had been made, any water deliveries had been made?

CAP Purpose

Magnussen: Yeah. That was even before the aqueduct even was south, you know, before the aqueduct is even started to construction south of the Salt River. So this is real early on. I don't think water deliveries to Phoenix take place until 1985, '84-85. So you don't have the facilities. So this is real early on in the process, in the early planning process.

Storey: What was the intention for how C-A-P was supposed to work when you arrived there?

Magnussen: Totally, you mean, or for the–

Storey: Yes. The concept of how it was going to function as a system.

Magnussen: When I arrived, it was pretty much in shambles because, you know, the project had just been on the hit list. So the major dams that were Orme Dam and Charleston, which, you know, would both regulate as well as bring water, you know, were no longer part of the project. So what was the plan? So I went there. My job was to come as the planner to re-plan Central Arizona Project so then, in fact, it could work.

Storey: So how did they deal with the fact that they weren't going to have a regulating reservoir, they weren't going to have Charleston on the San Pedro? Was it the San Pedro [River]?

Magnussen: Yeah, the San Pedro. I guess it was the San Pedro, yeah. Either the San Pedro or the Santa Cruz. I think it was San Pedro.

Storey: What was going through Reclamation's mind?

Magnussen: I don't think they knew. I mean, you know, you needed to sort of start from scratch and figure it out. So you had then the feasibility reports and you'd done the planning for so long a time. I mean, I suppose, you know, you could have just operated a canal system by itself. I mean, it's a pretty long canal to operate without it, certainly without flood control. So I think there were certainly those people who felt it couldn't operate without those and, you know, those that felt you had to find an alternative, and whether or not you could find an alternative or not just certainly was up in the air. You really didn't know. You had to go through that effort.

Storey: And so you went through the process and what did you come up with then?

Magnussen: Well, what we came up with in terms of regulatory storage, I mean, the alternative was Plan 6. So you eventually came up with New Waddell [Dam] and raising Roosevelt [Dam] and, at that time, building Cliff Dam on the Verde River. So Plan 6 was the culmination of that long planning study up there. What you finally came up with in terms of Charleston was you brought water through the Tucson Aqueduct all the way to the city of Tucson and connected it up with their system down there at Tucson. So that was the final solution.

Storey: When you say you went as the Planning Officer, and we went through this planning process, was it the same planning process that we would have traditionally used in Reclamation?

Advanced Planning for CAP

Magnussen: Yeah, to a large degree. We called it advanced planning, because it was the planning that was taking place after authorization. So it wasn't like a feasibility report, but it was. It wasn't called a feasibility report, because a feasibility report is that report that Reclamation sends to Congress to get something authorized. Well, C-A-P had already been authorized. A lot of times we used the term D-P-R,

what you call a Definite Plan Report, which means you put in sort of the details. You've already figured out what the feasibility plan is, and now you need the more detailed plan. So you were doing the planning after authorization, but you were doing it at a feasibility level analysis because, you know, you really had to go back then and rethink the process. So it was not dissimilar from what you would have done if you were going to go back to Congress to have it authorized. In fact, in the final result you did sort of have to go back and get it authorized, because did the term "Orme Dam, or a suitable alternative" include Plan 6. And you really had to go back to get that. You had to really go back and get that clarified. In fact, it wasn't really clear even if you got close to the end whether they had to go to Congress to get it authorized or have that.

But I'd say the process was very similar. You started out, you know, doing an appraisal-level study of lots of alternatives. I don't even remember now. You probably had fifty or sixty alternatives that you looked at, and you narrowed it down to a remaining few, and then you looked at those in more detail, and then eventually you did an environmental impact statement. You know, you did an environmental impact statement on those, which prior to NEPA you wouldn't have done an environmental impact statement. You would have just done a feasibility study. We did have a combined planning report and environmental impact statement that provided all the detail, all the detailed information. It had, you know, all the appendices. It had an economic appendix and it had a hydrology appendix and it had a social assessment appendix and it had a public involvement appendix. So it had all the sort of traditional planning.

Integrating NEPA into Planning for CAP

Storey: This would have been maybe six or seven or eight years into the NEPA period, after NEPA was passed?

Magnussen: Yeah. NEPA was what? '78?

Storey: '69.

Magnussen: '69?

Storey: Yes.

Magnussen: Okay, '69. Yeah, we start this in like '78, I guess.

Storey: And finish it?

Magnussen: Well, I think finish. I think the environmental impact statement is like 1984. So it's like six years.

Storey: So it's maybe fifteen years into the NEPA process.

Magnussen: But NEPA becomes, you know, kind of a combination of NEPA and the planning, you know, kind of our traditional planning, get merged in how we do that. This is, by far, at that time, the biggest planning effort the Bureau had ever done. I think when they went back, if you count the feasibility designs, which include lots of drilling and things like that, I think the total cost was 15 or 16 million dollars. The planning effort itself was probably, you know, 8 million. You know, the Bureau's used to doing planning studies for a couple of hundred thousand dollars a year. So this was a major effort.

Storey: What about public input? Was that new, different, more involved?

Public Involvement

Magnussen: Yeah. It was more involved. I was a real believer in public involvement. I worked with a fellow by the name of Jim Crayton [phonetic] when I was in Sacramento. Jim was probably one of the nation's foremost public involvement consultants, and when we went through the process of bringing an environmental contractor on board to help us do the E-I-A [Environmental Impact Assessment], Dames & Moore [phonetic] had the contract. Jim Crayton was their public involvement subcontractor. So Jim Crayton helped design the whole public involvement effort. Every major decision to the whole process had a major public involvement component. Dames & Moore had a person on their staff by the name of Marty Rosell [phonetic], whose full-time job was nothing other than working with the press and the media. Very good graphics.

There was a monthly newsletter that went out that described exactly where they were. The study was given a name. The acronym was CAWCS [pronounced caucus]. I think it was Central Arizona Water Control Study, which was the study of alternatives to Orme Dam. So there was a monthly newsletter that talked about who the people who were involved in the study and what stage of the study you were, provided background, you know, information for people, why regulatory storage was important, what was important about flood control, how did flood control work, how did regulatory storage work, and tried to do really a major

effort to do that. Governor [Bruce] Babbitt, at that time, had formed a Governor's Advisory Committee. I don't remember. I'd say fifteen, sixteen people on it that met on a fairly frequent basis, and they were sort of the political movers and shakers, and so they were major meetings to inform them of different aspects of it. And, finally, when you get to the final end, they really end up taking a vote on which of the alternatives ought to go into the E-I-S. So the public involvement was a very major and important component for the study.

Storey: Was that new for Reclamation?

Magnussen: I think to the degree that we put it, it was new for Reclamation. In fact, Jim Crayton had been the consultant that had written the Bureau's Public Involvement Manual. Also the person that contracted for the effort was a guy by the name of Darryl Adams [phonetic], who was a Ph.D.–

Storey: Sociologist, I believe.

Magnussen: I was going to say a social psychologist, but sociologist, and he was the public involvement person on our team. So I had really captured the Bureau's top public involvement person and the top consultant in the country and myself, and I thought between the three of us we were able to put on a very major and credible program and probably, to a large degree, was largely the reason for the success that we had, I think. You started out with a real polarized public in terms of Orme or not Orme, and at the end, you know, were able to basically form a consensus within the community as kind of identified finally by the Governor's Advisory Committee. There was only one dissenting vote in the final vote for the Governor's Advisory Committee to go with Plan 6. So in a period of five or six years, you move to big polarization on what to do to get to a solution that the community supported. Last year, the last feature of that was dedicated. So the proof of the pudding was it stood the test of time and was able to go to construction.

Storey: Do you remember who voted against it?

Magnussen: He was an environmental person, an Audubon Society representative, and he is name was Weitsman [phonetic], I think. Yeah, Weitsman. He was the President of the Maricopa County Audubon Society, and he voted against it largely because of Cliff Dam. Cliff Dam was on the Verde River, and he just could not bring himself to think that we could build just a new dam any place and just having that. He was very strongly, just never saw it happen. Now, as it finally ends up, Cliff

Dam doesn't get built and the safety problems that are on the Verde River then get taken place with existing dams. So the plan actually changes later on after this E-I-S is done. Bob Weitsman. Yeah, Bob Weitsman.

Storey: W-E-I-S-M-A-N?

Magnussen: No, I think there is a T in there. I think it was Weitsman.

Storey: They brought you in to run this planning effort on what had to be the highest-profile project in Reclamation at the time. All of a sudden, they have all this public involvement going on. Did you have any concerns in Reclamation about the public involvement and the way the planning process was going?

Reclamation Concerns with Planning Process and Public Involvement

Magnussen: Of the people that we worked with closely, I think we were really convinced that public involvement was the only way to go. The Regional Director, though, it's interesting. When I came, the Regional Director's name was Manny [Manuel] Lopez, and Manny generally supported, I think, this kind of effort. But he left and his replacement was Gene [Eugene] Hinds. Gene had been here in the Washington Office and came out to be the Regional Director, and he really didn't believe in this public involvement, and he just really thought we were a bunch of crazies down there.

I remember one of the newsletters. Everybody kept asking, "Well, when you get to the end, who's going to make the decision?" So we put out one of our monthly newsletters and said the decision-maker was the Regional Director. So we prominently featured the picture of Gene Hinds as the Regional Director and he was the decision-maker and he really was the key person that was really going to decide what was going to happen. Well, he was really angry about that. He didn't think this public involvement made any sense, and he certainly didn't want to have his picture displayed all over these newsletters about, you know, sort of singling him out to do that. So there were a number of people around that really didn't think this was, you know–it just was not the traditional way that we did it. It cost a lot of money.

But what really helped, Gene Hinds, it kept him from, you know, kind of derailing the effort was the fact that the real movers and shakers in Arizona that were really supporting this study, like Jack Feister [phonetic] from the Salt River Project and Wes Steiner [phonetic], the State Engineer, you know, were really

solidly behind it and realized you couldn't get to any kind of solution without that kind of support. So they not only required it, but they demanded that we did really a good public effort. People like Jim Crayton just really made it so much more credible, because he could come in and they could see that this wasn't just some lightweight that thought we ought to go out and have a bunch of meetings and see what happened. I mean, here was a guy that really understood. We had public meetings that there were probably 400 or 500 people that would come to the public meetings. So you couldn't have just sort of kind of a fly-by-night outfit. You had to know how to run a public meeting with 400 or 500 people. That's not something that's easily done, and it takes a lot of skill and knowledge and foresight and skill to be able to do something like that.

Storey: So Reclamation was using consultants to do that? Am I understanding you correctly?

Magnussen: To design them. Jim, in fact, did some of the meetings, I think. In fact, he helped, even chaired some of the Governor's Advisory Committee meetings, so he was heavily involved in it. Some of the designs, some of the meetings we ran ourselves. Some of the tougher ones he and his team did, though Reclamation presence was always there and there was never any question this was Reclamation's meeting. But having people like Jim and Marty and their team were very important.

Storey: It must have been an exciting project to be on at that time.

Project Managers

Magnussen: Oh, it was. Yeah, absolutely.

Storey: Who was the Project Manager?

Magnussen: Well, Dick Shunnick was at the beginning of the process. He was the Project Manager when I came. Before the process is done, then he leaves and Ed Hallenback, who had been the Project Manager in Yuma, came up to be the Project Manager in Phoenix. He was pretty skeptical about this whole process. I remember the first time we went in. I can't even remember how far we are into the process. We must be quite a ways along, though. I remember coming in and trying to brief on what we were doing. I don't want to say it was over his head, but he wasn't too excited about what we were doing. I mean, we were excited about what we were doing, but he wasn't sure this was such a good deal.

I think it takes a few years for him to really–you know, he really starts to grasp the scope of what the effort is and really starts to get caught up and at the end is really appreciative of the kind of things we'd done. But he'd been an old maintenance guy and he was used to turning valves and making water run up and down. All this planning stuff was really sort of foreign to him. But his instincts were pretty good. But he was never a major player, if I recall, in terms of making any strategic decisions or anything like that. He really kind of saw the process and we kept him briefed and involved. Farther down the process he gets more involved. He had a deputy by the name of Dess Chappelear. Within the organization we probably do a lot more working with Dess than we do with the Project Manager.

Storey: Because he was assigned that or what?

Magnussen: Yeah. Yeah, probably he was assigned it.

Storey: What about Richard Shunnick? What was he like?

Magnussen: He was just a good politician, I think. He was well respected in the community. He was a really good-looking guy. He had this kind of gray hair that made him look very distinguished. He always had a very good tan. He knew how to work the politics. He did lots of presentations to Rotary Clubs and keeping people informed. He was a good visionary. He was pretty good. Well, and he knew how to go get good people to do things. I think it was one of the reasons I came down there. He realized that you needed some new thinking on how to do some things. And so while he might not have known intimate details, he was willing to turn it over to you and trust you so you could move some things forward.

Storey: Before him, I believe, was Cliff Pugh.

Magnussen: Cliff Pugh, right.

Storey: Did you ever hear anything about him?

Magnussen: Well, yes. Cliff was a legend. I mean, I never really worked for him, because he was prior to Dick coming. But he was a legend in his time. And, of course, there were always stories about what Cliff Pugh did. And, in fact, he was around then, too, so periodically you would run across him. He was never really a major player in any activities that I was associated in, but he was certainly around and became a presence. Later on he works for one of the irrigation districts, I think, as we're

building part of the distribution systems. So probably work-wise I run across him later in the project. But he never was much of a player in the planning activities.

Storey: He didn't come to public meetings, for instance, and support the project or anything like that?

Magnussen: Well, he may have, but I don't really recall. I mean, he wasn't a major player, as I recall.

Storey: He still has his license plate that, I think, says "CAP 1." (laughter)

Magnussen: Probably, that's right. (laughter) He was quite a character.

