Molly Graham: This begins an oral history interview with Max Mayfield on November 3, 2023, for the NOAA Heritage Project. The interviewer is Molly Graham. It's a remote interview with Mr. Mayfield in Miami, Florida, and I'm in Scarborough, Maine. In our previous conversations, we had sort of skipped around. In our first session, we talked about your family history, early life, education, and the start of your career at the National Hurricane Center. In the last session, we really focused on your time during Hurricanes Andrew and Katrina. So, I'm wondering if we can just go back in time a little bit and trace the steps in your career so I can understand better how you came to lead the National Hurricane Center. In 1972, your title was satellite meteorologist. Can you talk a little bit about that position briefly? Then, I'll ask you about becoming a hurricane specialist.

Max Mayfield: Okay, I came to the National Hurricane Center in September of 1972, right after getting out of the Air Force. I was two years in the Air Force. I was an intern at the time, a lowranking intern. It was a wonderful program; you got to do different jobs and work in different sections there. Back then, the National Hurricane Center and the local Weather Service Forecast Office were all together; they're still co-located, but the management structure is separate now. Back then, the management structure was – in other words, the director of the Hurricane Center was not only over the National Hurricane Center but also over the local office. In fact, the deputy director of the Hurricane Center was also the meteorologist in charge of the local Miami office back in those days. Anyway, I was in the intern program for a short time. Then, it was 1974 when I became a satellite meteorologist. They had a new program, these new geostationary satellites were going up. So, I ended up working with satellite data. They established five of these Satellite Field Service Stations as they were called. One of them was in Miami at the Hurricane Center. It was something new, and I agonized over taking the job a little bit. But it was new and exciting, and a lot of money was going into the satellite program. My support to the NHC really didn't change much. I mean, the Satellite Field Service Station was there to support the National Hurricane Center, so we were still located in the same building. So, I did that. That was a wonderful opportunity to learn more about hurricanes. I believe we talked a little bit about Vernon Dvorak earlier and the Dvorak satellite technique, where you can estimate the intensity of a tropical cyclone just by looking at the cloud pattern on the satellite imagery. On the satellite imagery, the resolution was much improved in those days compared to what we used to have. It was just a whole new world. You felt like you really did a lot of good with satellite data because you can't afford to keep a reconnaissance aircraft flying in a hurricane twenty-four hours a day. You can't do it. You can't afford it. In fact, the planes can't fly that far all over the Atlantic, or the Northeast Atlantic, for example, and come back. We eventually got satellite imagery twenty-four hours a day. I felt like I was really making a contribution back then. I became proficient with applying the Dvorak technique. That's the main reason, I'm sure, that I was selected to be a hurricane forecaster in 1988.

MG: Was that also when Bob Burpee became the director of the National Hurricane Center?

MM: That was, I believe, '95. When I got there, Bob Simpson was the director. He left within a couple of years, and Neil Frank became the director. After Neil Frank, Bob Sheets, and after Bob Sheets, Bob Burpee was for a short time. He had some health issues. He was a wonderful man and a brilliant research meteorologist, but he had some health issues and was out a lot. Then Jerry Jarrell became the director from 1997 to early 2000 before I became the director in

April of 2000. It's pretty simple. I was in the Air Force for a couple of years and then thirty-five years at the National Hurricane Center. I tried to retire and ended up thirteen years with the ABC television station here in Miami, WPLG, as a hurricane specialist for them.

MG: I had something in my notes about Hurricane Erin in 1995. I'm not sure that was one we had talked about yet.

