

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
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IN PARTNERSHIP WITH NOAA HERITAGE AND THE NATIONAL WEATHER
SERVICE

AN INTERVIEW WITH DAVID VALLEE
FOR THE
NOAA 50TH ORAL HISTORY PROJECT

INTERVIEW CONDUCTED BY
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Molly Graham: This is an oral history interview with David Vallee for the NOAA 50th Oral History Project. The interview is taking place on November 8, 2019, in Scarborough, Maine, and the interviewer is Molly Graham. We will start at the beginning. Could you say when and where you were born?

David Vallee: Sure. I was born in Providence, Rhode Island, on March 15, 1967.

MG: I'm curious about your family history and how each side came to settle in that area.

DV: Both my parents were born in the area, but their parents were not. I'm trying to think. On my dad's side, I believe both his mother and father were actually born in this country, but their parents migrated from Italy, from various parts of Italy. My father's father, the Vallee side of the family, actually came out of Canada, French Canadian.

MG: Is that where the relationship to Rudy Vallee comes from?

DV: Correct, and all of the musical lineage in our family, which still blows me away to this day. So, staying with my father's side of the family, his dad was a drummer, and he taught my father drums. Then on that side of the family, I believe there were cousins or uncles that were all musicians, trumpet, and so on. That's the connection. It was that side of the family that was related to Rudy Vallee, who was a bandleader and who made his life here in Maine.

MG: Do you know what the relationship to your father was? Was he a great uncle, a distant cousin?

DV: I don't. I don't. It was not a direct relationship. It was indirect. So it's not like he's like a great, great, great uncle. I think it's more through the cousins' route than it is a direct correlation. But, the whole family had music in it from even before him.

MG: Did he get to know Rudy at all?

DV: No. I don't believe my — I know my father did not. My grandfather, that I'm not sure of. I don't know.

MG: Rudy Vallee had a reputation for being pretty temperamental.

DV: [laughter] Yes, so I've read. But, no, I don't know how much interaction my grandfather had with him or with that side of the family for that matter.

MG: What part of the family is French or Italian?

DV: Let's see. On my father's side, my grandmother is one hundred percent Italian. Zarlenga was her maiden name, Inez Zarlenga. She's the classic — used to pinch the cheeks and the whole bit. So my grandfather, my dad's father, was the French side of the family. On my mother's side, there's Granzi and Ruggieri. Again, I believe both my grandmother and

grandfather were born in this country. Their parents migrated over from Italy, as well. I believe Brooklyn is where they originated from.

MG: Your mother's family was musical, as well.

DV: My grandmother was a pianist, as well as my mother. Yes, I believe my grandmother taught my mother piano.

MG: Can you talk about the kind of music both families were playing?

DV: Oh, the easy one – let's start on my mother's side; it was classical. My mother was classically trained, as was her mother on piano. It was fun growing up because when I had to do solos, my mother would be able to accompany me because I was trained classically as well. Now, on my dad's side of the family, my dad and his — so my father's a twin. His twin, Ray, is still alive. He was our tuba player, and together, when they were in college, they had their own jazz band. My dad was the drummer, Ray played trombone, and if they did Dixieland, Ray would play tuba.

MG: Where did they go to college?

DV: They went to Rhode Island College, as did my mother, and ironically, my wife Mary, her parents, Marion and Roland, were going to Rhode Island College at the same time in the graduate program. They remembered my dad and my uncle and the dance band and the whole bit. When my wife and I met in middle school band, and I fell in love with her red hair [laughter] – talented flutist even at that age. When we started dating, going to a dance, this kind of thing, it was quite funny that my future in-laws knew my parents in that regard, which was kind of neat.

MG: Do you know what brought the families to Rhode Island?

DV: Boy, that's a good question. That's a really tough question. I want to say on my dad's side, my grandfather Ray was a foreman for Grinnell Corporation. So it was the industry. My great uncle, who lived with them, Edward, who my dad was named after, my dad's Godfather, he was a painter and a wallpaperer. I believe it was more their parents came here. For what reasons? I don't know. They created their own occupation for themselves. On my mother's side, I believe there were relatives that had made their home here prior to, and that's why they decided to settle in the state.

MG: It sounds like your parents met in college.

DV: Yes, they did. They both went to Rhode Island College. They were both in education, as were my in-laws. So my wife and I are all from a family of educators. In both cases, I believe they were the first generation in their families to go to college. Both my parents went on to get their masters, as did Mary's mother and father. Did that answer the question?

MG: Yes.

DV: I get so deep in thought I start losing track of what you asked me.

MG: What did your parents do for a living?

DV: My dad was a middle school science teacher for over thirty years. My mother was an elementary school teacher. Then she stopped teaching when Gary was born, my oldest brother. I've got two older brothers, Gary and Glenn. Gary just retired from public school teaching. He was a music teacher, the trombonist in the family, classically trained as well. So he was a music teacher. Glenn became an engineer. Glenn has his PhD. He was always the rabble-rouser, the middle son, lighting the curtains on fire and blowing things up in the garage, that kind of thing, and a mechanical engineer. He went to the University of Rhode Island. Gary went to Rhode Island College. Glenn obtained his PhD about twenty years ago. He worked for Stanley Bostitch Corporation, and he developed a lot of the inner compression mechanisms and bushings that are now patented in a lot of auto-nailers and auto-staplers and stuff like that. Glenn is teaching now at Western New England University. Let's see. Then there's me. I just lost track of the question. [laughter]

MG: [laughter] I was wondering what it was like to grow up in your house. It sounds like it was so musical.

DV: Oh, yes. So I started playing clarinet in second grade. My first clarinet instructor was the middle school band director in West Warwick, where my dad taught. So, to go back for a minute, because now I remember what you first asked me. My dad taught science at West Warwick [John F.] Deering Junior High School for over thirty years. He retired from public school and then began to teach eighth-grade science at a local Catholic school until he took ill with pancreatic cancer. That's what took his life in '92. My mother was an elementary school teacher until Gary was born, and then she stayed out of it until I was in fourth grade. We moved from Cranston, where I grew up, to West Warwick, where my dad taught. We lived two blocks from the school. My mother went back to school. She taught full time at Saint Joseph's, a Catholic School, first, second grade, and then fourth grade. She's semiretired. At the wonderful age of eighty-three, she is still teaching. She is part of the No Student Left Behind program, where she goes in two days a week, and she tutors kids for math and for reading. So she's still active. So growing up in the house. [laughter] So, yes, all music all the time. My brother Gary was the first one to pick up a horn. Glenn picked up trumpet, and the guy plays like Al Hirt. Man, he has a set of chops. So we were always doing musical stuff – summer bands in the junior high, in the high school, in elementary school, all through it. The summer my dad was running the Head Start program, I don't know how this came to be, but we wound up doing a concert in the summer as a family band. We put ourselves together for the first time. It was a wonderful experience. So when we were in high school – when I was in high school, Gary and Glenn had graduated, and the high school decided to have a talent show. Now, my dad, as a science teacher, junior high to high school, the joke was that after thirty years or whatever it was at middle school, he finally graduated. So he came up to the high school when I was in tenth grade. So, in my senior year, they decided to do a talent show. I came up with a crazy idea: we got to get the family together. Oh, by the way, Uncle Ray's got to play. We got to do this. So my mother, being classically trained, wasn't comfortable with the Dixieland

stuff, but the choral director was, and he could play by ear. So my brother Glenn and I could play by ear. You just give us the tune and the key, and we're good. Gary did the music, and Ray and my dad, of course, had the dance band, so we had all the original arrangements. In my senior year, we opened up the talent show both nights. It was a thrill for me because a lot of people didn't really know how good my dad was on drums. To see the reception he got, to me, as a senior in high school watching my dad, and the applause and the recognition he got from the kids in school, it was like a whole side of my dad nobody knew about. It was wonderful. We opened the show. It was great. So when I went to Lyndon State [College], I got to know the music program person there, and somebody threw me an idea of having our family come up and do a concert. So we actually did two concerts up at Lyndon, at the college. So we've played together for a long time. It was a blast. So that's what it was like growing up. All three of us, my two brothers and I, were always in the top ranks for our respective instruments throughout middle school and high school through the all-state competitions, the auditions, the recitals. So we were always going back and forth to somebody's concert, to somebody's performance. My wife and I were together in all the middle school and high school stuff, the band. She actually played with our Dixieland Band because one of the concerts we did, up in Lyndon, was like a tour around the year. We did a calendar kind of concert, and we played music for the different times of year, as an old Dixieland band would play in the day. She came up and played piccolo for us. The last concert we played was the Saturday before my dad went in for exploratory surgery, and we found out he had cancer. That was a fundraiser for Saint Joseph's School. Now we packed a couple of hundred people in the gymnasium, and we did a mock jazz funeral, walking the coffin in and the whole bit. So, growing up in the house, it was always music. Not that all of us pursued it as a career, but boy, we loved playing. So, cycle now to my wife and I having two sets of twins, and we sure were going to have every one of those kids play an instrument because we felt for their growth, for their knowledge, hand-eye, the whole bit, that this is important to us; we're going to at least see if they want to. Ryan gravitated toward what dad played, pretty straightforward. Molly gravitated toward what mommy played, flute. Both became remarkably tremendous musicians. Molly's followed it as a career like mom did, Ryan has not. Matthew, like I said, sax player, classical though. The only one of the four that plays by ear is Christian – trumpet. He played in the jazz band at high school, taught him how to improvise. He played piano to start and was really good at it. Then he gravitated to trumpet, and he was really good at it. He even took lessons on both. Then he got to a point where he just lost interest, and we weren't going to fight with him anymore. But he'll still pick it up and play. We try to bring the instruments over every Christmas when the whole families together and play for my mother. Because, since my dad died, we haven't played organized in a long time. And I miss it. So two Christmases ago, I convinced the kids – Christian, Ryan, Matthew – to bring their instruments. I had the orchestrations, Gary brought over his trombone, Glenn brought the tuba over because we knew Christian could cover the trumpet parts. We added Matthew as a tenor sax because Matthew played soprano, alto, tenor. My niece's husband, Michael, plays piano and is a music teacher, as is Megan, my brother Gary's daughter. So he played piano for us. We brought my mother to tears because we played like we played. My nephew Joe, percussionist, physical therapist by trade – that's his career path, but he was a tremendous percussionist. His wife, Jessica, played drums for us. So we had a full band and tenor sax. It was just such a blast, such a blast. But only Christian dared improv, along with me. That was a long way around, "what was it like growing up," but the music's a huge part of my life, always has been.

MG: What was your instrument?

DV: Clarinet and piano. So my mother can't stand me, jokingly, because I recognized early on I had a really neat gift. If I could hear it, I could play it on the clarinet or on the piano. I taught piano to myself. I can play Scott Joplin. I can turn anything into a ragtime. My wife was a music teacher, elementary music, had a band and a chorus. I used to go to her choral rehearsals and play piano for her. The cool thing was, I could move the key around if it was too high or too low. All I needed was to see the chorus; I knew what to do. So my mother jokingly says, "I can't stand the fact that you can do that. I spent all these years on lessons and learning how to play piano classically, and you just sit down and start playing it." So it's a weird gift. So after watching our kids go through playing with the Rhode Island Philharmonic, with the youth orchestras, the youth wind ensembles all these years, we kind of relived our musical experiences through them. About four or five years ago, I was asked – my sister-in-law, Kathy, a clarinetist, one of my clarinet teachers, and my brother Gary were part of this group called the Ocean State Summer Pops Orchestra. I got to know the band director because of all of the stuff my kids were in. So he came up to me one afternoon four or five years ago. "Dave, I need another clarinet player. Are you interested?" Now, I haven't played in decades, seriously reading music. So after talking it over with my wife, I'm like, "Yeah, what the hell. Why not? I'll give it a shot." It's been a blast. So now my wife plays with the group. So he has since left the orchestra, but we're still in it. Oddly enough, one of the directors of music at URI, University of Rhode Island, where Molly is, we all know one another – it's a small state, right? He's conducting the orchestra now. My wife and I are still playing, and we're having a blast. Well, the former director is also in charge of a concert band called the Wakefield Concert Band down the south coast of Rhode Island. Very popular, they've been around for decades. A year ago, coming up on a year – in fact, it was around this time, the first week in November, I get an email from him, Steve Toro, he teaches music at Moses Brown [School] in Providence. [He's a] tremendous conductor, really knowledgeable guy, and a heck of a clarinet player. He said, "Dave, the fellow that plays second clarinet with me in the Fall River Symphony is going to miss a concert, and I've been asked to find a replacement. I'd love to have you play alongside me." I'm like, "Oh my God, it'd be an honor. I'd love to." So he gave me the dates. He brought me over the music. I had one night to practice it because the next night was the rehearsal, and then a week later was the concert. So, off we went. At the end of the performance, he came up, and he says, "I got a serious question to ask you." I'm like, "Yeah, what's on your mind?" He said, "I really need you in my Wakefield band." He said, "Nick, who you know, who couldn't make this performance, is going to miss one or two of the performances of the three we do at the Wakefield band. Can you do it?" I'm like, "Well, give me the dates. Let me run it by the wife, run it by high command, and see what's going on." I had one conflict because of a performance Molly had at URI because this was last December when she was a freshman, but I could make the other two performances. So I tell him, "I'd love to. Shoot me the music. I'll practice. We'll go." It happened that the one I would miss was the one Nick could make. Nick, just for a side story, he knew Gary and Kathy; they all went to school together. So it's like one big happy family. So, I get to the rehearsal. Again, one rehearsal. Next Monday is the performance. Mary comes with me. So she's accompanying me to the rehearsal. Steve knows Mary and how talented she is on the flute. Halfway through the rehearsal, he looks at me, and he says, "Are you having fun?" I'm like,

“Oh, I’m loving this.” He turns to Mary, “He’s having fun.” Okay, trying to recruit me. At the end of the rehearsal, he meets up with my wife, and I’m packing up in the auditorium where we rehearsed. He puts his hand around me, and says, “You know, I really need you to join.” I’m like, “Oh my God.” It’s a fifty-minute ride from Cumberland where we live on one end of the state to where the band rehearses at the other end. He’s like, “You know that if I get you, I get her.” “Well, I’m not so sure about this.” Okay? So I said, “I’ll think it over.” Before our concert, the first Christmas performance, I went up to him, and I said, “Hey, I talked it over with high command. I’m in. I want to do this. I love this kind of music.” I said, “But under one condition.” He looks at me, and he’s all excited, he’s like, “What?” I’m like, “I’d give the world if you’d let me put a Dixieland band together.” His eyes got like – “Steve, I haven’t played since my dad died.” I said, “You got guys here” – the tuba player, come to find out, played tuba with my dad. The alto sax player sitting behind me at the first rehearsal I attended, leans over in the middle, between pieces, “Vallee, do you know Eddie and Ray?” I turn around, I’m like, “Who’s this old guy?” I’m like, “Yeah, Ed was my dad, Ray’s my uncle.” Turns to the fellow sitting next to him, says, “Lloyd, we’re in the midst of greatness. It’s another one of the Vallees.” I turn around, I’m like, “Who are you?” He gives me his name; I was dumbfounded – Dick Lafond. Dick Lafond played tenor sax in my dad and uncle’s band. I couldn’t believe it. The tuba player, Ed Moon, they recorded in their garage. All of this coming full circle. So I told Steve, “Just let me do this.” He’s like, “Oh, yeah, we have to do this.” So this summer, for the first time, the Wakefield Concert Band, off we went. We had a Dixieland Band. I formed it. We did five pieces at five outdoor concerts, and it was such a hit. He told me at the end of the summer, “You’ve got to come up with three Christmas pieces, one piece for each of the performances we’re doing.” So now we’re doing three Christmas pieces with people mixing in and out. The music’s important. It’s a blast. So he kept asking me, “What about Mary? What about Mary? What about Mary?” Finally, she joined for the summer, and now she’s staying on. So it’s crazy.

