

ROBERT BURD

TAPE 1, Side 1

October 9, 1996

M.O'R.: This is Michael O'Rourke for the Washington County Historical Society, beginning an interview with Bob Burd at his home in Mercer Island, and today is the 9th of October, 1996.

First of all, why don't you just tell me where you're from?

R.B.: Well, I'm from Ann Arbor, Michigan, and went to school there. [I got] both a Bachelor's and Master's degree in engineering from the University of Michigan, with a specialty in environmental engineering.

M.O'R.: What brought you to that subject?

R.B.: Well, actually, it was my Marine Corps experience. At one point in the Marine Corps they assigned me to a water supply platoon, where I had responsibility for purifying water for troops in the field, and this was in between my Bachelor's and Master's degree, and got me interested in environmental engineering, so I went back to graduate school specifically to focus on environmental engineering.

M.O'R.: And when were you in the Marines?

R.B.: Well, it was '54 to '57, in that category.

M.O'R.: And were you overseas, then?

R.B.: Offshore. It was during the Korean emergency, but I didn't get to Korea but served aboard ship and in Southern California.

M.O'R.: And what did your parents do in Ann Arbor?

R.B.: Well, my mother worked for the University of Michigan in an administrative job. My father sold Ford automobiles.

M.O'R.: And what kind of people were they? Did you get any environmental influences from them?

R.B.: No. Not at all. Other than my mother never wanting her four boys to be in the house, so we were always outside. So

whatever impact that had on enjoying the outdoors and the woods nearby and the ponds and creeks nearby.

M.O'R.: And what about your dad? What kind of father was he?

R.B.: Well, he was benign. Not a major factor in the family.

M.O'R.: Okay. And so you went to both undergraduate and graduate school at the University of Michigan, and were you drafted - no, you must have enlisted in the Marines?

R.B.: Well, I was in the ROTC program in school.

M.O'R.: And so then you went on to major in environmental science at the University of Michigan, and what did you do with that degree once you got out of school?

R.B.: Went to work for the State of California, the Water Pollution Control Board, and this was in '58 to '60 that I worked for them, and they were just in the early throes of developing regulations for industries and cities in the state of California.

M.O'R.: And what did you do specifically for them?

R.B.: Well, I wrote in effect waste discharge permits, monitored the waters and the waste discharges, made simple tests for quality of the effluence and quality of the water in California.

M.O'R.: Statewide?

R.B.: Well, I worked in two different regions. It covered much of the state, basically from Santa Barbara to the Oregon border, but excluding parts of the state, excluding San Francisco and Los Angeles.

M.O'R.: And what were the kind of problems that California was up against then?

R.B.: Well, like most states, they didn't have real strong environmental legislation, so it was a matter of a lot of twisting arms, persuasion of industry in cities to do a better job of cleaning up their wastewater.

M.O'R.: And that's partly what you did?

R.B.: Yes. Uh-huh.

M.O'R.: So you'd travel around to sites where you knew there were pollution sources?

R.B.: Yes. Most of my time was spent traveling, visiting the pollution sources.

M.O'R.: But you didn't have any enforcement authority behind you or -?

R.B.: Well, very little. It was pretty much all the power of persuasion.

M.O'R.: I imagine that in cases where there was real economic obstacles to overcome that that must have been pretty tough?

R.B.: Well, that's true. You reported to a board of, you know, part-time civilians and so forth that was administering the program that was made up of oil company people and other people who obviously had some special interest in the regulations you came up with.

M.O'R.: Did you make the argument, though, that clean water was in the interest of everyone? I mean, how did you persuade these people?

R.B.: Well, that's certainly one of the arguments, that everyone would benefit from clean water. There are people downstream that need the water clean, and that was basically the kind of argument you tried to make.

M.O'R.: And how long did you work in California?

R.B.: Well, I worked for the State of California for two years, but then I did return to California. Then I went to work for the Dow Chemical Company, which is headquartered in Midland, Michigan, and worked for them for seven years. But part of that time they sent me back to California. That's why I'm jumping ahead here. I worked for the Dow Chemical Company in both Los Angeles and San Francisco in the environmental business.

M.O'R.: Helping them to meet environmental regulations or -?

R.B.: Well, that was a minor part of the job.

The biggest part of the job was Dow was interested in providing a consulting service to other industries because Dow sort of pioneered industrial waste treatment starting in the 30's, so they thought maybe they could capitalize on this technology they had. So we attempted to offer a consulting service as well as try some experimental products that were in the laboratory to see if they might work on solving different kinds of pollution problems.

And so we traveled from city to city, industry to industry to experiment with some new chemicals to see whether there might be something here that would clean up their wastewater, for example, or clean their boiler feed water, and to offer some kind of consulting service based on the knowledge that Dow had acquired for 35 years or so being in the business.

M.O'R.: You said that they were trying to market this. Does that mean that they were less successful than they hoped they would be?

R.B.: Well, in the long run the researchers came up with some products that were useful in the environmental field, but in the long run Dow itself ended up not marketing most of them directly as opposed to letting formulators or smaller chemical companies which specialize in water and wastewater treatment market their products for them. Once they got to the marketable stage, after we demonstrated that they would work, Dow in most cases turned the product over to someone else to sell outside the company.

M.O'R.: So these were mostly chemicals that aided in cleanup?

R.B.: Chemicals of one kind or another, yes. Obviously that's where Dow had a lot of knowledge.

M.O'R.: And then where did you go after that?



R.B.: That was about seven years. From there I went to work for the federal government and worked for the federal government, then, for - I don't know - 22 or 23 years before I retired.

But I first went to Washington D.C. for the predecessor of EPA, the federal Water Quality Administration. This was in '66. The Congress in '65 had passed the Clean Water Act, which required all 50 states to establish water quality standards, and so my first job at EPA was to administer that part of the new Clean Water Act, to work with the states to develop for the first time water quality standards that had national standards, had some kind of national consistency to them. So that was a big milestone, the 1965 act.

M.O'R.: And you came to Washington in what year?

R.B.: 1966.

M.O'R.: But you were working for the federal government before then, or -?

R.B.: No, that's when I came to work for the federal government.

M.O'R.: Right. And what was your job, then, your first job?

R.B.: Well, it was to administer this water quality standards program. So I traveled to many of the 50 states to again work with them, try to convince them to adopt some consistent national water quality standards, consistent in terms of standards such as dissolved oxygen in the streams, consistent uses of the water fishing, recreation, and consistent implementation plans like for the first time basically telling the 50 states they had to install secondary waste treatment, which wasn't a requirement in the Act, but we were pushing the concept, anyway, back in the middle to late 60's.

