Molly Graham: This begins an oral history interview with Nezette Rydell for the NOAA 50<sup>th</sup> Oral History Project. Today's date is October 19, 2021. The interviewer is Molly Graham. It's a remote interview with Nezette in Lafayette, Colorado, and I'm in Scarborough, Maine. Just because this is a remote interview, I want to make sure I have your permission to record on the record.

Nezette Rydell: You do.

MG: Great. Well, I'd love to start at the beginning, if you could tell me where and when you were born?

NR: I was born in San Antonio, Texas, in 1955.

MG: I was curious how your family came to settle in that area, if you could trace your family history, starting on your father's side, perhaps.

NR: My father's side – a little of everything. My father's mother was German, and her family came in the late 1800s through the Port of Galveston to south Texas. My father's grandfather – that's a little bit more of a mystery, but my grandfather was born in a covered wagon in central Texas, and his mother was, at least in part, a Coushatta Indian.

MG: What was the industry your family was in, your grandparents and your parents?

NR: Well, my grandfather was sort of a jack-of-all-trades kind of guy, just worked mostly daywork. I don't know if he ever had a – he was a farmer when he was younger. They still had cattle and milking when my dad was growing up. My grandmother was the oldest girl of thirteen children, came to town to live with an aunt, and, over time, brought many of her brothers and sisters to San Antonio to live, helped them find jobs. She sewed in a sewing factory. She sewed Army uniforms at the Juvenile sewing factory in San Antonio. For that time and place, she did quite well as a working woman, although it was unusual.

MG: About how old was she when she was doing that work?

NR: Well, she was probably in her early twenties, late teens, early twenties when she came to San Antonio. I don't know exactly when she got that job. I know she was working in the '30s. Before the outbreak of the war, they were already sewing uniforms and that kind of stuff. You learn over time there was lots of preparation behind the scenes long before the war came to the US. So I know she was sewing in the '30s, and she worked all through my father's childhood and high school.

MG: What about your mother's side of the family? Where do they hail from?

NR: My mother was an orphan. I don't know a whole lot. I think they probably came, like most Texans that have been in the US for a while – Tennessee to Alabama to Texas – farmers.

MG: And tell me a little bit about your early childhood, your earliest memories.

NR: I grew up in San Antonio. We spent lots of time back and forth with a huge extended family of relatives. My earliest weather memory – I started school in the first grade. There wasn't kindergarten. I started school on maybe the last day of August or maybe the first day after Labor Day that year. In the first week or two, Hurricane Carla made landfall on the Texas coast. It flooded. I remember trees floating down the street. They canceled school, and I cried because I couldn't go to school. [laughter] That I remember.

MG: You were only maybe six years old when Hurricane Carla came through.

NR: Yes, I was six years old when Carla made landfall. I remember my father took us out for every hurricane, every flood. My dad would wake me up to watch it rain at night because the core rains would be heavier at night, and he'd wake me up – "Come watch it rain." We'd go out and see the rivers flooded. We'd go out and drive as far as we could, then walk out and just see this – I mean, South Texas is basically a desert in the tropics. To see that kind of water is pretty fantastic. This is the same person who said, "Why did you want to major in meteorology?" It's like, "Oh, I don't know." [laughter] So I always thought that was kind of funny that that was an interest of his, but he was like, "Why are you interested?" Because you woke me up every night to watch it rain.

MG: It sounds like you had a fascinated reaction to the weather, not necessarily scared or fearful.

NR: Yes, not fearful. Maybe not fearful enough. When I was six, I just remember sitting on the porch and watching. At that time, the drainage system in San Antonio was streets. That's how it was designed to work, and so the house sat up a little bit, and just sitting on the porch and watching boats go down the street with people in them. That was unusual, so you remember it. But I also remember having no idea about physics or weather systems, nothing like that, having no concept, just going, "How can the world do that? How can the atmosphere produce that much water in one place?" So yes, I would say from early on. How does the world work? How does the earth system work?

MG: Do other storms or hurricanes stand out to you from growing up?

NR: Oh, sure. I remember Beulah, 1967. I was in the seventh grade. At that time, one of the strongest hurricanes on record in the US. I remember big storms would produce huge amounts of rain. Oil storage tanks would roll across pastures. The visuals were pretty impactful. They made an impression. Yes.

MG: It sounds very dramatic.

NR: I think every meteorologist has a weather story. Mine was Carla. It was a very dramatic storm, and it hit very close to home, and I got to see it up close and personal. I think every meteorologist has that. Sometimes it's just a snowfall. One fellow told me a story about living in an attic dormer and watching snowflakes fall on the slanted dormer window at night. That has drama in its own way. But he said, "That's why I was [fascinated]. I just was fascinated by

these little things that fell softly out of the sky. What could make that happen?" So I think every meteorologist has something like that that pushed them to ask more questions or to wonder how can the world be this way? How can it happen like this? Where does all the water come from?

MG: Well, I think that's what I'm interested in exploring with you this morning. We've all experienced weather events, but you really formalized this interest and fascination in weather into a career, so I really want to make sure we trace those steps.

NR: Well, I think it was pretty - I often think it was pretty happenstance. I really think there was a lot of serendipity. I don't remember when, but I do remember, at one point, someone telling me – there was never a question that I wasn't going to college. I don't know if you know the NDSL program, the National Defense Student Loan Program, but these were the days of space exploration and science, and beat the Russians to the moon and America's behind. We're behind in science. We weren't, but there was this urge to - all of a sudden, we actually have ways to understand how this earth system works or how physics and mechanics and things work, so let's figure it out. I was smart. That sounds a little self-serving – I was smart enough. If you had some intelligence and some desire to learn – and I loved school – then you were going to college no matter what because in the '50s and '60s, it was possible. There was a big push for math majors and science majors, and things like that. I don't know that my parents ever had a vision for what – I think I told you, their vision of what a career would be was fairly limited. It was limited by their own exposure and experience. They just weren't aware of other things that one could do with one's life. Now I kind of wandered off your question. But I was always going to college. Someone told me: study what you love because, back then, people wanted you to be - if you came from a poor family, well, you need to get a degree in this so you can make money for yourself and your family, so you can take care – there was this real push to do well. I can remember arts was not an option because you weren't going to make any money doing that. You weren't going to be successful in the neighborhood or for your family. So again, I'm not sure. I was always going to college, and it was study something you love. I remember I told my kids that too. My daughter's an English major. She teaches English. She loves that. She explored other majors, and she didn't like it. Well, then don't do it. Do something you love. The job will come. It may not come in the form you envision or expected. You said you're not a scientist, and yet you're working in Fisheries. I don't find that all that odd. But the job comes in whatever form, so study something you love. I can't remember when or where, or from whom I heard that, but it really did stick with me.

MG: In your notes, you said that you had a lot of relatives around that were equally encouraging in terms of your education, so I'm curious who those relatives were and what that dynamic was with your family.

NR: So my father had a brother and sister. My grandmother was the oldest girl of thirteen children. Her husband, my grandfather – these are my father's parents – was the oldest of thirteen children. There was a lot of family around. [laughter] And all of us kids that were in this generation – because all of a sudden it was possible to go to college, it was possible to do these things. People did before that, but it was you basically had to leave your family and scrap get a little bit ahead. But the '50s, the postwar years, really opened that up for my extended family.

So all the kids that were my age, within four or five years, you all are all going to college. There was lots of support and lots of expectations. Expectations were pretty high.

MG: It sounds like both your parents were not college-educated?

NR: My mother had taken some classes, but I think after she was married. I don't think before. My father graduated from high school because there was a war on, and he worked for my grandfather. They had a small flooring company. He couldn't work on a federal job if he didn't have a high school diploma, so they got him out. [laughter] He was not a strong student. But he was a hardworking guy. And he made his way in the world.

MG: And did you have siblings?

NR: I have three sisters. All of us went to college. My father made sure that that happened.

MG: What other aspects of growing up do you remember, like the neighborhood where you lived? You grew up in a really interesting era, where I feel like the world was changing so quickly. You mentioned technology, but also socially and culturally.

NR: Well, sure. San Antonio now is a big city. It was not then. I think that's kind of important. You did not leave your neighborhood. There were no crosstown expressways. The enclave was pretty big. But that's where you lived. You had no need to go out of it. Your family all lived there. I remember the first shopping mall. The first air-conditioned mall in the country was in San Antonio. It was a long way to drive. That was just so out of our experience. We really kind of still – up until about the time I was in high school – lived in that enclave. I think there are some good things about that. Everybody knows you. You know everything that's going on in the neighborhood. There aren't any real surprises. Everybody knows who the good kids and the bad kids are, who needs help, and who's okay. Not to harp on it, but one of the things I am struck with now is I grew up in an age of miracles in medicine, in science, in technology. We had a neighbor who died of diphtheria. She was eight years old. She was a little bit older than me. But I remember when that girl died. She died of diphtheria, which is a disease we vaccinate infants against now all the time. I read an article in a magazine, I think Smithsonian, this week about an outbreak of diphtheria in Nigeria. I was kind of like, "Oh no, not that." So I think, when you watch the things in the world today and people arguing, it's like, they don't remember that. They don't remember before miracles. They didn't see the world before those miracles. I went to school with kids who had polio. I saw what that did. I don't mean like one in the entire school; I mean two or three in every grade. I think medicine comes to mind maybe because of current events, but there was an age of miracles. Most things were possible – this idea that most things were possible. That was sort of a long way around from where you went, but those are the things I take away. We lived in a little house. I read all the time. We used to get Weekly *Reader*. For less than a dollar, for the whole summer, for ten weeks, you got a little weekly – my sister and I lived for the day it came in the mail. I didn't own a book until I was in middle school, probably, when you had to buy – you used to have to send thirty-five cents to school to buy the book that your English class was reading. I remember my parents griping about that. That was a lot of money. "Well, how many more of these are we going to have to buy? But my mother took us to the library every two weeks. I mean every two weeks. So I grew up reading.

I still think that may be one of the most important life skills for anyone on the planet is to be able to learn through reading. That was sort of a long way around what you asked, but those are the things I remember growing up.

MG: You're definitely helping to paint the picture. I'm curious about some of your early education experiences, the schools you attended, and the teachers you had.

NR: So I went to elementary school in the neighborhood where I grew up. At least two and maybe three of my teachers also taught my parents in the same grades, so back to that little enclave thing. We moved across town when I started middle school. I went to high school in a city high school. At one time, it had been a county high school, but the city limits had grown out and encompassed it. High school wasn't – I had a solid high school education, but it wasn't a good high school education. I remember the physics teacher passed away, and they never replaced him. I did not take physics or higher math in high school, which I thought nothing of until I went to college and was like, "Oh my gosh, I don't know anything." That was the late '60s, early '70s. There was a lot of racial strife. It wasn't pleasant. Those aren't the world's best memories.

MG: Did you attend a segregated school?

NR: No. All my schooling was integrated. The high school was huge -4,500, 4,800 students. It was huge. For the time, it was huge.

MG: It does sound big.

NR: It wasn't the best nurturing environment. I had some really good teachers. I had some excellent teachers, the kind who push you to just – "Let's get through the day and just get out of here and do some good in the world." Really good teachers – dedicated.

MG: In your notes, you talk about your love of earth science, and so I was curious when that started and how it grew in the high school years.

NR: Well, I think it started when I was a kid. The earth science textbooks, you have little sections. In the third grade, there was a section on astronomy. It's probably two pages in a science book. But it was the pages with the pretty colors and the striped planets and the moons – dazzling. So that was just great. It was also the age of NASA and discovery, so space science and astronomy were big news and splashed everywhere. Although I'll go back and say I lived in a black-and-white world until I was in high school. We didn't have a color television. We didn't have a television until I was six, so my world – I think those things were fascinating just because you could imagine the colors, even if it was a black-and-white photograph. I would have never thought about this. I was six or seven, and there was a volcanic eruption in Mexico. I don't think it was Popocatepetl. I think it was a different volcano. It was February. I had a little red coat. It snowed, which is very rare in San Antonio. The snow was black with the ash from the volcano. My coat got dirty. [laughter] I remember thinking, "I'm going to get in trouble because my coat's dirty, and it's not my fault." So earth science was just all one big thing. I didn't see

those as separate things – weather, astronomy, volcanos. They were all kind of one thing. I do remember that.

MG: Well, stories like that are so interesting because they show you how the systems are connected that a volcano in another country is impacting a six-year-old in Texas.

NR: Yes. I mean, Mexico isn't that far away. Up until the First World War or after the First World War, south of Corpus Christi, that was still sort of disputed territory. But yes, I'd forgotten about the volcano and the black snow.

MG: You mentioned in your notes you, at one point, wanted to be a volcanologist.