Storey: How long were you there? From '77. Did you finish the environmental statement? '84?

CAP Environmental Impact Statement

Magnussen: '84, yeah. I leave just as it's being completed.

Storey: So about seven years.

Magnussen: Right.

Storey: One of the other figures in the office is Larry Morton.[35]

Magnussen: Right.

Storey: Tell me about Larry Morton.

Magnussen: Well, when I come, in the Reclamation terminology you've got 400; 400 means the operation and maintenance and 200 was design and construction. The 400 Division Chief's job was vacant, and they were trying to decide who was going to take that job. There were three people in the office. There's a fellow by the name of Joe Crotes [phonetic], and there's a fellow by the name of Tom Burby

35. Larry D. Morton participated in Reclamation's oral history program. See Larry D. Morton, *Oral History Interview*, Transcript of tape-recorded Bureau of Reclamation Oral History Interview, conducted Brit Allan Storey, senior historian, Bureau of Reclamation, during 1996 in the Phoenix Area Office, edited by Brit Allan Storey, www.usbr.gov/history/oralhist.html.

[phonetic] and, I think, Larry Morton. The three of them were sort of rotating around planning in that job.

Then when I come–I don't remember if this is right–I think what happens is that the environmental thing is becoming important. So Larry Morton is made the Environmental Officer, and I think that's shortly after I come. And they hire another fellow from the outside. I can't remember if it's Dan Fults or Jim Robertson [phonetic]. But, anyway, they hire from the outside to fill that Operations and Maintenance Chief. So Larry, of course, because the planning and the environmental activities go very closely together, so Larry and I and our staffs clearly work together very closely.

At that time, what we do is we really see the planning preceding NEPA. So the process that we go through is we went through a planning process to identify an alternative, and then we do the environmental impact statement in order to go forward. At the time, that made sense to us. I think probably more now we would probably combine the planning process and the NEPA process more closely together, and I think in some cases we probably end up doing planning twice, probably more on the aqueducts and some will go through and make a selection and then we'll go back and do the E-I-S. So we probably could have saved ourselves some time had we sort of put those two processes together. But that's how we were.

But we worked very closely together. We had very similar values, similar thoughts. So I've got the highest regard for Larry Morton. At the time I was there, he was very supportive of what we did and our effort. He was always a good person to bounce things off of. He's a good thinker and thought things through and always had lots of questions, "Why don't you do this or do that?" When we made the selection for the contractor, like Dames & Moore to do the environmental Impact statement, Larry was one of the people on the selection process and stuff like that. So he's with the process pretty much all the way through.

Storey: If you were to characterize this public involvement process, was this a good sort of working relationship? Was it an acrimonious process? How did that function for you when you were working on this?

Magnussen: Meaning internally or externally?

Storey: No, I mean in dealing with the public. Was everybody coming in screaming at Reclamation for five hours at the public meeting? How did that work? Or was it a love feast?

Public Input Consisted of Multiple Issues

Magnussen: Well, no, definitely it wasn't. I mean, there definitely were strongly held views on all sides. I mean, there were clearly your Orme proponents. There were clearly people who were pro-development that saw some structural solution. And there were clearly those that thought you ought to be able to operate the project without those things. The environmental community in Arizona wasn't very strong. It had a few outspoken people that probably didn't have a lot of credibility. Bob Weitsman was on the Governor's Advisory Committee. There was a fellow by the name of Frank Walsh, who was an engineer.

END SIDE 1, TAPE 1. JULY 30,1996.
BEGIN SIDE 2, TAPE 1. JULY 30,1996.

Magnussen: Did I say Walt? Is that what I said?

Storey: You said Walsh, I believe. Walsh.

Magnussen: Yeah. Walsh, he was kind of an outspoken critic of the project. And then you certainly had people who were kind of advocates for kind of a single position, the tribes, the Indian tribes. Both Salt River and Fort McDowells sort of had their positions. You had the recreation industry. You had the flood control advocates. You had the water supply advocates. So you had people kind of in these different camps, and then you really had the people that were what we kind of called the expert public, people from, say, the Maricopa Flood Control District that understood about flood control. And then you also had people that were interested in flood control but weren't necessarily the experts.

So we designed public involvement materials for the experts, for the people who wanted to come to the meetings and didn't know very much about it, and then we designed material for people that just generally wanted to sort of keep up track on what was going on but didn't want to spend a lot of time. So our goal was to make sure that if anybody wanted to know about the CAWCS or the Central Arizona Water Control Study, there was a way that we could get them information. So we said, "If you tell us what you want to know, we'll find out a way to get you the information." Recognizing that it was a process that you just

went through; there's people understanding the issues and if there was a common sort of understanding of the problem. You know, there was a solution out there and it was sort of a matter of sticking with it until you found something that people could sort of rally around.

There is a fairly major thing that happens in the process of doing the studies. In the process of doing the planning studies, you really find out that as you're doing the flood control studies, you really find that the spillways are undersized to be able to handle the major floods. So now there is a safety-of-dams problem, and that probably is one of the key components that allows Plan 6 to eventually be chosen, because it allowed some of the costs associated with raising Roosevelt and building Cliff Dam to be written off against safety of dams. So they were nonreimbursable. So it made the cost, in terms of what the local people were going to have to pay, more in line with what Orme had. So that certainly was a key fact in how they finally were able to come along.

Storey: You've hit a glancing blow off my next question, which is Roosevelt isn't even–I mean, that's Salt River Project. Why does it become part of C-A-P? What's going on there?

Salt River Project's Relationship to CAP

Magnussen: So what you have, you had Orme Dam at the confluence of the Salt and Verde rivers that did regulatory storage and flood control. So you didn't have Orme Dam. There's a series of three or four years in there where you have in Arizona what they call major floods, which means you have water in the river. You have water in the Salt River. So when that started to happen, at that time there were only like three major bridge crossings across the Salt River. So services were disrupted. I think a lot of times in a lot of places all of the fire services were on one side of the river, and when you had the flood, you couldn't get them over there. The lines were backed up for a long time. So there was a real demand for flood control.

So if you weren't able to build Orme Dam and you did some regulatory storage someplace else, what eventually becomes New Waddell [Dam], well, that didn't solve the flood control problem on the Salt River. So what you needed to do is find some storage. So there were a number of ways of doing that. You could build a new structure, or you could raise the existing structure and do something on the Verde River.

Reclamation's preferred plan always was to build what we called New Roosevelt, which was a new structure downstream from Roosevelt [Dam]. But the Salt River Project continued to push the idea of we ought to look closer at raising the dam. I think they thought that it would be more cost-effective to do that. I think they also thought from a historical perspective that you would really have trouble getting it through the SHPO, which is the State Historic Preservation Officer, if you started to build a new dam and the old one went away.

Now, it ends up, the way it finally ends up is that the raised Roosevelt doesn't look anything like the existing Roosevelt. I think the original concept is that you could sort of keep that masonry face on it and when you raise it, you would try to make it look the same. And so I think there were a lot of people that really thought that raising Roosevelt was really the only way you really could do it..And you would just never be able to get all the approvals that you really needed if you tried to build a new dam. Reclamation was always concerned about an old structure you didn't know very much about. I mean, there weren't very many as-built drawings and you had this rubble masonry we didn't understand very much about, and we certainly would understand, knew what we had, if we built a new one. So our comfort level was just a lot better with the thing.

The fact the Salt River Project, Roosevelt was a Salt River Project dam, certainly made them a major player. But what you were trying to do is you were trying to find cost-effective and environmentally sound ways of solving the flood control problem. If it happened to be you were going to modify an existing Salt River Project dam, then so be it.

Salt River Project was a very interesting organization to work with. For every person Reclamation would have, Salt River Project would always have five whenever we went to a meeting. They were always well staffed. They had thought their issues out completely. The effort they went through even to make a corporate decision in terms of what alternatives was as elaborate as what we were going through with the public internally. They would have major meetings and they would hire consultants to come in to talk about the positive and negative attributes of different alternatives. Before they made a decision, they went through a very major process, which was both helpful because Salt River Project politically was–well, they were very powerful politically. They were seen as astute. Their general manager was a well-respected person. So when he finally came out and said, "This is what I think we ought to do," I mean, the community listened very closely to him.

Storey: How did Reclamation relate to the Salt River Project?

Magnussen: Well, it's our project, and so they operate it for us under contract. But we also, in terms of this Plan 6 thing, we were peers. We had a problem to solve. It needed to get solve. It's sort of in their watershed. So I thought we related pretty much as peers in that process.

Storey: I need to ask that question differently. Some water-user organizations sort of have the reputation of being difficult to deal with, and others are very easy to deal with. How would you characterize Reclamation's relationships to the Salt River Project water users group?

Magnussen: Well, it probably depends on what the issue is. If we're talking about planning for Plan 6, I'd say they were very good to work with. They were competent. They had a problem that, as far as they were concerned, needed to get solved. Their dams weren't capable of solving the flood control problem. There was flood control through Phoenix. Because the alternative was to draw the lake levels down in their reservoirs to provide flood control, and that certainly wasn't going to be very acceptable to the Salt River Project, because their job was doing water supply and they didn't operate the dams for flood control. So they were very good to work with, I thought.

Storey: Did they get benefits out of the C-A-P flood control project?

Magnussen: Absolutely. Absolutely. I mean, they got their dams modified. They got them brought up to current standards. The flood control is nonreimbursable. I mean, they had a real political problem. The flood control was nonreimbursable. The safety of dams, they had to pay 15 percent of the cost. And the water supply portion of that was paid for by what they call AMWA [Association of Metropolitan Water Agencies], which was kind of the Phoenix area cities. So the Salt River Project, for not a lot of cash outlay, ended up with a pretty modern system.

Storey: But they didn't get any water.

Magnussen: Water supply was never an issue for Salt River Project. I mean, even Orme Dam, all the water supply was from the Colorado River and that was part of C-A-P. So the Salt River water supply was separate. I don't know that the Salt River Project was every really pushing hard for a portion of water supply. In fact, in the final result, they don't even contract for C-A-P water. As they go through their needs

analysis and demand, they had sufficient water supply through their own system and they don't even contract for C-A-P water. So they're not a C-A-P contractor.

Storey: Interesting. What did you like best about working in the Phoenix Area Office?

"I Liked the Challenge"

Magnussen: I think I liked the challenge. When I came, I was the first one in the Planning Office. So everybody that was involved in planning the C-A-P I hired. You very often don't have that opportunity to hire everybody that works for you. But everybody's loyal. You know, you're picking people that have the skills that you think are necessary to do the job. It was a highly motivated group with lots of skills and ability to do things. So it was fun working with the people that worked for me.

Storey: Tell me what you were thinking about as you were deciding what you needed to plan the new C-A-P. What kinds of considerations were going through your mind?

Magnussen: Well, I mean, you needed people that were good thinkers. You needed people that were able to interact with the most powerful people in the community, with Governor Babbitt and the head of the Salt River Project. So you needed to have people that had confidence and the ability to interact. You need people that were good communicators, both written and verbal. You need people that had good basic planning skills, that knew and understood the planning process and how it worked. Yeah, I guess that's kind of what I was–

Storey: So who did you hire?

Magnussen: Well, we hired Herb Dishlip [phonetic], who ended up kind of heading up the–

[Telephone Interruption]

Storey: We were talking about the people you had hired for the planning effort, I think.

Magnussen: Yeah. They were just an exciting group to work with. I think at the peak we were probably twenty-six. I think when I left, we kind of recognized that when the planning effort was over, it was over. So people generally moved on to other things. Herb Dishlip becomes the Deputy Director for Arizona Department of Water Resources. Wes Steiner hires him. Tim Hanley goes to work for the

Department of Water Resources and is now, frankly, the head of their entire effort on the Colorado River. Chris Kelker [phonetic] was an economist. Hired him from the Corps of Engineers. I hired quite a few Corps of Engineers people. He was an economist from the Corps of Engineers. He now works for the Central Arizona Water Conservation District. In fact, was probably one of the first Bureau people that was hired by the District.

So these were all very capable people that went on to other things. Jay Franson [phonetic], who headed up Tucson, now has his own A&E firm. I'm trying to think what they were. Hired Will Worthington [phonetic], who was the head of the Corps Office in Phoenix. At different times, as people kind of came and go, they each headed up their various efforts. So it was a very highly motivated staff.

Storey: Wouldn't hiring a lot of Corps people sort of raise some eyebrows in Reclamation?

Magnussen: You would think so. I don't recall ever being told I couldn't do it. We had good people and they were able to come over and perform. But they were basically planning people, and they seemed to have fit in pretty good, I think. I probably hired five or six of them. They saw this as a good opportunity, and I think generally the Reclamation people, once they came in and were able to do a good job, Reclamation people accepted them.

Storey: You mentioned Indian tribes in your initial interview. Was Indian water a major issue in the planning process?

Indian Issue

Magnussen: No, not so much the water as it was–it's not water for the tribes as it was inundation. Orme Dam backed up and inundated probably two-thirds of the Fort McDowell Indian Reservation. I think probably the dam itself was probably on the Salt River-Pima Maricopa Reservation, although the Salt River Pima-Maricopa tribe was not heavily involved. The Fort McDowells were. This was a major effort on their part to not have the reservation inundated.

Before I came, there had been an effort to identify additional lands the tribe could have, to build additional housing, you know. The tribe never accepted those as good alternatives for Orme Dam. I don't think until we really started doing the social assessment. We hired social assessment people, who are a

subcontractor of Danes & Moore, to really go out to interview the tribal elders and their concerns and understanding. We really didn't understand very much the Indian culture and how important the land was to them and how they were just never going to give in. In fact, there's a meeting, as we're getting close to trying to make a decision for Plan 6, that we're briefing the Arizona congressional delegation, and I think it's in our conference room there in the Bureau. John Rhodes, who was the Minority Leader of the House of Representatives, and Eldon Rudd and probably a couple of other members, we briefed them. I remember our social assessment people explaining to them the position of the Fort McDowell Indian community and were able to say there is no way. "The tribe is never going to back down. Here's the evidence and here's why."