M.O'R.: So it wasn't required by the Act, but ...

R.B.: Not unless you could prove that in order to meet a desirable dissolved oxygen standard in a stream that secondary

treatment was the only way to do it, then - but you had to make the connection in those years. You had to prove - and therefore the federal government had to do a lot of water quality surveys - you had to prove that secondary treatment was necessary to meet a desirable dissolved oxygen standard.

M.O'R.: Did they often do that - I mean, get into that kind of a situation with a state?

R.B.: There were a lot of arguments about whether secondary waste treatment was necessary, particularly in the coastal states, California and Washington - you know, Massachusetts.

M.O'R.: But not Oregon?

R.B.: Well, Oregon was sort of ahead of the game. Because of the need to clean up the Willamette River and because of Tom McCall's leadership, I think they were a little bit ahead of the curve. They made a policy decision - I don't think it was something we had to push them into - requiring secondary waste treatment everywhere, even for coastal cities.

M.O'R.: I meant to ask you, back when you were doing your graduate work you looked at the Willamette, right, as part of ...

R.B.: Yes, that was part of a Master's project, because one of our major professors had been hired by the Oregon Sanitary Authority to study the Willamette River, and so he brought back that as a project for his graduate students to basically do waste load allocations for the Willamette River, and this was back in '57, '58 time period.

M.O'R.: And so you worked on analyzing that information?

R.B.: Yes. I didn't physically travel to Oregon, but we used that as our major case study back in Ann Arbor.

M.O'R.: And what sort of conclusions did you come to about the quality of the Willamette in those days?

R.B.: I really can't remember, but I do know once I got to Washington D.C., and I had to testify before Congress frequently because we always were pushing new legislation, but the only two success stories that I could use with Congress about cleanup of water bodies was the Willamette and Lake Washington here in Seattle. Those are the two success stories that I used over and over again to try to convince Congress to pass additional legislation to promote water quality cleanup.

M.O'R.: So then about the time you went to Washington, that was just about the time, I think, that Tom McCall actually became governor of Oregon?

R.B.: I think so, yeah.

M.O'R.: And you just mentioned a minute ago that Oregon was a bit ahead of the curve relative to its two coastal neighbors here, anyway, and that McCall's leadership had something to do with that.

R.B.: Right.

M.O'R.: So would you say that McCall was a real plus force, then, in terms of the environment? It wasn't just a campaign issue?

R.B.: No, he definitely was. Again, as I've mentioned, you could then use in other locations the fact that, yes, we can clean up water by requiring more stringent pollution control from dischargers, the Willamette being an example we used over and over again.

M.O'R.: And was that a convincing argument to people? I mean, they made the argument, I take it, that it wouldn't make any difference if they cleaned up their act?

R.B.: Yeah. Well, I think that was a major factor in convincing other people to impose more stringent waste discharge requirements, yeah.

M.O'R.: Now, during this same period of time I believe Jack Churchill was in Washington, and I guess Jack Smith wasn't in Washington but worked a little bit ...

R.B.: I don't remember Jack Smith from those days. I do from my time out here.

But Jack Churchill when I was in Washington D.C. was in charge of our legislation program, so he had a key position there in terms of again working with Congressional committees to try to get additional pollution abatement legislation through the Congress.

M.O'R.: You said you traveled all over the 50 states during that period of time. What kinds of problems did you encounter, and where were they - I mean, the ones that you remember?

R.B.: The major problem was to try to convince all of the states to adopt secondary waste treatment as a minimum, a floor, for waste treatment. That wasn't required by the '65 Act as a policy statement. It subsequently became required in the '72 Act, but it wasn't required in the '65 Act. But much of my time was spent trying to convince the states that it's a good deal to require a floor of secondary waste treatment.

And we were very successful, with just some exceptions; again, some of the coastal states that didn't buy into it completely. But that was the major factors, to get them to adopt secondary waste treatment as a policy.

The other thing was to try to make sure there was consistency between the 50 states in the standards for the streams themselves. We were pretty successful in getting the states to adopt the right uses: This stream, Willamette or Columbia, is useful for, say, fishing, swimming, whatever. But we wanted then to make sure there was some consistency in the criteria to protect those uses.

Now, if there was a body of water, say the Mississippi River, flowing through a lot of states, you wanted to make sure that the

states in the upper Mississippi had consistent criteria with those in the lower part of the Mississippi. If all of the states adopted swimming as a desirable use of an interstate water body we wanted to make sure their criteria to protect that use were compatible, and so that was another major part of the job, to convince them to do that, as well as to adopt secondary treatment.

M.O'R.: And what do you remember of Jack in those days, Jack Churchill?

R.B.: Well, I just again remember him - he primarily was working, again, on the legislative side, and I was working in this getting the states to adopt the water quality standards, so I wasn't working that closely with him.

M.O'R.: So Jack was working on the legislative side, and you were working on the sort of implementation side?

R.B.: Right.

M.O'R.: How did you like working in Washington in that sort of political environment?

R.B.: Well, I liked it a lot. I've always liked politics, and you know, as other people have reported, it's a sort of heady atmosphere where you work with the Congressional staffs and spend a lot of time with Senators and Congressmen to try to convince them to be doing the right thing and to adopt even more stringent laws.

And also I was in a position where I wrote speeches for Stuart Udall, because initially we were part of the Department of Interior, so if he had to give a speech on the environment, I'd help write those speeches or prepare him for press conferences or go up on the Hill with him to testify before Senators and so forth. So I enjoyed it a lot. I enjoyed that experience a lot.

M.O'R.: And you enjoyed the political part of it, too?

R.B.: Oh, yeah.

M.O'R.: Did you know Udall?

R.B.: Well, I spent a fair amount of time with him, and we had certain celebrations in his office when we accomplished certain things. I remember particularly when the first Environmental Impact Statement was written covering the Alaska oil pipeline, we had a big party in his office where Mo Udall was the bartender and Stuart Udall was helping to serve the drinks and so forth.

M.O'R.: Who were other people in Washington that were sort of your political contacts at that time?

R.B.: Well, we had a lot of dealings with Senator Tunney from California before he was defeated for reelection because he had a very big interest in protecting Lake Tahoe, and so we spent a lot of time with him. Senator Muskie, certainly, because he's the father of all the legislation on the Senate side, and Congressman Blatnik on the House side was the father of all the legislation in the House. So I spent a lot of time with the committees, at least, that those people headed.