MG: Did anybody in your family sing?

DV: Unwillingly. [laughter] No, my dad and my mom sang in the chorus at church; they were in the choir. Glenn now does a really good Sinatra karaoke, and I do [imitates Louis Armstrong] a little bit of Louis Armstrong. “Now, we’re getting warm.”

MG: [laughter]

DV: Yes, so we goof around. My brother, Glenn, lives in Westbrook, Connecticut, and he belongs to the Elks. He was the “Grand Poohbah” – I’m thinking of the Flintstones and the “Grand Poohbah.” He ran the Elks for one year. Anyway, every October, they do an Oktoberfest. He’s had my uncle, my brother, and me. We go down, and we do the Oktoberfest. We play all German oompah music, and we end it by doing a Dixieland set. So he’s got us back together because he misses it, too. We really do. It’s just so much fun. He does the karaoke thing, but he doesn’t have a bad voice. A couple of years ago, he had us play in a vineyard outside in Connecticut. We did a Friday evening performance before the Fourth of July weekend. The Cassidy Hill Vineyards does music on Friday evenings. People come out, they have a big front porch, they picnic out on the grounds, and it’s really cool. So one year, Glenn got me roped into playing Dixieland, and we did a two and a half-hour set. The wine

was flowing, and he was singing. It was fun. But nobody went down the road to be a singer. We wing it.

MG: Did your group have a name?

DV: Yes, we called ourselves the Slaughterhouse Six because of the way we used to butcher some of the pieces. My uncle had the old bandstands, the old jazz band units that would set up with the square lights, and the stand would slope down? We had our own business cards. As a gag, my uncle had made up, on some of the business cards, "Slaughterhouse Six. We do weddings, funerals, bar mitzvahs, and circumcisions." [laughter] That's how we were. But we sang barbershop at one of the concerts in college. We'd taken this old tune called "In the Evening By the Moonlight." I introduced it, and the five of us sang it in four part harmony, which is really kind of cool.

MG: It sounds like you must have been really well known around town.

DV: We were around the state. Yes, we were, especially in the town. My uncle was a school principal for many years up in Cumberland. We did a couple of functions up there. We did a couple of functions in West Warwick. Every Christmas, before Christmas, they had a Christmas program they used to invite artists from all over the region. We always were asked to play. That was in the time when I was in high school, bleeding into a little bit of the time I was in college. It was just a blast.

MG: Well, tell me what else about growing up in Rhode Island stands out to you. What neighborhood did you live in?

DV: For a weather guy – so, let's start with the weather bug. The weather bug bit me in August of 1976. We moved from Cranston to West Warwick that January. I switched schools from Woodridge Elementary School to Horgan; I was in third grade. That summer, Hurricane Belle came up the coast. My dad set me down in the basement; we were watching the TV. I see John Giorse, the on-air meteorologist at the time on Channel 10, and I'm watching the buzz saw. I was memorized by it. We had wind blowing all night, heavy rain, the whole bit. So that was on a Friday night, Friday night into Saturday. Sunday afternoon, as my grandparents often did – my dad's parents lived literally five minutes down the street in a little village of Wescott on the Pawtuxet River. We were up on what was called Arctic Hill near the high school. For a weather guy growing up in West Warwick, that was a beautiful place. I had visibility markers. I could see Narragansett Bay from my window with a set of binoculars. We were up high. We were the highest point looking east toward the bay. Windy, snowy – I mean, it's a beautiful place to grow up as a meteorologist, as a fanatic like I was. But my grandparents would always come up for dinner on the weekend. So this Sunday afternoon about three, 3:30, grandfather pulls in, in his '73 Oldsmobile, which would later be my first car. When I got out of college, he stopped driving because of his eyesight, and he gave me his car. He calls me out to the car. As we're walking to the car, he says, "Hey, your dad was telling me you were really kind of mesmerized by this thing that hit us, by the hurricane." I'm like, "Yeah, yeah." He says, "I got a little something you might enjoy." Pops open the hood, and he takes out the book from the 1938 hurricane by the *Providence Journal*. I was hooked. I've

made much of my career on educating people on the whole behavior of New England hurricanes. I've walked the beaches, I've taken the photos, I've got what I call my next set of "before" pictures, before the next one hits. So much of my career has been around that one moment in my life, that bit me. The '78 blizzard, two years later, would seal the deal. But it was Belle because my whole career has been focused around how our hurricanes behave at this latitude – spending eight years with SUNY [State University of New York] Albany, doing research on the transition of these tropical hurricanes to these extratropical things we get hit by. The acceleration, what makes them recur? Why is all the rain to the west? Why is all the wind to the east? And doing thousands of presentations, public outreach, education, walking the beaches with the coastal decision-makers, taking the pictures, working with people now with sea-level rise and climate change, and all focused on New England hurricanes. That's probably the one thing I have been most known for throughout the region is the hurricane expertise. But, now, the last ten years has been focused on climate change and what that's doing to us. So that's what got me bit. So, growing up in West Warwick was great. I'm up on a hill. I'm a weather fanatic. I'm a soon-to-be-meteorologist. It's just a great place. West Warwick, at the time, had some really good music programs, good instructors. I took from one of the clarinetists from Rhode Island Philharmonic, Ray Motellini. Growing up, I had the music. It was a great area. The town had a fantastic football team, the West Warwick Wizards. It's a great, fun town to live in.

MG: It's unique that you're both musical and scientific. I feel like sometimes people are one or the other.

DV: I think it's the same side of the brain. I think it is. I think it is all the same. I'm lefthanded like my mother, so I can't spell. I blame that on her. Yes, it's interesting. We all are musical. Glenn, definitely engineering, Me in the science, my dad in the sciences. Yes, that is kind of neat.

MG: You brought up the 1938 hurricane, it killed six hundred people on the East Coast.

DV: It did.

MG: Can you talk about that hurricane? What do you know about it?

DV: Oh, god. What do I know about it? How long have you got on this recording?

MG: I've got plenty of time.

DV: I feel like I'm going to be staying for dinner; this could go on a while.

MG: You're welcome to. Do you want a pillow?

DV: No, I'm fine. I get into this position when I get serious.

MG: [laughter]

DV: How do you frame the '38 hurricane? I'll frame it this way. I don't know how my office is going to do if we get hit by one like that again. I say that because of the impact on my staff because of where they live and because of the overwhelmingness of an event of that magnitude. By today's terms, you saw what Hurricane Sandy did to New Jersey. You saw what Irene did to the Schoharie Valley in Eastern New York with rainfall. Put all of that together and triple the wind speeds. That's the '38 hurricane from about two o'clock in the afternoon until about eight o'clock at night, moving at fifty miles an hour, and driving fifteen feet of water up Narragansett Bay on top of the tide, flooding the downtown area, dumping a half a foot of rain up the Connecticut Valley where they already had flooding from rain the week prior. Falling on completely saturated ground and basically obliterating the records that had been set two years ago, two years prior by the '36 snowmelt floods in March. I mean, just an overwhelming all-inclusive, all-encompassing, equal opportunity destroyer of a storm. It wasn't a pure hurricane. It was clearly going through that violent transition from tropical to winter-like. But, it possessed all the ingredients – heavy rain along and west of the track, devastating winds, onshore winds to the east, wind damage galore. No warning; people had no clue, at least from a public perspective. By the time the Weather Bureau in Washington, DC was onto it, it was trucking at fifty miles an hour; it was too late. So throughout my career doing public education on these things, I came up with a phrase – unlike the Gulf Coast where the hurricanes spend the weekend, our hurricanes are in for breakfast, and they're gone by dinner. But in that twelve-hour period of time, you will change the shape of the coastline. You will lose lives if you don't plan and you don't evacuate, you don't get people out of harm's way. So that was '38. 1954, my mother was, I believe, eighteen. The morning Carol struck on a Saturday morning, she was tending a register at the – what was it? It'll come to me – at a department store in downtown Providence. Still no hurricane barrier. Carol, small Bahama-bred, Cat [category] 3. '38, big Cape Verde Cat 3. Cape Verde storms tend to be bigger. Storms that form in the Bahamas they've got friction going on with the coastline; they tend to be a little smaller. Carol equally as powerful, but her footprint of damage was smaller because the circulation was small. Drove more surge up Narragansett Bay than the '38 hurricane did. Most people don't recognize that. But the storm damage wasn't quite as severe because it hit at a lower tide, about a foot and a half. My mother had to swim out of the Shepherds Department Store when the surge came into the city without warning. Trees down, everywhere power out. All phone service in the State of Rhode Island was cut for a day or two. I mean, there was no communication. Devastating. So, '38 to '54, two big events. We haven't had a damn thing since, and that's what scares me. Part of my whole public outreach is if you weren't around in '54 to remember, you haven't been around long enough. Okay? So the best analogy I can make, you should put Sandy and Irene together and triple the wind speed. '38 had gusts of 186 miles an hour up on Blue Hill. I mean, that's insane. Irene took power down for seven to ten days in Southeast New England from what? Forty-five gusts to seventy. Big whoop. What you learn in that is anytime we have southeasterly gales, we don't do well because our vegetation, the tree canopy, is not weathered for winds of that intensity from that direction. They're weathered for nor'easters, northwest wind events behind the cold fronts. They're not weathered. They don't grow to be able to deal with the stress put on them by strong southeasterly winds. So the '38 hurricane was the landmark storm. But it took Carol before they finally put their heads around doing something to protect vulnerable coasts and communities – the Stanford Hurricane Barrier, the New Bedford Hurricane Barrier, the Fox Point Hurricane Barrier.

MG: Are those all federal programs?

DV: They were all run and still operated by the Army Corps of Engineers. There was a time where the City of Providence took over ownership of the Fox Point Hurricane Barrier, and that never ended well because the city didn't have the money to keep it up. So Corps of Engineers came in about ten years ago, twelve years ago, took it back over, refurbished the whole bit. Then you have, like Irene, the summer of '55, back to back tropical systems – not hurricanes here – Connie and Diane. Diane dumped over eighteen inches of rain in Westfield, Massachusetts, in one day. Catastrophic river flooding. Not the wind, not the storm surge. Catastrophic river flooding from that much rainfall. That set a whole other initiative of the Corps of Engineers of putting in flood control reservoirs all across Southern New England, putting up levies, gates, the whole nine yards. So you had these hallmark events that have resulted in dramatic efforts towards mitigation, after the events. So now today's threat is that thanks to beach retreat of hundred to two hundred and fifty feet on the south coast of New England, it ain't going to take a Cat 3 anymore. I have preached that for fifteen years. That, with this amount of suitable rise [and] the amount of beach retreat we're experiencing, it's not going to take a Cat 3 to knock these houses off the beach. And Sandy did exactly that.

MG: I know a lot of things you talk about is a “weather-ready nation.” Do you feel like we're not a “weather-ready nation?”