For the Arizona delegation, that was a real major turning point where they finally realized that no longer was Orme Dam going to be something that was going to come out. I think a lot of them, especially Eldon Rudd and a number of people, always thought you'd go through this process and then obviously you couldn't choose anything other than Orme Dam. So right up until the end, really kind of hung in. It was that meeting of how important this was to the tribe and that the tribe would never, no matter what you did, they would never give in. You could never give them anything that would be sufficient to overcome. And so there was just no alternative except to go find some other alternative.

So the tribe and its positions are a very important and key component in the process. They have a number of chairmen. They internally would elect a chair. They would have like elections every two years, but almost like every year they would have a new chairman. It was always a process of getting to know the new tribal members and their positions and getting to know them better. There was one chairman, it seemed like almost every other term he'd get to be chairman, and his name was Clinton Patea [phonetic]. He was probably one of the more articulate members of the tribe. In fact, I think he was probably on the Governor's Advisory Committee. I mean, he was a well-respected member of the community. He never really wavered from his position, you know. I remember one time he told me, he said, "I don't really understand." This is really early in the process. He said, "You know, you white people are supposed to be so smart. But you build and you live in the flood plain and you all get wiped out whenever there's a flood. Now, the Indian, he's not very smart. But he builds up on the hill here. When the floods come, he doesn't get wet. So you guys are stupid, and then you want to build the dam to take care of your stupidity and wipe my people out." He said, "That doesn't make a lot of sense to me."

I had to admit to him that I thought that was very insightful and that we weren't very smart on how we let people build and we let people build right alongside the river. Well, of course, they're going to get flooded out, and the river's going to flood.

Storey: What about other Indian groups?

Magnussen: It's really sort of different from kind of the Plan 6. Originally as part of C-A-P, there are five tribes who are identified to get water from C-A-P. And then in the process that happens–well, I guess I'm there, but I'm not really very much involved. Dan Beard, who is at that time the Deputy Assistant Secretary, in fact, it's like the last day of the Carter Administration, flies out to Phoenix and signs water contracts with another seven tribes, I think is the number. I think there's twelve altogether, another seven tribes, to provide them water from C-A-P. This becomes really a major activity. Obviously Arizona is upset. Additional water to the tribes more than they counted on, and there are some lawsuits that go on in terms of adequacy of the NEPA compliance associated with that. And Larry Morton's pretty heavily involved in that. It's really more on the periphery from where I am.

But then eventually what we do for the planning part is that we now need to do planning for providing water to these twelve tribes. So we, in a lot of cases, aren't very successful and in some cases are able to do. The Ak-Chin–able to get water fairly early to the Ak-Chin. And key to those is the Indian water right settlements where the tribes are able to settle their water rights, and in that process there are usually some compromises that are made, and C-A-P was usually a key component to that. So in some cases they got some additional C-A-P water. In some cases they were able to get C-A-P facilities built.

So working with the tribes, and every tribe was different. It's very hard to generalize. You really can't just say the tribes or the Indians, because historically their backgrounds are different, how they approach problems is different. The politics is different. Some of the tribes are mountainous tribes and some are more in the valleys and historically farmers, like the Pimas. Some are in the valleys but aren't historically farmers. Like the Papagos, they were more wanderer-gatherers. And it was really interesting. Even those that had been generations since this happened, really their basic interests are still the same. The Apache tribes really never had much interest in farming and probably aren't going to be very successful. You know, even though they identified water for farming, very

difficult in some of the places to get water, plus really not a lot of interest probably, too.

Storey: You went down to head the planning effort. Do you remember your title?

Chief of Advanced Planning

Magnussen: I was called the Chief of Advance Planning.

Storey: And what kind of a grade did that carry with it?

Magnussen: Well, I went down as a GS-13, and while I was there, I was promoted to a 14.

Storey: Do you remember when in the process?

Magnussen: That I was promoted?

Storey: Yes.

Magnussen: Well, I think Ed Hallenback was there, so it would have been–oh, I don't know, halfway through, maybe. '81, '82, probably something in that range.

Storey: To whom did you report?

Magnussen: I reported to the Assistant Project Manager, Dess Chappelear.

Storey: So you were not part of the Planning Division, is that right?

Magnussen: I was head of the Planning Division. Well, it wasn't the Planning Division, per se.

Storey: I guess I'm getting confused. I thought we were talking about Larry Morton and–

Magnussen: He was the Environmental Division.

Storey: But they were competing for another position.

Magnussen: Well, there was an Operations and Maintenance Division.

Storey: Oh, okay. I'm sorry.

Magnussen: In the Reclamation numbering system, the operations and maintenance people were 400 and the planners were 700, and design and construction was 200. So we were sort of the 700. You know how the codes are? Our code was A-P-O-700, and Larry Morton's code was A-P-O-150, which is kind of the environmental group.

Storey: Then it's logical that you reported to the Assistant Project Manager.

Magnussen: Right. Right.

Storey: I understand.

Magnussen: I think Larry and I and the Chief of Operation and Maintenance and, I think, the Lands Division or something like that, those four reported to the Assistant Project Manager.

Storey: Do you remember any more congressional briefings? How often did you see congressmen? They were obviously really interested in this project.

Meeting with Congressmen

Magnussen: I met with John Rhodes before I went off to take the job. When I knew that I was going to be selected and go off to Phoenix, I went up on the Hill and I met every one of the members of the delegation.

Meeting with John Rhodes was real interesting. He invited me into his big, huge office as the Minority Leader, and he had an administrative assistant. The guy's there in Phoenix now. I might think of his name in a minute. Anyway, he invited me in and we sat in big, high chairs and he told me, he said, well, the main thing was that he didn't like to be surprised. And that he realized that my bosses and staff would not want me to talk to him directly, that they needed to be informed, I needed to go up through the chain of command, but he really wanted me to know that it was okay. In fact he would really appreciate it if–and something had happened just before that that he had not been aware of, that he was caught by surprise that he really had wanted to get ahead of. I'm not sure I remember what it was, but it was something, probably something associated with Orme Dam or the studies or something that he hadn't been aware of before and had found out about it, and he just really thought that what I should do is pick up and call him. I don't recall that I ever did that, but we worked really hard to make

sure that certainly the staff both in Phoenix as well as in Washington, were informed.

Storey: Did you have to do that through Shunnick and Chappelear, or how did that work?

Magnussen: Yeah, primarily. Well, Wes Steiner and Jack Feister were in contact a lot with the congressional people and the Governor's office. We used to have like monthly meetings. It would be my recollection that probably an awful lot of those contacts when they needed to happen direct really happened through the local people rather than going up through the Bureau's chain of command, to the Regional Director, to the Commissioner over. I mean, we really weren't working much with the Commissioner's Office and stuff. We were really more working locally. So I think most of the communication with the delegation probably occurred that way.

Storey: What about lawsuits? Were there any that you became involved in while you were there?

Magnussen: The major one that I remember was the one over the water allocation. I think that was really the first big sort of NEPA suit that we had was the water allocation.

Storey: But I think you indicated you weren't really directly involved.

Magnussen: I wasn't directly involved. That was really more Larry Morton's. You know, you're around it and so you're there. But I don't remember that we had any lawsuits during that time.

Storey: That was about seven years in Phoenix, then.

Magnussen: Uh-huh.

Storey: Why did you decide to leave?

Going to Boulder City

Magnussen: The job was done. Ed Hallenback had a really interesting outlook on things. He was very much like Dan Beard. I told him a number of times, it was really too bad he wasn't still here when Dan Beard was here, because they had very similar values. It was, you shouldn't be building a bureaucracy just to do it. You ought to come in and do the job and when it was done, you left. And so once the Plan 6/E-I-S was done, then it was time to move on and do something else. So we

downsized that office as soon as that effort was done. Anybody that was associated with it left. And we just sort of understood that you just didn't stick around. There wasn't anything else to do and it was time to go on and do something else. So Roy Gear, who was the Assistant Regional Director in Boulder City, offered me a job to come up to be the Planning Officer. That seemed like kind of a logical thing to go and do. The job was done, you know.

Storey: How did this happen? Were you just sitting in your office and he came in one day and said, "Hey, come on up to Boulder City," or was there a vacancy announcement that you saw and applied for? Do you remember?

Magnussen: Well, Bob McCullough [phonetic] had been the Planning Officer. I don't recall that there was a vacancy notice. I think it was a reassignment. My recollection, they were doing some reorganizing in Boulder City. No, let's see. No, let's see. Bob McCullough had been the Planning Officer and Dave Gudgel [phonetic] had been here in Washington and Dave Gudgel came out and became the Planning Officer. Bob McCullough then went over into the Power Division.

Then there must have been a vacancy in the Operation and Maintenance Division or the 400 Division, because what happens is that Dave Gudgel goes over to do that. And I think Dave Gudgel asked to do that. He wanted to get some broader experience. So that left a vacancy in the Planning Division, and it would be my recollection that probably Roy Gear[36] said, "I'd be interested in having you come up and do this if you'd be interested in it." Personally, it was not a very good time for me. I had a son that was a senior in high school, so that wasn't a very good time to be moving from Phoenix. So my family stayed in Phoenix for that entire year. I was up there in Boulder City almost a year before they moved up so he could finish high school.

Storey: That's what, a four- or five-hour drive?

Magnussen: Yeah. Four and a half hours, yeah, to meet on the weekends. It was not one of the better years of our life. (laughter)

Storey: That must have been a strain.

36. Roy Gear participated in Reclamation's oral history program. See Roy Gear, *Oral History Interview*, Transcript of tape-recorded Bureau of Reclamation Oral History Interviews conducted by Brit Allan Storey, senior historian, Bureau of Reclamation, in Boulder City, Nevada, edited by Brit Allan Storey, and desktop published by Andrew H. Gahan, 2014, www.usbr.gov/history/oralhist.html.

Magnussen: It was a strain. Yeah, it definitely was a strain.

Storey: And then you moved to Boulder City?

Magnussen: Well, I lived in Boulder City that year, and when the family comes up, we actually buy a house in Green Valley, which is Henderson, which is halfway between Las Vegas and Boulder City. My wife had grown up in a small town and she wasn't interested in living in a small town anymore. Diane, who is our daughter, David had graduated from high school, and Diane was going to be a junior. In the Boulder City High School she was an advanced student. They just didn't offer some of the classes that she wanted to take, so needed to go to one of the bigger high schools in Las Vegas, so that's what we ended up doing.

Storey: What were some of the major projects that you got involved in up at Boulder City then?

Magnussen: Well, we had a number. We did working on the lining of the All-American Canal. We worked on the Spring Canyon Pump Storage Project. We were doing Title II of the Salinity Control Act, looking for ways to–

END SIDE 2, TAPE 1 JULY 30,1996.
BEGIN SIDE 1, TAPE 2. JULY 30,1996.

Storey: This is tape two of an interview by Brit Storey with Steve Magnussen on July 30, 1996.

Title II of the Salinity Control Act.[37]

Magnussen: I'd say that those were the ones that I remember mainly. The Spring Canyon was a really major effort.

Spring Canyon Project

Storey: What did that involve?

Magnussen: This was a pump storage project out of Lake Mead. The upper reservoir was in the Lake Mead National Recreation Area, and it was a consortium of about

37. Referring to the Colorado River Basin Salinity Control Act, P.L. 93-320. Title II authorizes the Secretary of the Interior to develop a program to improve and protect the water quality of the Colorado River upstream from Imperial Dam.

seventeen utilities in the Southwest. All contributed to a planning effort that was not unlike sort of the major effort of working in Phoenix on trying to find an alternative to Orme Dam. You know, here you had a major reservoir system, I would say probably in the order of 2 billion dollars. So this was a big project with a massive underground powerhouse. It was not real controversial environmentally because it was out sort of in the desert just off of Lake Mead. But the fact that it was in a recreation area certainly caused the Park Service a little bit of nervousness.

In the end, a couple of things were probably problems with it. One is, I don't think the utilities particularly wanted to have the federal government as a partner. Didn't really see the federal government as being a good, reliable partner. And the cost. At that time, they probably had alternatives that they could use. I mean, at some point, it might be a project that would come forward. Periodically when you start reducing peaking power like we are now just at Glen Canyon, then projects like that get some more attractive. They're having to go to gas turbines, which end up using a lot of fuel. So at some point Spring Canyon might be a project to do.

Storey: Tell me what Spring Canyon was intended to do.

Magnussen: Well, it provided peaking power. Like in a hydropower system what you do is when the lights go on and you need instant energy, coal-fired plants or nuclear plants don't go on very easy, but hydropower can instantly provide the power. So the advantage to hydropower is do that. What a pump storage project does is it's an energy consumer, but it takes more energy to pump it up than to run it down. But what you do is you run water on a daily operation out of Lake Mead into a reservoir so at night when energy is cheap, you pump up this separate reservoir and you make it full. In the daytime or early in the morning or late at night when people turn the lights on, then you run it the other way. So you have pump generator units that pump water up.

Storey: So it was not a water supply project at all, just a power project.

Magnussen: No, it's a power project.

Storey: And why was Reclamation involved?

Magnussen: Well, one of the things, we had the expertise to do it. It was on our reservoir, Lake Mead.

Storey: So we did have some proprietary use.