M.O'R.: Did you ever meet Tom McCall?

R.B.: No.

M.O'R.: But you probably pointed to his example?

R.B.: Yes.

M.O'R.: And you said that you were encouraging Congress people to adopt more stringent regulations. In those days what did you see as the next step in terms of regulation?

R.B.: Well, there were amendments to the '65 Act. The amendments to the '65 Act, as I remember, were passed in '66, in '68 and in '70. Some of them dealt with enforcement, giving us a little more enforcement authority. Other amendments dealt with the construction grant program, providing more money to build sewage treatment plants and sewers. That program was first initiated in '56, but really big money didn't start coming in until later. And as I remember I think in the late 60's some of the amendments dealt

with putting more money into the construction grant program to build sewage facilities.

M.O'R.: And there was a change in political climate there while you were working - in fact, that I guess resulted in your moving West, when Nixon was elected. You were under the Johnson Administration, then, before that?

R.B.: Yes.

M.O'R.: And how was the Johnson Administration to work with on these issues?

R.B.: Very supportive. Good environmental credentials and support.

M.O'R.: Were there people in the Administration that you remember particularly that you worked with?

R.B.: Well, the person that I think was our direct boss in our agency at that time, Jim Quigley, was a former Congressman from Pennsylvania. He was Commissioner of the federal Water Quality Administration, and he was a very good person to work for. He certainly pushed hard for clean water.

And in addition to Stuart Udall, there were other political people, political appointees, in the Interior Department that were very supportive: Joe Moore being one; he was from New Mexico. He was in between Udall and Jim Quigley. So we had some good support from the Department of the Interior.

M.O'R.: And Udall himself, what kind of a person would you say he was?

R.B.: Well, he's a very strong environmentalist, always has been and still is, and a good person to work for.

M.O'R.: So you worked there between '66 and '71, then?

R.B.: Yes.

M.O'R.: During that period did you have dealings with the state of Oregon, and if so, what kind of things did you work on in Oregon at that time?

R.B.: Really didn't have many dealings with Oregon; again because they seemed to be ahead of the curve in terms of the other 49 states, so more of my effort was spent trying to bring the other 49 states up to maybe where Oregon was. So I spent most of my effort in the other states, really very little in Oregon.

M.O'R.: And did you have any interaction that dealt directly with the Tualatin River in those days?

R.B.: No, not really. In fact, in terms of getting these water quality standards adopted, at least on paper in reading it, because I had to approve all these things, I became familiar with most of the water bodies around the country, but frankly the Tualatin I don't think was on my radarscope. The Columbia was, and the Willamette, but I don't remember the Tualatin being something we were focused on.

M.O'R.: And so then we had the Nixon-Humphrey campaign, and Nixon won, of course. And so that meant that you had to leave your job in Washington?

R.B.: Well, yeah, eventually, in that in the Nixon Administration a lot more of the jobs became political appointments, including the one I was in, and so the suggestion was made to me that I look around for other opportunities, and there was a vacancy which came up in Portland, actually. The federal Water Quality Administration still had an office in Portland in '71, and the Deputy Regional Administrator had moved into a regional administrator's job somewhere else in the country, so I came out in '71 and took his job as the Deputy Regional Administrator in the Portland office - for a time before EPA was formed and we moved the office to Seattle.



M.O'R.: Who was it that suggested that you might want to look for another job?

R.B.: Well, it was my boss at the time. I was the Deputy Assistant Commissioner for a lot of programs. The Assistant Commissioner for a lot of programs who was my boss was Gene Jensen, an old-time public health service person who was very familiar with Oregon and had spent time in the public health service in Oregon was the one that made that suggestion. And again, the vacancy came up out here, and Jim Agee, the Regional Administrator, hired me as his deputy in Portland.

M.O'R.: And so how long were you in Portland?

R.B.: Just a few months before we moved the office to Seattle.

M.O'R.: Were you married at the time?

R.B.: Yes.

M.O'R.: So your family moved around with you, too, then?

R.B.: Right.

M.O'R.: And how was that? Was that a strain on the family?

R.B.: Oh, no. I think the first 20 years after college I moved 22 times, part of it because of the service moving me around and Dow Chemical Company moving me around. So I don't know, we were pretty used to moving.

M.O'R.: And then the shift of headquarters to Seattle, that came about as a result of the Environmental Protection Agency being formed?

R.B.: Yes, and then they decided to consolidate all the federal agencies into, you know, the ten regional offices. It wasn't just EPA, but other offices were already here in Seattle, but they consolidated all the regional offices into the ten regions.

M.O'R.: And the Environmental Protection Agency came about as a result of legislation that ...

R.B.: No, it was an executive order from President Nixon.

M.O'R.: Okay. And what did you think of that change at the time? Was that a step forward?

R.B.: It was a desirable change.

M.O'R.: And then of course the Clean Water Act was also signed into law by Nixon, I guess?

R.B.: Yeah. Well, I think over his objection.

M.O'R.: Was it?

R.B.: I think President Nixon vetoed all environmental legislation, but I think it was all passed over his veto.

M.O'R.: I see. So he didn't have a particularly large commitment to environmental ...

R.B.: No, although he did form EPA, and I think that was desirable. And actually, the Republican political appointees that we had in the Interior Department before we became EPA actually were supportive of our environmental programs. So Nixon himself may not have been an environmentalist, but the political employees, who were all Republican politicians, who were in the hierarchy of at least the environmental business were pretty supportive.

M.O'R.: That seems slightly odd these days.

R.B.: Yeah, that's true.

M.O'R.: Do you have any idea about why that was the case? Was it because there was a dawning awareness that we had to do something about this?

R.B.: Well, one of them was Carl Klein, who in the Illinois legislature was known as "Clean Water Carl" or something. So he had, from the state of Illinois, a background in pushing for clean water. And then the man who became Commissioner, David Dominick, was from Colorado and was a Westerner, and while - and we weren't

necessarily involved with irrigation issues and stuff like that, grazing, that Westerners were concerned about at that time, but David Dominick being from Colorado and the West I think had some appreciation for the environment also. So I think those appointees helped a lot.

[end of side one]

BOB BURD

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M.O'R.: So there those two key people in the Republican Party that had that as a commitment.

R.B.: Yes. And actually, Russell Trane and Bill Ruckelshaus were Republican political appointees to EPA who were very strong environmentalists and very supportive of all the programs.