MM: No. That's a good segue into the Hurricane Liaison Team [HLT]. I think we mentioned the Hurricane Liaison Team. It's still going strong and does a lot of good with the coordination of the hurricane forecast especially with the state and federal emergency management communities. There's an interesting story about how that got started. I'll have to think a little bit on this, but it was in 1995. 1995 was a really active hurricane season. We had Hurricane Opal, not only a Category Five hurricane in the Gulf of Mexico but a large Category Five. Anyway, a very, very busy year. Earlier in the season, we had Hurricane Erin. So, this is 1995. It was the first hurricane to really threaten South Florida since Andrew in 1992. I remember making forecasts on Erin as a hurricane forecaster in '95. I remember the concern in South Florida with another hurricane threat, and the models were all headed toward South Florida. So, many, many people got in their cars and evacuated South Florida and went to Orlando. It's a common hurricane plan for some people. I wish people would go tens of miles rather than hundreds of miles, but that's what happened. As soon as a lot of these people left for Central Florida and Orlando, an upper low developed and helped steer Erin farther north, and instead of hitting South Florida, the center hit near Vero Beach and ended up going across Central Florida, including the Orlando area. It was a Category One hurricane on the East Coast there, and then it moved across the state. It was going northwestward across Florida into the Gulf of Mexico, and it was developing. It actually weakened over land down to a tropical storm, but then it started coming back. Even when it was a tropical storm, we put up a hurricane warning for portions of the North Gulf Coast, including FLorida. I remember doing this. I think it was jes as Erin was emerging into the Gulf of Mexico as a tropical storm. We had a conference call with the state of Florida. We explained we were going to put up a hurricane warning. So, we had the track headed northwestward, knowing that the hurricane-force winds could potentially impact the Florida Panhandle. But for those people who misused the forecast and did not understand the uncertainty – I'll not mention names, but the state meteorologist for Florida overly focused on that little skinny black line, and that took it into Mississippi. Anyway, Hurricane Erin developed into a category two hurricane. The eye wall moved over Fort Walton Beach. I remember this so clearly. The eye itself actually moved over the Pensacola area. So, Florida had hurricane conditions, and some bad things happened. I can't remember if it was the next night - it was probably the next night. I got a call from the state of Florida; the state meteorologist was shocked that this thing had gone off track. Well, if you have a hurricane with the track on an oblique angle to the coastline, coming in at a narrow angle, just a slight deviation in that direction of motion makes all the difference in the world in landfall. A hurricane is not a point; it's a large circulation. It affects a large area. You should not ever focus on that little skinny black line. I remember getting this call from the state around midnight, and I said, "We really need to talk. Let me invite you all down to the National Hurricane Center." The State Director of Emergency Management was Joe Myers, a really good and smart guy, and I invited them to come to the Hurricane Center. The way it played out the next day – Bob Burpee was the NHC director at the time, and he had not been there very long. He got a call from the governor of

Florida, Lawton Chiles, a very savvy politician, a good governor. The governor invited Dr. Burpee, Director of the Hurricane Center, to Tallahassee. Again, that was Bob Burpee's first year as director. So, he called me into his office and said, "Max, I want you to go with me and take whatever information we can get to explain the uncertainty in the forecast and the guidance that we looked at, the computer models for and tracking and intensity, and why we did what we did." Anyway, it was very easy to defend. I had a briefcase full of graphs and pictures and satellite imagery and radar pictures that we took to tell the story. So, Bob Burpee and I flew to Tallahassee the next day, and we met in a small room. Joe Myers, the Emergency Management Director for the state, wisely did not invite the state meteorologist to the meeting. He and his deputy, Frank Koutnik, another really sharp guy, were there with Bob, me, and Governor Chiles. Governor Chiles was kind of a folksy country boy. He was telling stories and telling jokes, hunting and fishing jokes. Bob and I are kind of looking at each other, wondering when the ax is going to fall here. I said, "I've got some information here I'd very much like to share," and he kept telling stories and jokes. Then, after about thirty minutes or so, somebody came in and whispered in the governor's ear. We didn't know what it was about at the time. But anyway, the meeting was over, we went outside, and the television cameras had arrived. So, he was just waiting for the media to get there. He had poor Bob Burpee standing behind him. Anyway, his story, in so many words, was that he ordered the Hurricane Center folks to come up to Tallahassee and straighten this out, and this was never going to happen again. It made Bob look terrible, and he didn't know what hit him. Anyway, luckily, I was in the background on that. But as a result of that, Joe Myers, Frank Koutnik, and I began to communicate, and I give Joe Myers the credit for this. He actually wrote a letter. I can't remember if he wrote it to the President or if it was the head of FEMA, Federal Emergency Management Agency, but it was a very powerful letter saying we needed better coordination among the agencies involved in our Nation's Hurricane Program. Making a very long story short, that eventually led to the establishment of the Hurricane Liaison Team. The idea was to have these video teleconference calls with FEMA. When we say FEMA, they have this huge table in Washington with all these emergency support functions represented, a couple of dozen people sitting around the table there that were the leads on these different areas: communications, transportation, sheltering, elderly care, and things like that. In addition to that, we would connect the state emergency management offices online as well. That started out being just the director and a handful of the most important people there in the state emergency management offices. After a few years, they could project this on screen and everybody in the whole Emergency Operations Center could see and hear the briefings. Anyway, it was a wonderful way to communicate what we wanted to coordinate with FEMA and the states. If you tell somebody a story, and then they pass it down the line, it always will get changed a little. So, they got to hear from the horse's mouth, the people making the forecast, and the director of the Hurricane Center gave these teleconference briefings in the beginning. I'll never forget one of the first times – actually, this was a practice run in the very beginning. We had a green screen at the National Hurricane Center, and we could project the satellite and radar, the forecast track, the model data, and the storm surge information – all that. We can project on this green screen. So, I'm there pointing to the green screen, but looking at what I can see the monitor. I can't see what was behind me actually on the green screen. So, I'm pointing to this and that. After a couple of minutes, I hear people starting to laugh a little bit. I kept going, and they kept laughing. I said, "You can see this clearly," and pointed to it. Then I said, "Please tell me you're seeing what's behind me." They laugh. "Nope, don't see a thing." Anyway, they finally got the kinks out, and it worked pretty well. In fact, in