Magnussen: When the Lake Mead National Recreation Area is formed, it's identified as a potential site. So there is some recognition that there could be such a project in the Lake Mead National Recreation Area. You had to get a permit from the Secretary of the Interior, because it was on Park Service land. So the utilities couldn't come in and do it themselves. The Department of Energy didn't build pump storage projects. So while it wasn't necessarily clearly in Reclamation's mission, you could certainly make the case as to why Reclamation would be involved, and we got seventeen utilities to agree, at least enough to put in some money to do a planning study.

Storey: And they put in the money for all of that planning?

Magnussen: Well, half of it. At that time, our policy was that our planning studies had to be 50-50 cost share.

Storey: How long were we studying this, do you suppose?

Magnussen: It was probably a three year. Typical feasibility studies are like three years, so I would say it was three years.

Storey: How many people would we have devoted to a project like that?

Magnussen: We would have had kind of our typical–we would have had a planning team leader, we would have had an economist, we would have had a hydrologist. One of the issues was when you're bringing these large amounts of water in and out of the lake, what impact would that have on the thermocline and the water quality. So we would have had water quality people involved. And then we would have had the engineers out of Denver, at that time the E&R Center, to do the feasibility level designs and the reviewers there. So I suppose we probably had in different parts of the organization a dozen people involved, probably.

Storey: I forgot to ask you, was this a lateral when you moved?

Magnussen: Yeah. Right.

Storey: So you moved in as a 14.

Magnussen: Right. All of the Division Chiefs in the Regional Office were 14s, I think, is my recollection.

Storey: How large a reservoir would Spring Creek have provided?

Magnussen: Spring Canyon.

Storey: Spring Canyon, excuse me.

Magnussen: I don't remember. I mean, it wasn't really big. I mean, it was a daily operation, so 70, 80,000 acre feet, maybe, or something.

Storey: But at the time it didn't look very economically feasible?

Magnussen: Well, I think it was economically feasible. I think we showed a positive benefit-cost ratio. I'm just not sure the utilities at that time were willing to put in that kind of money without absolute guarantees in terms of how the federal financing and permitting system would work. But there was a positive benefit-cost ratio for the project.

Storey: Tell me more about lining the All-American Canal.

Lining the All-American Canal

Magnussen: That's an interesting project. This really becomes kind of the forefront of water conservation and how to solve problems without building big water projects. Southern California is obviously in need of more water. Building more projects really wasn't going to happen. Well, there's another way to make water is that the Imperial Irrigation District, the biggest water user on the Colorado River, agriculture in California is like 3.8 million acre feet, Imperial probably uses 3 million of that. And with some water conservation either within the district or by lining canals, you could save an awful lot of water. Of course, Imperial couldn't afford to do that and really didn't have a lot of incentive to do that, but Metropolitan Water District, who is out of the seven-party agreement in California, the lowest-priority water user. So what Metropolitan would do, it would agree to pay for the water conservation activities and they could get to conserve water. Now you had a source of water that would be more economical than going out and building just another water project.

So what we did was Metropolitan and Imperial had signed an agreement where they would agree to put in water conservation to save up to about 100,000 acre feet within Imperial, and then the next step was that they would pay to line the All-American Canal, and through that they would save another 70 or 80,000 acre feet and they could get water that would be cheaper. So we produced the planning report and environmental impact statement. So at that time we were going to line it in place, and we had developed a demonstration project that we actually did on the Coachella Canal, where Imperial irrigates year round, so they couldn't afford to take the canal out of service. So we did a research project with the researchers out of the Denver Office. We actually put in the facility where we would actually line the canal while the canal was full of water.

Typically what Reclamation does, we dig the prism for the canal and then we line it. Nobody had ever seen this before. But quite a few people said, well, you build bridge piers and everything like that under water all the time. This is not some new technology. So we contracted with a contractor to come in and build forms so we could actually come in and do it right under water.

I think they finally decided, and I'm not sure, this happened after I left, and I'm not sure I remember all of the logic, but when the E-I-S finally comes out, the alternatives include lining the canal in place and then a separate canal. I think the preferred alternative now is to actually build a parallel canal. Some of it is environmental. When you go in to line the canal in place, there are some wetlands that are formed that no longer are in existence when you do that. The [U.S.] Fish and Wildlife [Service] was requiring that those wetlands be maintained, and people were just sort of having an inherent problem with understanding that we are going to line this canal to conserve water, but these wetlands that had been formed because the canal leaked, we have to maintain. So the logic of having to do that was causing people lots of problems. I think to some degree the parallel canal gets you around that problem.

Storey: One of the things about water is that people don't like losing it in the West. Where was the Imperial Water District gaining something, or was it?

Magnussen: That is one of the problems. I guess our argument was that what they got was they got a more efficient system and they could operate it more efficiently, it didn't take as many people to operate it, and so there was a cost saving for Imperial.

Storey: They got as much water as they'd always gotten.

Magnussen: They got as much water as they always got and they got a more efficient system, so it cost them less. So their operating costs were less. So that's what they got out of it. Now, they could also argue that they want to make a profit on it and they would sell the water for more. But the concept when we were working on it was the fact that somebody else would come in and put in–you know, so it didn't cost them anything, because it would really be just the price of the facilities.

Storey: This, I take it, was a pretty innovative concept at the time?

Magnussen: Yeah, because as you start looking West-wide, this was sort of one of the early kind of marriages between the urban and the agricultural people where the urban people needed water and they could afford to pay for some things that the farmers couldn't. So there was kind of a transfer thing that would take place.

Storey: Do you have any sense of who thought the idea, when they thought it up, and how long it took to implement it?

Delays on Lining the All-American Canal

Magnussen: Well, it's not lined yet. (laughter)

Storey: (laughter) Okay.

Magnussen: So I guess the answer, that's largely one of politics. I mean, the politics in California and in the Imperial Valley is very difficult. Some of the water conservation things are done within the districts and those are ongoing. The idea was there before I got there. We had a fellow on our staff by the name of Mike Stuver [phonetic], who is now the water conservation person in Salt Lake. He had worked quite a bit with Imperial and some of those irrigation districts in terms of doing water conservation. Whether it was our idea or was the idea of Metropolitan and Imperial probably in their discussions–a fellow by the name of Chuck Shreve was the General Manger for Imperial. Bob Shimp [phonetic] was one of the key guys for Metropolitan. Who had the original idea, I'm not sure I know.

Storey: Do you know about when? Before you came, you said.

Magnussen: Well, but not much before I came. I think the ideas were developed and I came in '84. So it had to be in the early eighties that these ideas were starting to get generated.

Storey: But still not fully implemented, I'm hearing.

Magnussen: Well, not the lining of the All-American Canal. The conservation things within Imperial, getting rid of tail water, having pump-back systems, doing more land leveling, those things are in and they are implemented. I think they save up to 100,000 acre feet a year. But the All-American Canal, to this time, it's really kind of caught up in who really does the lining. The farmers in the Imperial Valley were just having trouble with those big city boys coming in and lining their canal. Well, they had a number of agreements. I think their preference was that maybe Metropolitan would give them the money and then they would do it rather than having Metropolitan come in. So it got kind of caught up in the politics.

What's happened right now, though, this is really interesting. Now Imperial–the agreement with Metropolitan–let me back up. The legislation–this really does get complicated. The legislation that authorizes the Secretary to line the All-American Canal includes language that it will be done at no cost to the United States. So while the United States might do it, somebody else has to pay for it. And Metropolitan was willing to pay for it if Imperial agreed. So the legislation calls for an agreement between the two parties. That agreement has just recently run out, and Imperial has not renewed it. They have now signed an agreement with San Diego to sell San Diego conserved water. So now the politics even gets more complicated, because San Diego is a member of Metropolitan Water District. They're one of the member agencies. But they're the lowest priority. So what they have done is they have just recently signed an agreement with Imperial for 400,000 acre feet to go to San Diego.

Now, the question is how does the water get there? Does San Diego build a new aqueduct at 2 billion dollars, or do they find some kind of way in some of agreement with Metropolitan where Metropolitan will take the water through their system to do it? That's still getting played out. So you can see how does the canal get lined is still a major piece of that. And some of that 400,000 acre feet undoubtedly would come from the lining of the All-American Canal. Some of it would have to be with it.

Storey: And in the process, they've gotten the plans done for the lining, is that right?

Magnussen: Yeah. The plans are done. The E-I-Ss are done. They just haven't really worked out who's going to pay for it and how does it actually get done.

Storey: That's interesting. I didn't know I was going to uncover that when I asked it. (laughter)

[Tape Interruption]

Storey: We were talking about Metropolitan Water District. I think we had actually just gotten to the end of that. So since you need to leave in a few minutes, why don't we just close for the day.

Magnussen: Okay.

Storey: And I'll ask again whether you're willing for the information on these tapes and the resulting transcripts to be used by researchers.

Magnussen: Sure.

Storey: Good. Thank you very much.

END SIDE 1, TAPE 2. JULY 30,1996.
BEGIN SIDE 1, TAPE 1. DECEMBER 9, 1999.

Storey: This is Brit Allan Storey, senior historian at the Bureau of Reclamation, interviewing Stephen V. Magnussen in his office in the main Interior Building, on the seventh floor in Washington, D.C., on December the 9th, 1999, at about one o'clock in the afternoon. This is tape one.

Well, it's been a couple of years since we talked. I'm wondering, Mr. Magnussen, what you see as the most important issues that have come up in the last couple of years, or that are continuing issues in the last couple of years.

Issues Facing Reclamation

Magnussen: Well, I think our budget. I think our budget and how we're sort of faring with the budget, both kind of internally as well as our relationships with the Hill, and the fact that our budget continues to decline and we continue to have more and more demands on the Reclamation program. With Title XVI,[38] rural water, our

38. Title XVI refers to the Reclamation Wastewater and Ground Water Studies, which directed the Secretary of the Interior to develop a program to investigate and identify opportunities for reclamation and reuse of wastewater and impaired ground water. This Title XVI is part of large legislative package referred to as the Reclamation Projects and Authorization Act, P.L. 102-575.

operational things, we have more and more demands. Our customers have got a number of concerns in terms of how we're working. They continue to be concerned about what they call overhead, which we're defining as direct and indirect costs. They think we're too expensive. I think our business practices, we've got to improve our business practices so we can communicate better with our customers in terms of what our costs are, what costs do they have to pay. So I think that's an issue.

I think the issue of how we go about renewing contracts continues to be a big issue. We're in the process of doing contract renewals in California. We're doing contract renewals in Nebraska. We've got ones that will be coming up in the future. How that occurs, and the process, and how long it takes, and what are the rules continue to be controversial and difficult.

And then I think the whole issue of E-S-A [Endangered Species Act] compliance is an issue in a number of big areas, certainly is in California. It's on the Columbia River. It's on the Rio Grande and the Pecos [River] and it's on the Platte [River]. As Reclamation tries to operate its projects on the Colorado [River] , as it tries to operate its projects and work with Fish and Wildlife, the rules are a lot different for how we used to go about operating our projects. How we work with Fish and Wildlife is different in every basin, so there's not a consistent way. So we're struggling internally as an organization about how to work with Fish and Wildlife. Different regions of Fish and Wildlife have different procedures. We're sort of struggling with how do we do our E-S-A compliance. So I think those are some of the really big issues that continue to face us and continue to really challenge us.

Storey: Before we go back and talk about some of those issues, how's the reorganization that Dan Beard engineered, structured, whatever you want to call it, working? You've been here now, basically with a secretary, running the vast majority of Reclamation staff in the operations side. I know you're getting ready to hire two deputies, I believe, or one deputy?

Dan Beard's Reorganization

Magnussen: Well, I think in the reorganization that Dan did, we really decentralized the organization and sent the power to the area offices and the regional offices. What hole there is, is when there needs to be a Reclamation-wide view of things, there isn't currently a mechanism for addressing those issues directly.

A good example is how we do direct and indirect charges. The customers call it overhead. So what are our costs? As we went through the organization and looked, what we found out was every Area Office and Regional Office did it different. So when we went back to Congress, and Congress asked us for a report on our overhead costs, which we define as direct and indirect costs, we found out that, one, we didn't have a mechanism to define it very well at the Area Office level. And then second of all, we knew it was done so inconsistently, it wouldn't provide very good information. So we knew, as an organization, we had to find some way to be able to do that. But we don't have–other than the Director of Operations, who doesn't have any staff, there was not a good mechanism to say, "This is how we're going to do it, and how do we do it?"

So what do we do is we put together a team. And we put together a team. In this case, it got headed up by Jack Garner,[39] and we produced a report that said how do we do things and made some recommendations. But what happens is, and this is a good example, is that we pull very busy people, who have all got full-time jobs, in on a special assignment that we recognize institutionally we have to figure out how to do, but we don't have anybody to do that except we call people together in a team.

Reorganize the Director of Operations Office

So what I've concluded is that the Director of Operations does need an organization and he needs an organization that can, not in the old ways before Dan Beard, the old 400 and 700 organizations in Denver, to tell people how to do it. But a way to bring people together, somebody that would help sanction and organize and bring those groups together to help make a determination on a Reclamation-wide issue about how we ought to do work. And whether it's deferred maintenance, or how do we account for deferred maintenance, or how do we account for overhead and do our costs, or how do we get our bills out on time, or how do we deal on E-S-A compliance, or how do we do all these myriad of things. Where our customers are saying, "Well, you did it this way here. Why is it different?" Well, maybe sometimes there's some good logic why it is different, but we ought to be able to explain it, and where it doesn't make sense that they're different, have some way to go about doing it.

39. Jack Garner participated in Reclamation's oral history program. See Jack Garner, *Oral History Interview*, Transcript of tape-recorded Bureau of Reclamation Oral History Interviews conducted by Brit Allan Storey, senior historian, Bureau of Reclamation, in Denver/Loveland, Colorado in 1995, edited by Brit Allan Storey, formatted and desk-top published by Andrew H. Gahan, 2014, www.usbr.gov/history/oralhist.html.