M.O'R.: So you moved up to Seattle; and you were still, then, the Deputy Regional Administrator?

R.B.: Right.

M.O'R.: And what sort of responsibilities did you have in that job?

R.B.: Well, first of all, that job title didn't last all that long, but you're responsible for everything, managing all the environmental programs along with the Regional Administrator.

I remember when I first moved to Seattle - and my family at that time was still in Washington D.C., so I came up ahead of the office move to look for office space. But there was an oil spill in the San Juan Islands soon after I arrived, and so I ended up in the San Juan Islands sort of overseeing cleanup of an oil spill on Guemes Island, and that was one of my first big activities.

But soon after the office opened here, EPA was reorganized, and they ended up with a political appointee deputy, a Republican office-holder here in the state of Washington, and I was put in charge of the air and water programs. So I was the deputy just for a number of months, and then they reorganized. Don Moose, who was a long-time state senator from the state of Washington became the deputy, and I became the manager of the air and water programs.

M.O'R.: How did they clean up oil spills in those days?

R.B.: Well, not much differently than today, where you put booms out to contain the oil and try to vacuum it up or use absorbent material to pick it up.

M.O'R.: So when you were the Deputy Regional Administrator, then, here in Seattle, you had responsibility for all the Western states?

R.B.: Basically Alaska, Idaho, Oregon and Washington.

M.O'R.: So it didn't include Nevada or any of the Southwestern states?

R.B.: No.

M.O'R.: And what were major problems that you faced in that job, then?

R.B.: First of all, the air and water programs were organized differently then than they are now. The '72 Act passed, and of course that was a major change in the pollution control business. But the way the EPA offices were organized, I didn't have responsibility at that time for the waste discharge permit program or enforcement. Later on I had responsibility for that, but I didn't initially.

As I remember - and again, it wasn't initially my responsibility - but the biggest challenge facing the office was to get all these waste discharge permits issued to the industries and cities requiring, by and large, secondary waste treatment. That was a major activity.

M.O'R.: I guess when the Act was passed there was substantial money available, also, for construction of sewage plants?

R.B.: Yes. And I did have responsibility for that, as well as there was a lot of water quality planning money around. We gave out many millions of dollars in grants, both for planning for community outreach - you know, for construction of sewers and sewage treatment plants. EPA was dispensing a lot of money. Big part of my job.

M.O'R.: Looking back on it now, how effective do you think that was?

R.B.: Very effective. In fact, to use a section of the Act, which you may be familiar with, Section 208 - which got a lot of criticism from Congress and the media and so forth, but out here in the Northwest that Act that was very successful. We may have been the only region in the country that I think implemented that Act in a smart way. But that was very important, and it got communities involved with water quality issues because a lot of the money went to set up community outreach.

It got various industry associations involved. For example, the classic example is the AGC, Associated General Contractors. We used that money to educate them about how to build roads and whatever in an environmentally sound way. That's why today you see all these hay bale barriers and so forth on construction sites; it all started with this Section 208 of the Clean Water Act and the money we had to get citizens and industry groups together and involved in cleaning up the environment.

M.O'R.: So it was kind of an education and involvement effort?

R.B.: Yes. That was a very important part of the Act that really worked in the Northwest. And I still see the results every day today.

M.O'R.: And why didn't it work elsewhere?

R.B.: Well, I don't know. They just didn't implement it in the correct way. They didn't give the money to the right groups, or they didn't - out here, we made sure that we required certain outputs from the money we gave. We weren't going to let them do a report and have it gather dust in a shop.

We required definite outputs: an ordinance from a city, for example, would be the classic example, an ordinance to control

erosion. And we made that a commitment in the contract we signed with them to give them the money; then, you know, they didn't get their final payment of the money unless they followed through with these commitments they made. Again, the adoption of an ordinance is the classic example.

M.O'R.: So other people that had the responsibility for setting these programs up in other parts of the country didn't ...

R.B.: Didn't require those kind of outputs - we call them outputs, I guess - commitments in the contract that you negotiated up front before you gave anybody the money. You had to have definite outputs in the terms of regulation and ordinance, and we were the only ones I think that insisted on that.

M.O'R.: Is it acknowledged that this area was particularly successful, then?

R.B.: Yes.

M.O'R.: And did they wind up being a model, then, for other areas?

R.B.: Yes. They used a lot of our success stories as models.

M.O'R.: And I take it by this time, though, that you were at least somewhat more aware of problems on the Tualatin?

R.B.: Yes. Well, particularly with the few months I spent in Oregon before the office moved to Seattle. You know, if you're living in Oregon, you become more familiar with it. But yes, we negotiated these water planting grants, a lot of governmental units and whatever, in Oregon to work on watersheds and particularly streams. And I frankly can't remember whether we had one for the Tualatin, but we did for many parts of the Willamette.

But no, I became very familiar with Oregon, certainly starting in '71, but after the '72 Act, where we not only had more construction grant money to give out, but this water quality planning

money, and so I became very familiar with lots of different parts of Oregon.

I spent a lot of time in Oregon, probably mostly with the construction grant program because we had to do environmental impact statements on a lot of these projects because many of them were controversial. A classic example would be a sewer serving Jacksonville where you're going to upset the historic nature of Jacksonville by building a new interceptor sewer there. So we did a lot of environmental impact statements involving many cities in Oregon: Eugene, Springfield and Jacksonville, Medford and many others, and so I became quite familiar in minute detail with a lot of the streams in Oregon.

M.O'R.: Now, I think the Unified Sewerage Agency of Washington County was the beneficiary of several grants from EPA to construct all of their major plants, I think. Were you involved at all in those?

R.B.: Yeah. I can't remember a lot of the details, but certainly I'm aware of the grants that we gave them.

M.O'R.: Was that your job, then, essentially for the rest of your career?

R.B.: Well, eventually they split the air and water programs, so I ended up with just the water programs, but in that split I assumed responsibility for the waste discharge permit program and the water enforcement program, so the water part of the job was enhanced because then I had permitting and enforcement responsibility, also.

M.O'R.: And you said that you were in particular familiar with some of the problems on the Willamette in those days. So I guess that was sometime after McCall's initiatives there - but of course we still talk about cleaning up the Willamette today. In fact, there have just recently been some stories about genetic



deformities in fish that are being pulled out of the river near a place where people are considering drawing water for additional domestic supplies. Someone has been telling me about that recently down in Oregon.

So what kind of cleanup took place on the Willamette at that time?