NR: Again, I didn't see these as separate things until I was older. They were just kind of all one thing, how the earth worked. When you're a small child, it's just like it's all one thing, and how does it all work? I never saw them as separate. But all I knew about them was what I read, what I could find in an encyclopedia or a book at the library. The library was always like a scavenger hunt. What can we find today?

MG: We love the library, too.

NR: I think I grew up and still [think] there's not much you can't find in a book somewhere. If you need to know how something works or how to do something – God bless YouTube, but before YouTube, you could find it in a book somewhere.

MG: Definitely. Well, was the moon landing impactful for you? Was that a big moment?

NR: Oh, absolutely. The whole space race. I was one of those kids who used to write to NASA - "Send me everything you can about space." The beauty of this is they would. I would get manila envelopes two or three inches thick full of just stuff. NASA had all this material to send out to people who requested information. I remember one time getting something maybe an inch and a half thick on just how the space suit cooling system worked. But they sent you stuff. Again, there was always a way to find out how something worked. I remember they would bring these old, hulky TVs into the classroom, black and white, and we could watch the launch. I remember listening to John Glenn on his orbital flight. I was in the third grade. I remember the teachers rolling that in. I wasn't much of a mechanically inclined person. I didn't build a telescope, and I didn't build a crystal radio, but I knew people who did. I knew kids who did. Those were the kids I hung out [with]. You could do things. You could learn how to do it. So yes, the space race was huge. You asked about the moon landing. I was actually away on a trip. I was on a Girl Scout trip, actually. They brought a big, hulky, black-and-white television in, and we watched the moon landing. I think it was nighttime where we were. That was a big deal, all those girls watching that. I think we all went outside and looked up. [laughter] But it was part of the [idea that] all things are possible. You couldn't tell any of us that's not possible because there's a way to figure out how to make it possible.

MG: As a group of young girls, did it feel any less possible because these young women were watching men on the moon? Was any part of that experience gendered for you?

NR: It didn't. It didn't. But I think that we were part of that generation. I didn't know or see this about myself growing up. I was the oldest of my immediate cousins, and they were half girls and half boys. I had an old aunt, a great-aunt, who one time said – this was after I was married and had children, and I was probably forty. I remember my kids laughed at her because she said, "Nezette wasn't going to let those boys do nothing she couldn't do." And I was like, "Really? I don't remember that." I just remember being in the group. But from her perspective, maybe it's because I refused to be in the kitchen – I do remember that. "No, I'm going outside." No one told us we couldn't. The first time I remember someone telling me I couldn't do something because I was a girl – I hate to say this – was the high school counselor. She didn't want me to take trigonometry because there were only so many seats, and the boys needed them. I wasn't going to go to college. I was pretty mad about it. I remember my dad went up there, spoke to her, or as they say, had a word. [laughter] So this is going into our senior year, and let me just say I was the valedictorian of the high school class. Why did this woman think I wasn't going to college-? Did I do something that gave her that impression? I don't know where that came from. But I remember being absolutely shocked. I mean, just absolutely floored. It was the first time someone had told me I couldn't do something. Now, I did take the trig class, and I did very well. That was one of those teachers who said, "Do more. Go for it." He was the basketball coach. Because we didn't have a physics teacher, and we didn't have - but you know how that goes. That was the first time I remember that. I made it all the way to my senior year in high school before someone said, "You can't do that," or before I heard someone say [that]. I could be pretty oblivious sometimes.

MG: Well, it sounds like it wouldn't have made a difference.

NR: If the conversation wasn't going my way, I was out of there. [laughter]

MG: Your high school years are taking place with the Vietnam War in the backdrop. I was curious what that looked like from where you were. Was it being talked about in your classes or amongst your peers?

NR: Oh, yes. We all had MIA bracelets. The draft was going on. My friends' older brothers, cousins were going to Vietnam. The boy I went to the senior prom with was drafted. Now, by the time we were – I don't remember what year, maybe '69, the lottery started. But I remember the boys who turned eighteen. Even while they were still in high school, that lottery number was everything. I knew a boy whose lottery number was one, so he did not go to [college]. He was going to go to college, but he didn't. He joined the Air Force. I knew a boy whose number was eleven, and he joined the Air Force. So yeah, older brothers and cousins and things were all going. I worked with a fellow here. He was five years younger than me, but he had older brothers and sisters my age and older. We used to talk about how different our worlds were because his brothers went to Vietnam. That was my group. He was five years removed, and he barely remembers anything because it was over in '72. That was just a huge – we were the poor kids on the poor side of town. We weren't going to college without lots of sacrifice. If your parents thought you were going to get drafted, then, "Well, we're not doing that." That was tough. It hung over every decision. It hung over whether you were going to get married, you're going to do this, you're going to do that because you might have to go to Vietnam, or you were

certainly going to get drafted. Like I said, we were poor kids, and poor kids got drafted. That's just the way it was.

MG: As you were starting to think about the next steps and college, were you distilling your interest in earth science closer to something like meteorology?

NR: Yes. I had an uncle by marriage who'd gone to college, but nobody else had. Maybe some of the more distant cousins, and I remember getting college catalogs. Again, you had to write off, and they came, and they were big, thick books. We would all be perusing these. We didn't know how to go to college. We didn't know what credit hours meant. We didn't know what -"Well, what's a three-hour class? What does that mean?" We had to learn all that. But I remember perusing that. Majors were important. Basically, it was premed, prelaw, or what are you going to teach? I entered as a math major because my father could see that, but I changed my major the middle of the first semester to meteorology because it was what I loved. My uncle had gone to the University of Texas and badly wanted me to go there, to follow him. The rival school was Texas A&M. But that's where the poor kids went, right? It was a land-grant university. And they offered an undergraduate major in meteorology. At that point, it was not a big school like it is now. It was not hard to get in. Did you have a pulse? Okay. It was not difficult to get into school there. It had a big military presence, and teachers and the county extension agent, which was a really great job in my world. That was a big somebody if you were the county extension agent. Those were the kind of people who went to Texas A&M -Engineers. So I went to A&M. I chose A&M because I thought I would be more comfortable there. I wouldn't be quite so out of my depth. I talked to alumni at Big East schools, but in the end, I went to A&M. It was a state school. I had a state scholarship.

MG: Looking back, how do you feel about that decision? Being valedictorian, do you wish you had –?

NR: No. I think it was great. It was a big environment. And I wanted to go to a school that was larger than my high school. And remember, I had mentioned that my high school was fairly large. I kind of wanted to get lost in the world a little bit. I wanted to just kind of blend in the crowd for a little bit. I remember that feeling. People that know me don't believe that. But it was true. I wanted to be in a place where studying was important. I'd been a little wild and free in high school, and A&M was a more conservative environment. I don't mean that in the way that it's politically conservative now. I mean, in the way that just everybody was there on money that was hard to come by, and you better get up and study and go to school and go to class because somebody was doing without for you to be here. Everybody was in the same boat, so there was a little bit of comfort in that. It was far away from home that you didn't go home every weekend, but close enough that, if you needed to, you could. I think it was one of the better decisions I made in my life. I really do. The people I met there figured in my life for decades, for the rest of my life.

MG: They have a great meteorology program.

NR: They do. Horace Byers had been there and started this program. And my major professor was Kenneth Brundidge. He had been a student of Carl Rossby in Chicago. There was an

interesting project at the AMS [American Meteorological Society] a few years ago, where you traced your meteorological genealogy, who your professor was, and who their professor was. Kenneth Brundidge had come from the University of Chicago after Horace Byers to set up the program at A&M. It was a good department. It was a practical department. It was about application because their students historically had been military guys who were going into the Air Force to make forecasts for the Air Force. The school was opened to nonmilitary students in the early '60s, but only in the late '60s did it become common to have nonmilitary students and women. Women were on campus one year before me. But it was a great department. It was very small. There were a handful of women. If anyone gave us a hard time, I was oblivious to it. Now, sometimes professors did – that's a whole thing. We probably don't want to go there, but yes, it existed. It existed. There were professors who chased women around the desk and crap like that. But a different time. They're all dead. [laughter] We're moving on.

MG: You said there was a handful of women. On the faculty or just in the program?

NR: Oh, no. No faculty. [laughter] Silly girl.

MG: [laughter] Just wanted to be sure.

NR: I would tell you that I didn't notice that there were no women on the faculty. Maybe I had no expectations. It's also possible that I just didn't see it. When I first went to work in San Antonio, which was much later, there was a point where – there was actually another woman in the office, but I looked at the office, and everybody looked the same. I would forget that when they looked at me, that wasn't the case. Every so often, that would kind of trip me up. I'd go, "What?" And it was like, "Oh," because you would just kind of forget. Does that make sense?

MG: Yes.

NR: So no, there were no women faculty, but there were a handful of women –the military used to send – they called them one-year wonders. They'd pick out people and send officers to get a degree in meteorology so they could run weather units. Those were sometimes women. There were some pretty powerful women in my group. One had a degree in physics or engineering, and she was getting a master's in meteorology while she was there for the military. We were just kind of like, "Oh, wow." [laughter] She was pretty hard-driving. I didn't really feel like I was special. While I was there, it wasn't a big deal. It wasn't a bigger deal than it was in any other major. There were suddenly a lot of women at A&M, and there were women in the meteorology program.

MG: I'll ask you some more questions about the program, but you had said earlier that Texas A&M was a little bit more conservative, and so it leads me to ask, were there certain traditions or customs at the school? You're much younger than most people I interview, but did you have to dress up for dinner? Were the sexes kept separate? That kind of thing.

NR: I'm kind of laughing because this was an all-male school until the mid-'60s. It was also a school where this was the country school. This was where you went to major in agriculture. There were lots of ag [agriculture] majors. I married one. It was not an elite school in that

respect. It was a high-powered institution. They were turning out – like I said, there are lots of military officers. There are lots of people who went to Texas A&M who had fantastic careers. And they were smart. And they were hardworking people. But they all started out as farmer boys, coming off the farm. There weren't very many of those kinds of things because there just had never been women at all. So when we came, we didn't come out of the white glove, stocking society. There wasn't that class elite kind of thing. Keeping sexes separate? There wasn't much in the way of dorm rules. I lived in a dorm with individual outdoor entrances. There wasn't a lot for women. Why bother? It just didn't occur to anybody that there should be something or that there might want to be something for women, so it didn't exist then. But I don't think we missed it very much. We were busy trying to do what we were supposed to do because, like I said, our job was to get an education. That's what we were doing. Clubs and sororities were just starting to sort of make an appearance about the time I was leaving, but it really was not a big thing then.

MG: The Vietnam War wound down while you were in school.

NR: Well, the war ended in '72. We left Saigon in '72. That was when I was still in high school, so the war did not have much of an impact at A&M. The things I remember – I remember things like the tensions in Israel and Iran. Those were the sort of things that made the news on campus. Again, there was a huge military presence. More than half of any classroom you were in, everybody was in uniform. Those guys wore uniforms every day, so it wasn't like ROTC [Reserve Officers' Training Corps] on another campus. They wore a uniform every day. I remember the Shah of Iran, when that was going on, the Iranian Revolution, leading up to – it didn't happen all at that time, but just protests and things. The protest world was very, very, very small at A&M. It wasn't on our horizon. That's what I meant about conservative, almost cloistered in some ways. That wasn't our world, for good or for ill.

MG: Did you have a roommate all four years?

NR: I did. I had many different roommates. I lived on campus for two years. So I finished A&M in three years. I went year-round. I finished in three years. I had various roommates. I moved off-campus with some friends who had been suitemates or lived behind us, whatever – I'm trying to think – maybe after my second year, that summer because I was staying there. There were five of us, and I stayed in touch with those girls. Another girl and I moved into a house together. We found a house we could rent for ninety dollars, forty-five dollars apiece. [laughter] It was half of a duplex, right? It had no heat. This girl and I have remained close. I retired in September; she retired in December. We gave ourselves a trip to South Africa as a present. We went to South Africa for three weeks on safari. It was a Traveling Aggies trip. They all thought it was so cute that we had been college roommates together, so we just laughed. But that girl and I have remained close all these years. But we talk about those days. I am the person I am today because of her, her support and encouragement. She said at my retirement thing, "We lived in this house with no heat, and Nezette had the south bedroom." [laughter] She had the north bedroom, where it was cold.

MG: It sounds like you met your husband in college.