DV: Oh, no, we are so far advanced with respect to our ability to communicate the threat, our ability to communicate in the relationships we have built with our emergency management community. From my river center, it's not only emergency management, [but it's also] the dam operators at the state and federal level, it's Corps of Engineers, it's U.S. Geological Survey [USGS], it's New York City DEP [Department of Environmental Protection] because of the water supply concerns. We have, in the last ten years, really changed the way we do business and communicate the impacts. I think you see the results. We're not seeing a loss of life on a grand scale like we used to, less Katrina. I think that was a combination of a really bad storm hitting in a really poor area with multiple languages being spoken and the failure of government, at all levels, to rally around what we were trying to communicate. I think we'd do a lot better job this time around – ten, going on fifteen years removed from that catastrophic event. Climate change, whether people believe it or not, you live on the coastline, you realize it's real. Sea levels are going up. The challenge now, I think, we face is – it's abstract enough where people [say], “Do I really need to worry about what the beach is going to look like twenty years from now if I'm not going to be alive thirty years from now?” So it's becoming more challenging, I think, from a science standpoint to wrap it up in a context so that people can understand. You can hang a flood sign, say, “Hey, the water in 2010 was here.” That's meaningful to people who remember that. But typically, you go three, four, five years after an event, and it's out of sight out of mind. You're back to square one. So the inroads we've made organizationally, I think NOAA [National Oceanic and Atmospheric Administration], and the Weather Service in particular, has been on building those relationships within the communities through the emergency management community being at the table during drills, running exercises with them, using them as a litmus test on new products and services that we're trying to develop to build that coalition. I call it the coalition of the willing. We know that communication's a big piece. Weather Service, to their credit, brought in social scientists over

the last ten or fifteen years to help us with this, to help evaluate the products, with not someone invested in it but someone who understands the communication piece. We're hardcore scientists, and not everyone is as eloquent as others in taking complex weather stuff and translating it into, "Yes, you're going to have water in your basement tomorrow. These roads are going to be inaccessible," and bringing services along that help build that understanding. And then testing it and participating in drills and exercises and helping them craft how we do it, what it looks like. Does it make sense? Asking the tough questions. Too often, over the decades – and this isn't just the Weather Services, you can probably look at any federal agencies – many times, we build and disseminate what we think the partners need instead of taking a step back and asking them what they want.

MG: And who would the partners be?

DV: You, state government, local community official, Native American tribe, anybody that's going to use the information we have, anybody at any level. Now there are levels of sophistication in what your user set is like. We, as an agency, need to be nimble to serve that in a variety of frameworks to make it actionable. That's the key. Going from producing a forecast and hoping everyone knows how to interpret it to walking that walk and taking that step of explaining impacts, timing, magnitude. How much time do I have to prepare? What's your confidence that I'm going to lose that intersection tomorrow at 10:00 PM? Do I put the kids on the school bus or not? Is this a wall of snow, or is this flurries? Okay? It's taking a forecast and making it actionable and understandable.

MG: Is that your current job?

DV: Yes, it is from a water standpoint; it absolutely is. It's a hard transition for some because we've been – in the river center you've been born and raised on: you calibrate the model, you throw the rain and the temperatures through it, and you issue a forecast in cubic feet per second and in feet. And you expect everyone to understand what that means? No. We have to walk that walk. So my office is going to be embarking upon the next two years taking the demonstration that was done in Texas after Harvey and translating water information into areal extent of inundation. We're going to be bringing that up here to New England and New York over the next two years as the next step in this evolutionary process of taking forecast information and putting it into an actionable framework that decisionmakers can do things with. So absolutely yes.

MG: What was in this book your grandfather gave you about the 1938 hurricane?

DV: Oh my god, the pictures. The pictures of the beaches that I went to, the pictures of the places that I've driven by. I'm seeing in my mind, as I'm looking at you, two or three pictures that stand out to me. One of them is the Narragansett sea wall, coastguard house, these historic locations in the state where I stand there – if there was one place in this earth that moves me the most, it's standing by that sea wall and trying to fathom how that water that's down there got four and a half, five feet up off the roadway to the base of the archway that you drive under every day when you go by that sea wall. The damage and the loss of life and the carnage of the coastline – the power of the sea. That's what that book did to me. To see the wind damage and

the flooding and the disruption and to look at our coastline today, and say, “What the hell have we done?” What are we doing? What are we doing building on barrier beaches? Barrier beaches are supposed to move their width every thirty to fifty years. What, we expect that to stop because we put a foundation in the ground? Encroaching on a flood plain? Now Mother Nature’s going to show you where it belongs, whether you like it or not. You either build the wall as high as you need it and worry about the ramifications of that later, or you become proactive and figure out how we’re going to manage working the flood plain, building on the flood plain, whether it be on the river or on the coast.

MG: Was there anything unique about that Hurricane Belle that weekend?

DV: No, run of the mill, low end. It weakened as it hit Long Island. But I remember the wind, and I remember the rain and what it sounded like on the roof, and I remember the smell in the air when I walked outside the next morning when it was over. What got me was that satellite picture. Funny story. So about ten years ago, I’m at a state conference – it was less than ten. Maybe it was ten years ago now. Time flies when you’re having floods. I happened to present, following John Ghirore, who was the meteorologist on TV that I watched as a kid growing up. I get up there, and I was giving a talk on the climate piece and the whole bit. I get up, and I started that presentation. I said, “I’ve been blessed to be able to work this career of mine right here at home. It means everything to me that I can do it in a place I call home.” I said, “But a funny story most you don’t know – they often ask us meteorologists, ‘how young were you when the weather bug bit you and what made the weather bug bite you.’” I said, “And I don’t even know if this gentleman recognizes how much of an impression he put on me when I was a youngster.” I shared that story to the entire group of attendees with John Ghirore, the TV meteorologist, in the room. I just told them; I said, “I was bitten because of that gentleman showing that satellite loop of that little hurricane called Belle, and that Sunday evening, my grandfather pulling that book of the ‘38 hurricane out of the trunk.” Done, toast. It’s cool when you have a chance to thank the person that had no clue that he had that kind of an influence on you. That’s kind of a nice little pat on the back.

MG: Yes, I bet. Do you want some more water?

DV: Oh, no. I’m good.

MG: You mentioned that two years later was the ’78 blizzard.

DV: Oh my god, yes. It was my first forecast. I walked into school on a Monday morning said we’re going to get two to four feet, and I got laughed at. [laughter] My mother came to retrieve me at about ten o’clock in the morning, and at 9:37, the first snowflakes came down.

MG: How many feet did you get?

DV: We had thirty-six inches at my house. Yes. The drifts were up to the second floor of my friend’s house across the street – hurricane-force winds, three feet of snow, out of school for a week. The bulldozers didn’t get up our hill to come down the hill until Friday night, and that storm hit on a Monday. Amazing. Power went out twenty-two times. To this day, I can walk

outside in the evening and just go [inhales]. I'm like, "Yeah, this is going to be a bad one. We're going to get buried." There was a smell in the air before that snowstorm that I will never forget.

MG: What's it like?

DV: I can't describe it. I can't describe it, but I know it when I smell it. Isn't that weird?

MG: Yes.

DV: I know it. You just know it. I've had that feeling before some of these tropical systems when they've come up. One of my employees calls it the "fog of war." Because of the nature of our work, we're always so intensely deep into the process of the forecasting and the notification and the communication of the hazards and the conference calls and the briefings and the media questions, we fail to mindfully take a step back and sense the surroundings. So I have tried to do that with a couple of events. But snowstorms, I don't know. I can't describe it. You get that feeling. You feel the wind and the lack thereof. It's the remarkable stillness, the calm before the event. How can I describe it? Hurricane Bob, I was working at T.F. Green Airport in '91. It's a funny story if you don't mind me digressing. We will be here until dinner. I'm sorry. This is probably where Mary Erickson wanted me to be interviewed. [laughter] This is how we think. Okay? This is how it works for me. May of 1991, I was filling out my leave slip for my wedding. My roommate at college, Kevin Cadima, had made his way to our office – his father passed away a year or two before, very suddenly. He was working in Binghamton. He was able to get a hardship transfer. So we were working together, and we were roommates [inaudible]. He was on the [inaudible] my leave slips. I'm like, "Kevin, god, I'm getting married August 3rd. I got those midnight shifts on the weekend of the 19th. I feel bad taking them off." He said, "My god, you just got married. Take the shifts off; somebody will work them." I looked, and I said, "You know what? You're right." I stopped putting the dates down. I looked up, and I said, "We're going to get a hurricane that weekend." I wrote on the leave slip that we're going to get a hurricane that weekend. Sure enough, that was the weekend of Hurricane Bob, the weekend of the nineteenth.

MG: Yes, I remember Hurricane Bob.

DV: I got called into work on the day of the storm. I get in at about 4:00 AM in the morning – we work twelve-hour shifts, four to four. The first time in my life, I thought enough that, "You know what? I'm just going to stop and smell the roses here." I go out – so, we always took the observation ten minutes to the hour. It was ten minutes until five. I walked out. Where we did the observations, we walk outside to the back of the old airport terminal building. It was a single building with a little tower up top on the second floor. We worked on the first floor. I walked outside on the concrete apron, and I looked around. I didn't feel a breath of air. I could smell the ocean. There wasn't a plane on the tarmac to be seen. It was like this eerie stillness, calm. So, fast-forward to 2010, we get all this flooding coming at us, and I walk into my office at quarter of eight in the morning. My forecast team on the 29th said, "You need to sit down." They proceeded to tell me that this river basin that I grew up on was going to see a flood that was going to blow away the record that we just set two weeks earlier. So that kind of set the

whole course of events that day. It was intense. We were briefing the governor a couple of times, briefing wastewater treatment, talking to the town officials in Warwick, and West Warwick. It was my hometown, so I was helping the weather office by doing that because of my knowledge and the area of my expertise. I had all the relationships with people over the years. That afternoon, I finally had a chance to sit down in the break room and just pop on the TV and listen to the governor basically recite what we just told him two hours earlier – “This is going to be Biblical,” those are the words I used, “and people need to take action now to prepare so you don’t lose your life in this catastrophic flood. We’re going to see water in places we probably have never seen it before.” But we couldn’t tell them when will the treatment plants be flooded, will you lose the interstate, what about the shopping malls? That’s why, coming back to today, this whole inundation effort that my office is about to undertake is personal. Because I want to do that again. I want to be able to show them and give them timing and tell them you’ve got forty-eight hours to sandbag. You’ve got to evacuate this, this, and this. You’re losing this treatment facility at this hour. I mean, package that up instead of winging it like we did in 2010.

MG: What happened in 2010? What was that storm?

DV: We had four major events in five weeks. This is the new normal. With climate change, our weather patterns are shifted to where we’re seeing a blocked up atmosphere more frequently. It manifests itself two ways. You have behemoth systems that slowly move through the region dumping ridiculous amounts of rain, or you get hit like we did in 2010 – four events in five weeks, and you get almost a half a year’s worth of rain in that timeframe. That’s what happened for Rhode Island and Southeast Connecticut and Eastern Massachusetts in 2010. We had record flooding everywhere. The event on March 15th set records that broke old records by half of a foot of gauge elevation. In March, that last event, the twenty-ninth and thirtieth, just set the world on fire. I wound up taking three of my staff with me to West Warwick to the church that I made confirmation at when I was there on the weekend of the 1982 floods, where the water trickled to the intersection. I’m taking a picture of this intersection that was now four feet underwater. Water up the steps of the church. Water into the old elementary school. Water into the CVS. It’s just unbelievable, unbelievable. I ended up bumping into the Deputy Fire Chief of the town, who I didn’t realize was on the call that I had had with them the day or two prior. I just went up to him, and I said, “Quite the event, huh? He saw my jacket because I had a NOAA jacket on, and said, “Who are you?” I introduced myself. He’s like, “Man, you got that right. Your words on Monday afternoon to us – we got everybody out.” So that was kind of my first foray into well, we have a lot more detail we need to give people to help them make those kinds of decisions. We’ll get there.

MG: When you made the prediction for the ’78 blizzard, what were you going on? Was it just a feeling or something more?

DV: John Coleman, *Good Morning America*, he was one of the first ones onto the fact that this storm was not moving. It was already pounding over New York City, and it was heading our way. He said there could be over two feet of snow up to Boston. So I went into school and [said], “We’re going to get two to four feet.” A week later, when we finally got back to school, I get a lot of respect. [laughter] How funny.

MG: It seems like you measure time by storms. You have such a good mind for the years and the storms.

DV: Oh, god, yes. Yes, it's funny that way because each one of them leaves an imprint on you. When you're in the business that I am of floods and coastal storms and stuff like that, certain things stand out. 2010 I'll never forget. Irene I'll never forget; how we so accurately applied the six years of research that we did, knowing five days in advance we're going to put down double-digit rainfall somewhere in Western New England or Eastern New York, and how at zero hour we chased the west edge of the rain shield because computer models just couldn't get it far enough west fast enough. And just the remarkable amount of devastation. So, yes, you do mark it by time, or, in my case, by births, two at a time. Yes, even growing up as a kid, the early to mid-'70s, that big El Nino in the Pacific, it just didn't snow. Then, '77, '78, my god, what a ride that was. We had a big blizzard right before we went back to school or just after it, put down a foot to two feet of snow. I remember cars stuck on the hill in front of our house. Then we had devastating floods because we put a lot of rain down and melted it all away. On Super Bowl Sunday in 1978, I listened to Dallas and Denver on the radio because we had a devastating ice storm that affected Eastern Connecticut, central half of Rhode Island, into Southeastern Mass. We were without power for five days. My dad had the foresight, at the end of the fall, to fill the gas grill up. So we cooked on the gas grill in the back of the garage. Then we had a blizzard in '78 – bang, bang, bang, bang, four big events.

MG: You mentioned your dad as a science teacher. What kind of science?

DV: Earth science, middle school, seventh, and eighth grade.

MG: He must have been a big influence.

DV: More so on the music than the science. More so on the music. I fell in love with barbershop because he used to listen to WPLM Radio five to six o'clock every Saturday evening. He used to have barbershop music on, and the band and the music. He loved electromagnetic and electricity and stuff like that. Ironically, once I got to college, and he moved up to high school, he decided to start a meteorology and an oceanography class as part of their curriculum at the high school level. So I think my dad had far more influence on my love of Dixieland and jazz. I think the science we were born with. At least for me, I got those genes.

MG: Did you have him as your science teacher?