R.B.: Well, you know, there's always the question do you have high enough, say, dissolved oxygen standards for the river, and the secondary waste treatment from the dischargers, is that enough to meet the dissolved oxygen standard and maybe ammonia standard and nutrient standard. So I know there was a question of ratcheting up or down whatever the stringency of the discharge permits.

There was always the question, as you're well aware of, was the Willamette cleaned up more from the increased flows from the dams or from waste treatment projects. But there was, I think, a lot of analysis done of whether the discharge permits needed to be tightened up in order to protect the fishery, primarily, in the Willamette. And I don't necessarily remember a lot of the details, but I know when we're re-issuing those permits or awarding a grant to build a sewage plant, those questions came up: Is this enough treatment? Are they doing enough?

M.O'R.: And you mentioned the problem in Jacksonville with respect to it being an historic town now. Was the issue there that they just didn't want the streets all dug up?

R.B.: No. The issue was, and this has come up many places, a lot of places here in the state of Washington, is the size of the interceptor sewers serving Jacksonville. The issue was do you build a big interceptor sewer so there can be more development, or do you build just a small interceptor sewer that only serves existing homes, and in that case we insisted on a small interceptor sewer that just served the existing homes so that a development

couldn't come in and, you know, have EPA funding the development *per se* by building a huge sewer that they could discharge into.

So the question of whether you're building facilities to encourage development came up frequently. It wasn't EPA's role to encourage development. So that was a frequent bone of contention that came up in a number of Oregon cities, actually.

M.O'R.: And did it always come down the same way?

R.B.: Not necessarily. I remember specifically in the Jacksonville case we only funded a smaller sewer that no one else could hook up into if you weren't already a resident of Jacksonville. But other places, like Eugene-Springfield, you know, you allow for a normal amount of development and hopefully don't encourage new development outside of a sewerage service boundary that the federal government doesn't necessarily have any business in. That's a local planning decision. The federal government shouldn't be making planning decisions the local government should make by, you know, funding maybe a bigger interceptor sewer than you should be funding.

So anyway, those issues came up frequently in Oregon.

Also in Oregon I remember there were a lot of issues on the coast, small coastal towns that were being required to upgrade to secondary treatment; could the retired people living in those small coastal towns afford the new sewer bill? And that was frequently a big issue.

M.O'R.: I guess, then, if you only build a sewer of a certain size with the idea of not encouraging development, the problem of what to do should development come in the future then becomes the responsibility of the local government?

R.B.: Right. It's not the federal government making the decision because we built this huge sewer or a huge sewage treatment plant with excess capacity.

M.O'R.: Right. And did EPA see funding development as being just something that they shouldn't do because it was the local government's responsibility, or was it also that it would actually be counter to EPA's mission?

R.B.: The former, that that's local government's responsibility, and we didn't want to substitute ourselves for the local government responsibility.

M.O'R.: Well, then I guess it was in the 80's, early or mid 80's, when there were the first rumblings of problems associated with the Tualatin. I mean, there were concerns in the Lake Oswego community about the quality of water that was coming down the river, and of course ultimately what happened was that Jack Smith and Jack Churchill and others got involved in filing this lawsuit, first against the EPA, I guess. Were you aware of any of that before the lawsuit was actually filed?

R.B.: Oh, yeah, because I've known Jack Churchill for a long time, and I've met with him and with Jack Smith a number of times. And so I was aware that it was coming.

[interruption]

So knowing those two guys, I was aware this was coming.

M.O'R.: And so they talked to you about?

R.B.: Mm-hmm.

M.O'R.: And did you help them out in planning what to do?

R.B.: Well, no, I didn't help them out, but I don't think I discouraged them because it seemed to me they had the law on their side, and we had been frustrated in not getting the DEQ to be more assertive and to do more.

M.O'R.: And was that a problem throughout the states that you were responsible for in terms of getting the state environmental agencies on board to enforce the provisions of the Clean Water Act?

R.B.: Well, it depends on what provisions of the Act. It's probably fair to say that none of the states were enthusiastic about doing wasteload allocations, which was something that needed to be done here on the Tualatin because of the technical work involved, the massive amount of work involved.

M.O'R.: This is the TMDL's?

R.B.: Yes.

So it's probably a fair statement that none of the states were really excited about doing that, which is one reason why EPA ended up doing a lot of that for the states, providing technical assistance helping the states do that because they didn't have any experience with doing it and didn't have a lot of enthusiasm doing it.

M.O'R.: And so the EPA kind of helped them out and provided some support and expertise?

R.B.: Yes. Not in the lawsuit itself, but in the technical TMDL kind of work.

M.O'R.: Right. And what do you need to do to establish the standards? What is the technical problem?

R.B.: I'm not familiar enough with it, but you have to certainly quantify where all the loadings to the rivers are coming from and assess the portion coming from point sources and the portion coming from non-point sources - because it's much easier to deal with a point source problem than a non-point source problem, so you have to make an assessment where all the sources are coming from and how much removal you need to meet a standard, then - say, in this case how much removal of phosphorus and nitrogen do you need in order to meet a desirable standard for the river.

M.O'R.: Did you get to know Jack Churchill, then, a little better in this period?

R.B.: Well, I've always known him well. But yes, I saw quite a bit of him and Jack Smith in that period.

M.O'R.: And this was the time when you met Jack Smith, then?

R.B.: Yes.

M.O'R.: Well, how would you describe - start with Churchill; just describe him as a person and how you saw him operate.

R.B.: Well, he's very aggressive. That's the first adjective that comes to mind. Very aggressive in pursuing that case, and effective, I think. I mean, he had a one- or two-man crusade going on there, and the two Jacks were quite effective.

M.O'R.: Now, how about Jack Smith? His style's a little different, I guess?

R.B.: His style is different. He's less confrontational and takes more of a scientific-engineering approach.

M.O'R.: Do you know where the idea for the lawsuit came from?

R.B.: You know, I'm not sure, although Jack Churchill is very familiar with the law. I don't know. I assume it originated with him. Because at least with that portion of the law, I don't think there was necessarily experience in the other parts of the country, because once that lawsuit was filed, I think other parts of the country used it as, you know, a model or example, or became aware of it. But I think it probably originated with Jack Churchill's knowledge of the law and the fact that EPA had assigned him to work with DEQ, and he had some frustrations with that, as did we working with DEQ. So I assume that's where it originated.