NR: I met my husband in college. We married right after graduation. There was no hope of me - well, there was not much hope for me to get a job in meteorology- and that's where I really didn't get any help or encouragement to get a job when I graduated. I remember Dr. Brundidge saying, "Well, I thought maybe you'd go to graduate school." But I had a graduate class with him my last semester, and I think he was rethinking his recommendation for graduate school. [laughter] I'd taken this graduate class as an undergraduate and not done all that well. It was a struggle. But I remember him being surprised that I got married or that I was getting married. I think that was the only person. No one was very helpful about getting a job. It was like they just - part of that may have been going back to we all had to teach ourselves how to get a job. How do you do this? If your academic world isn't sponsoring you, that can be very difficult. On the other hand, maybe I didn't push that hard. Maybe I didn't push that hard enough. I don't know. But jobs were basically civil service. The Weather Service was the only game in town, and there were thousands of veterans applying for every civil service job. I didn't have a snowball's chance in hell because I wasn't a veteran. It didn't matter that I was female. I wasn't a veteran. I couldn't get on a register to get hired. There were some [positions]. If you were interested in going to Alaska, they might be able to – they had some hard-to-fill places. Trust me; I've met all those HMTs [hydrometeorological technicians] that went to Alaska. I had one friend, one colleague, who joined the Texas Air National Guard to help her with that. And it did. She was able to get a position. But most people didn't. They went to graduate school. One girl went into academia. She's in California. One became a broadcaster. They all had master's and doctoral degrees. I did not go to grad school at that time. I kind of went, "Can't go to the Weather Service? Oh, well, fine. I'll get married." I don't think I was aware of any other job besides that. I really did not want to go to grad school at that point. I was tired of school.

## MG: What did you do instead?

NR: So I got married. I followed my husband around. I had two children, although, by the time I had the first – I was already in grad school. I was working on an MBA [Master of Business Administration] when my first child was born. But I did not finish my MBA – six hours away from finishing. [laughter]

MG: I have a number of follow-up questions, and I want to understand where you went after getting married. I want to make sure I'm not missing anything from your time in school, the meteorology program, or the different professors you worked under. I interviewed Eddie Bernard a number of years ago. He's maybe a generation ahead of you. But I remember him talking a lot about Professor Robert O. Reid and Gaylord Miller. I don't know if those names are familiar to you. Perhaps they were in a different program?

NR: I don't recognize either of those. Most of my professors had been World War II Air Force guys. I remember Kenneth Brundidge because I think I had him for four or five classes. Dennis Driscoll was the statistics guy. I actually liked his class. It was maybe one of the hardest classes I ever took. But it was a fun class. Statistics was fun. It was basically climatology, right? My radar class – Dr. George Huebner had been there forever. His daughter was in my year. She wasn't a meteorology student, but I knew his daughter. He was very good. Actually, those were the things I remembered when I started working. I remembered things from my radar class

because it was practical, right? Not that they let us touch the radar at A&M. They had a radar, but we couldn't touch it. I'm trying to remember who else. Dr. Runnels, the theoretical meteorology guy, was a model train guy. [laughter] Then physical meteorology was a quite elderly professor. [James R.] Scoggins was there. He was not a professor of mine. I had a friend who was a work-study student who had trouble with him. And nobody cared. We were all on our own. [laughter] I'm sympathetic to women these days, but I'm also like, "Just pick up a stick and hit somebody. They won't bother you again. They really won't. They won't tell anybody why they have a black eye because they're embarrassed." That's a little bit glib, but you had to learn to get by. We had Walter Henry, who taught hundreds of students synoptics. He was good at it. We learned a lot. I was a good synoptician. It was a skill I acquired.

MG: Any former Weather Bureau guys? People who'd worked in the agency before it was NOAA [National Oceanic and Atmospheric Administration].

NR: Walter Henry. I don't know if he actually worked for the bureau or if he was just – back in the postwar 50s, that was a very, almost incestuous environment. You just sort of moved back and forth from one to the other. Certainly, some of the folks that worked for the Weather Bureau became Weather Service people – my first boss was an A&M graduate. My first office in San Antonio, I went up to meet - well, that's a whole other story, but five of the forecasters everyone in that office, except two people, had graduated from Texas A&M. Everyone. Every forecaster. That's sort of how I got into the Weather Service. I don't know if I told you this. I went to a dinner party. A friend of mine who had moved back to San Antonio was having some couples over for dinner. She'd been a meteorology major, [but] never worked. Her college roommate was there and her husband was a lead forecaster in San Antonio. It was like, "I kind of remember you. You know Ken Faulk is in San Antonio and Joe Arrellano is there and Robert Blaha. You should come up and visit." These were all fellow classmates at A&M. So we arranged for a visit, for me to go visit the office and see all my old friends. It turned out there was four or five inches of rain on the day I visited. It was a flash-flood day in San Antonio. I was like, "Maybe I shouldn't go. You guys are busy." It was like, "Oh, come on. The boss never comes in on Saturday." Well, the boss came in on Saturday, and I was analyzing a map. He goes, "Who the hell are you? What are you doing here?" [laughter] It's like, "Well, I just came up to say hi." He goes, "Well, if you're going to draw maps, you better come back and fill out an application." It was strictly happenstance. And I did. It was Billy Crouch. He had worked for the Weather Bureau when it was still the Weather Bureau. That's how I came to go to work for the Weather Service.

MG: I love that story.

NR: "Who the hell are you, and what are you doing?" [laughter]

MG: I still have a couple of questions about your college experience. You mentioned in the survey that you waited until you almost graduated before you told your dad what you were really majoring in. I just was curious, was it really that big of a deal?

NR: No. I don't think it was that big of a deal. But his very first question, when he – because you unroll the parchment, and it says meteorology. He just says, "What are you going to teach

with that?" [laughter] I don't want to make him out to be a bumpkin or something. It just wasn't in his world. I remember thinking to myself – I'm pretty sure I didn't say it out loud, but it was like, "I hope nothing." [laughter] I did not wish to be a teacher, although I did substitute teach for quite a while, but substitute teaching is very different. You get to do all the fun things – talk about volcanology or planets or weather. You don't have to take attendance and make lesson plans, and so it's not teaching, but it's the things I liked about teaching that I got to do.

MG: And how come you sped up your degree and graduated early? What was the reason behind that?

NR: I'm sometimes always in a hurry. But the bigger reason was I had X amount of money. I had another sister in college at the same time. I just basically wanted to be on my own and – yeah, and I didn't want to go home in the summer. I wanted to stay at school. I'd gone home the first summer, and that was not that much fun. I was working during school. I really did feel like I was a drag on the economy at home. I didn't want to go home anymore. It was time to be out of the house.

MG: Were you also focusing on specific areas of meteorology that you were interested in?

NR: I really was not. The degree program at that time was very strictly aligned with the requirements to work in civil service. The Weather Service was the only major hirer of meteorology graduates, so I took those classes. Looking back, I wished I'd taken some other things for fun. I took exactly the number of hours I had to have to graduate. [laughter] Exactly. I wished I'd had a little more fun. I wished I had taken – I didn't take an air pollution meteorology class or a chemical meteorology class. I wish I'd done that – atmospheric chemistry. I did take astronomy classes, and I took Fortran classes. They were taught in the aerospace engineering department then. But I took extra Fortran classes because I liked it. It turned out later on that was kind of useful. [laughter] But I didn't do any kind of specialization. It just really wasn't on my radar that I might want to do that, and there might be reasons. I just was very narrowly focused. There's no blame, but it's just my lack of exposure, my lack of awareness.

MG: And you said you followed your husband around for about twelve years after graduating. What line of work was he in? Were you moving around during this time?

NR: He was an ag major, so we lived on the farm. [laughter] He did a few different things. Like most guys, when you first graduate, you bounce from job to job. But he ran a farming operation for a while. He worked in the oil fields for a while. And then we ended up back in San Antonio. It was kind of stable at that point. And I kept telling him, "When we go back to San Antonio, when we go back to the city and settle down, I'm going to finish my master's." And I didn't. I had a second child. Then I went to this dinner party. It took two years from the time I actually applied to the Weather Service until I got hired. I had a good boss. He was very much aware of diversity. I don't just mean gender, but I meant he was very much dedicated to a well-rounded environment. But still, it took two years to get hired. I'm sure that the Weather Service's larger diversity – the world kind of came to them somehow and said, "Fix this." [laughter] So there was a push to hire people for modernization. Some of them really ought to be female, so I'm sure

that helped some. But I also know that there were four lead forecasters from A&M going, "You should hire her. We know her. You should hire her." So I think that counted for more than anything was that people sat there and went, "We know her, and that's a good hire. You should hire her." So I give them lots of credit.

MG: And you think that the MAR [Modernization and Associated Restructuring] had a little bit to do with that? I know an aspect of the MAR was to diversify the Weather Service workforce?

NR: Yes, and I don't know a whole lot about that because, again, I can be oblivious. [laughter] I only became more attuned later on, after I was working, and people started telling me I couldn't do something. But that was part of it. They were hiring in preparation for this expansion, so they were hiring people to get ready. Then somewhere, somehow – and I don't know the course of that action – some of them had better be female. But there were other forecasters in the office that would tell me I had no business being there. I should be at home with my kids. I mean, to my face, not subtly, not nuanced. [laughter]

MG: How did you handle those situations?

NR: A lot depended on my mood at the moment. But I remember telling one guy – he was quite religious, and I was like, "Well, God gave me a brain. I'm not wasting the gift." That kind of hit him where it's like, "Oh." If God didn't want me to do this, He shouldn't have given me a brain. He could have just made me an automaton. [laughter] Sometimes I'd push back, and sometimes I'd just walk off. A life well lived and a successful career is the best revenge. I was very lucky to have both.

MG: You know what's funny is, in researching for this interview, you have a wiki quotes page, just lots of your lines.

NR: I do? [laughter]

MG: I'm thinking this interview is going to generate so many more.

NR: Why? [laughter]

MG: Who knows?

- NR: You need to send me that.
- MG: I will. I'll send you the link.

NR: I'm sitting here; I'm just like, "Oh my God."

MG: I think it's going to be a lot more populated after this interview. You've said some wonderful lines.

NR: Well, I hope they're good and not mean because I can push back a little hard if I think you're being injurious. [laughter]

MG: No, they're all wonderful and very much professional.

NR: Oh, good. I feel better. I'm still sort of like – I'm turning around, like, "You're kidding. Why would they quote me?" [laughter]

MG: It's basically about being weather-ready.

NR: Oh, yeah, that's my job. [laughter] The weather-ready nation was my job, although I think it's a good approach, too. You need to be ready to live in the world, whether it's a virus or a hurricane. Guys, it's not going to get any easier. Mother Earth's pretty pissed off at all of us. [laughter] As a whole, she's going like, "Hmm, we need to shrug some of this off."

MG: How did you feel about being back in San Antonio?

NR: Good. No, I was happy to be at home. My husband was from the Austin area, so we were back close to both of our families. I came back, and my father's cancer was diagnosed right about the time I moved back, so the blessing is I had six months, nine months with him that I would not have had otherwise, that would not have happened. This was back before – it cost to make a long-distance telephone call, so you didn't call. The world was just very, very different. While that was very, very hard, it was a blessing I got to spend that time with him. Now, his parents were still alive. My grandparents lived to be in their 90s. My grandfather died just short of his hundredth birthday. My father had been their looker-after, and my aunt as well. So it was maybe providential in that respect, I was able to come back and do my duty.

MG: Were all of your sisters out of the house at that point?

NR: Oh, yeah. So background – I have two younger sisters that lived with my mother. And I was fourteen or fifteen when my dad and I left. Then one of my sisters came with us, so I had two younger sisters, but they were already out of school by the time I came back to San Antonio. Now, they're both married. They had children young. My youngest sister married very young. I was the only one that lived in town, in San Antonio.

MG: Then how come it took two years from that dinner party and exciting Saturday to being hired?

NR: Well, remember that whole veterans' preference thing, right, that veterans' preference, which I never have said a bad word against because I believe in civil service. This is the deal we made with veterans. The US made this deal in 1865, and it's a good deal, so I don't fuss about it. But the reality is it presents some obstacles to non-veteran hires. Why did it take two years? Getting on the register. I know there was a job, and I didn't get hired. The boss called me in, and he said, "I couldn't reach down that far." You have some leeway on the list, but he couldn't go down to where I was. I think that's when we filled out my application again. It's like, "Say some more about your experience here. Flesh your application out." That moved me up the list

a little bit. But I think the bigger thing was just that they were hiring so many people getting ready for modernization, or at the beginning of the modernization, that I just finally was where they could reach me on the list. But I still think the biggest thing is people recommending you. I had a friend I quilted with. I was in a little quilt group. I shouldn't say little. They were all very high-powered women. I was the one who stayed at home with the kids. Many of them were officers' wives, and a couple were doctors. These were pretty high-powered women in my little quilt group.