So what I then proposed is that there be two deputy positions advertised, and selections made, one in Washington, and one we call Deputy Director of Operations West. The idea would be, is that person could be any place. Right now, we're saying could be in Denver, or could be in one of the regional offices. But, frankly, it could be lots of places, because it involves travel and going to places, meeting staff. And the staff can be, we say, could even be some different places.

As an example, we said, "What's working really well?" Well, the regional liaisons here in Washington work really well. They're highly motivated, they come in for short-term assignments. We can staff the Director of Operations the same way. Highly motivated people who are experts in their area, that want to come spend a period of time. They don't necessarily have to uproot their families and be in Denver. I mean, they could work out of their office and be assigned to the Director of Operations, or they could maybe go to Denver and do it on a two-year detail, and then go back to their home office. There's probably lots of ways, and we could probably take into account the needs of the employee to find some way. We say, "We want you. What do we have to be able to make this work?" And we probably have some tools available.

So I tend to view it as sort of like a virtual office. You know, we've got telephones and we've got computers, and we've got lots of ways of communicating. We can run an organization like that. So my concept is that we put together a small organization of, I don't know, ten to fifteen people, that would be the staff for the Deputy Director of Operations West. He or she would be the arm of the Director of Operations, to be able to give him some staff, in terms of being able to accomplish some of these kinds of activities. So I think that's what probably was missing out of the Dan Beard organization. I think Dan was pretty clear when he did the reorganization, he did the first step. He said, "I know we haven't got it right. There's some things, as we operate for a while, we're going to find that probably need to be changed." And I think this is probably one of those things. The other one that was found out, we did a reorganization with the issue managers, used to be the old Program Analysis Office, P-A-O. Those have been combined, and there aren't issue managers anymore. There's now an Office of Policy here in Washington, and that's in the process of being implemented.

So there are some things like that, that were initially set up when Dan was here that we're in the process of changing. It's not changing the basic concept. They're recognizing there are some things that didn't quite work, and frankly,

Eluid Martinez, as Commissioner, has a different management style than Dan Beard did. And so the organizations respond to management style, sort of what the current Commissioner wants and sees. It doesn't change the basic philosophy of a decentralized organization, but it puts in place some of the pieces that maybe weren't working as well as they could. That's sort of my thoughts.

Storey: Do you see staff beyond the Deputy Director positions being needed?

Magnussen: Yes. I guess, that's what I would say. I thought it's an office of ten to fifteen. So the Deputy Director of Operations right now, my thought, has a staff of ten to fifteen people.

Storey: In addition to the two deputies, or for each deputy?

Magnussen: No, for the Deputy Director West. I don't think the deputy here has any staff, but the Deputy Director West has a staff of ten to fifteen people. And some people currently in the Office of Policy that probably make some sense, who those are. I mean, I think the RIM's[40] Operation with John Lambert is clearly an operational kind of thing. It probably ought to be in the operations office. The problem is there isn't anyplace to put it. It had to be someplace, had to have a home, so it went to P-A-O.

Storey: Like the History Program. [Laughter]

Magnussen: You know, there's a number of things that are like that. I think another good example is the security program, or the new maintenance person we brought in. Those are clearly operational kind of things.

Storey: Dam safety, maybe?

Magnussen: Well, dam safety already works for the Director of Operations. Dave Actenburg [phonetic]. So my sense is, so that organization [unclear].

Storey: But there's the John Smart [phonetic] dam-safety position.

Magnussen: Well, I think that probably stays. The reason I do is, I think the John Smart operation is sort of an oversight position. I think to have it working for the Director of Operations is sort of the fox watching the henhouse. So it seems to me John Smart's valuable because he sits outside the direct authority of the

40. Records Information Management.

Director of Operations and provides advice and sort of can sit apart and do that. I don't know that it's a Policy Office, necessarily, but it's different from operations. So I guess my thought is, it probably stays where it is.

Storey: Interesting.

Magnussen: Those are all open for discussion, and we need to have more discussion and debate about it. These are Steve Magnussen's thoughts. I think as we go about having more discussions about what are these two deputies and what will they do, we'll get a better sense of it.

Storey: What's the trend in the budget?

Reclamation Budget Trends

Magnussen: Well, what happens in the budget, it appears that because of the budget caps, what's happened the last couple of years is Reclamation's overall bottom-line number has continued to go down. And then when the President sends forward his budget message, he looks back at the enacted level, and he said, "Well, now we don't want to above that." So what we're seeing is sort of a continual down-trend of the dollar amounts going down. The problem is that we've got more and more demands on our program. Congress has authorized a number of new Title XVI programs. There's some additional rural water things that are up for authorization. So, as a result, we see more and more demands on Reclamation program. We certainly have some facilities that need to be rehabbed.

We've got a Safety-of-Dams Program that's, from the budget standpoint, that's based on need. If we happen to have down year, where we didn't have as high a need so we didn't request as much money, but then it went back up to where it was the previous years, and Congress likes to look at the year before. So while you had a dip in the program all of a sudden, then there's pressure on that. So we've got needs in dam safety that are now over and above what it had been the year before, because it's dependent upon not level of funding, but having the funding available to do the work you ought to do. So what we've got is, we probably have requirements of a hundred and fifty, maybe more, dollars than we really have the ability to do, and we're funding things at sort of a less than optimum way. We say we want to fund our Dam Safety Program, we want to fund our O&M Program, and then we've got these new initiatives that the administration wants to do. And what happens is, aren't any of those getting funded at their capability.

So what we've got is everybody a little unhappy, thinking Reclamation's not doing a very good job, because we don't put enough money in to do these projects, that ignore their program. So my concern is we've got a constituency that is generally fairly unhappy with us. They're unhappy because they think we cost too much. They're unhappy because we're not getting enough money in our program. It seems to me it's hard for an organization to be effective if its customers are not feeling good about what we're doing. So the budget's a problem, and I haven't got a very clear picture of how we sort of get out of this downward spiral, but it's a trend that sort of developed. What people will say is, we were briefing some people in the Department, "Well what are you complaining about? You got as much money as you did last year." Yes, but last year we got cut by the Congress. So there's not a good understanding. We're not doing a very good job of getting our message out, either, I don't think.

Storey: You said a moment ago, we had the capability of doing a hundred and fifty dollars of work. On dam safety, I believe it was? You meant a hundred and fifty million?

Magnussen: I was talking about dam safety, Title XVI, and rural water.

Storey: But you meant a hundred and fifty million, right?

Magnussen: A hundred and fifty million, right.

Storey: You've mentioned Title XVI. Tell me what Title XVI's all about.

Title XVI Programs

Magnussen: Well, Title XVI is a program that was authorized in the big omnibus bill[41] of '92 or '93. I can't remember the year. But anyway, basically it was a wastewater reuse program. It was initially a program that primarily focused on California. There was a recognition that in Southern California, if you were able to use the wastewater one or two more times there, that that took a lot of pressure off importing water into Southern California either from the Colorado River or from Northern California. And to the degree that those were both environmentally sensitive and controversial, being able to do that was important. So Title XVI was authorized to provide federal money to the cities in Southern California to help them be able to reuse their water more.

41. Reclamation Projects Authorization and Adjustment Act of 1992, P.L. 102-575.

Now, what happens is that once other cities and other parts of the country saw that there was this kind of funding, they also asked to get some projects authorized. So Congress, year before last, authorized a number of additional projects, some in southern Nevada, some in New Mexico, and additional projects in California. What happens is, if you take a look at what would be the funding required to complete all those projects, the capability of these cities to spend money for wastewater reuse is really very high. And what we've decided that we would try to fund it in the twenty- to thirty-million-dollar range, and there probably is demand out there for sixty or seventy million dollars. So the cities aren't very happy that they're not getting funding at the level that they would really like to have just because we're not–if we funded it at that level, then that would have a significant impact on kind of our base program, our O&M, dam safety, and things like that.

And the other thing is, while it's coming through Reclamation program, it really doesn't benefit Reclamation directly. It's really pass-through money to the cities, so there's no Reclamation employees that are doing work as a result of it. It's purely the money that goes, so it doesn't really provide anything for Reclamation to really do. It's all done, really, by the cities. And to some degree, the cities have the ability to fund that themselves already and so a lot of times, if the funding's not there, they'll go ahead and finish the project. Then we'll be paying them for work that's already done.

Well, you can see within the organization, where we have–there certainly would be parts of the organization that would say, "Well, we've got, really, our own demands. Why are we sending money off to San Diego or San Jose or some of these cities to do the wastewater reuse project? They've already completed [unclear]. We're just giving them money to pay them back, and that's taking money out of our program." So there certainly is parts of the organization that see Title XVI as not being a direct benefit to the organization. Although you certainly make the argument and justification is that to the degree, if we're concerned about water management and we are wanting to use our water much more wisely, this is certainly a good use of the federal resources. But with the constraints on our budget, it potentially takes away, or can take away, from some of our base program, which is a concern of the organization.

Storey: Can you talk about some of the programs that we're funding, by chance?

Magnussen: You mean under Title XVI?

Storey: Yes.

Magnussen: Maybe I don't quite understand that question.

Storey: What kinds of projects are we funding?

Magnussen: Well, we're funding the ability for the cities to be able to reuse that water. I mean, to the degree, some cases it might be additional desalting, sometimes it might be additional infrastructure to take the wastewater someplace. What we're really saying is, we're not funding primary and secondary treatment. That's an E-P-A function. But to the degree that going to the next level of use, the tertiary treatment, that we'll help provide up to twenty-five percent. That was the original authorization. It's now changed. It now has a cap of twenty million dollars. But we will provide, depending on which legislation we look at, we'll provide money to help this water be reused. San Diego is an example of a very aggressive, active program, recognizing that they were under constraints from E-P-A to not discharge secondary treated sewage to the ocean. So if they were to go through another level of treatment, they could reuse it, they would do that. But that's very expensive, and the federal funding was important to help finance that. I don't know if that answered your question.

Storey: No, well, you did partially. Wastewater reuse, to me, as somebody who doesn't know much about this, sounds like you treat the water and you put it back in the pipes into the city. Is that what's going on?

Magnussen: Well, it really depends. You have to look at every city, and you have to take a look. I mean, you take it to the extreme, you'd say you'd put it back in the water treatment plant and you would send it as domestic potable water for people to re-drink. In some case, I think some cities might want to go there. San Diego, as an example. Or it could be, I mean you can't use, as an example, you can't use secondary treated wastewater even for plant watering or for agriculture. You've got to go through another treatment. You've got to basically take the viruses and some of the pathogens out. Basically, what secondary does is that it takes out some of the organics, but it doesn't go that next step. Wastewater reuse takes it to the third treatment stage. Sometimes that's desalting. Maybe you're using it for golf courses. Maybe you're using it for median landscape watering on the freeways. Maybe you're going to reuse it for agriculture and you're going to sell it to the farmers. Or maybe it will go for groundwater recharge, and you'll put it in the ground and it will stay there for a number of years, and people will get other

kind of groundwater. So it really depends on the plan, exactly how it's planned to be used.

But the basic concept is it helps provide another level of water treatment beyond secondary treatment, which is sort of a normal process that cities go through for treating their wastewater, and allows it to be used in a way that we have primarily used raw water before. Could be landscape watering, could be agriculture. In some cases, it might be domestic. Now you have to go through the public health process and the public health agencies that regulate drinking water in the states, and E-P-A would have to be satisfied. It becomes very controversial. Maybe in some cases the state won't sanction it and so you can't use it for potable use. It tends to be–it does become a political problem.

San Diego ran into the problem of–you know, they originally were using it, and I'm not familiar with exact details, but they had a very aggressive program in wastewater reuse, and then somebody started a campaign that said, from toilet to tap. Well, I'm sitting here as a consumer saying, "I don't want to be drinking water out of my toilet. Don't be using this wastewater." So it tends to be politically sensitive, and it has to be accepted by the populace in general, and they have to understand it, and they have to be comfortable that they're getting water that's okay for them to be able to use. That all becomes part of the issue. But we're saying, as water managers, that's important use of the water, rather than just–and it particularly works well when you're on the coastal plain, because where these cities were not reusing, they were discharging into the ocean, you could get additional use out of that. You can see that has a real–and if we can cut down the amount of imports out of Northern California and off the Colorado River, that will make a big difference in trying to manage the federal water supply. So that's sort of the concept.

Storey: Were there any other specific examples besides San Diego that you happen to be aware of?

Magnussen: Well, L-A, I mean, we've got L-A, Orange County, San Jose, were sort of the initial big ones that were done. There's now plans for doing things in Albuquerque, other places like that.

Storey: You mentioned rural water. What's that program about? What's that activity about?

Rural Water Program

Magnussen: Well, rural water is–there's a number of projects that have been authorized over the last few years–Mid-Dakota, Mni Wiconi.[42] They're primarily in the Dakotas. What you have in the Dakotas is, you have a groundwater supply that's not very good and you've got a lot of sort of small towns that, without adequate water supply, are unable to grow or do. So there were some projects that were authorized to bring good drinking water to areas in the Dakotas that didn't have very good water. In some cases, this was tied in with the Indian reservation. In the case of Mni Wiconi, there's four Indian reservations that are part of the project. Some of these reservations are the poorest reservations in the country, so being able to get good drinking water is important.

But one of the problems is when you have very small communities that are spread out over long distances, building pipeline could take–what these projects do is they take water from the Missouri River, and they were part of the original concept when we did the dams on the Missouri River, to be able to get water to these areas. So it takes water from the Missouri Rivers to these areas, takes good drinking water. But these are very expensive projects, because they're spread out, you know, small communities. Our policy had always been that M&I was able to pay its full cost. Well, these small towns certainly aren't able to pay the full cost, and so there's a significant federal subsidy and grant in process in being able to build these projects. It's certainly different from the repayment that we're used to getting from our traditional projects.