DV: No, he would never allow it. He never had any of us in class. He didn't feel comfortable, and I'm glad. The irony is – there are a couple of things about my dad. Humble. Humble as they come. Never wanted to take a drum solo. We always insisted that he did, begrudgingly. He had the respect. So he never had the top students. Most often, he was given probably the most challenging bunch, challenging from a learning standpoint. But his room was always the meeting place. You had the valedictorian, you had the football player, and you had the kid with a disability in a wheelchair; they all came to see my dad. It was like that when he moved up to

the high school. My dad's room was the meeting place because I saw how he was. When he passed, the first person at the wake was a student he had had a couple of years before who was wheelchair-bound. I remember him. I saw him coming down the street as we pulled into the parking lot of the funeral home. My uncle and I were in the hallway. I knew he was coming up, and he came up the handicap ramp, down the hall, [and] he was the first one in. My uncle looked at me and said, "That's all you need to know about your dad." That kid stayed the whole time. That's how he was. So that's been his influence on me, how you treat people.

MG: How old were you when he passed away?

DV: Let's see. He passed away in February of '92. He always said it was going to snow the evening he died, and it did. We walked out of the hospital – I went to work that night. I had an evening shift. The last thing I did was told my mother to call Father Charles from Saint Joe's. I saw the look in his eye, and it reminded me of my grandmother, his mother, when she passed from liver cancer. It was the last thing I did. I told my dad I can stay. He says, "No, you go. You don't need to be here, go. You have a job to do." So off to work I went. Even my boss was like, "What are you doing here?" I'm like, "It's all right." At 7:30, my brother Glenn calls. They're all at the hospital, and he passed. He had passed way before I got there. That was the last thing I did. He always said it was going to snow. So that evening, we happened to have partly cloudy, chance of flurries in the forecast. I didn't give any thought to it. It's like 11:30 at night, we're walking out of the hospital, and sure as shit, it starts to snow lightly. I just stopped. My uncle realized that I had stopped walking with them and he came back. He says, "What's wrong?" I'm like, "Look. He always said it was going to snow." That's kind of weird. Kind of weird that way. Yes, he had a huge influence in a lot of ways, and I miss him dearly even after all these years. [laughter] I wish he could've seen – and my mother-in-law, too. God, she was a saint that woman. She was a saint. I just wish they could've seen the kids. I'm sure they have.

MG: Did she pass away around that time period?

DV: Two years later. We lost my dad and her mom and my grandmother and grandfather. I didn't think my dad would be at the wedding. We got married in August of '91. He was diagnosed in September of '90, like I said that Monday after the concert, the last concert we played. I didn't think he'd be at the wedding. Then my wife's mom passed away in June of '94.

MG: When were the first set of twins born?

DV: '97, yes.

MG: What year did you graduate high school?

DV: 1985, and Lyndon '89, May of '89.

MG: Where is Lyndon?

DV: Do you know St. Johnsbury, Vermont? Up in the Northeast Kingdom. They're about twenty minutes north up Interstate '91.

MG: Is it still called Lyndon College?

DV: No, they went and changed it to Northern Vermont University at Lyndon. Can't say I'm a fan of that, but it is what it is.

MG: Did you go there to pursue meteorology?

DV: Absolutely, yes. You know why I picked that college? So ninth grade, the summer of my ninth grade, going into tenth grade, my parents and I did a trip around New England. We stopped at a couple of colleges. Lyndon was one of them. What I loved about it was that it was a small community, just like my high school. I needed that. I went to U-Lowell [University of Massachusetts Lowell] – big city, busing you between buildings – not for me. It's the Italian in me, touchy-feely. Right? Like Leo Buscaglia, give a hug. Take the burden off people and make them laugh. Life's too short. I got that from my dad because my dad always lightened the atmosphere. So, yes, I went to Lyndon because it was that kind of small school. Each of the professors had something different to offer. My advisor, Dr. Bill Fingerhut, a lot of students had a hard time relating to him because they always asked you the tough questions, and he never gave you the answers. He always wanted you to come back. "Think about that. See what you can get and come back to me. We'll see if you did it right." I appreciated that because he made me think. He made me look at myself and figure out what I needed to do better and figure out a way to do it better. At the end of the day, I surprised him because he didn't think I'd do as well as I did. He became a good friend. I mean, we played golf together when we were up there. He helped me with my putting. It's those kinds of relationships that are important, and you only get that in a small college.

MG: Don't they have a pretty good meteorology program?

DV: They do. On air, too. So when I first went to college, I really thought I was destined to do TV. But damn, you can't break that science itch. I did on-air. I was shy when I was young. I'll say that again: I was shy when I was young. I think the music and playing clarinet got me out of that. Today, I have no fear of public speaking whatsoever. I still get the butterflies. Gulf of Maine meeting this week, 2050 – Tuesday, I'm the second speaker of the day. I get up there, and I realize that my lips were quivering, and I had that flutter in the stomach. I'm like, "Wow, I haven't felt this in a long time." This is a good thing because it keeps me focused and on my toes. But I was shy when I was young.

MG: That changed in college.

MG: It changed before college. I really think it was the music that got me out of it. Local AM radio station hired me for a year. I didn't get paid money, but they gave me gift certificates and PawSox [Pawtucket Red Sox] tickets and all that stuff. But I did the on-air – I did the weather forecast for an entire year. That was fun. Probably, it was a series of things. Playing clarinet, you're soloing, you're doing stuff. You got to build your confidence to get out of your element.

Doing the radio made me very comfortable speaking. Doing TV I think was the final – I realized, “Hey, I can do this. This is fun.” So I applied to the Weather Service. I volunteered for the Weather Service in the summer going into college. I started doing a little bit of hurricane research, historical stuff, going through the books, going through the records, looking for hurricane impacts. Then, at the end of my sophomore year, the Weather Service was beginning the process of bringing in younger guys and gals out of college, pre-modernization when the radars are being built, they haven’t been deployed yet. But, they were already getting to put that glide path to get new blood into the organization. That was in 1987. So coming out of the spring semester of my sophomore year, I applied for one of the positions. They were GS-3, 4 met. [meteorology] intern positions, student meteorologists I think we were called. But what it did is it guaranteed your position when you graduated. I applied, and one of the professors at the time, Barry Richwein – I watched this guy growing up on AM Weather, which was a PBS program that the Weather Service did. It started out for Alaskan interests of flying and fishing and all this. But I remember Barry Richwien growing up. The next thing you know he’s one of the professors at college. Well, I wound up proctoring a couple of his classes and helping in the classes. So we developed a really nice relationship. I had already volunteered for a summer at the Weather Service, and I think I did for a second summer when I was in college, in the evenings. I’d go in once or twice a week at night. So that spring, the Weather Service opened up a whole handful of these positions around the country. One of them was going to be up in Boston at Logan Airport, where the weather office was. So I had Barry Richwien as one of my – what do you call them? Letter of recommendation. So I applied. Unbeknownst to me, he had written a personal letter to the meteorologist in charge, Tom McGuire at the time. I get a letter in the mail. Again, this is all pre-email, so it’s all snail mail. I was working for the town of West Warwick; I got hired to help paint boiler rooms for two summers, which was good money and fun work. I set the fire alarm off once. That’s another story, which is hilarious because everybody in the town knows my dad. It’s a funny story; I set the fire alarm off [inaudible]. That was a blast. I get home, and my mother calls me. She says, “You got to get home because you got a letter in the mail from the government. They want to hire you.” So during lunch break, I went home. What did they give me? They gave me the 1-800 number to the weather forecast recording line. [laughter] They didn’t even give me the number to the airport. But because I had volunteered at Warwick, I knew a couple of people in the office, and I call there, they gave me the number. Lo and behold, I get on the phone. I talk to Tom McGuire at the time. “Oh, we’ll get back to you.” I go back to work. Three o’clock in the afternoon, I get a phone call – “you’re hired.” So roll the clock a few years later. I get hired that summer to work the summer, took the semester off, went back for the winter, took the spring semester off, went back in the summer and this happened. Then, by fate, they had a vacancy at T.F. Green Airport at the time that I was graduating. They held the position vacant for a couple of weeks until I graduated, and I started right at home. I mean, just perfect timing.

MG: This is all with the Weather Service?

DV: All with the Weather Service, every bit of it. It’s the only organization I’ve worked for in my life.

MG: That’s amazing.

DV: Career-wise, I've been able to do it all at home, hopping between the meteorology and the hydrology job series as I've gone, taking advantage of the opportunities. My love of hurricanes and rain and all this has paid great dividends. The key there is you make opportunities for yourself. Sometimes they're presented to you, and you just do it and let your performance speak. So after the fact, Tom McGuire retires. I went up to him, and I thanked him. I said, "You're the reason why I'm in this organization." He said, "Well, your reputation preceded you. After that letter Barry Richwein wrote for you, how could I say no?" So you put two and two together, you realized how important that was. Yes, that's how I got into the organization.

MG: Did you study with anybody at Lyndon that went on to work for NOAA or be a TV meteorologist?

DV: Oh, yes. Like I said, my roommate Kevin's working in Norton for the Weather Forecast Office. He worked for a number of years up in Burlington, Vermont. He's come back. Our ITO [Information Technology Officer] at the Weather Facility is Jim Notchey; he was two years ahead of me at Lyndon. One of the TV mets in Rhode Island, Tony Petrarca, who's on WPRI, the CBS affiliate – Tony hosted me when he was a senior and I was an incoming freshman. I spent a night in his dorm with him during an orientation. We have each other's phone numbers. So yes, these relationships last a long time.

MG: What was the curriculum like? What were the classes you were taking?

DV: The thing that attracted me with the Lyndon program was that they got you into meteorology and climatology classes in the first semester. Many of the larger universities, it's physics, chemistry, physics, chemistry, physics, chemistry, math, and then in your junior year, you start doing your meteorology. Lyndon had a very applied program, and I liked that; that attracted me. That probably had a lot to do with why we selected that college because of the way the program was constructed. So you were in there forecasting your first semester – Intro to Meteorology, Intro to Climatology. Second semester, the math and physics in the meteorology curriculum were all intertwined. Then you had the opportunities through your electives to get into things. I got into tropical meteorology because of my love of New England hurricanes. My thesis for senior year was on the El Niño–Southern Oscillation and its impact on hurricane frequency. So that's what I really loved about that curriculum. I had to take a couple of literature courses. The one I was able to get into was the Bible as Literature. I took it as a junior, and, ironically, it was the one course that kept me from getting a 4.0 that semester. But at the end of the semester, the instructor wrote me a personal note congratulating me on doing such a great job. [He] said, "I would've never expected the quality of work you provided in this course out of a met. major," [laughter] which was sort of a little – [slaps hand]. But it was a nice compliment. It was nice. It was a fun campus. Everybody knew everybody. The teachers were thoughtful. They were all approachable. It was just a great environment. Like I said, it was small, and I needed that.

MG: Did you graduate a year later than you initially anticipated?

DV: No. No, I graduated in '89.

MG: What about the relationship with your wife during those years? Where was she?

DV: She was at home. I jokingly say she wasn't into boys. So when I went to college, we had a relationship, but it wasn't really serious at all. I dated a little bit while I was at college, but we got back together during the Christmas break of my sophomore year. We went bowling together, actually. We just hit it off. Thankfully, she was still available, and she still had a heart for me. So I was very lucky.

MG: Did she go to college?

DV: Yes. She graduated in three and a half years out of the music program. She took some summer classes. Oh, she's a smart, smart girl. The kids are following in her footsteps. It's not me; it's her. So, funny story. In my junior year, we were getting more serious at that point. In my junior year, Valentine's Day – Thursdays, they only had one class, and I think Valentine's was on a Thursday that year. I tutored math, but I moved the appointments around. I knew a friend of mine was going to be driving down Wednesday night to go home and see his girlfriend and then come back late Thursday night, so that he could be in class Friday morning. So I told him, "I'll go with you. I'll do this." So I moved things around. I wasn't worried about the class I was going to miss. [laughter] I didn't tell my wife, but I told my dad – well, my girlfriend at the time, Mary. She had no clue. My dad knew I was coming over. On the way, we had stopped, and I got her a box of chocolates and a little bear holding a heart. About five minutes after six in the morning – now, her dad, at the time, was still teaching in Scituate; he was an elementary school teacher. I pull in the driveway, quiet as I could be. I walk up to the door, and I ring the doorbell. It's 6:15. I hear Mary's mother, "Who could that be?" Mary's like, "I have no idea." I hear her dad say, "Ha, I bet you it's David." Mary's like, "Dad, don't say that." Mary comes down the stairs, and she opens the door, and she's like, "Oh my god." Here I am with a box of chocolates and the bear. I see her father do the Jackie Gleason double-take, like this: "Oh my god, it's him." I spent the whole day with her. I went to classes with her, the whole bit. It was fun.

MG: You must have scored a lot of points.

DV: I scored a lot of points on that one. Yes, I sure did.

MG: When you graduated from Lyndon, you were –

DV: I was already employed.

MG: Right.

DV: I was hired full time the summer of '87, which would've been the summer going into my junior year. I was also doing the on-air TV at that time. I remember vividly the person who's in charge of the TV production classes came up to me at the end of the spring semester in my junior year, when he realized I had been hired [and] I wasn't going to pursue TV. He came into the dressing room, and he closes the door. He says, "What the hell are you thinking?" I'm like, "What do you mean?" He's like, "You know what kind of career you have ahead of you doing

TV, and how good you are at this?” I’m like, “But I love the science. I love the Weather Service. I want to be part of that organization. I want to do that kind of work.”

MG: Is that really a decision you have to make where it’s either TV or science? Why can’t it be both?

DV: In the federal government, it can’t be.

DV: I was actually asked, I think while I was still at Providence – no, I had become senior service hydrologist for the weather office. Tony Petrarca actually approached me about hiring me, if I could do both. I actually had to get legal counsel involved to see – what are the ramifications? It got back to me that because of the nature of the business, the fact that you’re in a very exposed office with a lot of interactions with multiple organizations, we can’t have you attached to a TV station because it’d just be this conflict of interest. So yes, unfortunately, nowadays, you really have to figure out are you going to go one way or the other. Not that you can’t leave one and go to the other. When I retire from federal service, who knows? You never know.

MG: Well, it sounds like your music career might take off.

DV: [laughter] It could, although it doesn’t pay well because everything I’ve done is voluntary.

