My name is Lisa Arkin, and I am here with Mary O'Brien. We are here to talk about the city of Eugene, and its place in history in terms of the Toxics Right-to-Know Movement, and Toxics Use Reduction Actions and Policies. I am director of Beyond Toxics, a nonprofit, based here in Eugene, but we work statewide, and I am thrilled to be speaking with Mary because she is the founder of Beyond Toxics, and has a rich and deep history in the Environmental Protection Movement.

Lisa: So, I think we should really begin by asking Mary about how she got started here in the little city of Eugene with taking on the role of toxics in the environment, and some of the policies that became viable here in Eugene that are models for other cities, states and really the whole country.

Mary: Well, it was actually 30 years ago. I had just finished a doctorate in botany down in California, and I came to work for Northwest Coalition for Alternatives to Pesticides (NCAP), because, of course, we were working with forestry issues, and it happened to be the years of aerial herbicides spraying with 245-T, and then when it was suspended by the EPA, 24-D.

Lisa: I just want to ask, "Was that at the same time as the Vietnam War?" "Did it have anything to do with?"

Mary: We were spraying after the Vietnam War, after it was no longer, the Army was no longer using 245-T and 24-D in war, but we were still using it aerially in western Lane County, and in western Oregon on the forestry.

Lisa: And, "Why did they use?" Just as a side, "Why did they use chemicals like that in war, and why were they using them in war again?"

Mary: They were using it for defoliation to expose humans who were our considered enemies to take the leaves off of trees. And they were being used here in western Oregon after clearcutting of conifers to kill any broadleaf trees that might come in and sprout up, and so called compete with the new planted conifer (douglas fir). Now, eventually, they learned this is kind of crazy, because, for instance, one of the broadleaf trees is red alder, which fixes nitrogen, which makes it more possible for the conifers to grow, but at the time, it was we will kill everything in the way of our little conifer seedlings. So, I became involved in this issue of aerial spraying, and it ended-up with a series of court cases, which started with one court case with a lawyer here in Eugene, and it was the first time a judge here in Oregon had ruled that the Forest Service was not admitting, actually, this may have been a BLM case initially, no it was a Forest Service one first, was not admitting that 24-D could cause cancer, and yet in the Federal rules of Environmental Impact Statements, you needed at the time to state what could go wrong with your project whether any project of the Federal agency was doing, and they would not admit that 24-D was associated with cancer, some cancers. So they kept losing in the courts, and eventually, there was a series of five court cases, and finally, the 9th Circuit Court of Appeals said that the Forest Service in Oregon and Washington (Region 6) and Oregon and BLM could not spray one drop of herbicide until they re-did an Environmental Impact Statement that was accurate. So at that point, NCAP was working primarily with the Forest Service, and said let us work together, and one of the alternatives in the new Environmental Impact Statement will be a least-use herbicide alternative. That is, it does not say no herbicides can be used, but try other things first. Show why you would need herbicide and other methods, like planting older conifer seedlings would not work. So they agreed to do

that, because you do not have choose the best alternative, we just wanted them to include that alternative. Well, it turned out they thought that was the best alternative too, and that is what the Forest Service adopted for Oregon and Washington, and ever since then, they have no longer done that kind of aerial spraying that they once did.

Lisa: I just have to ask if that work lead to your highly respected book *Alternative Risk Assessment*. Is that how you got started on offering that.

Mary: Yes. Alternatives to Risk Assessment, because instead of asking the question that risk assessment asks, which is, "How much can we spray and it is okay? Not too many cancers will happen. Not too much birth defects will happen."

Lisa: Or an acceptable rate. As if there ever was such a thing.

Mary: Yes. An acceptable rate. Instead ask, "What is the least amount of an environmentally-risky behavior like, spraying herbicides, or using pesticides in food? What is the least we need to do? What are the alternatives?" So that did turn that around. And then, it is a little hard to remember getting to you and Beyond Toxics. Hyundai was coming to Eugene, and people were alarmed for a number of reasons: it was an industrial complex out in a rural area.

Lisa: In a wetlands.

Mary: It was building in a wetland, and it was going to be releasing toxic chemicals, and we did not know really what ones they were. So, we went to the City Council and said would you require Hyundai to tell what chemicals they would be using. They said no, so we basically went to the streets, got 11,000 signatures on a Toxics Right-to-Know Reporting Law that would require not only Hyundai, but all of the industries that were using toxics within the Eugene city boundaries to report all of the toxics they took in, and which ones left. Kind of like just money accounting. How much money comes into your business, and how much money goes out.