So the rural water program becomes projects that the administration has always opposed, but have gone through Congress and have been authorized and we've been giving the responsibility to carry out. They're all designed and constructed by the non-federal people, so they weren't projects that Reclamation traditionally planned. We weren't involved in the design. We were given a design when it was done, and told to go build it. So Reclamation then had the responsibility to oversee them getting built, but they're all built by the local entity. So we're sort of the funding mechanism for these projects. They clearly have capability of building them faster than we've got money for.

While the administration continues to oppose it, there's a number of new ones that are coming along, and we had hearings last year. Lewis and Clark, Perkins County, the reformulation of the Garrison Project, now called the Dakotas Water Resource Act, all have components to them that provide rural water. So

42. Referring to the Mni Wiconi Project Act of 1988 (P.L. 103-434) to develop safe municipal, rural, industrial, water supplies for the Pine Ridge, Rosebud, Lower Brule, Indian reservations in South Dakota, along with numerous counties in South Dakota.

it's another program, somewhat like Title XVI. It doesn't provide any employment for Reclamation people. We haven't planned, we haven't designed. They're not being constructed. They're pass-through money.

While you can certainly put together a good case for why these projects are needed, the fact that they're getting funding through Reclamation's budget and through Reclamation's program takes money away from other parts of our program. If we had an increasing budget and they'd say, "Well, to do this, here is the additional money to go do that," that would be fine. But what they're doing, what's happening is Congress, because of budget caps and lots of other reasons, is continuing to reduce our budget, in the meantime, authorizing these projects and authorizing more. So it puts us in a very difficult situation. As an organization, we're not very good at saying no. Although the administration has opposed these, we've continued to put some money in, because politically, certainly Senator [Thomas A.] Daschle from South Dakota is very important to this administration, as well are the two North Dakota senators. We're not going to say, "No, we're not going to fund these." We're going to say, "We can't fund them as high as you'd like to see them, but we certainly are going to fund them." But that takes money out of our programs.

Storey: So we don't oversee the manner in which the money is spent?

Magnussen: Well, we oversee it, but it's not like sort of our traditional way that we would do it. We don't have a project construction engineer. We don't have our inspectors. We certainly have some oversight responsibility, but that's probably a part-time job for somebody. Typically, if we were building a project, we'd have a project construction engineer and we would have a procurement staff. We'd have our construction inspectors, and we would have all the things traditionally that we have. And when things go wrong, they come back to us, and they ask, "Why didn't you oversee this?" We say "Well, we weren't involved in the design."

A good example is when they were issuing some specifications to do a part of the pipeline. I think it was for Mni Wiconi. There was a big sort of dispute between the bidders on, could this be steel pipe or was it iron pipe? The entities that were putting out the bids had made a determination that it was going to be steel pipe. Well, they came to Reclamation and said, "You guys need to fix this. You need to decide." Well, it wasn't our design. Okay? So when things tend to go wrong or there's been concern that the tribes–because the tribes are building some of the projects when it directly affects them, that it costs more for the tribes to the work than for the non-Indians. "What are you going to do about this?" So

we get pulled into, when things are controversial, to try to sort out conflicts. But we're not prepared. They weren't our thing, and so we're always reacting to problems rather than trying to be on the front end. So it's a very difficult program for us to administer.

Storey: Yes, I would think it would. That's all in Great Plains, is it?

END SIDE 1, TAPE 1. DECEMBER 9, 1999.
BEGIN SIDE 2, TAPE 1. DECEMBER 9, 1999.

Storey: You were saying most of those things are in Great Plains.

Magnussen: But in the future, there certainly are other communities around that would like to see the pipelines built to small rural areas. There's parts of southern Utah that want to have some pipelines built, and there are certainly some Indian reservations in Arizona and things like that, that would like to have rural water systems built. If this looks like some kind of program that Reclamation wants to have, I'm sure there's lots of senators and congressman that would be willing to authorize it. But the bulk of the dollar in Great Plains, but there certainly is potential for rural water systems in other parts of the West.

Storey: Of course, you talked about the omnibus water act–I've forgotten the exact title of it–but it included the Central Valley Project Improvement Act.

Central Valley Project Improvement Act

Magnussen: Right.

Storey: I had the impression that we ask for sums of money to implement that, and they get cut way back, maybe from eighty to fifty million or something. I'm wondering how that's going from your perspective, the implementation of the Bay-Delta [unclear].

Magnussen: I don't think the issue is so much money. I mean, I think the administration continues to ask for money. Congress cuts it back. But frankly, we haven't had a very good track record of being able to spend the kind of money that's being asked for. So to some degree, the amounts of money that are being requested were more political decisions than they were substantive decisions, because there's been big carryover, and we haven't been able to spend all the money.

The real problem is trying to figure out what to spend the money on. The Cal-Fed, C-V-P-I-A processes are big stakeholder processes where lots of people have input and say, and kind of a collective process to try and decide where do we want to spend restoration money. What should we do? You don't have projects that are fully designed and ready to be implemented, and they're not all Reclamation projects. I have very few all-Reclamation. An awful lot of the projects are implemented by the Corps of Engineers, or Fish and Wildlife Service, or the state of California. So how those decisions get made, and how much money is needed, and how is it tracked, and how do you know if you're being effective, are all things that aren't, because the program is so new and everybody's sort of struggling, aren't all put together.

I guess you asked how well it's going. I think it's got a long ways to go. I mean, it's clearly collectively involving the stakeholders in decisions, has got some merit, but it's very difficult. It's a lot slower than if you had sort of one czar that can make all the decisions. The water situation in California is very complicated. The fact that you've got so many stakeholders, and working with the state of California, trying to manage that whole thing has been very complicated and very difficult as we've struggled along with the Department on how to implement those programs.

Storey: I have the sense that the Assistant Secretary's really active in this program.

Magnussen: Yes. There has to be somebody from the Department, the Secretary or somebody representing the Secretary at a political level. One is just because of how important California is to the administration. The number of congressional representatives, two state senators, and a Democratic Governor, just make it important. So somebody has to be taking the lead, that's a political person. Originally, before this happened, we've talked about that, Betsy Rieke had the lead when she was here. And then after she left, John Garamendi, who was the Deputy Secretary, kind of had the lead on California things. And then he left, and then Patty Beneke had the lead. I assume you've heard now that Patty Beneke's announced that she's leaving, and she's leaving in January. So David Hayes [phonetic] now is going to pick up the California thing. So you'll tend to have somebody in a political level within the Department that has to play the lead.

There's a lot of decisions that Reclamation–that either go across departmental lines because of Fish and Wildlife, to try and resolve some of those conflicts and make policy decisions. It's the political leadership where the policy really lays that needs to be made.

Storey: How is C-A-P going, from your perspective?

Progress on the Central Arizona Project

Magnussen: Well, the litigation's going on C-A-P, and there's been lots of attempts to settle it. So far they've been unable to do that. Do they continue to go back to court and resolve this or come to some settlement? I think it's just time to tell. I think now with the election year coming up next year, do people want to wait and see who's the next Secretary? Do they want to try and settle now, or do they want to wait and see who the next President and Secretary are going to be? It makes things during an election year very difficult to get done. So we'll have to see, I guess. But there's still a big financial dispute between C-A-W-C-D and Interior. While they have gone to the judge and say, "We want to keep working on it," they clearly yet haven't come to any resolution.

Storey: One of the things that's happened is–let's see, we've changed three of the five Regional Directors?

Magnussen: Yes.

Storey: Yes. How does that affect Reclamation and its programs?

New Regional Directors

Magnussen: Well, I think first of all I'd like to say, I think the three new Regional Directors that are coming on board are incredibly capable, very good, very knowledgeable, with a long, good history of being good water managers, good people managers, and all the skills that we want to have in our Regional Directors. So I'm incredibly pleased.

I think Maryanne Bach, new Regional Director in Great Plains,[43] just passed her one-year anniversary. I guess I can't sing her praises high enough, first female Regional Director, has got the praises from her stakeholders. She's tough, she's honest, the stakeholders respect her and work well.

43. Maryanne Bach was Regional Director of Reclamation's Great Plains Region, 1998-2005, and participated in Reclamation's oral history program. See Maryanne C. Bach, *Oral History Interview*, Transcript of tape-recorded Bureau of Reclamation Oral History Interviews conducted by Brit Allan Storey, senior historian, Bureau of Reclamation, in 1994, 1995, 2009, and 2011 in Denver and Evergreen, Colorado, and Billings, Montana, edited by Brit Allan Storey, 2008, www.usbr.gov/history/oralhist.html.

Bill McDonald,[44] I guess is, I don't know, four or five months maybe. Certainly has a long history with Reclamation, well known, well respected, incredibly thorough, has met with all his constituents, has worked through a lot of difficult issues already, and I think is managing the program.

Lester Snow, new Regional Director in Sacramento, while not a career Reclamation person, he certainly is a career water manager, has experiences in Arizona, San Diego, most recently with Cal-Fed. Has demonstrated his political astuteness, understands the water management business. And while he doesn't have a history with Reclamation, I have no doubt in my mind that he's a real asset to Reclamation. Very difficult job out there, in terms of [unclear], but he is a personal friend of the Secretary, he worked with the Secretary when they were in Arizona, which is where I first met him. He's just a solid individual that could look at the big picture, and I think will help lead the Reclamation program in California to the direction it ought to be led.

I'm sure there are going to be changes in style and some things that they put emphasis on that the previous Regional Directors didn't do, but I see a continuation. I don't see it being drastic changes. I mean, you still have the same political leadership and things like that. What we put in place are good career water managers who've got a history of good, effective leadership, and it was time for them to step up.

That's why we do these training programs that we've got. There's going to be continual turnover in the organization, and people are going to leave. We've got people behind them that are ready to step up to the plate and do work. I think this is kind of proof of the pudding, so. I think what we have to do, we have to be able to, when we've got these vacancies, we've got to be able to find good, effective people that can go in. I think Reclamation's positioned itself pretty well. We've got a whole new group of leaders. We just graduated fourteen people in a S-E-S[45] Training Program, between Reclamation and the Department. These people are poised and are ready to step into positions of leadership, given the time. So I feel very good about our future, in terms of our capability of filling key

44. J. William McDonald held a number of high-ranking positions with the Bureau of Reclamation, including Assistant Commissioner-Resource Management, 1990-1994; Regional Director of Reclamation's Pacific Northwest Region, 1998-2010. Mr. McDonald also participated in Reclamation's oral history program. See J. William McDonald, *Oral History Interview*, Transcript of tape-recorded Bureau of Reclamation Oral History Interviews conducted by Brit Allan Storey, senior historian, Bureau of Reclamation, from1993 to 2011, in Denver, Colorado, edited by Brit Allan Storey, further edited and desktop published by Andrew H. Gahan., 2014, www.usbr.gov/history/oralhist.html.

45. Senior Executive Service.

positions. We've got a fairly old workforce. There will be a number of people that will be moving in and out of the organization. I think we recognize that and we're prepared to face it.

Storey: Roger Patterson,[46] though, wasn't as old as many of us are.

Magnussen: No, no. He was one of the younger. A lot of times we expect people to have lots years of experience to step into these key positions. Roger was clearly an outstanding person people recognized really early on, and so he went into very high positions of leadership very early in his career. But one of the problems of doing that is there's a period of time that they might leave. [Laughter] And Roger did, and went to Nebraska.

Storey: You mentioned renewal of contracts. Especially, I gather, in California that's an issue.

Renewing Water Contracts

Magnussen: And it's an issue on the Republican River. Those are the two big ones right now that we're working with.

Storey: We've got the lawsuit on the Republican right now, don't we? Or has that been settled? I don't know. I think it was the Republican. Nebraska and Kansas were disputing.

Magnussen: Well, we had a Supreme Court suit, the *Kansas v. Nebraska*. But that's not directly an issue in the contract renewals. I mean, when you do the contract renewals, there's lots of issues that sort of are around it and make it complicated, but I don't think there's a direct–I mean, we can certainly get contracts renewed without resolution of the Supreme Court suit. Ultimately there could be some impact. If the Supreme Court decides certain things, you might have to take that into account, but it's going to take longer to resolve the Supreme Court suit than we hope to get our contract renewal.

Storey: What are the kinds of issues that are coming up in contract renewal?

46. Roger Patterson held a number of high-ranking positions with the Bureau of Reclamation, including Regional Director of Reclamation's Upper Missouri Region, 1988-1991; Mid-Pacific Region, 1991-1999. Mr. Patterson also participated in Reclamation's oral history program. See Roger K. Patterson, *Oral History Interview*, Transcript of tape-recorded Bureau of Reclamation oral history interviews conducted by Brit Allan Storey, senior historian, Bureau of Reclamation, from1994 to 2000, in Sacramento, California, and Lincoln, Nebraska, edited by Brit Allan Storey, 2011, www.usbr.gov/history/oralhist.html.

Magnussen: Well, the big ones are the term of the contract, how long is the term going to be for? Are they twenty-five years? By law, the Central Valley projects can only be renewed for twenty-five years. In California, do they have a right of renewal, or are they open? On the Republican River, is our policy twenty-five years like it is in California? We don't have laws that say that they are, but by policy, we've said twenty-five years. And so are there opportunities for making them more than twenty-five years? What's the term of those contracts? That's one of the big issues.

In California, you've got also tiered pricing was put into place in those contracts. Tiered pricing being, at least as defined in the Central Valley projects, as first eighty percent of the water supply is priced at one price, and a hundred percent of the supply is priced at the full price of water. Ninety percent is in the middle. So there's kind of a formula that's put in the legislation, and is controversial. So people are used to paying one price for water. In California, the more water you use, the more expensive it gets, so that tends to be controversial. You don't have that proposal on the Republican. There's not legislation that requires you to do that, and it's not a proposal.