But one, (Marty?), her husband, was the weather commander at Randolph Air Force Base at the time. I remember going in and going, "Marty, I would like to meet your husband." "Okay, why?" "Because I want to apply for this job, and I need a reference, and everybody I know is dead. Everybody from A&M – all my professors are gone. I'd like to meet your husband." He was great. I sort of knew him from saying hi in the house. But he sat down and interviewed me and wrote a reference. I think people willing to do that kind of thing – those five guys going, "We knew her in school. She's hardworking. She's good." And having a boss that was somewhat dedicated to having a diversified workforce – you don't get there just because you had an application. I think that's still true today. When I interviewed people, I would interview three jobs back. If that meant I was talking to your junior high football coach, then I talked to your junior high football coach. I tried to be very careful. I had a lot to choose from. Don't choose carelessly. Does that help?

MG: Yes. I also sort of skipped over something. In the meantime, you had been pursuing your MBA. I was curious what you thought you would do with that, and also where you attended.

NR: Well, I had been working. Before my first child was born, I'd been working at Sam Houston State University in Huntsville, Texas. There are two state institutions in Huntsville. There is this little university, and there is this prison system. That's where everybody worked, at one or the other. I just thought, since I'm there, I might as well take advantage and go to school. There wasn't a whole lot – the big major on campus was criminal justice, and that wasn't for me. So I worked on an MBA. Mostly, it was just because I was there. It was a whole world I knew nothing about, so that made it interesting. I think it paid off a little later because it was pretty clear that I really didn't want to go into business, but it didn't hurt for a scientist to have a business background, especially later on in my career. I never finished, but I learned a lot.

MG: I've found that folks in the Weather Service and other services within NOAA, having an MBA or that business background helped in terms of mobility and leadership roles.

NR: So I did that. Like I said, I never finished. I kind of felt bad about that. But *c'est la vie*. After the kids were in school – the kids were in school before I went to work. But by the time I sort of settled into my job, and I'm looking to advance in this agency, and that's sort of a big decision because everybody thought I'd be the quiet little girl in the corner over there and just work for twenty years. I want to do something. I need my master's degree. I was in San Antonio – nothing close, nothing local, no program. What to do? I was looking at a brand-new remote learning thing nobody had ever heard of. But South Dakota School of Mines had a radar meteorology program. This guy was trying to put it online, and his university was fighting with him. It was all brand-new. But I was really getting serious about doing that. I was looking into

the – the Weather Service had what they called a university assignment program, where they would help pay for your education in return for years of work or whatever. One of the older guys, he was a manager, and he goes, "Nezette, at this point in your career, a master's in meteorology is not what you need. That's not going to help you. You need to finish your business degree." But there was also this brand-new - I was playing with these brand-new toys computers - and there was an online program in computer information systems at Nova Southeastern University, which was like an MBA for technology. So that's what I did. The Weather Service helped. They covered about a third of my education. It took me three or four years. My son was starting high school. I thought it would be good for us to study together, for him to see me having to study because he had to study. I didn't need to be off watching television after dinner while he was hitting the books. I thought that might help. I don't know. Anyway, I loved it. I absolutely loved it. It was perfect. And that made all the difference in the world. I could speak the language of technology of modernization. I saw MICs and regional people being completely snowed by guys trying to sell them something or telling them, "This is the way you have to run this." That was my impetus. It was like, I can do a better job. I'm going to do that.

MG: This was a little bit later in your career?

NR: This was later in my career, about 12 years in. My youngest one was already in high school then. Early in my career, I just worked. [laughter] It took six years for modernization to get me a forecast job, which is a really long time. There was some pressure to move. I actually tried to – it never worked out with my husband to move, but I did my job, and I loved my job. I was good at my job.

MG: Well, I want to dive into your career and the steps and moves along the way, but I'm wondering if we could just take a three-minute break.

NR: Sure. Sure. Yes, we can. I can get some tea.

MG: All right. I'll be right back. I'm going to pause the recording. [Recording paused.]

NR: Okay.

MG: So one thing you put on your notes that I was interested in asking about before we dive into your different roles and positions with the Weather Service was that, at the beginning of your career, you said you remembered advertisements for what sounded like early television meteorology positions.

NR: [laughter] That was when I was still at A&M, learning how to go about looking for a job – there was a job board, right? There was somebody with this crazy idea. You know how they put the little shreds and pull the number off and call it? There's a piece of paper, and then you pull the little tab. It was this crazy idea. They were going to put in a cable channel that was all weather. So we all laughed about that, but that was on the job board. But the other thing – it was in Atlanta. Maybe I even talked to somebody, and maybe this was a year or so after I graduated. My hair started turning gray in high school. I've had gray hair all my life. I talked to someone

in San Antonio about TV work. He was like, "Well, we're going to have to dye your hair. We're going to have to get you a clothes consultant. That was just not my thing. That was not my world. I was totally uncomfortable in that world. The idea that someone would tell me what to wear – even though it probably would have been a huge improvement. Dye my hair? It's like, "No." So that was all kind of funny. There were a couple of private – that was the very beginning of private meteorology firms, not AccuWeather, but Mike Smith's company, WeatherData in Kansas City. There was actually a woman who had set up a company and had some private contracts with baseball. I remember reading an article about that, going, "Wow." But still, it was this huge risk, this huge idea, and [we said], "It'll never work. It'll never go anywhere." So, hindsight.

MG: When did that shift occur, where TV weathermen became fairly ubiquitous?

NR: Well, I'd gone to school with a fellow named David Finfrock. We had this ill-fated graduate class together. The only reason I didn't just absolutely lose my mind was that, on the first test, I made a forty-eight. But David's grade was worse. [laughter] I felt bad for David, but I just remember thinking at least I'm not the worst in the class, and they're all grad students. But David did not – I don't know if he finished his master's, but he went to work for a fellow named Harold Taft in Fort Worth. Harold Taft was the big weather guy for the entire region, right? And we all were like, "TV work? David Finfrock was the smartest guy in the class. TV work?" He had this wonderful career at it. So all sat there and went, "Maybe we should take a different look at this." That shift was just starting. But for the smartest guy in the class to leave school and take a TV job, it did make us all stop and reassess our prejudices. And of course, now it's a big deal. There are lots of weathermen who are quite rightly pillars of their community. They save people's lives every day.

MG: How were you feeling about returning to work and working for the Weather Service at this point in your life?

NR: It was a dream come true. When I went to that dinner party, and when I went to that office to visit – I mean, I was analyzing a map. I hadn't had a colored pencil in my hand in twelve years. I was so excited. The idea that I could actually do this – I don't know what my family thought. I probably never stopped to ask because I was so excited. It was my childhood dream coming true that I was going to work as a weather person, as a meteorologist.

MG: What was your first position title?

NR: Intern. [laughter] Up until just recently, like two years ago, every new hire you hired in as an intern. The other jobs were the non-degree track, and those were what they used to call met techs, meteorological technicians. Those were the guys that came out of the Air Force. They were running the observing world. They created this observational database that the US has. It was a big deal. But if you were in this other track, you were an intern, and you were an intern for two or three or four years until you could bid on a forecaster job. So, I was an intern. And I was a forecaster. I was never a lead forecaster because I became a hydrologist. Our hydrologist very sadly passed away suddenly, and I became the hydrologist, service hydrologist.

MG: This was at the San Antonio weather forecast office?

NR: Yes. So the other thing was the office was less than three miles from my house. My husband's office and my children's school were between our home and the office. We're back to that little enclave idea. Childcare was never easy. But it was much easier because it was all so close together. In the modernization period, the office moved out of town, and so it was about twenty-eight miles [away]. We were out in a cornfield outside of New Braunfels, Texas. It took me about a thirty-five-minute drive. It was all highway miles. It was a pretty easy commute. But it was no longer right next to the house. I'd been with the Weather Service for about six years when the office moved up there.

MG: What was the staff's reaction to the move? Were there personnel changes around this time?

NR: The reaction was the same as it was all over the Weather Service. Some people are happy, and some people are – "I don't want to move. I don't want to drive." I came to [Boulder] twenty-something years later, and the office still had two guys who lived in Denver. They'd never moved when the office moved to Boulder. Those feelings were still in there about moving and not moving. I think a lot of people didn't like it. But over time, new employees that are hired in live closer to the office. We never moved because it was not a bad commute for me, and my husband was in San Antonio, so it was fine. I loved being out in the country – back to the stars and the planets thing. In town, the observing site was on the roof, so you climbed the stairs up to the roof every hour to do the observation. I'd go up early and stay. The stars were out. You were in town, so you saw ten stars. We moved to New Braunfels, and you could see the Milky Way. It was just a dream come true. On meteor shower nights, we'd all come early. We'd put blankets out on the – the office was built up, and so it was a slope, so you put blankets out, and you could lay there and watch the meteor showers. Then the guys would come out, going, "Okay, my shift's over. You're about to start." We'd have to go inside and go to work. [laughter] It just was wonderful to be out in the country. It was wonderful for me. I loved that.

MG: Yes. It sounds like it was wonderful to be around so many like-minded colleagues and friends.

NR: Well, I think that's true. I think that's why we are this little, small agency. We're all the same kind of people. We're all interested. If you're not interested, you don't choose this job. You don't choose meteorology. It chooses you. So yes, like-minded people. My children all thought we were all strange. [laughter] My husband would just go, "Think of every physics student you ever met." We all thought we were perfectly average human beings. [laughter]

MG: Were there any sort of tricky negotiations with the balance of your home and family life with this new position?

NR: Yes. Yes. [laughter] Yes, they were tricky. I don't know if they'd be much less tricky with any other job. Again, remember the time. But yes, after a while, you figure this out. Sometimes my husband would be traveling. My husband worked with a woman I'd gone to high school with. She had a daughter who was going to college. I would hire her daughter to come spend

the night at our house. She was going to night school, so she'd come over after her class. She'd go to bed. She'd get the kids up, get them dressed, and get them off to school. By the time I came home, the house was empty, and I'd go to sleep. After a while, you find ways to do this. But there aren't traditional ways. If you keep trying to force your life into a traditional methodology, it will not work, and you will become frustrated, angry, and the job becomes impossible, so you have to be exceedingly flexible. I say that so calmly, and there were so many - my mother-in-law was great. She would show up on crisis days. How grateful am I that she would do that, that she could do that, that she was close enough? But there would be crises. Dave is due in court, Carl has a fever of 103, and I'm on the mid-shift. She's like, "I'll be there in the morning." That kind of support. But it meant you had to ask people. You had to ask for favors. You had to. Only one time did I ever – and this was before family-friendly sick leave. That did not exist, so the flu was going around. My son had the flu. He was small. And it was the chills, shaking. He had the real flu. David had stayed home with him one day. On my days off, I was home. Then it finally came to where I had to take a half a day off of work. Several of the forecasters went in and raised Cain about that. "See? You just can't have her. She just shouldn't be here." Half a day. And of course, I took annual leave, but it was emergency annual leave, so someone had to pay to cover my shift. After family-friendly sick leave, men could take off and take care of kids, and it was okay. There was no stigma attached. But I only did that one time in my entire career, and I got just holy hell for it. [laughter]

MG: Did you not do it again because you had gotten holy hell for it or because it wasn't necessary?

NR: Oh, it just didn't come up again. [laughter] But everybody faces those kinds of things. But at that time, no man ever thought that was his problem. It just didn't occur to him that it was his problem – times change. But juggling the job, I don't think that was all – I gave a little seminar in the office one time. I actually came back to San Antonio long after I left. The MIC asked me to come back and talk about work-life balance. I think my second slide was, "I really was never very good at this. I'll tell you things that we did, things we didn't do, things that might work, things that didn't work. But first, let me tell you that I don't think I was really very good at balancing the two."

MG: Can I ask what you mean by that? Where do you think you didn't do well?

NR: Well, having said that and on reflection of being much older, some of it may have been expectations. I was not a "good wife who stayed home with the kids". I think my family took the brunt of that. In the long run, I think it was probably good for all of them. My husband was great. Don't get me wrong. He was great. His job was just as important as my job. But my job was just as important as his job. So I think, in the long run, we all learned to be much more flexible, to find flexibility where you initially thought there was none. I also think I chose the job over family a lot of times. I don't know if that's right or wrong, because I speak from my perspective of the '50s, '60s, that I chose the job a lot. I think my kids would tell you I chose the job, which is why you can't talk about my children. [laughter]

MG: Got it. [laughter]

NR: I did the best I could with what I had at the time.

MG: I think, in your notes, you also said there were a number of women that were hired the same year you were but that they didn't last as long.