MG: You have had some TV and radio experience.

DV: Yes.

MG: In Providence and Boston?

DV: Let’s see. Radio was in West Warwick, and the TV was up at Lyndon, up in Vermont. The students actually run the TV station up there with the advisors being the instructors. So we did our thing and put together our own weather production as part of the broadcast. Great experience. I’m so glad I did it.

MG: Yes, I bet. What was the internship experience in Boston? I have that in my notes.

DV: So that was a GS-3, 4 position, where you were in their local forecast group. I had to get my certification to take weather observations. You did local adaptive forecasting. We were the front lines to the public. We answered questions. Back then, we were still recording with radio broadcasts. We hadn’t brought in the automated systems yet. We took the weather observations up on the roof of the Mass Tech Center, all that stuff. That’s kind of what life was like on Bonanza Bus from Providence to Boston every day, Monday to Friday. My dad would drop me off. My dad would pick me up. I go to see a lot of high rises go up in downtown Boston between 1987 and 1989. Then, when I left college, when I graduated from college, and I was hired at T.F. Green Airport, I spent one week up at Logan because the offices were relocating at that time in ’89. Excuse me, I’m ahead of myself – no. When I came out of Lyndon, I went directly to T.F. Green Airport. I was there through 1993. Then when I was

promoted to senior service hydrologist, I went up to Logan for one week. '93 was the time when the offices were moving, and the radars were being put into operation and installed and all that.

MG: Are all weather services offices at airports or airfields?

DV: Many of them are, but many aren't. It really depends on proximity and availability of space. In our case, they were relocating both the weather office and a river center. Back in the day, yes, many of the weather offices were located at airports because of the observations responsibility. But, after the modernization and the locations of the Doppler radars, closing the old radar locations down as time went on, many of the weather offices tried to collocate either with the emergency management operations centers or with universities. So the Albany weather office is located on the campus of SUNY. But our relocation kept us in Senator Ted Kennedy's district and collocated the river center, which is in Bloomfield, Connecticut, to Taunton and the weather office out of Boston down to Taunton.

MG: That's still your home office.

DV: Yes. We moved a block in March of '18. [laughter] We went over the radar into the town of Norton, but we literally moved a city block to a new location, brand-new facility.

MG: What's your commute like today?

DV: My commute is about twenty-two minutes door to door. That's just right.

MG: Not too bad.

DV: No, not at all.

MG: I always forget when the MAR [Modernization and Associated Restructuring] started. Were you involved in that?

DV: I was a recipient of the good fortunes that the modernization brought us. Both from coming in as a GS-3, 4, landing a position at T.F. Green Airport and then taking advantage of a new position for the Boston office, and that was having the service hydrologist run the hydro program. That's when I moved out of the meteorology job series into the hydrology job series for the first time. So I was in that position from '93 to 2001, and then became their science and training officer, or what they called the science and operations officer position, from 2001 to 2007. Then January 2007, I became the hydrologist in charge.

MG: Can you talk a little bit about the work you did before you got into hydrology? What was the nature of that work?

DV: So, with T.F. Green Airport, we were a local adaptive forecast office. We kept the relationships with the state emergency managers, the local communities, weather observations, pilot weather briefing and local adaptive forecasting, and the local forecasting at Narragansett

Bay. That was basically the core of what we did. I took care of a couple of weather observing stations. One of them was on Block Island, one of them at Quonset [Point Air National Guard Base]. So I'd go down there periodically and meet with the observers. If there were new people coming on board, I'd facilitate the training they had to take for their certification to take weather observations. That's where I began to put together my first paper on New England hurricanes for the emergency managers in Rhode Island, looking at everything that's hit us tropical from 1936 to then 1991. I included [Hurricane] Bob in that. Did a lot of public speaking out to the elementary schools, science and outreach, and stuff like that. It was kind of nice – you had a broad playing field at that office at that time. I got involved with the gauging networks that supported a local flood warning system that was active at the time but beginning to die off because there wasn't funding from the communities to support it. That's kind of where I got my introduction to the hydrology of it.

MG: Can you talk more about that?

DV: I took advantage of an opportunity. I had an interest because of my remembrance of the '82 floods. When the opportunity presented itself to take over that part of that program, the hurricanes and the rainfall piece, I jumped at the opportunity. So the hurricane piece gave me a lot of opportunities for the outreach and education. The monitoring networks gave me a greater appreciation for the flood risk and flood threats, what it takes to be able to model a river, model a stream, do that kind of work. So I was looking both in and outside of the agency in late '92, '93. My wife, Mary, was teaching now in East Greenwich full-time. She was set. All of her family were in the area. We really didn't have much ambition to move, but I didn't have much of a promotion opportunity because of the way the grade structure was. Bob Case, who was the former deputy director of the Hurricane Center, came up to be deputy MIC [manager in charge] for the weather office – or, he was hurricane specialist at the Hurricane Center. He was up there at the time for Hurricane Bob, 1990 to 1992. I remember him saying to me in the winter of '93, "Just keep your eyes open. There are going to be a couple of positions coming up. Keep your eyes open. We got our eye on you. Just be ready to jump." So because of the grade structure, I knew I wouldn't have an opportunity to become a forecaster because I was capped at a GS-9. The forecasters at that Boston office, because of the grade structure and the responsibilities started at 12, and you can't go 9 to 12. So a position or two like that came up, and I couldn't apply for it. So now I'm thinking, "What am I going to do? I'm capped." I knew there was this other position, a service hydrologist, which was going to be new to the organization, at least to the Boston office, to run the hydro program. I had done that at the local office, so I thought, "Oh, I'm competitive for this." Around the time the vacancy came out in the late summer, my grandmother had passed away. She had lived with us in West Warwick. That's my mom's mom. I come into work after taking a couple of days off, and I go to the job vacancy board, and I pull the board off. The first one upfront is the service hydrologist, and it's 12, 13; I can't apply. I throw my lunch in the thing, and I threw the board back up on the wall – it was on a clip. I did my thing, and then I thought, "Well, I said well I might as well see what else is out there." I go back to the board, and I flip the page, and there's an amendment to the prior job vacancy and a correction. They changed it to a GS-11, 12, 13, which meant I could apply for it. How ironic. That was the position that I got that gave me the opportunity to go up to be part of the Boston office. So I went from weather observations, pilot weather briefings, getting all the certifications for that, local adaptive forecasting, local warning issuances,

communications with the local EMs [emergency managers], all that. For a bunch of years, I spoke at a lot of the state conferences, even at that time, talking about New England Hurricanes. It was already becoming my big thing. Then I get up to Boston, and it's a GS-11, 12, 13, senior service hydrologist. Over the next eighteen months, I built their entire Hydrologic Services program. It was one of the first offices in the country to incorporate coastal flooding into the architecture that we'll be using, the new software that we were [using]. Because of my pushing, I became an acceleration site; they gave me the opportunity to play with this software and start kicking it around. I developed relationships with forecasters at the River Forecast Center because we were collocated now. I learned a lot from those people and basically built the services program from the ground up at a weather office that had not done that because the river center did all the river flood warnings back in the day. Now, all that responsibility was going to the weather office under the modernization. So I got involved with the first generation of gridded weather forecasting. I had the science and teacher in me by way of my parents and all that. So I very quickly gravitated toward looking at the science officer position as one that I could possibly obtain, or the warning coordination. But, that person I knew was – he had no ambition to move on because he really loved the area, and he liked the position. So I did all the outreach and education for the hydro program, for the hurricane outreach, all the stuff. I had the good fortune of being on the Discovery Channel, Weather Channel, History Channel documentaries on the Perfect Storm and the '38 Hurricane, and Hurricane Carol, all this stuff. So I loved that job. It was a fun job. You were out in the community, working with the communities that had river gauges where we provided forecasts for, going out and doing assessments after the flooding, working with the community to establish flood elevations, working with the river center to bring new services on board. It was a great position. I love that job. It was just a lot of fun. And getting to define it, because that weather office had never had that responsibility before. It wasn't without growing pains early on because we simply didn't have robust technology at the time when I first came on board. But by 1996, we were a pathfinder site for the new AWIPS [Advanced Weather Information Processing System] software program, the whole AWIPS architecture. That gave me a jumping on point with the new hydro program software that we're going to be using to issue the warnings, to monitor the rivers, to do testing and stuff like this. It was a great job. I really enjoyed it.

MG: Have you had to learn some of the modeling algorithms and figuring out how to –?

DV: Oh, yes. The Weather Service at the time had a really robust training program, where they brought folks like myself out to learn about how do you run a hydrologic services program, what's the software like. I love to be – and I tell my staff this today. My whole motto is I want to be ahead of the train, not chasing the caboose. Okay. I'll protect you, and we'll take our lumps, but I want to be at the head of the train. I don't want to be put in the position where we're told what to do. I want to be out there, out in front, helping to frame what it looks like. I've done that all throughout my career. I've had supervisors that have had the trust in me and have given me a wide playing field to be able to do that kind of development, and it's still that way today.

MG: I know your title changed in 2001, but how different was the work you were doing?

DV: Going from service hydrologist, where I was the “water boy,” dealing with ocean and riverine flooding – whenever I became the science and operations officer, it was across the entire program domain from fire weather to superior weather to winter storms, coastal flooding, hurricane floods. It was overseeing the whole science program and the whole operations program for our office. I had a good group of people to work with that did some outstanding research. We did research on drought, fire weather, coastal flood thresholds, the hurricane stuff, hurricane evacuation work, HURREVAC [hurricane evacuation] training with the emergency managers in a couple of the states. Participating for eight years in the CSTAR [Collaborative Science, Technology, and Applied Research Program] research work with SUNY Albany on extratropical transition, and having one of the forecasters at the river center working with me on developing all these high-resolution rainfall reanalyses for all the tropical cyclones. So it became a very much broader program management position and facilitating all of the training for the forecasters – working with our weather event simulator to develop simulations to bring the forecasters – get them in the hot seat and take them through these scenarios to see how they respond to them. Do they remember how to use the tools? Are they applying the tools correctly? Do they know how to just do the basic procedures of getting a warning out? Working with fellow colleagues in our region of the weather service in the eastern region to – best source of compliment is to steal somebody else’s good work and make it fit your office. We’ve done that work, too. It’s a management position, as well. So you’re not supervisory, but you’re managing the program, and a pretty broad diverse program at that.

MG: Did your physical office change?

DV: No, we stayed in Taunton. I just went from a cubical to a small office. [laughter]

MG: Do you want to talk about your current position?

DV: Yes. So in 2007, I had another opportunity. Actually, it was late 2006. They had the hydrologist in charge vacancy came up again. I had applied for it a couple of years earlier, was not selected, but the person they selected was excellent at the time. Unfortunately, he succumbed to cancer at a very young age, so the position opened up a second time. I applied for it. After my first interview, back in 2005 – I think it was 2005. It might have been a little earlier. I mean, I had nothing to lose. I had probably one of the best interviews of my life. I was quoting Bobby Kennedy and all sorts of stuff. My regional folk up at Weather Center’s headquarters, in our regional headquarters in Long Island, they knew of me and how much I had done and my accomplishments and the office’s accomplishments. But I think after that interview, they realized this is somebody we want to make sure gets one of these positions someday. So they gave me a couple of opportunities to run a regional team, to get on a hurricane assessment with Hurricane Isabel, to do that kind of work. I want to say 2003 I think was the first time I applied for it. It might have been 2005. I can’t remember. Those years run together because of all the kids. So they gave me some opportunities. I had a two-month detail down in Greer, South Carolina, to run the office while they were in between managers. So it was a nice way – they got me to a couple of leadership courses with OPM [Office of Personnel Management] and really took care of making sure that I got the growth and the breadth of experience that they felt was necessary to do the next step. So when the job opened up in late 2006, I was interviewed. I didn’t feel I had as good of an interview. I had an asthma attack the

night before, so I didn't sleep well, and it was still hanging over the next day. But they had confidence and faith in me. I got selected. Now we've continued to be a very innovative and progressive river center. Which I'm very proud of. I've had wonderful people on the staff that helped make that happen.

MG: How many river centers does the –?

DV: Thirteen. There are thirteen of us spread out across the country. Our domains are shaped by the hydrology. So for my area, it's the Buffalo Creek and everything east. Basically, water that goes into the Atlantic or into Canada. The upper Susquehanna region, which is in part of New York State, goes to the Mid-Atlantic river center. We have wonderful relationships with three Canadian provinces. We do work with New Brunswick, where we share warning responsibilities and forecast responsibilities along the Saint John River. They have their own river center, and we've done forecaster exchanges. They've come down at least four times in the last five years just to spend a couple of days with us. We train their forecasters. They work with my developmental operations hydrologists on sharing knowledge because now they're running the same forecasting architecture that we have been running now for ten years. It's been a wonderful relationship with them. We have a relationship with Quebec Province because of the 2011 floods in the spring. We forecast Lake Champlain in the Richelieu River, which goes into Quebec Province. Now they have adopted the same architecture that we have. We just recently started doing work for Ontario Power Group and the New York Power Authority by forecasting the Niagara River. The modeling was developed by the Corps of Engineers. We took it on, tested it, evaluated it, and put it in operations. So we're forecasting off the Niagara River to help with the power generation and water management out there in Western New York and Ontario Province.

MG: You were talking about your current position. In all these roles, you've just been focusing on the Northeast?

DV: Correct. So when I was at T.F. Green Airport, it was focused on Rhode Island; that was our service area. When I moved up to the weather office in Boston then Taunton, our service area became all of Rhode Island, most of Massachusetts except the Berkshires, Hartford, Tolland, and Windham Counties in Northern Connecticut. At the time, we owned Cheshire and Hillsborough Counties in Southern New Hampshire. That jurisdiction was governed by the Doppler Radar's coverage area. That's the Northeast River Forecast Center. It's a pretty big area because I have to go from the Buffalo Creeks eastward across all six states of New England and a little bit of the three Canadian Provinces.