And there's not E-S-A compliance. There's not an E-S-A issue on the Republican like there was in California. On those contract renewals, not only do you have to do an E-I-S, you have to do that both on the Republican and in California, but in California, you also have to do E-S-A compliance, which makes the ones in California somewhat more complicated. How long it takes you to do the E-I-S? It's taken us longer than perhaps we thought. We also had to work with the Corps of Engineers and some of their issues and policies, because they operate one of the reservoirs. What's the Corps' policy and how does it work? So those are some of the issues.

Storey: You just mentioned Endangered Species Act issues. When we were talking earlier, you mentioned a whole long list of rivers. Let's talk about each river and what the kinds of issues are that you're seeing at this level in Washington. How does that play out politically with our sister agency, the Fish and Wildlife Service, with the E-P-A, and the other involved parties?

Endangered Species Act Issues

Magnussen: I don't know. I guess you start–you've got the Columbia River, and you've got all the anadromous fish on the Columbia and the Snake [rivers]. You've got a number of federal agencies that are involved in operating the federal power

system, Bonneville Power [Administration], the Corps, and the Bureau. You've got both Fish and Wildlife and the National Marine Fishery Service who are responsible for implementing the Endangered Species Act. The proposal there to help save them was to potentially take out four dams on the lower Snake River, none of which were Reclamation dams. But most people would argue that that's probably only part of the solution.

If you want to be able to maintain anadromous fish, there are probably lots of other things you need to do. Just taking dams out doesn't guarantee survival. What they call the four Hs–habitat, hatchery, harvest, and hydro system–all need to have plans to work in sync. So far, there aren't really those plans, and so part of the problem is they don't have plans that cover all of the issues.

Reclamation's role there, we, of course, operate some of the upper Snake River dams. We've certainly got Grand Coulee on the main stem. One of the things that we've been given responsibility for is water acquisition. We have committed and supply 427,000 acre feet of water for flow-through water to go do. There's supposed to be a new biological opinion this year. I think most people don't think that that's going to happen. So how do we make sure we've got E-S-A compliance on our facilities? We're in the process of addressing how to do that now. That's the Columbia.

On the Platte River, there's the whooping crane and some of the issues there. As we're going through, there's been an agreement struck with three states, Wyoming, Colorado, and Nebraska, and the Department of Interior for doing studies, long-term plan for doing studies of operations on the Platte River, get endangered species consultation and compliance, within operation of our facilities and other actions that people would be taking. We're in the process of doing a major E-I-S that will cover the activities on the Platte. The Assistant Secretary, Patty Beneke, has been the Interior representative on that. The interesting thing, now that she is leaving, how does that get addressed? There clearly needs, like you were saying, there needs to be some political leader from the Department that sits on that. So who is going to be the successor there? These kind of years become interesting.

In New Mexico, certainly issues that are important to the Commissioner [Martinez], being from New Mexico, both the Platte and Rio Grande have endangered species, have the silvery minnow on the Rio Grande, and I think it's a blunt nose shiner on the Pecos, and how our projects operate. Lots of controversy, lots of litigation on those rivers. What authority does Reclamation have to acquire

water, operate our projects? These are all issues that are currently being discussed.

On the Colorado River, you've got the four endangered species. There's what they call the Multi-Species Conservation Plan that's going on the lower Colorado River, involves a stakeholder group composed of the states and the environmental organizations, power users, to put together a long-term plan for managing endangered species on the lower Colorado River.[47] Certainly the intent is that the states can continue to develop their compact water, and they can only do that if they have E-S-A compliance. One of the problems is that every time there was an action, they would have to go consult with the Fish and Wildlife Service. Well, that's a very inefficient and not very good way to do it. So the idea on these things, like on the Platte and the Colorado River, is to have sort of one big consultation and do something that can last for some period of time, you know, ten, fifteen, twenty, period of time, but says, "If you take these actions, then future diversions of water will be given E-S-A compliance." So the problem is trying to put those kinds of things in place and to do.

In California, of course, you've got the anadromous fish there, as well as pumping out of the Delta, you've got the delta smelt and the anadromous fish, the salmon, that you need to operate your projects to get in consultation with. Lately they just had some litigation in California. Prior to C-V-P-I-A [Central Valley Project Improvement Act[48]], a set aside of 800,000 acre-feet to try to provide additional water for the anadromous fish. How do you account for 800,000 acre feet of yield? Yield is a planning term and doesn't translate to operational terms very well, so nobody knew how to measure 800,000. When John Garamendi was here as a Deputy Secretary, he tried to find a formula that didn't actually measure it, but that everybody could agree to.

Well, what happened was environmental groups didn't think they were getting the full 800,000 and the water users thought they were getting more than 800,000. So they both sued, and the judge said, "Well, you don't have the luxury of coming up with something you think approximates it. The law says 800,000,

47. "The Lower Colorado River Multi-Species Conservation Program (LCR MSCP) is an ambitious, regionally coordinated conservation program with an "ecosystem-based" approach to conserving species and habitats along the lower Colorado River. Through implementation of the program, federal and non-federal water and power agencies intend to achieve long-term compliance with state and federal endangered species laws." For more information, see The Lower Colorado River Multi-Species Conservation Program, http://www.sci.sdsu.edu/salton/LowerColoradoRiverMSCP.html. (Accessed March 2017)

48. Title XXXIV of the Reclamation Projects and Authorization Act of 1992 (P.L. 102-575), was enacted to protect, restore, and enhance fish and wildlife habitats in California's Central Valley and Trinity River Basin.

and you've got to find a way to measure it." So the Department of Interior, along with Fish and Wildlife Service and Reclamation, came up with a plan on how to measure 800,000 and presented that to the judge, and we're still today sort of waiting to hear back. Is that a plan that the judge thinks is okay, or is he going to modify it? So that's trying to find out how to implement C-V-P-I-A and the law, to try to double the fish.

The other one that's really interesting now, too, also Fish and Wildlife. Do they do individual consultations? Do they do programmatic? They have proposed doing a programmatic consultation on the upper Colorado [River], which involves the diversions from the west slope to the east slope in Colorado. And in that consultation made Reclamation the action agency for overseeing all that. Well, a lot of these are private diversions, so we're very concerned about the implications and the ramifications of Reclamation being the responsible federal agency for diversions that are taking place by non-federal entities. So some of the precedent-setting for that is complicated.

One of the things that we'd done, not too long ago, we had a meeting between Eluid Martinez, Commissioner, and Jamie Clark, who's the Director of Fish and Wildlife Service, to talk about E-S-A consultations, some of the upcoming contract renewals that were coming. Our thinking really is saying now that it probably would be good to have a national-level meeting with Fish and Wildlife Service. How are these consultations going in different basins, and what's working, what's not working? So we're in the process of internally giving some thought to what such a meeting would look like. Who would be there? What issues should we be talking about? Because these E-S-A consultations with Fish and Wildlife, in a lot of ways E-S-A is defining how we're operating our projects. Our stakeholders don't understand it very well. We're not sure we understand the rules.

E-S-A consultations a lot of times are sort of private consultations between Fish and Wildlife Service and the action agency and Reclamation. Our stakeholders are very uncomfortable about that. There's discussion going on how to operate their projects, and they don't have any say. So the whole process, it's difficult. It has a lot of political implications. It has big implications for how we operate our projects. So we're sort of treading new ground on E-S-A. So E-S-A is one of the big issues for Reclamation.

Storey: I've heard you talking a lot about fish issues. What about other kinds of issues?

Magnussen: When we talk about the Columbia River, they've got bull trout up there. So what happens, a lot of these basins, sometimes you have anadromous fish which are sort of the downstream, but then you have upstream fish that are in the reservoirs, and because you want to do something for the downstream, maybe make additional releases, might react negatively to the species that are in the reservoirs. That's something that makes it more difficult. So you've got bull trout up in the Pacific Northwest on the Klamath [River]. I should know–I can't remember off the top of my head, but you've got species in Upper Klamath Lake that are lake species that impact how you can operate. And you've got the salmon downstream. Those are the two primary ones, I think. Most of the other endangered species aren't–but you've got terrestrial species. Just on the Colorado River, you've got some birds that are–

Storey: Willow flycatchers, maybe.

Magnussen: Southwest willowfly catcher, that impacts how you operate your reservoirs, because some of the trees, some of the riparian species along the river. So you sometimes have conflicts between the E-S-A in terms of if you do one thing and it negatively affects another. So you tend to have those conflicts that you have to look at.

One of the keys for some of these things is getting better science, better understanding of them. We need better data as we try to manage. A lot of times, collecting this data is expensive. It's not always timely to get this information as quickly as you need. So, always the science. A lot of times, Fish and Wildlife gets forced into listing species faster than they would like. There's not a complete understanding of the needs of the species and what it takes to avoid jeopardy or for recovery. And then you certainly have interest groups that have interests of their own, in terms of how the projects ought to be operated and will file suit or make demands. Sometimes there's good science to support that, and there's not. People can always make innuendoes or things about what ought to happen, but that's not always true. We really find out once we collect more data, more science. A lot of the suppositions we had about what was good for the species isn't necessarily true, so we need better data and better information.

Storey: You mentioned the regional inconsistencies in dealing with the Fish and Wildlife Service. Are these a real deeply imbedded issue or are these more nuisance issues? And how well do our regions overlap their regions?

Issues with the U.S. Fish and Wildlife Service

Magnussen: Well, our regions don't overlap. They don't have the same boundaries. They're on state boundaries. If you're dealing in Arizona, New Mexico, those are two different regions of the Fish and Wildlife Service. In fact, Charlie Calhoun[49] can be dealing with three different regions of the Fish and Wildlife Service, depending on what state he's in. Colorado, Arizona, and New Mexico all have different regions, so that makes it complicated. I don't think we know how deeply imbedded these are. I think that's why we want to have this national-level meeting with Fish and Wildlife. Is this something that's coming down from their central office, or is each region sort of developing their own ideas? What do we do if we come up with an idea that looks like it works pretty good? Can we implement it in other regions? How do we go about doing that?

So I think we're sort of on the forefront of trying to understand. We're starting to get a little bit of history in terms of how these consultations have gone throughout Reclamation. Different policies have worked in different places. We, as an organization, I don't think we understand collectively across Reclamation, E-S-A consultation. Individual regions have done consultation and understand theirs, but we don't understand across Reclamation, and we suspect it's probably true for Fish and Wildlife, too. While there's a handbook out, there's lots of interpretations and things that get tried and don't get tried. Baseline is always an important one. What's the baseline? What are you measuring from? There's not always consistency, different baselines on how you define that. In some cases we'd like to see it one way, sometimes another. So there just needs to be a lot more discussion.

Storey: One of the things I've noticed lately is we're doing a lot of work with Spain and Mexico. Is that affecting the internal programs in any way?

International Activities

Magnussen: Well, I don't think in Spain so much. We've had a long history of working with Spain and sort of helping support them. Certainly this Commissioner's had some interest in that. But I don't know that the program has changed an awful lot over there.

49. Charles A. Calhoun was Regional Director of Reclamation's Upper Colorado Region, 1994-2000, and participated in Reclamation's oral history program. See Charles (Charley) A. Calhoun, *Oral History Interview*, Transcript of tape-recorded Bureau of Reclamation Oral History Interviews conducted by Brit Allan Storey, senior historian, Bureau of Reclamation, from1994 to 2009, in Salt Lake City, Utah, and Denver, Colorado, edited by Brit Allan Storey, 2010, www.usbr.gov/history/oralhist.html.

I'd say with Mexico it probably has to some degree. There's a number of issues along the lower Colorado [River] that, because the relationship and a long knowledge of I-B-W-C [International Boundary (Water) Commission] Commissioner, John Bernal and Eluid Martinez knew each other well before they became Commissioners of their respective organizations. As a result of that relationship, there's been a number of things that have been of concern to Mexico that the Bureau of Reclamation has gone to work on. Two that particularly come to mind, one is the sediment that's along the lower Colorado River that impacts the Mexicans' ability to make diversion of Colorado River water. And the other one is salinity. We have a treaty with Mexico that defines how the water gets delivered to Mexico and what the salinity needs to be, but there are some salinity problems that are not covered by the treaty. The Mexicans have raised concerns, and as a result of that, we've been willing to put some creative ideas on the table how to solve these things. So I think to some degree our program has changed because of that.

Storey: What about the drought programs that are going on?

Reclamation's Drought Programs

Magnussen: Well, there's two parts of the drought program, Title I and Title II. One involves being able to spend some money to help people through the drought, and the other one really has to do with helping the states put together plans. I think our thought has always been the drought–

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Storey: This is Brit Allan Storey with Stephen Magnussen on December the 9th, 1999.

Always going to be having droughts in the West.

Magnussen: Yes. Some years you've got better rainfall than others. That's why all these reservoirs were built. So drought is sort of a way of life in the West. So the legislation was passed, as well as our approaches have been, the most effective thing to do is for the states to have good drought plans. So our big push is to help the states where they've wanted. We've done drought workshops and we've helped provide funding for them to get their plans. Then there's part of the program where they really are in a drought, if there are some emergency needs that they've got, there is some limited amount of funds that we've got to help with

emergency situations. To the most degree, most of those funds have been spent. There are some limited fund transfers that we can do sometimes to help provide, but our major focus has really been to try to help the states and get good contingency plans in place. So that when droughts happen, they're better prepared to deal with them. Rather than being kind of a funding mechanism for when a drought happens, we've quickly got to get some money in here to help this particular problem. We don't see that that's really the federal role.

Storey: What kinds of things can be done for droughts? At a very elemental level, if there isn't water, there isn't water.