M.O'R.: Did he ever talk strategy with you in terms of how you might proceed to force the DEQ to get moving or to accomplish the cleanup on the Tualatin?

R.B.: Well, I don't know if "strategy" is the right word. While I've known him for a long time, I've never - at this period of time I've never heard such harsh words from him directed at me.

I think he was very frustrated that maybe we somehow weren't more effective in persuading DEQ to do more, or to move faster; I don't know. I think he was very frustrated, and I heard about it, certainly, in no uncertain terms. But I don't know if discussing strategy with him is correct. I was aware of what he was up to, but I was of course somewhat circumspect in what I told him because he was suing us. I don't know, it's probably not fair to say we discussed strategy, but I heard him out. It was more a one-way conversation.

M.O'R.: So it doesn't sound like it would be correct to say that you were partners in this enterprise at all, then, eh?

R.B.: No. No, I don't think that would be correct.

M.O'R.: And in fact he was putting pressure on you as well as everybody else?

R.B.: Oh, yeah. I probably heard stronger words from him than anybody in DEQ did.

M.O'R.: Do you remember any of those conversations? What kinds of things would he say to you?

R.B.: Oh, I don't know. I think he just couldn't understand why EPA somehow couldn't be more assertive or force DEQ to do more. I don't remember any more specifics; it's just a general feeling.

M.O'R.: Now, you said that the DEQ, like other organizations in other states, was not anxious to come up with loading standards for the streams. Was that the main problem with their implementation of the law, or were there other things that frustrated you, too?

R.B.: Well, DEQ wasn't known as a strong enforcement agency on point source discharges, and that was a big frustration to me. EPA had to threaten to unilaterally take enforcement if DEQ wouldn't. We had something called - I don't know if it was a 30-day notice - where I'd send DEQ a letter saying, "Well, if you

don't take enforcement action against X industry or city, we're going to within 30 days."

And with that kind of pressure, we sometimes got DEQ to take enforcement action, but DEQ as a philosophy believed more in arm-twisting than enforcement action. Whereas EPA, we had a lot of attorneys eager to enforce and we were stronger on enforcement. So that was a frustration.

And again, it's just a matter of priority setting, too. I mean, all of the environmental agencies, federal and state, had a lot more to do than we had staff to do it, so you had to set certain priorities, and we were always trying to set geographic priorities: Which streams are the most important to work on? And the Tualatin always came up high in that kind of rating, along with the Grande Ronde and the Columbia.

So trying to get DEQ to focus resources on certain limited water bodies, that was something I did continually because we gave DEQ money to hire their staff, and you know, to run the program, so we felt we had something to say about how they spent our money. So we would routinely sit down and try to get them to set priorities, geographic priorities; let's focus on the Tualatin, Grande Ronde, Columbia River, Willamette, certain coastal bodies of water. And it took a lot of effort. They didn't want to necessarily have the EPA pushing them, but we constantly were pushing them.

M.O'R.: Did you ever have to implement the 30-day enforcement?

R.B.: Oh, yeah. There were some occasions where we took enforcement action ourselves. I don't necessarily remember which ones right now, but I know in some cases we took enforcement action ourselves.

M.O'R.: And so in that case, then, it would be EPA going directly to the polluter?

R.B.: Yes.

M.O'R.: And, what, filing a ...

R.B.: ... lawsuit, using the Justice Department attorneys, yes.

M.O'R.: Now, was that the kind of thing that Jack wanted you to do more of, then?

R.B.: Oh, probably, yeah.

M.O'R.: Was the DEQ in Oregon better or worse than the average state agency that was ...

R.B.: Well, first of all, they had very talented people. You know, they hired good people, so they were good in that sense. Again, I think the major fault we had was a lack of an enforcement ethic, enforcement policy.

M.O'R.: Now, when Smith and Churchill filed the lawsuit, I think in the beginning - I believe there were two lawsuits, and the first one was filed against the EPA to force them to enforce the Clean Water Act. How did you feel about that lawsuit at the time when it was filed?

R.B.: Well, we weren't unhappy with the lawsuit because we knew that's what the law said and required, and so it was a legitimate lawsuit and we knew we couldn't win a lawsuit like that because the law was very clear.

We, I guess, had the concern that maybe DEQ had: What did it mean in terms of our resources, and were we going to have to redirect our resources from somewhere else in order to carry out what the lawsuit was going to ultimately require.

[end of tape]



ROBERT BURD

TAPE 2, Side 1

October 9, 1996

M.O'R.: This is a continuation of the interview with Bob Burd on October 9th, 1996.

So the lawsuit was filed against the EPA, and you sort of considered it kind of a friendly lawsuit, then?

R.B.: Yes.

M.O'R.: I've got a note here that Jack Churchill and Jack Smith spent a lot of time with you and your staff. Was this during the period of the lawsuit?

R.B.: I think so; I frankly don't remember it all that well. But I think we had a mutual objective, which was to get DEQ as a party to the lawsuit because I think all of us realized in the long run, you know, you had to get DEQ to do this work. That's one thing I know we talked about was how to get DEQ to be a party to the lawsuit, and how are you going to actually do the TMDL work - because again, we all recognized that that was a major workload, and the Willamette wasn't the only river in Region 10 we had to worry about.

M.O'R.: And the lawsuit was filed against EPA rather than DEQ because -?

R.B.: Initially, anyway, because the law required that. If the state didn't do something that the law required, EPA was responsible to do it, and we weren't doing it. So that was a provision in the law that Jack was aware of.

M.O'R.: So that was the place to start, then, in terms of legal action?

R.B.: Mm-hmm.

M.O'R.: Did you yourself get involved in the lawsuit, then, at that point? I mean, did it make any difference to you in terms of your workload?

R.B.: Well, my involvement was probably tangential because our lawyers handled the lawsuit, but my involvement would have been as a manager allocating resources, mainly people: How are we going to do a TMDL; it gets down to that, how are we going to do it? DEQ is telling us they couldn't do it on their own, and so as a manager I had to decide how many EPA resources we could allocate to help them do the work that the lawsuit wanted done.

M.O'R.: Were you ever called to court or anything, subpoenaed, during the lawsuit?

R.B.: Not that I remember.

M.O'R.: And then later on, and I'm not sure how much later, they filed a second lawsuit, not too much later, I think, against the Unified Sewerage Agency. In that lawsuit they identified an incredible number, I think it was well over 10,000 discharge permit violations on the part of USA, and I've heard various stories about how serious these were and ...