Lisa: That is called mass balancing. It balances what they start with at the beginning of the year, and accounts for where everything has gone up to the end.

Mary: Right. Is it going into the air? How much is going into barrels that are carried off the site? How much is going into sewers? Where is it going? It turned out to be, these industries are very technically competent. Turned out they could do it, and they have been reporting ever since. I think you came in at that time when we were gathering signatures for the Toxics Right-to-Know Law.

Lisa: Yes. The law passed in 1996, and that is actually when I started to get involved.

Mary: That was Citizens for Public Accountability.

Lisa: Right.

Mary: Citizens for Public Accountability was formed because the introduction of this industrial facility had been done without public input. There was not going to be public accountability for the toxics. There was not going to be a public accountability for what if they left in three years.

Lisa: The funding was using public money that would have gone to schools.

Mary: So the idea was there ought to be public accountability for activities that put the community at risk traffic-wise, economic-wise, toxics-wise, whatever. There ought to be public accountability.

Lisa: You know the law you were referring to, or the Ordinance you passed with all those signatures.

Mary: It was not an Ordinance, it was a Constitutional Amendment, because if we had just passed it as an Ordinance, the next City Council could have reversed it.

Lisa: True. So a Constitutional Amendment to the Charter, the City Charter. What is interesting, one of the many interesting things about that, and there is a lot we can talk about, is that it is very much a Human Rights Doctrine, because even though the regulatory agencies like the Department of Environmental Quality or the Lane Regional Air Protection Agency has records about what is being emitted from all of these industries, these records are not the kind of thing that your average person could get access to or even understand. They are highly technical. So by creating this publicly-accessible database of what is going into the air, what is going into the water, what is going into the product, you opened up, your vision Mary was to open up that information for all of the public to have.

Mary: Right. Soon after we passed this law, the State Legislature, and I must say, it was with enabling the then Governor Kitzhaber, they passed a law that said no other community could pass a law like this.

Lisa: That is right. They really clamped down on it.

Mary: I thought, you know, we succeeded in Eugene because clearly people believe they should have the right to know about what toxics are in their community, and because we were not a statewide organization, other communities cannot have that same right. That is when the idea came to me of forming what was originally called Oregon Toxics Alliance.

Lisa: You started on that around the year 1999, year 2000.

Mary: Right. By then I was not so active directly in toxics. I was working for Hells Canyon Preservation Council on Eastern Oregon side on conservation issues in Hells Canyon National Recreation Area. But here was this active, vibrant woman Lisa Arkin in Citizens for Public Accountability who had recently left teaching at the University of Oregon as a dance professor, and I thought I think she could be a good director for this.

Lisa: Well I certainly learned the passion from you, and being a member of the Citizens for Public Accountability was a great training ground. It was a vibrant, smart group of people, and we really took issues on you know, by the horn as they say, and in a very scientific way lead by you, and we did a lot of other projects that mixed public accountability, toxics and environmental protection. I remember when you and I really went to bat to stop gravel mining on prime farmland in the Willamette Valley, and we stopped a series of massive gravel pits that they were just going to tear-up Class 1 soil. We also worked together to make sure that Hyundai, then Hyundai did not expand their factory. They would have doubled their size, and then left the community.

Mary: That is right. And left the community. We knew how volatile that industry is, and how it can pickup and leave a community in the middle of the night essentially. So it is a fortunate thing that more of our wetlands in West Eugene.

Lisa: Were not destroyed, only to be abandoned later with empty buildings on them. Here it is the year 2013, and those buildings are still sitting empty on the wetlands.

Mary: Well, and it is also an interesting little twist. There were certain rules about their building, and one of the things they needed to do was keep sediment out of the water that then flows through Amazon Creek.

Lisa: Willow Creek into Amazon Creek into the Willamette Watershed.

Mary: We found, citizens found that in fact, they were not following the rules of keeping the sediment out. We did settle with them with a lawsuit, and then with the money we were awarded, we bought some headwaters of Amazon Creek for the public.

Lisa: And funded water quality testing programs at Churchill High School, and some of the elementary schools to teach kids about science and water quality. That was great.

Mary: So it is a great history of citizens demanding accountability for toxics and other impacts that take place in the city.

Lisa: And that today we get phone calls and emails from various other places around the country because the city of Eugene still has the model program. As far as I am aware, it is still the only toxics reporting program that is mass balanced-based, which provides a much more accurate, an accurate accounting of really where all these toxins are going. Federal programs such as the EPA Toxics Release Inventory are still based on self-reporting, that the industry basically.