Magnussen: Well, but if you've got in place a plan of a city–maybe a good example was here, what happened in Washington. There was low rainfall this year, so one county, Montgomery County, put a moratorium on water. Another county, on the other side, didn't. Well, things that you can do is, you can coordinate. When you get into a drought, how far do we cut back? How do we do it? You've got in place the mechanisms for what happens to the water. Do you put restrictions on lawn watering? How do you go about implementing?

So you're prepared in advance for what happens when you have one. Because at some point you're not going to have adequate water. So what do you do? You're prepared in advance to know what to do as opposed to sort of being in a crisis. That's what plans really do. You have in place–you've already thought out what it is you're going to do in advance, and you're prepared to implement it. And the citizens have already had their input, so the citizens also know that one year out of five, we're going to have some drought. We don't know when it's going to happen, but when it happens, we know who's going to make the decisions. I make sure that there's not inconsistencies across the service area, that we're not going to have one citizen having a green lawn and somebody else having a brown lawn. That creates problems. So we thought through ahead, so those things don't happen.

Storey: So part of this planning would be how to cut back water use?

Magnussen: Well, sure. If you've got less water, you cut back water use. How do you operate your reservoir? Right when you're going in the beginning there, you don't always know. Do you operate on the safe side or do you take more risk? You've had discussions with your cities and things like that, on how you're going to operate your reservoirs.

Perspectives on Reclamation Commissioners

Storey: I know I've asked you similar questions in the past, and you've already talked about it a little today. Let's get retrospective about the Commissioners. You've been in Washington, I think, under Dennis Underwood, at least, and Dan Beard. Were you here under Dale Duvall also?

Magnussen: No. I worked with him, but I wasn't in Washington when he was Commissioner.

Storey: Looking back from your perspective now, what have those past Commissioners done that was good for Reclamation and what have they done that might have had unforseen consequences that weren't so good for Reclamation?

Magnussen: Well, Dennis was sort of the consummate water manager. He'd been the Executive Director of the Colorado River Board of California. So he brought in sort of a wealth of knowledge of the laws and institutional arrangements on the Colorado River. So he brought in that perspective. He was an incredibly detailed, knowledgeable person, and he was used to getting involved in all of the details. So working with Dennis was always interesting, because he worked incredibly long hours, was incredibly hard working, but wasn't a great delegator. He needed to do everything himself. So things sort of got all sort of bottled up around Dennis, so probably what wasn't as good was the fact that sort of turning things over to his key managers to do. He got highly involved. I can remember sort of endless discussions around Animus-La Plata. I mean, they must have gone on forever as he would look at all the options and get involved in the plans and all the details. But he was good for Reclamation because he was a career water manager and knew and understood those things, and understood the water management business, so having that kind of good solid career was really good.

Dan Beard was a visionary. He was a leader. Whether or not you sort of agree with what Dan did or he didn't, he made major changes in the organization. Dennis saw a lot of changes that needed to be made. This might be sort of a good way to describe the difference between Dennis and Dan. Dennis worked hard on writing a strategic plan, and it had eleven volumes and went on infinitum in a lot of excruciating detail, so probably didn't change Reclamation an awful lot. He knew it needed to change, but the way he went about it was writing a detailed plan that did something for everybody. Dan, on the other hand, came in and said, "I don't need a long plan. What I need is a vision of where we ought to go and a commitment from the organization to get it done." We could say it in relatively short time frame. So Dan obviously made major changes within the organization.

But in doing so, alienated a big part of our constituency, which to some degree we're still dealing with today. Such drastic changes in philosophy or in terms of who he worked with has made lots of our traditional constituency suspicious of Reclamation. I think my sense is, we have to find the right balance of all of those. When you've alienated a part of your constituency, it's hard to get sort of that trust back. So that's been difficult.

Eluid Martinez,[50] on the other hand, is a water administrator, not the manager. He didn't manage projects, but he was an administrator coming from New Mexico. So he sort of knows and has loyalty to the state perspectives in terms of water rights and things like that. So he brings that kind of perspective. He's used to making decisions, mostly almost like a judge. I mean, while he wasn't a judge, I mean, the Water Engineer in the western states is a decider, and he's an arbiter of disputes, disputes over water rights, and he gets to make decisions. So he approaches a lot of problems like that. He's very pragmatic, he wants to make good decisions. He's not political in an extreme sense. He wants to make good decisions. He doesn't dither things to death in presenting the data. He'll make a decision and move on and go to the next one. He's been very good for the organization from that standpoint.

One of the things that–but he's not very well connected into the political apparatus of the Department or to the administration. While he's a political appointee, he's not one of the members of sort of the inner circle, the political leadership. So the connection between our leadership and the Department's leadership is some different.

Every administration's different, and while we always sort of have the people that have been identified from the White House and those that are from the Secretary, and you always sort of always have sort of different camps of political appointees, and sometimes they work together, and sometimes they don't. [Laughter] Dan was obviously fairly well connected into the thing, but he came primarily from the Hill and a lot of his power came from George Miller. There were times when he and the Secretary didn't see eye to eye very good, and that created its own kind of problems.

50. Eluid L. Martinez was Commissioner of the Bureau of Reclamation under the administration of President Bill Clinton, 1995-2001, and participated in Reclamation's oral history program. See Eluid L. Martinez, *Oral History Interview*, Transcript of tape-recorded Bureau of Reclamation Oral History Interview conducted by Brit Allan Storey, senior historian, Bureau of Reclamation, during 1996-2001, in Washington, D.C., and Santa Fe, New Mexico, edited by Brit Allan Storey, 2006, www.usbr.gov/history/oralhist.html.

Storey: Let's see. A couple of years ago, I went down to the pre-law conference on water at the American Bar Association meeting down in San Diego. They talked–I've forgotten the district–but one of the Central Valley water districts was represented. This woman was talking about how they had lost a disproportionate share of their water because of the Central Valley Project Improvement Act and the 800,000 acre feet you were talking about earlier. I was wondering if that had any repercussions for Reclamation, or are we just simply implementing water rights somehow? Maybe you're not familiar with this.

Implementing Water Rights

Magnussen: Well, I'm not familiar with the exact situation and which district it is, but I don't think there's any doubt that all the agricultural districts are proposing to get less water than they may have thought that they were originally entitled to. When the original contracts were done for the Central Valley, the assumption was there were going to be a lot more reservoirs and a lot more water. So the Bureau of Reclamation negotiated contracts based on sort of an optimum, ideal world. What happened is a lot of those water supply projects never got built–Auburn, Round Valley, Pascata [phonetic], New Vale [phonetic]. All these water projects that were proposed to have got built didn't get built, for environmental reasons or not good dam sites, or lots of reasons. Then E-S-A came along and requirements of in-stream flows for fish, and C-V-P-I-A came along and redid the Central Valley Project. It wasn't just for water supply for farmers; it put fish and wildlife on equal terms with some of those things. So as a result, these districts are getting less water.

And then this B-2 [phonetic] lawsuit that I was just talking about, how do you account for the 800,000 acre feet and stuff like that? The proposal now is that in–I'm trying to remember. I don't remember the exact numbers, but in a normal year, the districts south of the Delta will get forty-five percent of their water supply. In wet years, they'll get fifty percent. Well, that just about drives them crazy. So they could see, here you've got a wet year, and the way that the formulas go out, we're only get half of the water that we thought we were going to get. Well, this is major dislocations.

Now, what's supposed to happen? Are some farmers supposed to go out of business? Are we going to buy out the rights? Did everybody get less water? They pump more groundwater? What happens? That's part of the concern. If you're a farmer out there and this is your livelihood, you say long term. I mean, "I know there are some years I'm going to get less water because of the drought and

things like that, and I can rely on groundwater. But if this is the long-term plan, what's my future? What should I be doing?"

C-V-P-I-A was constructed to some degree that you'd be able to sell water and sell water to Southern California so maybe the farmers could sell some of their water and could go to Southern California, and they would financially be okay because they could reap money from the sale of the water. But so far, a lot of those farming communities, they don't want people selling it. They want to keep it for their rural communities. They don't want them to dry up. But, frankly, probably what happened, there's probably more land under irrigation than there's water for. We probably overdeveloped. In a lot of ways, we probably overdeveloped some of those agricultural more than what the resource could probably stand, and now it's that dislocation of going back the other way, and there certainly isn't any political consensus on what's the level we should be at. So what's happened is the water has become sort of the big fight. Sure, that's exactly what's happened.

Recreation Issues on Reclamation Reservoirs

Storey: One of the issues that we keep beginning to run up against is that in the past, we allowed developments around Reclamation lakes. [Lake] Berryessa is a wonderful example, and it's now conflicting with what we now perceive the public interest to be. Yet we're having trouble dealing with these issues, my impression would be because there are political implications. Could you talk about these kinds of issues and how you see them from your point of view?

Magnussen: Yes. Development around the reservoirs can be difficult. When Reclamation originally developed the projects, we were interested in developing the dams and the water supply works. We didn't have the expertise and didn't have a lot of knowledge about recreation. We weren't in the recreation business, and there wasn't always consistent policies, and so a lot of these things got developed because of the people that were involved, the Reclamation people, as well as who was there, the counties or the cities or the Forest Service or the Park Service, or whoever it was, or, in some cases, nobody. We did it ourselves.

Still today, I mean, I would say that in terms of time that I spend, I would say maybe once a month something comes across my desk dealing with recreation and land development around a reservoir. It's not something that's high priority, that I spend a lot of time on. Well, that's probably true for Reclamation's management structure in general. The things that take our day-to-day attention are

the water management, all the things we've been talk about, and land-management issues are not something that the organization has a lot of expertise and spends a lot of time on.

[Lake] Berryessa[51] is a good example. These are places where you need to have attention paid to it. I think, to a large degree, we'd say we'd like to have those land-management issues be taken care of by somebody else. Somebody that has the expertise, the local counties, the Forest Service, the Park Service, whoever might be in the area that has that kind of expertise. And in cases where that's working, that's great. I mean, the Lake Mead National Recreation Area's a good example. Here's the Park Service, it manages all the land around Lake Mead. It's working well. It doesn't bother us. They've got a good organizational structure. Berryessa, on the other hand, we've got a county there that doesn't know how to do it, and they get political. We can't get them to do what they need to do. We get pulled into unsafe conditions and unsanitary conditions. So when they're bad, they're bad.

But as an organization, we don't have the funding or the resources or probably even the management strengths or interests to really do a good job of managing recreation. I mean, it's not our core business. I mean, you can go back and take a look, say, "Well, what business are we in?" Nobody says we're in the recreation business. Right? So, like other successful businesses, you find somebody else to do the work that's good at that and you're not good at. But what do you do in those situations where you can't find somebody? I think that's been the difficulty.

Storey: Is there anything else you think we ought to talk about this time?

Magnussen: Not that I can think of. That's a lot.

Storey: What about the President and the Congress are sort of, at least where I sit in Denver, they look like they're squabbling a lot. Is that affecting Reclamation?

Dealing with the Politics

Magnussen: Yes, probably. One of the programs we've had, we've tried to push title transfer. We haven't really talked about title transfer too much, but there certainly are a

51. Lake Berryessa is the reservoir formed behind Monticello Dam, a major feature of the Solano Project, in Napa County California. For more information, see Zachary Redmond, "Solano Project," Denver: Bureau of Reclamation History Program, 2000, www.usbr.gov/projects/pdf.php?id=195.

number of projects that probably don't have a big federal interest. If we don't have to work and manage those anymore, we don't.

In the last Congress, there was a real difference between the administration and the Congress in terms of how do you go about transferring these titles. What are the terms and conditions that they're done under? The fact that the administration has lots of odds about other things just sort of puts them at odds. I think it sounds like we found some compromises where we can find some language that we can all agree to, but there was a big issue, did you need to do E-I-Ss and do NEPA compliance for these title transfers? Well, the administration was always going to say you had to do them. I mean, that's one of the keystones. The Congress wanted to exempt those from NEPA. Well, that was a veto threat. So they were big deals. To the degree there was very differences in sort of the environmental views on these things between Republican Congress and the Democrat administration, those tend to play into some of the difficulties we had.

There's a number of pieces of legislation that we wanted to get through. One of them is dam safety. We want to get the ceiling raised for our Dam Safety Program. If we don't get the ceiling raised for that authorization, there are probably a number of new things that we would want to get started in 2001, and for sure 2002. We need to get the ceiling increased.

As long as they were fighting about these other things, they weren't going to do that. You would tend to think that raising the ceiling for the Dam Safety Program wouldn't be a controversial thing, but it gets caught up in some of these bigger issues. The chairman's certainly not going to do anything to help the administration solve some problems until he gets what he wants. So as a result, the legislation didn't get introduced until late. There wasn't any hearings. So it has spillover in other areas that you would assume wouldn't be controversial, but get caught up in sort of this overall disputes between–

Storey: What about law enforcement?

Magnussen: Law enforcement's the same. It's one of those that gets caught up. So dam safety, law enforcement, Hoover memorabilia, reauthorization of the Small Loan Act, there's a number of things that are sort of in the queue that we would like to get all caught up in that.

Storey: So they just don't go anywhere?

Magnussen: They become important for us next year, try and get through. So action years, so you've got another–you got to do it early in the year. If you don't, you're probably–

Storey: Their attention is elsewhere.

Magnussen: And their attention is elsewhere. So next year will be difficult.

Storey: Well, I sure appreciate it. I know you have an appointment in a few minutes, so I need to get out of here and you need to get set up for that. Once again, is it all right for researchers to use the material on these tapes and the resulting transcripts?

Magnussen: Sure. Yes.

Storey: Thanks.

END SIDE 1, TAPE 2. DECEMBER 9, 1999.
END OF INTERVIEWS.