NR: Well, I probably had a better environment. I don't know a lot, but knowing what I know about those other offices and where they were, I probably had a much more supportive environment. Remember, I had five guys that I went to A&M with, so they already knew me. I wasn't just some girl coming in. And we were "girls." My boss never said "women" – not that he was a bad guy. My office was larger. Back then, there were different sizes of offices, and mine was larger, so I think I had a more supportive office. I certainly had a more supportive boss. That doesn't mean he was an angel with wings that made all the troubles go away. But in the larger picture, I think some of the other women didn't have as much support. People leave for different reasons. One left to get married. One left to do television. Shift work is hard enough. I was thirty-four. They were twenty-two. It's a big difference. I can't imagine dating while you're on a rigid rotating shift. Now I can because people do it all the time, but those things were hard. I was better placed by time and experience to be successful.

MG: And when you say the office you were in, do you mean that there was a smaller office within this forecast office?

NR: No, no. No, so I was in San Antonio, and that was a forecast office. Before modernization, there were these Weather Service Offices, WSOs. And they were radar offices. They took observations, radar observations, and sometimes upper-air balloons. But they didn't create a forecast. In those offices, there were never more than two people working at one time. At night, you were always by yourself. From 4:00 p.m. until 8:00 a.m., you were by yourself. Nobody was very good about giving you the day off so you could go to dinner with your boyfriend, or swapping your shift. There were very rigid rules about the schedule and taking off back then, which was fine. I was okay with it. So there were always at least three people in my office at work. I was never there alone. In those smaller offices, you were always alone, so it was tough. [laughter] Who do you ask questions when you don't know how to do something, when you're confused? So I think to be twenty-two and just out of school would be pretty intimidating.

MG: You came into the Weather Service at a kind of pivotal time. Dick Hallgren had just retired as the director. Joe Friday had come on. Did you get to meet him, because I know that he went around to all the offices?

NR: Yes. I met him several times. He had a field forecast committee that I served on, so I met him in DC. I think people were pretty good about going around. There was a real impetus to try to get you to other offices and other work environments, so I went to visit one of these smaller offices to see what that was like to work there. Our radar was out at Hondo, Texas. I drove out there to see what that was like. They really did try to get us to go visit offices that had different programs to see what kind of job you might eventually want to have. They were very encouraging of participation in professional organizations, AMS and later NWA [National Weather Association]. Joe Friday was a good guy. Dick Hallgren's a good guy. They were

having to make decisions about modernization that were beyond their technical – I don't mean expertise, but it just wasn't part of our world. I walked in my first day, and there's this little – well, it was actually pretty big – there was a little computer, CRT [cathode ray tube] screen sitting there. I walked in and said, "Oh, what's that?" And the boss said, "Oh, that's the MAPSO [Microcomputer-Aided Paperless Surface Observation] computer." I was like, "But what is it?" And you could see him – I had never seen a PC before. I'd never seen a small computer before. I'd seen big mainframes and minicomputers that took up half a room. But I had never seen a desktop – I'd never in my life seen one. You could just see his face going, "Oh, no, she doesn't know anything." [laughter] I remember that. I learned. I grabbed every user manual, every self-taught computer class. It was like I'm going to learn this stuff. The big computers still used Fortran. I had taken six hours, extra hours, of Fortran, so it's like I could talk that language. Yes, it was the change. It took me about six or seven years to realize that people were being asked to make decisions about things they didn't know anything about and how unfair, in some ways, that was and how difficult it was to get it right. The workforce suffered when they didn't get it right.

MG: This was the initial year of the MAR as well, when you came on, in 1988?

NR: Right, '88. Yes.

MG: What were you told about that and how it might impact you?

NR: Well, you had the old guys telling you their perspective, which was dismal. "You won't have a job in a year." One guy says, "You won't have a job a year from now. I'm just telling you. You're not going to be here a year from now." And I was like, "Watch me. I will learn whatever I have to learn in whatever time I have to learn it. Watch me." I saw him again when I first came to Boulder and reminded him that he had told me that. "Remember when you told me - I was a GS5, and you guaranteed me I would not be there in a year, that my job was going to disappear, they were going to fire everybody." So you had that. On the agency's part, I think they really did an excellent job. They really tried hard to communicate what was going on. There were lots of newsletters and posters about this new piece of equipment or that development. There was a lot of information about where it was going. You're dealing with congressional funding, so maybe you got two years of funding, five years for the radar program, so it never went according to plan. Timelines slipped. We made big jokes about that. The radar was ten years late coming into - it was an 88D, and it was ['94] before we fielded the first one, right? Stuff like that – that it took so long. But they really did a good job of conveying a vision about how the agency was going to evolve and how that vision changed over time with the realities. A lot of people might disagree with that. But I really do think, if you are honest and take your hurt feelings out of the equation and your own disappointments out of the equation and there were many – that the agency probably did as good a job as it was possible to do, given that we'd never seen anything like this before. No one had ever seen anything like this before. God, that sounded very pro-agency. I probably never sounded so party-line in my whole life.

MG: I'm seeing a few more wiki quotes added to your page. [laughter] I wanted to ask about some of the emerging technologies during this time. ASOS [Automated Surface Observing

Systems] and NEXRAD [Next Generation Weather Radar] were being deployed at the beginning of this era.

NR: Well, the ASOS replaced the physical taking of the observation, which was my job for those first five years and was the job of these veteran employees that were not meteorologists by degree, so those were hard feelings. They were doing away with those jobs. They created other jobs for these people. But if you're the guy in the coal mine, and they're shutting down your coal mine, you don't really believe they're going to give you another job. That was a lot of hurt and hard feelings. I was somewhat skeptical of the technology. Could it really do what I was doing every hour? Could it really measure the rainfall, the wind? You know it's possible, but was it as good? Was it reliable? So there were questions about that. But I was also fascinated by the fact that people thought they could build it and they could do it. And they did. Frankly, it does a better job than I think it's gotten credit for over time. The radar I was fascinated by. That's why I said that that radar class in meteorology, all that theoretical radar stuff, man, that all came flooding back. I remember sitting down and writing out the Probert-Jones equation, going like, "God, I can't believe I remember that." I was fascinated. I loved the radar. I loved the physical mechanics of the radar. I loved the code that made it work. The original code was in OS-32. Now, there's a language a lot of people have never and will never hear of. But I just loved it. I just sort of dove into that. I was never the best radar operator in the office. I was good, but I wasn't anywhere near the best. But I loved working in – I worked in the background of the radar, moving the data back and forth. That was the part I worked on, and I just loved it. It was at the time I was learning to code and learning how systems – not how a computer worked, but how a system works, and networks and stuff. It was wonderful. I embraced it. [laughter]

MG: Were you learning more about satellite technology as well?

NR: I used to tell people, "In my next life, I want to be a satellite meteorologist." Gary Ellrod was a satellite meteorologist in DC. One time, he said, "You should do this." I was like, "I know, but I'm invested over here now." It was a world I was fascinated by but wasn't deeply involved in until it got to the point of moving the data into AWIPS [Advanced Weather Interactive Processing System]. Again, in the back end, I was all over that, moving those datasets around, parsing them, pulling data out of the larger dataset, and stuff. That was fantastic. Yes. The new satellite program, I'm just in awe. It's like I wanted to work ten more years so I could work with the GOES-16 satellites because, oh my gosh, they're just fantastic. Who could have dreamed? I saw TIROS-1 launched and pictures from that that came in my little NASA packet. Now you have sixteen raw images every three minutes. It's just mind boggling. There's so much data in them.

MG: It's really exciting. I'm thinking back to your childhood and the space race and how all of this really came to your front steps. I don't sense that same experience today, that these exciting things are going on, but perhaps the public isn't as excited by or engaged with them.

NR: Well, first of all, you're tying together things I never really thought about being tied together until I just said, "In my NASA packet, there was a black-and-white satellite image." Duh. [laughter] Wow. I sometimes think that. But I also think there are probably exciting things

going on that we don't recognize as being exciting. But twenty years down the road, somebody's going to be sitting in your chair interviewing someone else and tying that connection. Well, is it the same? I don't know. So much of our discovery – and I would say realization versus discovery – is derived. It's derived from something that was already there. When my kids were little, they had to interview someone who had lived in San Antonio for over fifty years. My grandfather had so much company that month because every kid from both my kids' classes came because he was old and he had been living in the same house for seventy years. One of the questions they asked him was, what's the most important invention or discovery of your lifetime? I'm thinking telephone, airplanes – derived technologies. My grandfather said the internal combustion engine, which is an original technology. It was invented before he was born, but that's okay. But you talk about being - he was able to distill that down to a primacy that I couldn't, from my perspective. I'm looking at derived technologies. So he saw that. He flew in a jet airplane the year before he died when he was ninety-eight years old. He flew twice, in a barnstormer in 1913 and a jet airplane. So you're talking about excitement for me. That existed for him too. I think it probably does or will exist for another generation, but we may not realize it until much after the fact. It might be something like ion engines, ion propulsion. That's really not a derived technology. That's a new technology, right? Space sails. I'm trying to think of what might be a completely new invention. I don't think it's impossible. But I don't think we see it right now because there's so much to derive from what already exists. There are only a few people on the planet that are actually working on brandnew, and it may be because we don't have as much time to think as we used to. I used to have all summer with my little Weekly Reader to think, to contemplate. There's a lot of philosophy in there. [laughter] Sorry.

MG: No, I love these kinds of conversations. Were you getting a sense of how increased computer power could change the work you were doing and the impact of that?

NR: Yes. I think everyone was. AWIPS was a big deal. When I went to the Olympics – I worked at the Summer Olympics in '96, and so we were there in '95 and '96. That was in part a proof of concept for integrated technology, for integrated meteorological applications. The size of the datasets – I started working in the background; I didn't realize how big, how much data was in there. I think, as we all made that realization, it was like, the sky's the limit. People will be doing this. We go from, like I said, one satellite image every six hours, and now you have sixteen every three minutes. They can do things with all that data and create derived products and stuff. But the size of the data fields – and I think over time, as we began to understand – and I still can't wrap my head around a terabyte. I don't know how much that is. It's just really, really big. But as we begin to deal with those kinds of numbers, I think all our minds just went *poof*, and now there's no limit. You don't limit yourself because you've seen the world burst past these limits over and over and over. Yes, I think we were all aware, especially in the early days. We couldn't exactly see where it was going, but we knew it was going somewhere. I don't think I'm alone in that. [laughter]

MG: Right. You eventually got into hydrology, and so I was just curious how that happened and if it was impacted at all by the Year of Water at the National Weather Service in 1993.

NR: We had a crusty old service hydrologist. His name was John Patton. Part of my job was to gather the river observations that came in, and we had to put them into the system and stuff, and I did that. Like everything else I did, it was like, "Well, why? But why? And why? And what's behind this? And how does this little machine work?" I'd go out in the field with him and look at the equipment and a bubbler in a stream and stuff, so I learned about that. But the biggest thing was that I was learning Unix. I was learning the language of these new computers. I was working to help him translate the database that mostly existed in his head but partially on paper into the AWIPS system, into the hydrology database. There was a lot of data. Unfortunately, he died at the beginning of that process very suddenly. It was devastating for the office. I wasn't the world's best field hydrologist. I gave it my best shot. But I also wasn't afraid to ask somebody for help, call up the USGS [United States Geological Survey] and go, "I'm going to be out at this gauge. Do you want to meet me out here?" -But mostly, I did the coding work and the data entry and set up the applications. That's what I did. But that's how I got into hydrology. I hadn't taken any hydrology in college. But the USDA [United States Department of Agriculture] used to have classes for federal employees. They still do. They had a three-hour hydrology class, Introduction to Hydrology. A lot of us took it so we could figure out what John was doing back there in that room. [laughter] Well, I took a second class because there's not enough torture in taking one. It was a lot more about theory and routing flows down rivers. It was real hydrology, and it was hard. I understood what the data had to support, so that's how I became the hydrologist, again, a little bit by happenstance. It just happened, and I had some skills that were useful in the moment.

MG: When would that have been when you moved into that position?

NR: 2000. But I really don't remember much about the Year of Water. I remember things about the Johnstown flood. There was a lot of PR [public relations] about flooding. In 1998, we had a huge five-hundred-year flood in Central Texas. It was just horrific, terrible. People died. Things destroyed. It was horrible. We were not computerized at that point. That was before we got AWIPS. In fact, they were putting AWIPS into the office that week. We were working strictly on PCs with backup applications trying to do the forecast, and we were – I remember the ETA model forecasting six inches of rain, and we all thought something was wrong because it never forecasted that much rain before. Now, we had thirty-eight inches, but it was forecasting six, which was a huge amount. I think the forecaster put something in the discussion about a tremendous amount of rain this weekend. It's going to be very [dangerous] No one could imagine, right? So that happened. John died maybe in '99. I became the hydrologist in 2000. And in 2002, we had another five-hundred-year flood, every bit as deadly as the first one. That's when I remember thinking - we were computerized; the data was in a computer, and it was shareable with people around the world. But we still weren't very good at conveying flood information. It was before we had graphics. Nobody knew how to do it, so it was a disaster that was an impetus for development.