Mary: That does not have to be mass balanced.

Lisa: No. They do not have to account really for how they came up with their numbers.

Mary: And there is a very high threshold of toxics use before you start reporting. Ours is down to.

Lisa: 2,000 pounds. Right? Yes. 2,000 pounds. So when Beyond Toxics recently did the first ever Toxics Tour in Oregon, but we held it out in West Eugene, we compared how the Federal government reports data on the Toxics Release Inventory with the City of Eugene Toxics Right-to-Know, and we found that the information provided at the city-level is far more detailed and exacting and useful to citizens. It is playing a big role in how we are looking at childhood asthma in West Eugene, and correlating emissions from industrial sites with cases of childhood asthma.

Mary: That is ironic given that Governor Kitzhaber who is a physician, allowed, he, it is you know, a kind of behind the scenes story, but he allowed and did not veto, a law passing, allow passing the legislature that said communities other than Eugene could not learn the exact amount of chemicals, and which industries were releasing it, and into what medium, air, water, trucking it off-site, whatever.

Lisa: And of course the industries' excuse that it would cause them to go bankrupt has been proven false, because no industry, business or commercial endeavor in Eugene has closed down because of the Toxics Right-to-Know Law, and actually, they probably, the Fire Marshal who collects that information, finds it immeasurably helpful to safety, public safety knowing which flammable chemicals are on-site, and in what amounts they are on-site. So all that data is collected by the Eugene Fire Marshal.

Mary: So now to come to a little less sanguine place, it is strange that 30 years ago we were working to end aerial spraying of 24-D on Forest Service lands for forestry, and now Beyond Toxics is in the middle of exposing how much aerial spraying of 24-D is going on near Triangle Lake, just 10-15 miles West of Eugene on private forestry lands.

Lisa: That is right. Unfortunately, when the Federal government through the Bureau of Land Management, and the Forest Service was doing the right thing, and reducing or stopping their use of aerial application of these pesticides, the private industry went to work here in Oregon to change laws to make it very difficult, not only to stop the practice, but to learn what they were spraying, where, how much, when. So it is only because recently, so many Oregon rural residents were complaining again, just like when you started, Mary, complaining of health impacts, whether it be miscarriages, or cancers, or extreme chemical sensitivities and rashes, headaches, bloody noses, whatever the ailment, complaints were coming in, which eventually lead citizens to really demand some accountability. It is a convoluted story, but because of some urine testing, which found 24-D and atrazine in 100 percent of the 39 people who were tested. This included kids as young as six and seven, and all the way up to people into their 70's. Because it was found in urine long after any spray had occurred, which means it was either remaining in their body, not being metabolized out, or it was somehow remaining in the environment, and they were getting continual chronic exposures. We do not know yet. But because of that, the EPA, working with our state agencies, the Oregon Health Authority, began an investigation called the Triangle Lake Investigation to look into what was really happening with aerial pesticide and ground pesticide sprays in the forestland in West Lane County. And for the first time ever since these laws were enacted to shield forest companies from having to supply their pesticide application data, Beyond Toxics was able, with the help of residents out there in Triangle Lake get the spray records from our state agencies, which had demanded that the applicators turn it over, we have been mapping it, and looking for

patterns with what is being sprayed, how much is being sprayed, and where it is being sprayed. So this kind of data collection has not happened since the example you gave way back when, when the Federal government started taking a look at it.

Mary: Right. And one high school English teacher in Alsea had learned that 245-T, which was still being sprayed.

Lisa: Which is part of agent orange.

Mary: The other half being 24-D, can cause miscarriages, and two or three of her past students had dropped by, talked with her, they liked her a lot, had mentioned that they had miscarriages. So she walked door-to-door throughout the entire community of Alsea, and found out eight people had had miscarriages, and the great bulk of them, had had those very soon after aerial spraying of 24-D and 245-T. So it was a citizen mapping by going to every house in the community of Alsea. Eventually the EPA came out, and confirmed that those miscarriages had happened in association, close time association with aerial spraying, and then the Lincoln County Health Department had demanded they come back and do more in depth, and they compared Alsea, the miscarriages in Lincoln County with I believe up in Portland, which is an industrial county, and an Eastern Oregon rural county that did not have any aerial spraying, because it did not have any forests, and found that only in where the aerial spraying, only in Lincoln County did you have this bump in the spring of miscarriages, and at that point they suspended on an emergency basis 245-T. Now, 24-D, which is not as potent at producing miscarriages, but has its own problems, nerve problems in your hands and feet, cancers, is now still being sprayed. So, it always is the case, just as President Obama said in his inaugural address today, citizens have to be active.