R.B.: Yeah, a lot of them, I'm sure - as has happened other places there have been lawsuits, a lot of them aren't very serious. A tenth of a pH point or something.

M.O'R.: Right. They're technical violations, maybe. But I guess it certainly got people's attention. Were you very aware of USA at that point?

R.B.: Well, yeah, they came up in discussions a lot, sometimes because of the construction grant program where we were providing grants to help them build facilities. So I got involved in that angle, too, and I remember a lot of discussions - well, it was sort of too late, but was the discharge point of the waste discharges at the right spot, and was it feasible to, you know, go to the Willamette or the Columbia at this stage.

And also, you know, a lot of discussions about the non-point source component versus the point source component. And I think a major objective of the lawsuit was to make sure attention was paid to the non-point source component, too. We could deal much easier with the point source discharges because we had the permit program, but we all recognized there was a significant non-point source component, and I'm sure USA - one of their ultimate objectives, which I guess was carried out, was to make sure that the non-point source contributors were a party to this whole program, also.

M.O'R.: You mentioned that there was talk of discharging USA's effluent to the Willamette, or to the ...

R.B.: Well, that kind of discussion came up. I don't know how realistic it ever was, given the cost of going to, you know, a different water body, but as I remember there were some discussions about that.

M.O'R.: And did you know Gary Kraemer at all, the head of USA?

R.B.: Well, I don't know him well, but I knew him a little bit. But I don't know him that well.

M.O'R.: Of course, these days USA is actually seen, at least by some people, as having a positive impact on the Tualatin because especially in the summertime they're discharging effluent to the river which is - you know, has lower phosphorus levels, anyway, than I guess the ...

R.B.: What's coming down.

M.O'R.: What's coming down the stream, yeah. And they are responsible for a fairly large percentage of the flow, I think, in the summertime. I mean, maybe 25, 30 percent. That of course came about as a result of the lawsuit, when they had to actually do something about the phosphorus.

I heard from one person that the phosphorus treatment was actually something that should have been installed by USA with their original grants from the federal government under the Clean Water Act. So that almost sounds like it was a tertiary treatment. Was that something that was envisioned or required by the Clean Water Act?

R.B.: Well, not directly. It was implied if you couldn't meet your standards, say a dissolved oxygen standard, without tertiary treatment, you had to do tertiary treatment. For example, all of the major dischargers into the Great Lakes had tertiary treatment: Detroit, Cleveland, Milwaukee and so forth because it was necessary to clean up the Great Lakes.

I think in the case of the Tualatin, I don't know how direct that was or not because we're talking about - we weren't as knowledgeable about nutrient contributions initially as we are today. You know, we were eager to make sure everybody got a grant to build secondary treatment. We didn't have very many tertiary treatment plants early on when we started making these massive construction grants. I don't know how thorough an investigation was made.

You know, we did a lot of the analysis at EPA before we awarded any construction grant, and if we were convinced early on that tertiary treatment was needed, that would have been a requirement before we would have given them the grant. I suspect that's something that came up later.

M.O'R.: Now, you said earlier that you realized the lawsuit was undefendable because you knew what the law said. So I guess you anticipated from the beginning that the lawsuit would be won by the Northwest Environmental Defense Fund or whatever they called themselves?

R.B.: Right.

M.O'R.: And did you then start preparing for that eventuality?

R.B.: Oh, yes. Again, primarily that involved in my case trying to decide how we were going to offer them technical assistance, DEQ technical assistance.

M.O'R.: Well, the lawsuit was won, and USA was required to kick in roughly a million dollars as a settlement for remediation of some of the problems on the Tualatin, and were also required to establish total maximum daily loading levels on the Tualatin. And DEQ, I guess, was under some obligation to do TMDL's for all the streams in Oregon as a result of the lawsuit.

[interruption]

R.B.: Well, anyway, DEQ then had to consider TMDL's for other water bodies, and they went through a priority setting process, which we had to approve or we were involved in, and I think they set up a list for quite a number of streams to do TMDL's on.

M.O'R.: There was, I guess, a million-dollar settlement that USA had to come up with, and there was a point during the settlement of the lawsuit where the Interior Department argued that they should get that money. Do you recall that?

R.B.: No. No, that doesn't sound right. No, because one of the good outgrowths of the lawsuit was this community involvement - you know, USA and the farmers - I don't know, I think there was a citizen group formed or something. But I think that's one of the good results was a cooperative effort among a number of different parties. And that takes money, generally, to orchestrate those kind of things. And so whatever money resulted from the lawsuit, its best use is to promote, you know, that kind of outreach, committees and citizen involvement of the various affected people. I think we always had the philosophy that keeping whatever money

results local and using it to promote education and cooperation is the best use of it, and I think that's what happened down there.

M.O'R.: Right. It is what ultimately happened, but I guess - I think both Jack Churchill and Jack Smith told me that Ed Meece had - I mean, he didn't get personally involved, but some attorneys apparently representing the government had come and made the argument that the settlement should just be paid as a fine to the federal government.

R.B.: That's not necessarily an EPA philosophy, but it may have been a general, you know, White House kind of position, or to reduce the deficit because the money would have gone back into some general pot in the treasury somewhere. So maybe it was a philosophical thing from the White House in terms of how to reduce the deficit.

But no, we always felt at EPA that the money should be kept locally there. Keep citizens involved.

M.O'R.: After the lawsuit was won, what did the EPA do in terms of helping to implement its terms?

R.B.: Well, we gave a lot of technical assistance, and I've probably mentioned the name Bruce Cleland, but he is the primarily technical person here in the Seattle office that got assigned to help them do TMDL's because, you know, they didn't necessarily know how to do it. And as I remember, he worked on that as well as the one involving dioxin in the Columbia River. He has spent a lot of time in Oregon providing technical assistance on TMDL work. And I think a few others at EPA did, also. But that was our primary follow-up, as I remember, was providing technical assistance on how to do it, because we, as I remember, had done a couple in Idaho and whatever, so we were familiar with the technique, and so we helped DEQ get going.

M.O'R.: Were you yourself familiar directly with water quality problems in the Tualatin at that time?

R.B.: Oh, yeah - having swam in Lake Oswego a number of times. [laughs]

Well, I've seen the Tualatin, but more of an impact by seeing what was happening in Lake Oswego.

M.O'R.: What did you see in the lake?

R.B.: Well, there's, you know, more algae growth than you'd like to see, less clarity than you're like to see.

M.O'R.: In terms of the aftermath, then, and the technical assistance that was provided, from your own point of view how well did all of that work out in the end?