MG: The first flood was in 1998. Was that the Red River flood or something more local?

NR: No, it was in the Guadalupe River Basin. Well, we had seven river basins in the San Antonio area, and six of them were in flood, so it was all of South Texas. There were pictures on

television in China of houses floating down the river that a friend of mine sent me. It was a big flood.

MG: What was the 2002 flood?

NR: Same. It was the same rivers, the same area. There were some differences. The 2002 flood, the core of the rains was shifted a few miles. But the same rivers were in flood. The same things flooded. The same houses got swept away. It was pretty radical. Actually, the 2002 flood was worse. There were lots of things that taught me some really hard lessons in that flood. John used to always complain that he couldn't get some of the partners to issue a flood warning too early because they were scared it wouldn't verify, and I ran into the same thing. I learned a lot about what you have to tell somebody to get them to go along with your recommendation. Somebody wrote one time, "Your job is to give recommendations. You do the best job you can with what you have. And you hand them the recommendation. And if they don't take your advice, that's not your problem." But in the weather world, we think it's still our problem. If people die, we still think we didn't do something, didn't do enough. You won't find a meteorologist that doesn't believe that – a Weather Service meteorologist. You won't find one that doesn't think somehow they should have done more, so we sort of wear all of that on our shoulders. It's tough. But nobody can envision it. Those things had never flooded before. Canvon Dam spilled over the spillway for the first time. Medina Dam came close to spilling and scouring. The sheriff was on the dam at Medina. I'm saying, "You need to back off the dam." He goes, "If the line goes out, you know I went over." He wasn't going to leave that dam. He was going to tell me exactly where that water was every minute. That's the kind of people you work with. That's the environment you work in. But nobody could imagine that ever happening.

MG: You mentioned involvement in a couple of Olympics in the '90s. Can you say what that was again?

NR: In 1996, the Summer Olympics were in Atlanta, Georgia. The Weather Service was providing weather support for the venues, for the individual sports venues, and for the crowds. They did that for the Salt Lake City Winter Olympics as well. Now, I don't know that they do it anymore. It's kind of a public-private [issue]. But that was a proof of concept for early AWIPS, for integrated data sets in forecasting, for meso and even microscale modeling in operational forecasting. IBM was running these very fine-scale, one kilometer – now we think one kilometer - oh, we run a quarter-kilometer now. But one-kilometer models started every hour, started every two hours, rerun it, ensemble - the whole idea of ensembling models was brand new, and then the integrated technologies on the platform. The Weather Service put together a team. They put out a note going, "If you want to apply, apply." And I thought - well, I'd done a gliding championship. The World Gliding Championships were in Uvalde, Texas in 9'3 or '94. They had experts coming in to do the forecasting, but they wanted a local person from the forecast office. They needed three people. It was three weeks. They had two people. And it's like, "Well, can I do it?" And my boss was like, "I don't know why not?" They're like, "She's just an intern." He's like, "She's local. She's lived here all her life. She knows the weather." So anyway, I did that. That was my first exposure to international competition. But also, all those teams have weather people on them. The US team, the captain was a captain who taught at

the Air Force Academy. He told me, "I make all of my students take glider rides, so they can understand the power of convection in the atmosphere." So I did that. I had done that, right, on a fluke because nobody else applied. If anyone else had applied, they would have taken them over me. They didn't apply, so I got to go. So a couple of years later, they opened applications for the Olympic support jobs. And I got one of the spots. I don't know how. There were maybe twenty of us. There were like six people in Savannah with the marine stuff. I actually wanted to go to Savannah because we did marine forecasting at that time in San Antonio. But I didn't. It was the opportunity of a lifetime – very fine mesoscale meteorology, point forecasting, because you were forecasting for this swimming pool right here. We didn't care about out there. But it was also yes-no forecasting. Yes, it's going to rain. No, it's not going to rain. It was very challenging, but it taught me – going back to the technology, it was like, we really can do this. John Nielsen-Gammon at A&M says, "You cannot forecast a thirty-degree wind window." I was like, "No, but I can forecast sixty, and then I can get close to thirty." If you forecast sixty, you can make yourself get closer to thirty degrees. You can work your way into that. That's what the Olympics wanted. For these differing venues, they needed very, very specific forecasts. We proved that we could do it with some skill. [laughter] We weren't perfect. But if you make yourself do something, you can develop skills, so that's what I learned. We went to Atlanta the summer before to get introduced to the technology and the people. Then, the next year, we were out there for seven or eight weeks. It was great. [laughter] The most talented forecasters you can imagine. Again, I wasn't that talented. I think I was a jack-of-all-trades meteorologist. Probably, they sat there and went, "We need two women?" I don't know. I don't care. I got to go do this, and I contributed value. It was just a fantastic experience.

MG: We said "Weather-Ready" earlier, and you said that was my job. I was curious where that came from and when it was coined.

NR: That's a Louis Uccellini phrase. Louis defined his directorship at the Weather Service as developing a Weather-Ready Nation. Now there are weather-ready nations. The WMO [World Meteorological Organization] has adopted this concept. The Weather-Ready Nation thing really had some – like, you know, there's something to this. It sort of embodied things we were already doing and things that we wanted to do – talk to people, emergency managers, businesses. So it was freeing for a lot of us. I found it rather easy to adopt. It encompassed all the things that I thought were important and that I thought were the reasons I was working in civil service. I have a duty to the American people. I took an oath to support the Constitution and provide weather information for the American people, for the American taxpayer. I get paid out of the guy who's mowing the lawns' taxes. You better be delivering his money's worth. I thought weather-ready nation resonated with me, and it was easy to adopt that and umbrella it over the things that we were doing and that we thought we ought to be doing. And I think a lot of people felt that way with it. It really was a description of what we ought to be doing as civil servants.

MG: Around this time in your career, in 2003, you had an opportunity to work in Hawaii. Before we go there, I want to check in about a couple of things. First, I want to make sure there's nothing we're missing from your time in San Antonio.

NR: I was there for sixteen years. It was a long time. It was a career, right? They were great. I think we've covered most of the things. They were good people. Everyone taught me a lot. It

was a good place to have begun my career. It prepared me well for the things that came after. But there was an awful lot of luck of just being in the right place at the right time.

MG: How are you doing for time? We've been talking for a little over two hours.

NR: I'm okay if you're okay. If you want to take a break, but I'm okay. I have nothing else. Today, there's nothing on my calendar.

MG: Okay, good.

NR: Not that it's ever very crowded. [laughter] Retirement's been a real different ballgame for me. I'm used to having twenty things before noon, so it's different. But I'm good if you're good.

MG: I'm good.

NR: I can talk for hours.

MG: Well, how did this opportunity come up in Hawaii? How did your family feel about the move, things like that?

NR: So how it came up – there are some interesting aspects, perhaps, to that. I was happy. I could have worked in San Antonio for the rest of my life. I would have been happy staying there for the rest of my life. My husband and I had separated very amicably. But the idea that I was now by myself and I have to think about things like retirement, which I've never really thought about before, right? I have to think about those kinds of things and take more of a longer view of my career. And I was becoming ambitious. I had finished my master's. I had worked in the hydrology program. I had worked in these sports competitions. I used to tell my kids – we had always talked about moving. My husband couldn't move. But I'd tell the kids, "When the youngest one graduates from high school, I'm going to think about bidding on a job somewhere. Maybe I'll go to DC; maybe I'll do this." But I needed to think about career advancement, although I could have retired in my position and done just fine. But I needed to think about career advancement and what I wanted to do. About six weeks before the Hawaii job was open, I was visiting with some friends. I was like, "Well, there's a job coming up in Hawaii, but I don't want that. I don't want to do that." This friend of mine just stopped me and goes, "Why wouldn't you want to go to Hawaii?" I stopped in my tracks and went, "I don't have a good answer to that. Therefore, I should consider this, right?" It was a management position. It was the warning coordination meteorologist [WCM]. You were the warning coordination meteorologist for the entire Pacific Ocean. Everything that has to do with commerce in the Pacific comes through Honolulu. Everything that has to do with aviation in the Pacific comes through Honolulu. Everything that has to do with marine comes through Honolulu. The Air Force is there. The Navy is there. The Army is there. It's just this nexus of cultures and business and economy. And it's a WMO region. It's a United Nations region. It's like, "Why wouldn't I?" You're going to gain more experience in this job in more programs than you ever would anywhere else at one time, right? And it was; it was like two fire hoses going full-time all the time. But it was great. I worked with the WMO. I worked with the United Nations. I went

to United Nations conferences on gender risk in disaster. Where else do you get to -? We made recommendations to the council. So, where do you get to have that kind of voice and influence? I really didn't know all that when I went, but it didn't take me very long to figure it out. Plus, it was just - the boss who was interviewing me was like, "How do you feel about living in a multicultural environment?" I was like, "Well, I live in a multicultural environment, not any of your multiculturals, but I grew up in places that are parts of Mexico. I live in this environment -German, Catholic, Lutheran, Mexican, Anglo." Then, I go to Hawaii and, like I said, all different. So it came up, and I went. The fellow before me was ill and later died, and a position opened up. It was during a time when people didn't want to move very much, and there weren't very many applicants. I used to think, "Why?" When I left, I worked very hard to get good applicants on the panel because it's the most fantastic job you could imagine, in my humble opinion. So I went for three and a half years, and I loved every minute of it. I didn't think I'd come back. It was just amazing. World-class climate in that building right outside of my office. World-class surfing, marine, oceanography right there. You were in that milieu every day. Every day, you were talking to somebody at the university [and] NOAA. It's just this huge NOAA presence. People in Hawaii didn't say, "Oh, you work for the Weather Service." They said, "Oh, you work for NOAA." That was maybe my big first experience, my first exposure to big NOAA. I loved it. Do you know what spot weather forecasts are?

MG: No.

NR: They're part of the fire world. If there's a fire, you do a spot forecast for right there, kind of like the Olympics, for the weather right there. We did spot forecasts for monk seal pup births because they're endangered; they're incredibly rare. They're aumakua. They're ancestors of the Hawaiians, so they're very important. These first-time mothers had had their pups way down the beach, and you didn't want to move them if you didn't have to, but if the waves were going to get high, you needed to pull them up so they wouldn't die. So we'd do spot work. Agency people would say, "You can't do [that.] Spot forecasts are for fires." "And for monk seal pup births." So I would go out to NOAA agencies and go, "How can we help you?" "How can you help us? Can you get us weather observations near these fishing buoys? Can you get us some regular information? I just loved that environment. So that was Hawaii. [laughter]

MG: It's interesting that you would say people recognized NOAA before the Weather Service. Because when I tell people that I'm a contractor for NOAA, their eyes cross. Then I'll say, "You know, the Weather Service." They'll go, "Oh, yes." It's the opposite.

NR: I was going to say, in Maine, I would have thought Fisheries. But Fisheries also means regulatory law, and that's not popular. I had a friend. Her name was Mary. She worked at Fisheries in Hawaii. On Fridays, we'd all go to Gordon Biersch on the pier, at Pier One, and have a beer or whatever. She was like, "You shouldn't sit with me." I was like, "Well, why not?" She goes, "Because I work for law enforcement, and those guys won't talk to you. The Hawaiian guys you're trying to work with, they're not going to talk to you if they see you with me." And she was serious because Fisheries – they love NOAA in Hawaii, but not the people with law enforcement. But NOAA was pretty well thought of in Hawaii. They had a big coastal marine debris program. Of course, we had the tsunami program. But lots of boats. NOAA was, for the most part, popular.

MG: It sounds like this must have been a period of personal growth for you being on your own and away from San Antonio.