Lisa: That is right.

Mary: And that is the history of toxics in Eugene, whether it is the aerial spraying of herbicides for forestry, whether it is the release of toxics by Hyundai, whether pesticides are used in public schools and parks and post offices. Eugene got quite early, I wish I could remember what year, the integrated pest management for the schools in Eugene, which was an early activity, and it is kind of interesting because I actually live in Utah now most of the time. I work for Grand Canyon Trust on forest service issues there in Utah, but I just came in through the airport a couple of days ago, because I am here for a conference actually on beavers.

Lisa: Eugene Airport.

Mary: It has an overhead screen, and it is talking about Eugene being a Green City, number five in, I do not know, in some survey, and you think yes, in lots of ways, and no in lots of ways, and that it always takes citizen action, because we should not be dealing with aerial spraying of 24-D 30 years after that was recognized as something that was not wise for the forest service to do, and they do not do it.

Lisa: Now it is just private forestry, and in our state forests as well, and we are working, Beyond Toxics is continuing to work by helping to pass the state law to pretty much ban pesticide use in schools, and it is

not exactly a ban, but it is working on the principal you were discussing, that least toxic alternative. So that law went into effect in July of 2012, which is the strongest law in the nation I do believe to protect school children, teachers and other personnel on school campuses from unnecessary uses of pesticides. School districts have been thrilled by how that law has turned out, and what help has come to them to learn how to manage pests without having to rely on neurotoxins.

Mary: You certainly do not hear the forest service complain they cannot grow trees.

Lisa: Absolutely not.

Mary: Without the herbicides, which they once claimed. But it was interesting when the lawsuits came down, and finally the forest service called Northwest Coalition for Alternatives to Pesticides, the regional office up in Portland (Region 6), they said what do we have to do to not see you in court anymore. We said three things. One: Do not go to Oregon State University for your toxicology, because they keep saying that 24-D is safe, and you keep losing in the courts as a result. Second: Let us write an alternative that says least-use of herbicides. You do not have to choose that alternative, you just have to write it and include it. Thirdly: Why don't you come down for a day with to Northwest Coalition for Alternatives to Pesticides' office, which was in Grower's Market down by the railroad, the train station, and we will give you some ideas on alternatives to use of herbicides. Now, I think they thought, well, we will come down and listen to the Northwest Coalition for Alternatives to Pesticides staff people tell us what we ought to do in our forests, but unbeknownst to them, we knew various district rangers who were already using methods that did not require herbicides. Different several culturalists, different ranger districts did not want to fight the local people about herbicides, and they were, had been quietly using other methods. So when Region 6 staff came down from Portland to Grower's Market, all of the speakers were their own people saying we have already got alternatives. We do not have to be doing this. That is the interesting thing about toxics, there are always alternatives. I remember during the years I was here in Eugene, I served five years on a United Nations committee on methyl bromide, which is a fumigant in the soil that when it is released, like if you have seen plastics over strawberry fields in California, that used to be methyl bromide being fumigated into the soil, when the plastic is lifted, goes up to the ozone, and destroys the ozone layer. Well, this committee, went around the world talking about learning from different countries what their alternatives were. And, our report at the end of the five years, that we studied all over the world, was that already, alternatives existed for 90 percent of the use of methyl bromide. You did not need to used it, and that is, nearly always the case.

Lisa: And now I think what has changed since 30 years ago, is that there is, first of all, a lot more scientific data on the harmful impacts of these chemicals, both to the environment and to human health. I think everyone is pretty aware that these chemicals pass from the mother onto the fetus, and can cause quite a bit of damage as the fetus is developing. Neurological damage, resulting in permanent cognitive impairment. That is sort of, we accept that data now, whereas I think 30 years ago, you know we were still having to prove that.

Mary: Well, and 30 years ago, you could not find the organic food availability that is in Eugene now, with how many stores in Eugene, everything from the original ones like Kiva and Sundance, on up to Market of Choice.

Lisa: Capella's.

Mary: There is just a much greater sense in Eugene that these chemicals can be toxic.

Lisa: But even to the point if you go on the EPA website, in terms of children's health and toxics, they themselves will say the best thing you can do is buy organic food for your children, because one of the primary pathways a kid is exposed to pesticides is through the food that they eat.