MG: And you really have to go there?

DV: Yes, we do. I was out last week in Buffalo for two days for a congressional stakeholder engagement that we held. Oh, yes. I try to get my forecasters out to the different offices. While I was out there, I took a morning and spent it with the Buffalo forecast staff, did a presentation. For the newer forecasters, it was to give them an idea of how we go about the business of river forecasting for them, and where we're going with the inundation work, the

new National Water Model, how we're going to try to put all these pieces together in a meaningful way.

MG: So were you coordinating with all the other river offices?

DV: We do. We coordinate primarily with Mid-Atlantic because we share portions of New York State. So we want to make sure that our forecasts are consistent, well-collaborated. For your edification, the way the river centers work – to produce a river forecast you have to have a hydrologic modeling in place, the different modeling components calibrated, and what we mean by that is basically trying to develop the best relationships to move water coming out of the sky into the ground and in the river. That's what the hydrologist and senior hydrologist do. We also have a function where we have to analyze and assess what fell – rainfall, snow, snow water, temperatures – over the last twenty-four hours, and forecast those elements into the future. So we're both meteorology and hydrology. The meteorology is what comes out of the sky; the hydrology is what happens to that water when it hits the ground. So we do this across all six states of New England and a good portion of New York State every single day.

MG: When I interviewed Ed Johnson, he felt the hydrology program didn't get as much credit or attention as it deserved. Was that something you felt?

DV: Yes, for many years, the weather organization was run by people with meteorology degrees. A lot of the sexiness of what we do is in the meteorology. It's in the tornado hitting the ground. It's the land of instant gratification. Okay? You get the big snowstorm. You measure the snow. Did you verify or not? It's the severe weather outbreaks. It's the big hurricanes. Atmospherically, that community has been more mature and has worked really well together for decades, I think, on building the new numerical weather models. You had a lot of academic centers working on these common problems across national centers. Hydrology's always been more masked. Part of that, I look at it over the years, was somewhat – it was somewhat done to themselves, I think, because we opted to develop our own models, our own way of doing business, our own architectures, our own support, our own software. As the decades rolled forward, I think a lot of that became unsustainable, and we became behind the times in spite of advancing technology. But since, I'd say, the early to mid-2000s, it's changed dramatically. It started [with] our desire to get a more robust hydrologic modeling framework in place to do some of the more difficult modeling tasks. It started with an investigation of how do we move from 1970s and '80s technology, from a forecasting standpoint, into the 21st century. That effort included a couple of people on my staff that were involved in different aspects of examining what other architectures were out there that we could bring into the hydro program to become the backbone of this modernization of the hydrologic services program. I was very fortunate to have been asked to get my center involved with that in 2008, 2009. Proudly, we've become one of the leaders, I think, nationwide in our ability to look ahead and be progressive and really get the most out of this new architecture that was developed for us by Delft Hydraulics, Deltares now.

MG: Is it also helping with prediction of rainfall?

DV: The prediction of rainfall is the holy grail. If you ask me what's the greatest source of uncertainty in a river forecast anywhere you provide those, I'm going to tell you it's our inability to accurately predict where that rain will fall, how quickly it will fall, and how much. Consider what we're trying to do. We're trying to do this on a scale of a couple of hundred square miles. You have two basins that are side by side, as we like to say. [laughter] I'd lose twice if my forecast of rainfall is wrong because it's not going to flood the place that gets flooded, and I'm going to flood the place that didn't, from a forecast standpoint. Our ability to accurately predict the rainfall, to me, is still that greatest source of uncertainty. So now we've gone from the current architecture in the river centers where we are forecasting for generally watersheds that are a hundred square miles or greater. We typically forecast on six-hour time steps. Some of our tidal locations we forecast at an hourly time step. But for decades, the river forecasting centers shared a common approach to how we forecast, and all the routines that we work together, and the workflows to get the forecasts out are pretty much bound by these six-hour time steps. That's driven by observations over the decades. But now, with the new National Water Center, which was brought into being between 2011 and 2015, really when the efforts got underway to really make this center a reality, we now have our first National Center For Hydrologic Development. It's a wonderful partnership between multiple federal agencies and academia. We have visiting scientists that participate. Our big rollout over the last three years has been the new National Water Model. Now there's still a myriad of science issues we know we have to address with the accuracy of the model and the science behind how you do hydrologic forecasting on an hourly time step at a scale of 2.7 million river reaches nationwide. It's a heavy lift. We know from a prediction standpoint, numerical other models haven't come far enough from rainfall predictability to maximize what we have from a hydrologic science standpoint. But there are issues within the science of the hydrology that drives the National Water Model that we know we still have to do investigating work with. That's being lined up and working on it as we speak. So I have faith as we continue to move forward, the numerical weather prediction will come along, and so will the science behind the hydrology. So the exciting part of this now is that we have a National Center, mandated by Congress, to focus on improving the delivery on all scales and all space and time, the delivery of hydrologic services – whether it be a year down the road for water supply planning to tomorrow night's flash flood in the Midwest. In doing it on a scale that is going to take our organization from being able to provide a daily forecast at 3600 locations where there's a gauge to doing this nationwide, including Puerto Rico, including Hawaii, eventually Alaska – doing this on a scale where we're covering 2.7 million river reaches, small basins. It has the potential to completely revolutionize the way we do hydrologic services. I'm excited about that.

MG: Were you involved in forming the National Water Center?

DV: We were not. The formation of the National Water Center started out as a philosophical discussion about how can we virtually put together a center of excellence where we're including the Weather Service, the U.S. Geological Survey, and the Corps of Engineers. Three big water agencies that have water responsibility nationwide, from monitoring and groundwater modeling, to the Corps of Engineers and their water management activities in the Mississippi and the flood control projects throughout the nation, to the Weather Service, which is the forecasting and warning wing by a decree in the Organic Act that we are to provide data information forecast warnings for the protection of life and property and the enhancement of the

national economy. That's in the Organic Act. So the virtual concepts that we were talking about as a group of water program managers in the organization evolved into that plan of a virtual center getting in the hands of the Senator [Richard] Shelby and the Science Steering Committee at the center level. They had the money, the wherewithal, and Shelby had a campus, the University of Alabama, that he wanted the center built. And here we are.

MG: So did this happen recently?

DV: The National Water Center, I believe – I may have the dates wrong. I believe the Water Center itself actually physically opened in 2015, but it's been a slow process to get the staffing in place and get people interested and wanting to apply, wanting to be a part of this. They just recently staffed up their Operations Center for what they call their initial operating capacity. So now they have an eighteen-hour a day, seven-day a week footprint that will eventually go to twenty-four hours a day. It's got to be the national voice, if you will, of the hydrologic situation of the day. Also, within the center itself, they have a couple of dozen research scientists that are working with NOAA employees, NOAA staff. USGS has a presence there. FEMA [Federal Emergency Management Agency] is going to have a presence there. We hope someday the Corps of Engineers will have a presence there to help and to put together the modeling and do the science and heavy lifting of the research end of it to continue to evolve and improve our hydrologic services. The National Water Model right now is the big boy in the room because it's the new shiny toy that's got tremendous capacity, tremendous capability. Where we're at right now with that model is both evaluating its performance, identifying the critical science gaps we know we need to improve upon, and getting the research and the modelers together to make that happen. Also, on the other end of taking forecast information and processing it in a way where we're providing actionable, meaningful information to our partners, whether it be tonight or next year, and doing that in a way that allows us to really blow the doors off of how we deliver services. My center is going to be doing that work over the next eighteen months, looking at providing a whole new service, not just the graphic, but delivering the services. By that, I mean delivering the raw information for partners to bring into their GIS [Geographic Information Systems] architecture so that they can map this stuff, like areal extent of inundation. They can put in their spatial display within their system – they can look and look at the timing of when floodwaters are going to be at point A, point B, point C, for us to deliver that service, both as a graphic but also as a data service. That's where we're going. It's just incredibly exciting.

MG: Do you think the Water Center's well placed in Alabama?

DV: Let's just say we're glad we have a National Water Center. It's a tough thing. Right? Let's see. "“Everyone to his own liking,” the old woman said when she kissed the cow,” I guess is the way to put it. If you're from the Deep South, you love the Deep South. We had a great opportunity, and we took every advantage of it. I'm glad we did. It just happens to be in Alabama. Some people in our community, in the hydrology community and the weather service, could do marvelous things working there, just don't have the appetite to want to up their family and relocate down to the Deep South. I'm in that camp right now. My whole family's up here. Everything's up here. I'm playing music again. Would I love to be down there? Yes. Did they really recruit me hard? Thank you, yes, they did. That was humbling.

To think that I had what they thought it would take to help move that center out. I'm still a huge contributor even though I'm not physically down there. I help them every chance we can because it's important. But people from the South would say the same thing if they put this thing up in New Hampshire. I would have lost half my staff. Because they would've all gone up and moved to Vermont or New Hampshire be up there working at the Water Center in New Hampshire. So the opportunity was there, and it was taken, and it's a good thing. It really is. Sometimes it makes it a challenge to get the right people to apply for the right positions. But what I have actually seen in the last couple of years, the Water Center, right from its inception, wanted to tap the academic community and the college students working on their masters and PhDs. A good number of those people that participated during the summer workshops, the summer symposiums that the Water Center organized, through NCAR [National Center for Atmospheric Research] and the research organizations and the academic institutions, those people are now working for us as NOAA employees. That, to me, is one of the best things that I think is transformed from this, that we've done this in a way where we've encouraged academia to be a key player for us, to bring in the graduate students and the PhD candidates. Now, these people are coming on board as full-time NOAA employees, and they're pulling the doors off this stuff. They're energized, they're enthusiastic, they've been involved with it from the ground floor. It's tremendous.

MG: Are any of these efforts born out of the Fair Weather Partnership Policy?

DV: No, not to the degree of us getting the National Water Center. This really was an effort that, nationally, we felt we needed to modernize the water program, period. Everything from architecture to research to organizational structure. So not directly. However, some of what we're doing in the hydrologic services arena is the direct result of the Fair Weather Act, amongst others, because it set a pathway for how we should play with academia, with the private sector, with evolving new services, with service delivery. But it was not a correlation now that we have the center. It's more we've leveraged that report actually to our advantage to build a case for what we're trying to do and where we want to go.

MG: You've mentioned you had opportunities to go on the Weather Channel and the Discovery Channel. What were the programs? What were you talking about?

DV: Most of that work was because of the flood and hurricane threat. They came after me as a subject matter expert because of my years of doing this work and my understanding of the behavior of the whole New England regime, be it a nor'easter or be it a hurricane. More recently, it's been the climate change work my office has done, where we've become an integral part of wastewater training throughout New England, through a group called NEIWPC, which is the New England [Interstate] Water Pollution Control [Commission]. It's funded by the state departments of environmental management through the wastewater treatment program, where within the curriculum is an extreme weather workshop. We come out as a river center and talk about flooding, coastal, and riverine. So I've transitioned [from] less hurricane, and doing a lot more with the flooding and the inundation, explaining what we're seeing, showing people the data of just how the behavior of a river flooding has changed as a result of the warmer weather climate regime.

MG: Can you say why New England hurricanes are unique? What are their characteristics compared to other regions?

DV: Sure. A hurricane, by its nature, needs eighty-degree bathwater, a nice warm ocean, lots of ocean heat content, gentle upper-level winds to provide just enough venting but not so much that you shear the storm apart. When a system wants to come north, it has to interact with the jet stream to do it. In the late summer and fall, here in New England, we're getting the first shots of arctic or polar air. When you [have a] tropical heat machine and you get it to engage with a polar air mass and a strong jet stream, all hell can break loose – Sandy, Irene, 1938, all of these types of systems. So the uniqueness of our New England hurricane is born upon the fact that our hurricanes are going through a metamorphosis as they accelerate up the coast, going from something purely tropical to something not quite. When you have the right ingredients and chess pieces on the board, it can be explosive. Sandy, '38. Okay? With that, we're fortunate because we understand that behavior. High winds, coastal flooding, maximized east of the track, heaviest precipitation west of the track. That's favored up here in New England, why? Because we've got the Adirondacks, the Catskills, the Poconos, the Greens, the Whites, the Berks, the Longfellows. All of that high terrain and all that deep tropical moisture gives it a little added oomph when it's forced up three to five-thousand-foot mountains. That's why we see so much of the heavy rain on the west side of these things. So it can be explosive, powerful, and you get all the ingredients the atmosphere has to possess, all acting to make these things accelerate and be extremely devastating. That's why I love them. I do. Sounds strange. Sort of like General [George S.] Patton loved the war. It's amazing from a science standpoint, the power. It's just amazing.

MG: Are you sad now that hurricane season is coming to an end?