NR: Oh, yes. It was a management job. My daughter doesn't like to fly, and it's a nine-hour flight from Houston. My son would come every time I'd send him a ticket. He loved it. But yes, for the first time in my life, in my entire life, I lived alone. Remember, I talked about that enclave and all these cousins and everything? I wasn't related to anybody on the island. [laughter] I didn't know anybody. The first couple I met, they sort of adopted me into their – he was a NGS [National Geodetic Survey] guy, so Ocean Service guy. He and his wife took me in and introduced me to people. He was from the islands. He had gone to school there, Punahou. Then through them, I met a family, a Hawaiian family, that literally adopted me into their family, and I became part of their ohana. We're still in touch. It was wonderful. Yes, it was great personal growth, but also tremendous - for the first time, I had a voice. My voice was informed, and people paid attention to what was said. I will credit my boss, the MIC there. He was great. My boss turned around and said, "She speaks for me when she talks." I thought what faith he had to do that, but also the entrée it gave me to really develop my own management style, my own thinking about things. I would think something, and I could be turned around on it. If somebody brought me enough data, I would go, "That's a better approach." You get some respect for being able to change your mind a little bit, I think. Yes, it was tremendous, tremendous growth, and just a wonderful experience to live somewhere else, to live out of your comfort zone, and to know you can do it. My boss would come in and go, "Can you go to Hong Kong tomorrow?" "Yeah. I got a credit card and a toothbrush." [laughter] Just crazy stuff that had not appeared in my little world before.

MG: That's incredible. I think, during this time, you mentioned doing some tsunami readiness. That seemed to be a focus of the Weather Service at that time.

NR: Well, it was. Hawaii and Alaska and California and Oregon, but Hawaii, first they bombed the place in '41. And then, in '46, the tsunami wipes out tremendous amounts of infrastructure, killed a hundred and forty, a hundred and eight -a lot of people. But these people have lived through disaster. You don't have to convince them much about preparation. They're all over that because you can't evacuate to Oklahoma, and no one's going to come to your rescue. You're on an island three thousand miles away. So that was good. The tsunami program was really getting a push then. There was a big earthquake while I was there. Fortunately, it did not trigger a tsunami. But there were lots of tsunami alerts while I was there. The Weather Service, for the first time, began relaying tsunami warnings and putting them on their brand-new web pages. When I got to Hawaii, most people did not have web access. By the time I left, most people did, so it was a real technology change again. The tsunami program was – and still is pretty daunting. I think there have been some great people responsible for that. There's an international tsunami office there, Laura Kong and her colleagues. There was also a woman, and I am embarrassed to not remember her name, but she was a survivor of the '46 tsunami in Hilo, and she ran a museum on the Big Island. She and I did always agree, but that woman was passionate about what she was doing, and she got things done. I think, during the last big earthquake and tsunami warning, the islands really were ready - there was nobody in the water. There was nobody on the street. People were up in the buildings, off the streets. They really have this down now because it's

such a huge thing, and there's nowhere to go, and there's no help to come. There's a military unit and they have a single mission. Every military unit has a primary mission, secondary missions. They have one: prime power. Their mission is power, restoration of power, and the airport and power at the port because both of those things are in the flood zone. A tsunami is going to take them out, just like it did in 1946, just like it did in 1960 with the Chilean earthquake. The only way that you're going to get help to Hawaii is on a boat that comes from California. I was just always in such admiration of those people. They knew their mission, and nothing got in the way of their mission. There were some real lessons about staying singlefocused. It was very instructive to work with them. Anyway, that was Hawaii and tsunamis.

MG: Well, what else stands out to you about your time in Hawaii and your role there?

NR: Part of it was technology. In the office, I would say, technology-based because they were probably a few years behind, simply because when I first got there, ninety-seven percent of people did not have access to the internet at home. We didn't have smartphones then. So the infrastructure was being built in place – so technology in the office. The Hawaii office had not modernized in the same way that mainland offices had. A lot of that was because the AWIPS contractor didn't - they hardwired so many things that wouldn't work in Hawaii. They would hardwire identifiers in the climate program that we didn't use, so you couldn't just plug in the data. You had to rebuild the application. So over the years, they had done a lot of that homegrown. My mission, along with another manager, was to - now this stuff works in AWIPS and works for Hawaii, let's transition and let them do the upkeep. Why are we spending all these resources on upkeep? And that was even storage, so archiving. NCDC [National Climatic Data Center] wasn't archiving Hawaiian products because, before, they couldn't. Well, now they can, so why are we printing room-fulls of boxes of paper? Let's transition to the NCDC. That was huge. I got a grant. Maybe it was an NCDC grant. It was a data-preservation thing. I got a grant to digitize the Central Pacific hurricane archives because they were really just two file cabinets in a back room. We had all this data for eighty degrees of ocean that didn't exist anywhere else in the world. So I got a grant. I hired a student. We digitized this data. The technology thing was big. The other thing, I think, was the vulnerability. I would go to state meetings, and they would talk about vulnerabilities. It's like, "Well, okay, I know how to handle this hurricane. I'm learning how to handle the tsunami thing." Then they would talk about the volcano blowing up. I was like, "I got nothing for that. I don't know how to handle that." I remember a meeting where someone spoke, "In the next five years, there will be an explosive eruption at Halema'uma'u at Kilauea. She's an oozer. She'd been oozing since '83. It's like, "Five years." The volcano is swelling and expanding. I do remember coming away from that meeting going, "Wow." I remember thinking, "I will never be depressed or intimidated by anyone else's difficulties ever again because if you can go to that meeting and walk out smiling." But I just remember that feeling, going, "I have to conquer this." For me, the way to do that is to educate yourself, learn about this, and what you can do. But those were the two things I took away from Hawaii, besides all the just sheer fun things to do. I spent a day - see, you're making me tie these things together. I spent a day with a woman from the Center for the Study of Active Volcanoes. She was a geologist. She was a volcanologist. I flew to the Big Island. I stayed in the - there's a CCC [Civilian Conservation Corps] camp there, little wooden cabins with stained glass windows and stone fireplaces. It's fantastic. She picked me up before dawn, and we were out until about ten o'clock that night. We walked on lava that was two million years old and lava

that was two minutes old. She took me all over the island. It was fantastic. Where else could you do something like that? So that was just kind of a personal thing, but it was like, "Oh, wow."

MG: You were there for a few years. How were you thinking about your next career steps? Did you want to stay?

NR: I did want to stay. My children weren't all that happy with me being - my daughter especially. But I also wanted to be an MIC. I wanted to be making the decisions. I know enough to do this, and I can do it well enough, I think." I'd learned a lot about people. Hawaii was really about people. There were forty-three – it's the largest forecast office in the nation, forty-three people, three ITs, contractors. I'd never worked with contractors before, so I learned how that process works. It's like, "I can do this, and I think I have something to contribute. Based on my experiences in San Antonio and Hawaii, I believe I can contribute to the running of a forecast office." So I came back to Brownsville, South Texas. I had three hurricanes. I learned that you really can't go home again. [laughter]-again, I thought I would stay there, but circumstances changed, and I didn't stay. But I was home, and I was in my Spanish-speaking world, which I had loved, and I missed, and I still miss to this day. I could go to Mexico every day if I wanted to. It was a good world. I didn't think Boulder would come open in my lifetime. I didn't think Larry Mooney, the MIC, would retire. When he did, it was kind of like, "I think I'd like to go to Boulder." Don't hear this wrong. We provided value every day to the taxpayers in South Texas, in deep South Texas, in the Rio Grande Valley, every day. We gave them their money's worth every day. We had three landfalling hurricanes. One went inland less than ten miles from the office. We brought down the shutters. We camped in the office – the whole bit. We provided value every day. I knew that, in Boulder, I could work with OAR [Oceanic and Atmospheric Research] and CU [University of Colorado Boulder]. We ended up working with NORAD [North American Aerospace Defense Command] and Peterson Air Force Base. I worked with the group at Fort Logan, the Army group whose mission is to come in behind the hurricanes for civilian support. I loved big NOAA. I came back to big NOAA, purposefully looking for - I want to have that voice again because I think that's important. I don't know that I should be the person making all these decisions, but I think I should be at the table talking about them. I think I had the knowledge to do that, so I came back to Boulder. It was great. [laughter]

MG: Just to clarify the timeline, when did you leave Hawaii? How long were you in Brownsville?

NR: So I was in Hawaii for three and a half years. When did I leave Hawaii? I left in April of '07, I think. Yes. Hurricane Dean was '07. I left in April of '07. I came to Boulder in July of 2010. I was delayed by a tropical storm and had to have my house reappraised before I could leave. So I came, and I moved into my house on Labor Day. [There was a] big wildfire that same weekend. At that time, the largest fire in Colorado, which has been surpassed many times in the last ten years. But that was my – "oh my God, wildfire." I had employees who were impacted, and the building was impacted. I didn't even have Internet service in my house, so I had my phone as a hotspot. NOAA wants me to report on my employees. I'm like, "I don't even know where they live. [laughter] But I learned real fast. That was my introduction – to move into your house, go to Walmart to buy a shower curtain, and the end of the world is right

there in smoke and flames. "Oh my God, what have I done?" [laughter] I've gone from earthquakes and volcanoes to firestorms. It was pretty radical.

MG: Well, can you just first say a little bit about your experience as MIC in Brownsville? What was that like? Did it help shape your later career?

NR: Sure. So Brownsville is a very young office. Another old MIC said, "Your job is to hire them in, train them up, and ship them out." We had people who had careers there, but we had a lot of new hires that came through. In Hawaii, I learned how to work with people because I had to learn multiple cultures, multiple perspectives. We gave tours in Mandarin Chinese. I had to learn a lot about people very quickly, that I didn't know anything about their background. Right? In Brownsville, the same way. Younger employees. Lots to learn about weather forecasting and about federal jobs. A lot of them didn't understand things about their employment. What I learned very quickly was a lot of people didn't have a good understanding of what their benefits were working for the federal government. There was a lot of coaching, training, educating, and helping people – helping people learn to write their resumé better so that they got a look for the job they were bidding on - so we did a lot of that. The technology was in pretty good shape, but no one had really pushed it. I don't think we ran a single application on AWIPS that didn't come with the package. It was kind of like, "We can probably leverage more of this data." We weren't doing a lot with the Gulf of Mexico data from drilling platforms. It's like, "We can ingest some of this observation data. We can do some stuff with this." So we started doing more of that, and that was fun. But some of it was just people development, program development, and learning to deal with both hiring and handling retirements, which I had never done before. In Hawaii, I hired the students. I managed them. But I didn't deal with - well, nobody retired, either. [laughter] Nobody retires in Hawaii; you just work forever. I really got dumped into the administrative end of workforce management and realized how much I need to learn, so I built up this knowledge database of stuff I probably should have learned before but never did, and then tried to put that to good use. We dealt with illness, serious illness, and so what kind of benefits, what kind of programs are available. How do you help an office deal with that when someone they love, know, and have worked with for twenty years is sick or something like that? So I learned those kinds of things. I learned even more to work on people skills. That prepared me for coming up here. When you come to Boulder – they care about the science. They are world-class. Most of these guys are the tops in what they do. That doesn't make them very good federal administrators. [laughter] Except perhaps for budgeting and research. I brought something to the table. I worked very hard to integrate what they did. In Hawaii, we had visitors every day. It was always a congressional junket, right? Somebody was touring the office every day. Somebody was in the office every day. In Boulder, it was the same way. Somebody was touring the building every day. I wanted to be able to talk about what Global Systems Lab was doing and how that benefitted the Weather Service, what Global Monitoring was doing and how we use that data, and the Physical Sciences Labs' research into rainfall production and hail production and how we use that data in the forecast, and what data we had that they used in their research. So we talked about that integrated environment with visitors. I got pretty good at that part because I like to talk and tell a story. So we saw lots of staff. Then, later on, we would actually see senators and congressmen, and they would bring them to the office because, as a group, our whole NOAA building had developed this ability to talk, to tell stories in concert, and support each other. I always like, "I'm where the payback to

taxpayers happens. They do all this research, and I'm where the taxpayer gets his return on investment. He gets a forecast or a warning that saves his life. I'm the ROI [return on investment." That was a lot for that one question you asked.

MG: No, this is all good. Were you with the weather forecast office there or the GSL?