R.B.: Well, I think it worked out well. I think, you know, we helped train DEQ staff, as we did train other state's staff, to do TMDL's. I don't know what the current situation is down there, but I assume they maybe do those, or upgrade the ones they've already done. And so I think it worked out well. And I think there probably still is an ongoing citizen involvement down there, which I think is probably a good outgrowth of this, also.

M.O'R.: Yeah, although I think that some of the problems that existed before the lawsuit also continue. I think there's still some frustration on the part of environmentalists relative to how quickly the DEQ is moving to establish the TMDL's, and I believe that it's possible that they might even be in violation of the court order of that lawsuit to keep up with the schedule that they said they would maintain. In fact, NEDC, or whatever it is - the group the Jack Smith was originally heading up - has just filed another lawsuit to force the DEQ to live up to its obligations under the first lawsuit.

R.B.: Well, there may have to be more of that. I think - I know there is a philosophy at EPA now to do less enforcement, be

less assertive with the states, and to me that means that the environmental groups are going to have to file more lawsuits. Like you may have read an environmental group in Oregon filed a lawsuit in the Centralia, Washington power plant, coal-burning power plant. And I applaud that because it's a way to move these things along faster; in this case, to get the Rainier National Park air cleaned up faster.

M.O'R.: This is on the PacifiCorp plant there, the coal-burning one?

R.B.: Yes.

M.O'R.: And the issue there was that they just weren't doing a good enough job on the scrubbers?

R.B.: Sounded to me like they weren't doing anything in terms of sulphur dioxide removal.

M.O'R.: The reason I'm interested in that is I'm also doing a series of interviews for the Historical Society on PacifiCorp, so I know a little bit about the Centralia plant.

Now, you say the EPA has moved to a position of less enforcement. Is that something that happened when you were still there?

R.B.: No. That's something that happened after I left. Less enforcement; it looks to me like they're going back to maybe where they were in the 60's: less enforcement and more technical assistance, providing more technical assistance.

M.O'R.: And what was the impetus for this change, do you think?

R.B.: I don't really know.

M.O'R.: But it's not a change that you necessarily agree with?

R.B.: No.



M.O'R.: And obviously you've continued to be friends with Jack Churchill since the lawsuit days, so apparently his aggressive behavior didn't sour your friendship?

R.B.: No. I take him the way he is. I know his personality pretty well and accept it.

M.O'R.: And you yourself are still involved in the environmental business even though you're retired?

R.B.: Well, I'm active in a couple of Puget Sound environmental groups. In fact, something I'm doing tomorrow is some more volunteer work. EPA - for example, this office doesn't review NPDS discharge permits any longer. We used to insist that DEQ permits meet out standards, but now EPA just leaves it up to the states. And so one of the environmental groups I belong to, we review the discharge permits that the states are proposing to re-issue and, you know, complain if they don't meet what we think are necessary standards. So anyway, I'm involved in that.

M.O'R.: And what are the groups that you're involved in?

R.B.: Well, the Puget Sound Keeper Alliance and the People for Puget Sound. It's Puget Sound related work. Jack has encouraged me to be a one-man crusade against the raw sewage discharge in Victoria, British Columbia, which my last two years at EPA I took on hassling Canada as a daily occupation, and I will get back into that in a few weeks.

M.O'R.: Well, that's an interesting issue. So it's a question of trying to get Canada to do something about a problem that ...

R.B.: Here all the cities on the U.S. side have secondary waste treatment, and Victoria, this tourist Mecca, doesn't have any sewage treatment at all.

M.O'R.: They just dump it straight into the Strait of Juan de Fuca or something?

R.B.: Yes.

M.O'R.: And then that could have an impact in terms of water on the U.S. side?

R.B.: Oh, yes.

M.O'R.: That must be touchy, though?

R.B.: Well, yeah. The Canadians deal with these issues differently than we do, and they don't have as tough of laws as we have.

But I've given a lot of interviews in Canada and have created a lot of annoyance in officials up there, even though as a senior member of EPA we used to meet at least annually with our counterparts in Canada, but they don't like - because they don't do it themselves, they don't like my being interviewed by the *New York Times* and the *Vancouver Sun* and the Vancouver TV stations and complaining about the fact that they aren't doing enough in terms of waste treatment. That's not their style, not their way of doing business. So I know I annoyed them a lot.

M.O'R.: One of the things, I guess, that happened after the Tualatin lawsuit was that Jack Smith got involved in helping them do some of the TMDL work on the Tualatin itself. I think he was hired as a consultant by USA. And of course the USA has gone on to actually get a handle on their phosphate treatment.

There was doubt on the part - at least expressed by USA at the time that they would be able to actually do something about the phosphorus. Was that something that was true in the mid-80's, what to do about phosphorus and ...

R.B.: Well, I think there's a problem - and my memory is a little vague - but see, had they considered phosphorus removal with initial design of the plant, it would have been easier because you can design and activate a sludge plant to remove phosphorus if you design it from the beginning that way. If you're going to do

phosphorus removal after the fact, it's maybe a little more costly in fact having to add an extra step - you know, chemical treatment or whatever, as another step, whereas had it been considered initially in the original design of the plant, it would have been easier, less expensive.

M.O'R.: Easier and cheaper?

R.B.: Yeah.

M.O'R.: But in general, then, the problem of removing nutrients is something that can be tackled?

R.B.: Oh, yeah, the technology is there. There's no doubt about it.

M.O'R.: Well, anything that you can think of that we didn't talk about that would be interesting to discuss vis-a-vis the Tualatin?

R.B.: No. I think we've covered everything. I think it came out well, in the sense that the lawsuit generated this interest in TMDL's. You know, TMDL's have been done in a number of streams in Oregon now. USA is working with others in their area to remove nutrients, and so there was definitely a beneficial outcome in terms of working relationships as well as the water quality of the Tualatin itself.

M.O'R.: It sounds like you're active still in some of these issues. How are you dealing with retirement?

R.B.: Well, you know, enjoying it a lot. The first year of retirement I did some consulting in Taiwan, which was interesting, although I don't necessarily want to do it in a country that has no political will to solve their environmental problems. They certainly have all kinds of money, it's a very wealthy country, but they don't want to spend it on environmental improvement. That was interesting, but again, convinced me I don't want to necessarily do work in a country like that again.

M.O'R.: Okay. Well, I want to thank you very much for the interview today.

R.B.: Okay.

[end of tape]