DV: When I was younger, I used to be, not anymore. No, you know when it really struck me was during Hurricane Floyd, creeping up the East Coast. I was briefing the State of Rhode Island Thursday evening, one of the last briefings we did. Floyd was upon us. We were getting the heavy rains. We were getting tropical storm-force wind gusts. My younger set of twins was in the intensive care unit. They were born in late June, and this is September. They were within a week or two of coming home. You're looking at a Category 1 hurricane at that time, about to turn north, coming up the coast. I'm like, "I got two-year-olds at home, and I got a set of young twins sitting in an intensive care unit. This kind of changes things." My whole perspective on dealing with a major natural weather event changed at that moment. At the end of the call with Rhode Island EMA [Emergency Management Agency], the director at the time, Al Scappaticci, said, "Can I call you after?" I'm like, "Yeah. Sure, sure." So he gives me a phone call. He said, "Hey, I know you and your wife had another set of twins. Are they home yet?" I said, "No, no. They're still over in the continuing care unit over at Women & Infants [Hospital] in Providence. He said, "Oh, did you hear the whole complex is without power? You might want to give a call to see how they're doing." I turned white. I remember the meteorologist in charge, my boss Bob Thompson, looked at me and said, "Are you okay?" I said, "I need a couple of minutes to make a phone call." I called my wife. She hadn't heard from the hospital. I call the hospital, finally got to the ward where the kids were. They said, "No, no. We're all set. Backup generator power came on. It's actually the building next to us. The kids are fine." That was my first – "Oh, these things have impact." Okay? I call a couple

of my experiences in my career religious experiences. Two sets of twins is a religious experience. My first “religious” experience, honestly, was when I did the service assessment for the Weather Service of Hurricane Isabel, which hit the Carolina coastline. I had the good fortune of traveling with the colleague of mine who’s now down at the Ocean Prediction Center, Darin Figurskey. Darin was the meteorologist in charge of Buffalo at the time, and I was the science officer up in Boston in 2003. We went down to Albemarle Sound. We met in Raleigh, he and I drove out to Wakefield to the weather office there. On the second day, which was a full day we were in Wakefield, I drove with warning coordination meteorologist Bill Sammler down into the town of Edenton. On our way down, you could see the changing behavior of the wind damage. You had microburst-looking wind, and then you had – you got close to where the eyewall hit and you started seeing tops of trees sheared off, roofs missing – a very different behavior. But coming from New England and all the work that I had done on New England hurricanes, I was in that town, and there was something eating at me, like there was something there I was supposed to see and I hadn’t seen it yet. So, on the last day that we were in Wakefield, we were to drive back to Raleigh to reconvene, and then the next day was going to be spent writing up the report while we were all together. Darin says, “Hey, which way do you want to go? You want to go back on the highway, or you want to go back on the back roads?” I looked at him – and he’ll tell you this story, too. I said, “Darin, there’s something in Edenton I’m supposed to see. Can we go the back way? I want to go back down that way.” He looks at me, and he goes, “You’re scaring me, boy.” I’m like, “Just trust me.” So we go down, and I told him which way we wanted to go. We went down by some cotton fields. He stopped the car; I reached out of the car and picked some cotton. That was cool. A kid from the Northeast, I never saw cotton before. We get down into Edenton. We’re going over the Chowan River Bridge, which went over the very west end of Albemarle Sound, I looked out the window, and I said, “Stop the car. That’s it.” The west end of the Sound had an eight-foot storm surge. Carnage, houses blown off foundations, washer/dryers up on the hillside blown out the back walls. He and I spent the afternoon there taking pictures, talking to one or two people who were there trying to pick up the debris. I was looking at this one house. We went inside the house, and sheetrock ripped right off the wall right below the cabinets. So you knew how high this storm surge was. What caught my eye was a crib mattress cover wrapped around a clothesline. That was like, “Oh my God. Here I am in the Northeast telling people fifteen to twenty feet of surge. This is eight feet, and this is what it did.” So that was kind of my first aha moment. Okay? My first experience. The second one that changed my whole focus in my river center was the 2010 floods. It changed my focus on how we need to operate the office, and Irene solidified that a little over a year later. But it was my hometown. It was watching my hometown go underwater and our collective inability to tell the governor, who I knew personally, “I don’t know how this river is going to go. I don’t know what the elevation of this, this, and this is. But you may lose the shopping malls. You could get water on the interstate. You’re going to lose two wastewater treatment facilities.” That started my whole focus on this whole climate change. Something’s going on here. This isn’t just us now. In 2007 and 2010, we had record flooding all over the place. 2008, levies almost overtopping in Northern Maine. 2009, it was in New York State. 2010, it was Rhode Island. 2011, it was the Catskills. Okay, enough already. Hello. Okay. I get the point. Time to look. Now we’ve got a cottage industry in my office because we’ve done so much work analyzing the changing temperature and precipitation patterns, what’s driving it, and how the hydrology’s responding. So a couple of religious experiences in my career.

MG: That's powerful. I know that a number of years ago, the Weather Service did a hurricane reanalysis project, and they looked at older hurricanes.

DV: Oh, yes.

MG: Were you part of that?

DV: Yes, I was. [laughter] Funny story. Another funny story. So, yes, absolutely, I was involved. Anytime it got to a New England hurricane, I was asked to review. I put my foot down on Carol in 1954 because the trend was to say that wasn't a Category 3 hurricane. I was pissed as nails, man. Chris Landsesa and I know one another really well. We've had a good relationship over the years. I made a case to say you've got to keep Carol as a Category 3. I contend that she was the purest hurricane to make landfall at this latitude here in New England. It possessed the wind; it possessed all the classic ingredients, the storm surge – yes, I get it. If it's a Cat 3 offshore and it weakens to a two, you're still driving all that ocean in. But I fought and fought and fought, going back and forth in a scientifically nice way. At the end of the day, Carol stayed a Cat 3. So, yes, I've been involved with that mostly as a reviewer, as someone who's, again, a subject matter expert because of my understanding over the years and the research I've done on New England hurricanes, which is nice. I appreciate that they think enough of that that they want to reach out to me to make sure that we didn't miss anything. So I usually get a pass to look and see, especially that group of storms between '38 and 1960, which had a lot of impact up here in New England.

MG: What was the reason for doing the reanalysis in the first place?

DV: That's a good question. I want to say it was just from a scientific standpoint that we have so much more data available to us now in the techniques that we can utilize to go back and reanalyze, to really get the best possible count on the number of storms, their intensity, how did they track, where did they make landfall, to put us in a better position to be able to analyze risk and vulnerability, and to do historical comparisons between storms as we move forward.

MG: Was that an effort across the whole Weather Service?

DV: It was. Yes, it was driven out of the research wing of the National Hurricane Center is what led that initiative, but academia was involved as well.

MG: What kind of new information was being added as a result of this?

DV: Oh, they added storms. They took storms out because the data didn't support them. They changed intensities. They moved tracks of storms because of the new reanalysis techniques. So quite a bit of information regarding the hurricane history here throughout the United States has been greatly improved by that effort.

MG: Is it still going on?

DV: I'm not sure where they are in that process now. They go through a reanalysis after every major hurricane. This big project, though, started in the middle and worked its way in two different directions.

MG: How far back does it go?

DV: Late 1800s.

MG: Wow.

DV: Yes.

MG: I noticed that that's as far back as the hurricane history goes.

DV: Yes. There's a publication by David Ludlum that goes back into the 1600s with the first colonial hurricane and stuff like that. When they did the earlier ones, of course, there was a lot of oral and written history that they were relying on, and some crude observations that were taken at the time.

MG: Was that incorporated into the reanalysis?

DV: Yes, it was. So that reanalysis dataset has everything from the raw observations to the new reanalyzed track, timing, the speed, forward motion, intensity the winds, the whole nine yards. It's a really, really, rich, rich dataset.

MG: Is it something I could access? It's it publicly available?

DV: Yes, through the National Hurricane Center, it is. Off their site, if you just google hurricane reanalysis, I think it'll get you to where that database is housed.

MG: Okay, neat. Earlier, you mentioned the Perfect Storm. I'm doing an oral history project in Gloucester right now, and everyone seems to have a theory about it.

DV: 1991. Yes. [laughter] So you had Hurricane Grace – classic, October hybrid. You had a hurricane by the name of Grace that was moving up across Central Atlantic, and you had a very large winter-like looking weather system that basically was forecast to do what it did – intensify and drift westward because of the way the atmosphere was getting blocked. It just so happened that Hurricane Grace, as a heat machine, got caught up in that broad circulation, and the energy from that system and its core got wrapped into this thing, and you had the best of both worlds: tropical cyclone, heat machine, big upward level atmospheric winter storm over the North Atlantic, and the thing exploded. They actually wanted to name it when it was south of Nantucket. The Hurricane Center at one time was contemplating actually renaming that thing a hurricane or tropical storm or subtropical storm at that point. But, by that time, all the damage had been done on the coast of Massachusetts into Maine and New Hampshire. So it was after the fact; it really wouldn't have mattered. But yes, that October Perfect Storm was a perfect storm in a way.

MG: Are there other “perfect storms” that you can think of?

DV: Yes, the October ’96 system that dumped over thirteen inches of rain in Newburyport and eighteen inches of rain in Southwest Maine was another one where you had tropical storm Lili going off in the Atlantic, got wrapped up into a nor’easter that was developing off the coast of New England, and brought all that tropical juice into the center of a circulation of a cold-core system, and wham-o – slow-moving onshore flow for three days, coastal flooding, and remarkable amounts of rainfall. Sandy, another example, a tropical system coming out of the Caribbean trying to go offshore, getting captured by a large-scale upper-level winter-like weather system. But she was caught up in a way where the inner core of that system is actually somewhat protected and was able to maintain its identity until it hit the coast of New Jersey.

MG: Can you talk a little bit more about the work you’re doing at SUNY Albany with the tropical cyclones?

DV: Yes. So that work went on from 2000 to about 2006, 2007. So, CSTAR –

MG: Is that an acronym?

DV: It is. Give me a second to check my phone.

MG: Sure, I’ll pause this.

TAPE PAUSED

DV: So there is a program that’s run; they’re typically two to three-year grant programs for universities doing atmospheric science research. So CSTAR is the Collaborative Science, Technology and Applied Research initiative. These projects have been going on for over a decade now. One example coming out of the CSTAR research was the partial thicknesses technique that was developed in the Carolinas through NC [North Carolina] State University to predict precipitation time. Another one that I was affiliated with between 2000 and 2007 was the one that was awarded to SUNY Albany, the State University of New York in Albany, and I had the remarkable good fortune of working very closely with Dr. Lance Bosart and Dr. Dan Keyser at the university, where, over the course of six years, seven years, I had the pleasure of working directly with two graduate students, one of which, together we worked on the reanalysis of New England land-falling hurricanes that produced heavy precipitation in the northeast. Our focus was on defining the synoptic-scale or large-scale mechanisms that led to the behavior that we see, the transitioning of the rainfall from the ocean side to the inland side, which ones had that transition, which ones only partially did it. To identify the large forcing mechanisms in the atmosphere so that we could then train the forecasters in the field what to look for and what to look for in the numerical guidance simulations to see if they’re handling it right. The second part of that project, where I had the good fortune of working with another grad student, was focused on the mesoscale mechanisms, those small scale mechanisms that lead to the modulation of the heavy rainfall regions up against the terrain, the formation of coastal fronts, all these smaller mechanisms that are working on these tropical cyclones when

they get up to our latitude. Two of my colleagues that were at Binghamton, New York worked with a third graduate student in this six-year effort to look at what we call PREs [Predecessor Rainfall Events], which are pre-event heavy precipitation events that promote flash flooding a couple of days before the eye of the storm comes ashore. So it was very productive. We produced a number of papers. I produced and recorded webinars and tele-training on the techniques and on the processes that are involved, conducted those as live webinars with the field offices around the country over the years, and still provide that information periodically at science seminars. So that whole program was born and raised in that late 90's timeframe after the Weather Service had completed the modernization. It was a great jumping-on point to really get interaction between the field forecasters and the research communities at the collocated universities. It's been very successful, and it still goes on today. SUNY-Albany did work on closed lows on the ET transition, what we call extratropical transition of hurricanes. They did work on lake effect snow, on wind shear, convection, lake-induced convection, tornadic convection in the northeast. So each one of them around the country has had areas of expertise that they focused on – very successful program.

MG: Well, looking back, is there anything we've skipped over in terms of your career or other things you want to talk about?

DV: Yes. There is one thing I want to talk about. I've been blessed in my career by having some really remarkable supervisors and mentors, people who love the science, people who had patience, people who enjoyed the same thrill that I enjoy and what got me into this field, people that have never lost that, never lost that excitement. About a year to a year and a half into my tenure at T.F. Green Airport, I had a supervisor by the name of Paul Sisson, who is now and has been for many years a science and operations officer in Burlington. Paul came to the Weather Service in the early '90s, prior to hurricane Bob. So I want to say it was maybe 1990 he came on board. Paul came to us from the Aberdeen Proving Ground. He was a civilian working for the military. Just a tremendous individual. He was young like I was, cool, calm, collected, loved the science, enjoyed what we do. He was progressive, gave me a really big playing field to find my niche, do my thing. When I got promoted, I had Bob Thompson, who just recently retired, and Bob was my supervisor from October of '93 until the end of 2006, when I was promoted to the river center. Then I had the remarkable good pleasure of working with Bob as a colleague, running centers that happen to be collocated. Bob was a gentle individual. He got the biggest kick out of watching us do our thing. Bob allowed me to do a lot of pretty creative things, and to use some of the crazy people in our office, who had the same kind of weird way of thinking as I did, to do an awful lot of neat things that have really moved our services forward, really have moved our services forward. We've talked about some of that, from his allowing me to take over the whole hurricane program and maintain that as our service hydrologist, in that position, to let that be part of my bag of tricks, to look at extending riverine stuff to the coast, to setting and establishing the capability to do the coastal flooding like we do the riverine, and to do the service delivery and the research behind it to make it work. [He's a] tremendous individual. We took many trips together along the coastline to meet with the town officials to talk about the hurricane threat, to do the training. He just gave me an open playing field, and he's a big reason why I am where I am today because he was a great mentor, he was incredibly supportive. God, when my wife and I were going through the hell of having two sets of twins, both born three months early, and all the fear, and the ups and downs of that, and

adjusting my schedule so I could be at the hospital or at home or what have you, and just being a really good role model growing up through the agency, through the organization. You know why I became a science officer? I had some really good people like Ken Johnson, Jeff Waldstreicher, and the regional director at the time, Dean Gulezian – tremendously supportive, really engaging me and encouraging me to keep pushing that envelope, supportive of our science program, supportive of my involvement in the CSTAR effort, supportive of getting out and getting the word out, and doing this type of training, and facilitating this type of research. That's at a regional level. I've been surrounded by remarkably talented people as colleagues in the offices at the river center at the weather office to tap, to help us move forward, who enjoy the thrill of doing it. Then when I became the hydrologist in charge, the chief of our hydrologic services division now, George McKillop, was the deputy for a decade or more. Having his support over these – oh, god – twelve years now as both a role model and as a confident and as a supporter – and his supervisor, Regina Cabrera, who's retired, she had left that position, I think around 2014, '15. Having that support – you have no idea how important that is to have that support and to see the enthusiasm supporting me on a new initiative of taking numerical weather model ensemble predictions of rain and temperature and creating an entire suite of hydrologic service out of that. Starting out as a small little, "Gee, why don't we do this? Why can't we do this?" Going to my development and operations hydrologist a year into my tenure, saying, "We've got all these global forecast ensemble members. Why can't we just take the rainfall and temperatures and run them through the hydrology? Let's give the weather forecasters something they can sink their teeth into. Show them what the spread is. Show them what the range of potential is," and how that became a regional initiative, spread all the way almost to the Mississippi River, and how the emergency managers in the weather offices embraced that. You don't get there without the support, what I call "a coalition of the willing," those people who support. It just reinvigorates you, gives you another boost. It gets you to do more. To see some of that philosophy now baked into our whole new hydrologic ensemble forecast service that came out of some of the deficiencies that some people in the country didn't really appreciate what we were doing because they felt it's a disgrace to the hydrology to throw that kind of crap into a hydrologic model. But knowing full well that while we know we can't get all the warts out of these things, it's sure giving you a picture of what your potential is. That helped us evolve where we've gone with the new hydrologic ensemble services, which is already a big step above what we've already done. You don't get there without people that want to pull you up and people that want to support you. I think that's a very important point, that mentorship and having those people that gave you a proving ground, gave you a sandbox – a really big one in my case – to let me bang around with a lot of things and try and test and evaluate. That's why I tell my staff, like I said, "I want to be at the head of the train because the view is a hell of a lot better than sitting in the caboose."