NR: No, I was the MIC at the weather forecast office. But we're in this big NOAA building. We do these tours, and there are tour stops. The Weather Service is a tour stop. We have sixteen thousand visitors plus middle school kids in Boulder County that come through the building every year. There's a big education piece. People come to Boulder because they can visit more than one NOAA agency at a time, so we have a person who handles all that. The current one, she's just wonderful, a talented person. She's great. [laughter] She would package these tours. If the congressman was interested in flood control, well, then he'd go to these three places. If he was interested in fires, he'd go to these three places. GSL was right down the hall. There are a couple of them that kind of would live in my office. They actually have sat at the forecast desk and trained as forecasters. They worked on side-by-side experiments over the last thirty years. They'd be talking at the water cooler or in the kitchen, and they'd go, "You know what we really need? If we just knew what the water vapor data was in this place, we could do a better forecast for this and such." The GSL guy is like, "I've got that data." Then they'd figure out a way to import it or bring it in, and then, later on, build a tool that would give you some sort - that would look at all these terabytes and terabytes of model data and make up some kind of an application that would give you little alerts and go, "Today you should look at this. Today you should think about fire. Today you should think about" - and they would build tools. And that happens by understanding what the other person does. That happens by just spending time with them. I used to call those water-cooler conversations. We had the big fire in 2010. This guy comes in, and he says, "I've taken all the fire data from all our locally-run models, and I've thrown it up on a web page, and here it is." He sat down next to the forecaster. "So here's the one-kilometer HRRR [High-Resolution Rapid Refresh], and here's this model and that model." Our forecasters would sit there and use that. It was wind data. Mind you, biggest fire, cameras everywhere. It was a big deal. People [were] calling. I'm watching this back and forth. It turned into this big story that I would tell when people came to visit because he didn't just have his model. He had everybody's model. He had the guy across the hall that he's competing with grants for, but he put his model on this webpage, so this forecaster could look at all the stuff in one [place]. The forecaster is saying, "Well, that one is just garbage. This one started out bad, but it's really gotten better. This one is really on right now." This fire went on for about a week, I think, and those researchers got real-time feedback from a forecaster who was using their data. The tagline to the story was it can only happen in a building like this because they won't let us set fires for an experiment. It's why you have to have NOAA buildings that integrate multiple agencies, because if those guys hadn't seen each other going to the bathroom and the water fountain every day for the last ten years, he wouldn't have come into our office and said, "Here, I can do this for you." So that kind of collaboration cannot be designed in the moment. It has to happen - so that's why you have a building like the Skaggs Building in Boulder. Thus endeth the lesson for the day. [laughter] That's why you have Boulder. That's why you have Norman, Oklahoma. That's why you have PMEL [Pacific Marine Environmental Laboratory] in Seattle. That's why you have these places, so they can just sort of cook and simmer, and then, all of a sudden, greatness bursts forth.

MG: This era that you're in Boulder seems like the time where the work of the MAR really came home to roost, in a way. You've developed all these technologies, and now you're able to use them to improve forecasts.

NR: I hope so. I hope so. I think so. I would say not that it just came to fruition because I think it's come to fruition over and over again. But I showed up at the right time in the right place with a set of skills that nobody knew would be important, and they became important because this is what was happening. So this place has been great. In the '50s, you couldn't get anybody to come to Boulder. That's another story we tell on the tour. People didn't want to come here. It was nowhere. The City of Boulder gave NOAA this hundred acres. The university was here, and they had a nascent engineering space program. Nobody wanted to come out here. It was Siberia. It was cold. Maybe you could ski. It was the 1950s. Now, people will sell their relatives to get a job in Boulder, right? It's a big deal. But there had been this heyday of the modernization, and Boulder was in the middle of that, the Boulder forecast office. Sideby-side experiments. We actually built the first AWIPS here. We were on the forefront, the cutting, the bleeding edge of that. Then things kind of quietened down. After modernization, everybody kind of went, "Ah, we'll get a break." So when I first came in 2010, I sat and visited with each employee - "Well, what do you like about Boulder? What do you want to see?" Every single one of them said they wanted to get that feeling back of being on the leading edge. And I go, "Okay, fine." [laughter] So we did seek out some of those partnerships again. Some of them were still in place, but we sought out more, and we built more. I don't know if you've ever seen the HRRR smoke maps. You see them a lot – out in the West, we see them a lot. But you should be seeing them. I'll send you a link to them if you like. But this HRRR model, H-R-R-R model, was developed in the building. We were very much involved in using it, testing it, and experimenting with it. Then, a few years later, Ravan Ahmadov was developing applications for smoke dispersal and composition and transport – smoke transport. He said, "I'd like to set up an ingest mechanism so you guys can ingest my model output and just see." Well, it's fantastic. It tells you where the smoke is, near the ground, a thousand feet, six thousand, integrated in the column. I had him come to workshops and talk to the forecasters. And then they'd look at it and go, "This is really pretty good stuff." The HRRR's winds were always pretty good, so this was pretty good. Now it's used everywhere. Last year and this year, with the fires, you see it all over on web pages. That's where these smoke maps come from. You can see if it's going to be smoky, or if it is, and then you can see where it's going to be tomorrow. We sought out partnerships to bring that feeling of innovation back. It can be exhausting, but it's also pretty you go home at the end of the day feeling like you've paid the taxpayer back. You made it worth your salary, so it was pretty good.

MG: Were there other weather events that stand out from your time in Boulder?

NR: Well, the big fire, that was – because I'd never had to deal with a fire that size before. Then we had the big floods in 2013. That was huge. In 1976, I had just graduated from college when the first Big Thompson Canyon flood happened. This, 2013, was a nightmare revisiting for everybody. It was pretty radical. I was actually TDY'd [temporary duty travel] out of the office at the time, so that was crazy trying to do things. I got home pretty quick, but that was horrific. People in the building – my staff had water in their houses, a few of them, basements and stuff, but people in the building lost their homes. It was devastating. A flood is a gift that keeps on giving, so there was a service assessment out of Weather Service headquarters. The state was fantastic to work with. We had a couple of blizzard events that were mighty. [laughter] Really mighty. We had students, Hollings Scholars. That was fun. The one I thought was the least promising actually has several published papers, and it was a COMET [Cooperative Program for Operational Meteorology, Education and Training] project. Tells you how much I know. I was like, "Oh, I don't know about that, but yeah, go ahead and try." It turned into this big research project. In fact, I think his professor is on the new radar program development. We've had more fires, bigger. It's just that the first one made such an impression; I never got over it. [laughter] Blizzard. We had blizzards that have shut down the airport and shut down town and shut down power and stuff. I hate to think I'm missing something, but I probably am. I probably am missing some really important weather event, and somebody's going to go, "I can't believe she didn't mention it."

MG: I understand. It's not hard to schedule a follow-up or to plug these things into the transcript later.

NR: I'll go back and look at the top ten weather events of the decade and go, "Oh God, I can't believe I didn't mention this." [laughter]

MG: Well, I wanted to ask, was there anything on your radar during the last decade about larger movements and changes in the National Weather Service?

NR: Well, sure. Dr. Uccellini, I think he's announced his retirement. When he became director, I was a little bit skeptical because he's a real NCEP [National Centers for Environmental Prediction] guy. He's a modeler. He and his staff and his deputies just turned out to be fantastic. I ended up really liking working for him. The two things he did is this Weather-Ready Nation, this idea of weather readiness. But that was also wrapped up in - he really addressed longstanding budget issues for the Weather Service. In all of my career, this idea of year-to-year budgeting and, in September, waiting for the budget to be approved, and they didn't approve the budget, and there was a continuing resolution. That creates all kinds of administrative work that costs money. I used to just pull my hair out going, "The American people would be appalled at what we're spending on administrative tasks because you didn't pass the budget. It's money that could be spent so much better on real stuff. Then, later on, I would be concerned about – the MIC always knows which employee is having difficulties, who's living paycheck to paycheck, who's got some serious issues at home. When they'd talk about a shutdown and people would go crazy, I would just bleed for these people because I didn't know how to help them. Right? Even though, in the end, it's all going to be okay, for the six weeks in between, they're going to die a thousand times because they're worried about paying their mortgage or they're worried about paying their kids' tuition or whatever. So, Louis reorganized the structure of the Weather Service. All that was wrapped up in budgeting. I think it's been a good thing. Is it perfect? I don't know. It's better than it was before. So those two things – the continued evolution of technology. I cannot believe how good the HRRR model is, the high-resolution rapid refresh. I couldn't believe how good it was in 2014 when they implemented it, and I can't believe how good it is now. I just sit there and go, "I'm not going to have a job next year. It's too good." It's not perfect. But damn, it's pretty good. I think Louis had a lot to do with getting that model

implemented because other things he wanted to do were based on having a model you could rely on at that resolution at that time, so having that big vision to be able to really go, "We have to do these three things in order that these six things will happen so that those twenty-five things can happen." I think that that's a brain different from mine that can see that. I can see the first step and half the second one. I think you're lucky to get a person with that kind of vision. I was in a good place to be in that milieu, quite frankly, to hear the discussions I wouldn't have otherwise heard. That's what I took away from Boulder. That's what I came for, and that's what I took away.

MG: What went into your decision to retire? And can you talk about it in terms of the timing and the pandemic and what that's all looked like?

NR: I had always planned to retire at sixty-five, and I ended up retiring at sixty-four because my finance guy told me I could. Let's blame a government inaction. We had the shutdown under the [Donald] Trump administration, and it went on forever. My people missed two paychecks. Now, they got paid pretty soon after, like maybe a day or two after the second one was due. But that means mortgages didn't get paid. That means school tuitions didn't get paid. The government shutdown is a fallacy. It doesn't shut down. Seventy percent of us keep working. You don't pay us. But we keep working. We keep coming to work every day. So there are lots of emotional things that get tied up in that. But this went on for so long. It was in such a bad political climate. Two paychecks is a lot to not have hit your bank account. They may not know it, but everybody knows somebody who can't go two paychecks without getting paid. Bad stuff happens in their lives. I was railing about it because it was just so senseless. I had an appointment with my financial advisor. I said, "Man, I don't know if I can work another year." I said, "I can't do another shutdown." He said, "Well, you always told me you could work another year standing on your head." And I said, "I can. I can work. I can't do another shutdown." He just looked at me. He said, "You don't have to." I was like, "I'm going to retire." I wanted to retire in a warm month because a friend of mine said you should retire in a warm month. You can go outside and enjoy it. If you retire in December, there's six inches of snow out there, and it's twenty below. So my birthday is at the end of August. "I'm going to retire on the 31<sup>st</sup> of August." I loved the first six months. And then the pandemic. [laughter] And somebody said, "You should have kept working." I would have hated not being able to see my employees and talk to them every day. Because I used to manage by walking around, right? I managed by walking around my office talking, listening, and watching. I think it was the right time. Unfortunately, it's like, "What are you doing now that you're retired?" "Well, right now, nothing." Things here are still fairly shut down. That's thirty-two years. That was a good career. I'm so fortunate to have done the things I did.

MG: Yes. It's been so fun to hear all about them. This has been a delight.

NR: It was like, "Oh, I haven't got much to say." And then I started talking, and there's a lot. I got to do some pretty cool [stuff]. [laughter]

MG: Well, what do you think the coolest thing is or what do you think about when you say that?

NR: Oh, I don't know that there's any single one. The soaring championships, that was pretty cool, maybe because it was the first thing like that that I'd ever done. But I got to go up in a sailplane. I got to go up in a glider. I got to go up in a tow plane towing a glider. But I got to talk to meteorologists from all over the world. I worked for a while with the AMS [American Meteorological Society] Board on School and Popular Education. That was fun. You just meet people from all over that care –what did you say earlier? – care about the same things you do. I did and still do some leadership development, coaching, and counseling. I like that. I like to see people advance in their – I don't want to say advance as much as grow – grow in their career. But I know how lucky I was. There's an old football coach in Texas that used to say there's no such thing as luck. Luck is where preparation meets opportunity. I made damn sure to be prepared. I did that part. The rest just happened. Yes, it was a good career.

MG: Well, Nezette, this has been an interview worth waiting for. I have had so much fun the last couple of hours. It's been such a treat to talk with you.

NR: I feel like I probably bored you to tears. I'm so sorry. [laughter]

MG: Not at all. It's one of those days I can't believe I get paid to do what I do. This has been so much fun to speak with you.

NR: Well, I hope you can make something out of all that mess. [laughter]

MG: Well, I actually can't wait to transcribe this because it's going to be so fun to revisit all your stories.

NR: Yeah. I'm not a good storyteller at connecting lots of threads. But it was a good career. Thank you for leading me through that revisit. That was good. [laughter]

MG: Well, what happens now is, unless there's anything else, we'll wrap up. I want to thank you for the time you spent with me today. It will take a little while to get the transcript to you.

NR: I'm not going anywhere. [laughter] I had a trip planned to New Zealand in a couple of months. Of course, it's been canceled. It's kind of like, "Am I ever going to get out of my kitchen again?" It has to get better someday, but maybe not. Maybe not. Maybe the earth is shrugging and going, "We need to depopulate by a quarter or something." I don't know. I'm not going anywhere. I'll be here. If you need anything from me, let me know, whatever I need to do to help you.

MG: Okay. Again, it may take some time to finish the transcript, but I will follow up if I have any more questions.

NR: That's fine. Take care. Have a good rest of your day.

MG: All right. Thank you so much. So nice to finally meet you.

NR: Bye-bye.

MG: Bye-bye.

-----END OF INTERVIEW------

Reviewed by Molly Graham 1/28/2022 Reviewed by Nezette Rydell 2/22/2022 Reviewed by Molly Graham 3/5/2025