Mary: Never mind that when you are growing food organically, the children of the farm workers are not getting, are not living right next to a field where the spray is going on. It is interesting, and on one level how far we have come, and then very clear that Beyond Toxics as an organization is still so much needed, and is such an outlook for citizens who want to take control of their lives and help make their community healthier. How many interns are you working with right now? You are working with a whole class at the University of Oregon.

Lisa: Yes. A whole class, 30 students from the University of Oregon, plus about six or seven interns, and volunteer hours from well-educated and experienced people who have recently retired from some of the agencies we just talked about, whether it is fish and wildlife, or forest service, or DEQ. People who have worked all their lives in the environmental arena, and have found Beyond Toxics as an outlet to use their skills for the further protection of the environment. So that has been quite a boom for us, and enabling us to do these massive mapping projects, and because of the foresight of people like you, and our current board members, we are really linking human rights with environmental protection and toxics reduction. So much of our work is unique in that we are continually tying together the human right to know what is in your air, what is in your water, to be able to have a say so about what is in your air and your water, and what you consume through food or your personal products, and to change policy.

Mary: Well, and I think it is always poignant to realize that the fish cannot take control of their own lives that way. They cannot protect their own community, unless folks like your volunteer who is a retired fish biologist from forest service, she is helping to stand-up for the salmon that are in the Triangle Lake creeks, because the other species cannot speak for themselves. Only citizens can.

Lisa: You are so right, and even though that study came about because of human health impacts, in the course of mapping all these pesticides, we are finding that there are tremendous impacts into these very rare anadromous salmon habitat streams. These are, when I say rare, there is not every place in the world that there is cold water that is just right for mating patterns of the salmon where they can hatch their juvenile salmon, and those salmon can the find their way back to the ocean. I mean, Oregon is blessed in that way, and you are right. Those salmon cannot speak-up for themselves, so it is our studies, and how we are analyzing the data that will eventually help us show that these practices of

using helicopters to distribute pesticides over tens of thousands of acres is, does not make any sense, and it certainly not necessary to have a viable forestry industry. I also wanted to kind of circle back to all the work that you, Mary, did to help Eugene pass the Charter Amendment for citizens' right to know, and toxics right to know.

Mary: It was a great experience gathering the 11,000 signatures, because you would go walk up to someone, and say I have got a, would you put your signature on putting on the ballot a law that would say you get to know what chemicals are being released by industry in the community. It was so interesting, because it took a lot of hours being out on the street by a lot of people, but it was not that hard, because of course, people they would often say, you mean I do not already have that right. I remember one time, it is a great, this guy was walking up the street, and he had on black leather motorcycle pants and a black jacket, and he is kind of a big guy, and he is kind of swaggering up the street, and I said hi, would you like to put your signature on this petition to get this on the ballot to know about the toxics that are being released by the industries in the town. He said yea, I will sign that, and I will sign for my sister too. (Laughter) You know you cannot, you can only sign for yourself. He said I know she would sign it too. I said sorry. (Laughter) So it is kind of 200 percent that people believe they ought to have the right to know about toxics, and they are so interested to learn that, about alternatives, that toxics do not have to be used in the first place.

Lisa: You know I have to bring up another win that showed about alternatives because it was so important to the city of Eugene and the Willamette Valley, and that was the ban on field burning in the Willamette Valley where the farmers were insisting there was no alternative other than burning the field, we were able to show, Beyond Toxics was able to show not only were there great alternatives, they would make them more money. They could rotate crops, and have crops growing all year round, such as meadowfoam, which is used in the cosmetic industry. So it has been a win-win, but the main thing is we were able to show the relationship between the air pollution caused by burning fields, and the increase in acute asthma attacks. Again, bringing it back around to community right to know, what is being done, looking for alternatives, and then showing how human health would be improved, and air pollution, and global warming, and not ruining our ozone layer.

Mary: That is always the case. So few toxics really need to be used.

Lisa: Yup. So I think Eugene is really at the center of a lot of the best work in our nation about reducing toxics, and making sure that our health, and in terms of the future generations, and the health of those who cannot speak for themselves such as the fish, or the birds, or the beavers, that it is all part of one ecosystem.

Mary: And it will always be important to elect city council members and mayors who believe in the ingenuity of humans to come up with alternatives. Alternative transportation, alternatives to toxics, alternative ways of, alternative schools.

Lisa: Alternative products.

Mary: This is a community that fundamentally recognizes that there are better, there are always better alternatives.