MG: Is that a feeling across NOAA?

DV: Yes. I think if you ask people and you look deep enough, more than not, you're going to have people who are going to recognize that they had people there along the way that really did want to see them go. Not that I'm without work, [laughter] but I took over running our eastern region in the Weather Service's leadership program. We now call it CLASS. God, I better remember the acronym – Cultivating Leaders to Advance Science and Service. That's what we call it. I got an oversight team of five folks and a former Weather Service employee that's been

our facilitator for our workshops. She was one of the training folk at our training center for years in the leadership program. I decided to take that on because I think what I just talked about is so important. You got to have a mentor. You got to have a couple of people you can bounce things off of more to get a different perspective, people who want to look out for you and help you and identify that you're a go-getter – "We need to get you higher up in this organization – give you the experience, give you the exposure, and that's part of what our leadership program is built on, getting people the experience, the exposure, developing those relationships. I think if you look across NOAA, you're going to find that more often than not.

MG: How have you seen NOAA change in the thirty years you've been with the agency?

DV: [laughter] Oh, boy. Let's see. Try to put it in perspective. I think the biggest improvement, to me, is how much more I am aware of what the other parts of NOAA are doing and the fact that through regional teams, the interdisciplinary work that exists now didn't exist before. Who'd have thought twenty years ago that a river center would give a damn about what's happening to an algal bloom in the Gulf of Maine, let alone be providing forecasts and decision support services that now inform the monitoring community and feed a model that generates a seasonal outlook? It's ocean. It's chemistry. It's physics. It's weather. It's water. It's all integrated. It's all disciplinary. Admiral [Conrad C.] Lautenbacher, who was the NOAA director back when we developed this regional team concept, I think, realized we have too many silos in the organization. There isn't that cross-fertilization that needs to exist, and I would say even within the Weather Service, it had been the same way. "My forecast is my forecast. Don't you touch my forecast. I don't care what that person says. At that boundary, that's my forecast." You know what? When you're three weather offices serving one state, that state director for emergency management doesn't give a damn where it's coming from; it better be the same. You better not be singing me one song from office A and another song from office B, because I have to make a decision that's going to affect people's lives, their property, where they're going to move to, are we going to evacuate. So with the modernization and now with greater forecasting and all this, we've really been forced – and it's a good thing – to really have a much more open and collaborative exchange internally within our organization so that we are sending a consistent message to our partners at all levels of government. So as much as NOAA had all these stovepipes, oh, guess what? So did the Weather Service. And yes, thirty years ago, hydrology didn't talk to the weather. That's why we went on separate tracks for decades. That's why, even today, the systems we use are really driven for what the requirements are of the weather office, not the river centers. We're still fighting that battle. It's gotten a lot better. They recognize it now. The next [inaudible] architecture that we get is going to account for this. It's taken decades. Why? Because we didn't talk to one another. Why? Because we had silos. Why? Because I got paid out of that pot and you got paid out of that pot. It can't exist. There's not enough money to go around anymore. You have to leverage the interdisciplinary nature of business.

MG: Well, now I want to ask you about your family, starting your family, and finding out you're pregnant with twins.

DV: Yeah. [laughter] It's a long road to get there.

MG: If you're comfortable talking about it, I'd love to hear about it.

DV: Yes, to a degree. So we have twins on both sides of our family. It wasn't the whole reason why we had twins, but I think it had a little something to do with it. Both our sets were three months premature. First set was one pound-twelve and a pound fifteen, ounces that is. Second set was two pounds one ounce, two pounds three ounces. Both spent about three months in intensive care. In the first set, Ryan was uneventful, Matthew put us through hell and back. Molly and Christian were a little bit easier, but they were born a little sooner. But the second time around, they have my wife on bed rest. She was getting injections to help the lungs mature. It really changes your perspective on what's important in life when you're holding a baby that's under two pounds. The sad thing, really, was when our kids were in the intensive care unit, there were full-term babies that died because of neurological issues and whatnot. So we felt that we were pretty, pretty blessed that we were able to come out of this pretty unscathed with four healthy young adults now, all with their own talents, all with their own individual personalities, what makes them tick, across the whole spectrum.

MG: Can you say a little bit more about each of them? We were talking off the record earlier when we were having lunch. Can you tell me where they've ended up and what they're doing?

DV: Oh, yes. So in the older set, Ryan plays – he was extremely talented on clarinet. Unfortunately, because he chose the science field, he hasn't been able to fit in but only one semester being able to continue to play in the concert band at the university. But he is in his fifth year at the University of Rhode Island. At the end of four years, he had successfully completed upper dean's list chemistry, degree in chemistry. He is in his fifth year to get his physics degree. He spent the summer of 2018 at Kyushu University doing research on thermally activated delayed fluorescents. So when he is done this spring, he will be applying – he's about to apply to graduate schools, and I can see him going on to get his PhD, doing research, maybe being a teacher. Incredibly talented. His twin, complete opposite. Ryan has a lot of the Vallee genes. Matthew has all of the Raiche genes. If you put Matthew between his great aunt and his grandfather – his grandfather is no longer alive, he passed away in 2012 – my wife's dad, Matthew is a Raiche through and through, a French Canadian guaranteed. He looks the spitting image of the two of them if you put him between them – his mannerisms, how he asks questions, just like his grandfather. So, so funny. So Matthew [is a] tremendously talented saxophone player. Matthew had a learning disability or two along the way, which is not uncommon, especially with preemies, primarily in math and reading. That kid has a remarkable work ethic, and he worked hard as can be all through school to get the excellent grades that he got. One of the best tools I had as a dad trying to help him with math was the whiteboard in the basement that his fifth-grade resource teacher gave us at the end of his time at the Community Elementary School. I helped him in sixth, seventh grade with math and with Intro to Physics by being able to do problems on the board because I recognized Matthew learned by doing and by seeing. It helped him. That kid worked really hard, and by the time he got to senior year, he'd gotten out of the IEP [Individualized Education Program] all on his own. So he went to Rhode Island College for music education, did a year, [and it] really wasn't for him. He didn't really enjoy it that much. He enjoyed playing, but not the theory and all this stuff. So he came to us and said, "I want to take a year off. This is why. I love playing, but I don't like teaching, and I don't think it's for me." So he worked full time. He had been

working in high school for a local supermarket chain and found a home in the produce section. They love him, again, because of his incredible work ethic. So he took a year off. He went back. He paid for his first semester. He did pretty well, working primarily on his general education requirements, trying to get a smattering of courses to see if anything clicked. After his second go at it, while he passed his classes and did fine, he decided the college thing wasn't for him. So he's invested now with the supermarket chain he's working for. He's doing great. They love him. Corporate loves him. They come in to see him, to talk to him. He's a known commodity. I'm just really proud of him because, in his own way, he's made a wonderful niche for himself. He helps train all the new people that come on board. They give him the important shifts when they have to do all the stocking and resupplying because they know that Matthew will do the work of two or three people because he's that good. That's the older set. The younger set we have Molly and Christian. Molly is following in mommy's footsteps, going to the same university, University of Rhode Island, for music education, and an incredibly talented flutist. I'm so proud of her. All four of our kids played in the Rhode Island Philharmonic Youth Wind Ensembles and orchestras and repertoire orchestra and symphony. Molly got a chance to travel with the symphony to play at Carnegie Hall back a few years ago when she was a junior in high school. I'll never forget the day she came home and said, Dad, we're going to be going to Carnegie Hall. Have you ever played at Carnegie Hall?" I'm like, "Molly, played? I've never been to Carnegie Hall." So it's just a thrill to go and watch them as one of five invited symphonies to play at this convention. It was just a thrill to listen to that eighty-two-piece symphony from Rhode Island get an instantaneous standing ovation after the three pieces that they played. So she's doing remarkably well [in] music education. Waiting to see what her niche is going to be in the music education arena. So that's been exciting. She's playing in small ensembles. She'll be soloing with the symphony, the URI orchestra this spring. Then we have Christian. [laughter] Christian, Christian, Christian. He has always been one of the most creative of the four kids that we have. He's the type of kid that where when he gets on to something, he's going to run it into the ground and do everything he can with it, whether it be skateboarding – he plays piano and trumpet, though he hasn't followed it as a career. He did a year of business administration courses at Rhode Island College, and fell in love with playing Fortnite, but not the computer-based Fortnite, the mobile Fortnite. He is taking a year off because he has become a sensation nationwide. He's got over half a million followers. His tag is SSN Santa if you want to watch him. He has developed a niche in the mobile gaming family if you will because he's one of only a handful of players nationwide that has become so good at playing the Fortnite game on a mobile device. This all started about a year and a half ago where he got on to it, saved his money from working. He was a manager at Burger King, working a couple of nights a week during his first year of college. He bought his own gaming system and then the mobile device, and he really gravitated toward the whole mobile arena. So he's turned my basement into somewhat of a recording studio, including webcams, green screen, boom microphones, lighting apparatus. He streams and then he records his stream in real-time with a camera on him and a camera on his hands, on the mobile device. He posts his videos and does voiceovers and music and all this onto it, puts them up in his own YouTube channel. He's involved with Twitch now. It's become a remarkably successful endeavor financially on his part because of the advertisement through YouTube. Google pays him for the number of hits he gets on his videos. Samsung has brought him on board for six months, a paid endeavor to help Samsung kind of roll out and perfect their mobile device. Now he's looking at a contract that could have him going to Texas with a new mobile gaming

venture that the Dallas Cowboys have their interests in. So hit while the iron is hot. So we'll see where it takes this kid, but he is all in and extremely talented at it. He keeps a G-rated station, and he kicks people who off who try not to be that way. He's got a great rapport with young and old. It's quite remarkable to sit there and watch him do his thing in this whole new emerging field if you will.

MG: That's great. You must be so proud of all your kids.

DV: Yes. It's pretty wild. Someday I'll have to write a book because they are all so different but all creative in their own way.

MG: Yes, I bet. Well, is there anything I've forgotten to ask about or left out.

DV: Let's see. Is there anything, anything, anything? [laughter] It's kind of a funny line, but it's the one that's driven me my whole life. Anything with a name in the Bahamas. That's how I educated the emergency managers for twenty years in Rhode Island and New England. Any system that's got a name that's about to enter the Bahamas is your business. You got to pay attention to it. You'll find it's always something that drives all of us in this field. For me, it's the New England hurricane, always has been, always will be.

MG: What's the relationship between a hurricane forming in the Bahamas and what happens in New England?

DV: Well, it's just if they're going to hit us, they got to get there first. As they're approaching the Bahamas, that's about the time we're going to begin to gain confidence of whether or not this thing is going to threaten us or not. The old rule of thumb for emergency managers was wait until the center gets to Hatteras. It's too late. When they're trucking at thirty, forty, fifty miles an hour, it's too late. '38 went from Hatteras to Providence in eight hours. So early on in my career, when I started doing research on our systems and I looked at where these things were coming from and the timing and the evolution, it was clear to me that once they got west of seventy-two degrees longitude, we got to pay attention. If they're going to hit us, they're coming through or just north of the Bahamas. We developed this area box if you will. Anything with a name getting into that box in the Bahamas, we have to pay attention to. We educated the emergency managers on that because it changed the way that they approached how they were going to prepare. A lot of them, when I first came in, in the early to mid-'90s were all on that, "Oh, you got to wait until the semicircle gets toward Hatteras," and we knew that it was too late. It's too late. Way too late. But that's the importance of the Bahamas. It's always good to try to put a tag on it, something they can remember – anything with a name in the Bahamas.

MG: Okay. Good. Well, if I think of anything else, maybe I'll send you an email, or we'll have another opportunity to talk. This has really been such a treat, and I'm so glad you could come to me.

DV: Excellent. No, this is wonderful. This is absolutely wonderful. I've enjoyed it. Thank you for your hospitality and the munchies. I'm so glad. This is perfect.

MG: Yes, this is nice. If all my interviewees could come to me, that'd be great.

DV: [laughter] That's for sure.

MG: Thank you.

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Reviewed by Molly Graham 12/4/2019

Reviewed by David Vallee 1/25/2020

Reviewed by Molly Graham 1/25/2020