Katrina – and I'll be careful with my language here – Bill Massey, a dear friend from FEMA that I still talk to after all these years, was sort of the leader of the Hurricane Liaison Team, at least getting it going in the beginning. He was the worker bee that actually brought the people in and did some fantastic things there. I'll never forget in Katrina - we're there, ready to give the briefing, and there was a pause. They said they were waiting for the President to come online. We had a mic that we always kept muted, but we had unmuted at the time because it was time to start. So, we unmuted the mic. Bill looks at me and says, "Oh, Mayfield, we're in deep doo-doo now." Anyway, I don't know if the President heard that or not. Within a second or two, he came online. The point is that the President of the United States was on these calls at times for something like Katrina. In Florida, Jeb Bush was almost always on the calls when he was governor of Florida. Some of the other states had very high-level people in there, too. Anyway, that's how it got started. Finally, FEMA established a permanent position at the Hurricane Center. Matthew Green – I might have mentioned him earlier – was selected for the position at the Hurricane Center, and he's still there after all these years. He's been there almost twenty years now, I think. So, it still works very well to communicate with one voice. Our job was to just give the overview of the hurricane in a short period of time and then get out of the way and let the emergency managers do their emergency management coordination. The states can talk to the FEMA and vice versa. So, some really good things came out of that Hurricane Liaison Team.

MG: It sounds like it was formed pretty quickly after Hurricane Erin, but for some reason, I have in my notes that it was officially formed in 2004, after a busy hurricane season. Was it called something different for a time?

MM: Well, I remember that the NHC staff was pretty much on its own in supporting the HLT computers for several years after Hurricane Erin. I know that Matthew Green came in 2004. That permanent position made a difference because we didn't have the staff to support it. It was really a huge challenge for the existing staff at NHC to make this happen. We were busy with the forecast and keeping our own computers up, and then we had these new computers for the Hurricane Liaison Team. So, it was time. I'll never forget Eric Tolbert, one of the deputy directors of FEMA, called me prior to the 2004 hurricane season and said, "Max, are you ready for a full-time position at the Hurricane Center?" I just said, "Thank you, Eric!" Anyway, Matthew's been in charge of this, keeps the train on the track there, and has done a wonderful job.

MG: Are you able to quantify in some way the impact that the Hurricane Liaison Team has had on preparedness and response?

MM: I don't know how to quantify that. All I know is a lot of people got gold medals for that. Actually, my friend, Bill Massey – I'm not sure Bill ever got rewarded for this. I remember a hurricane conference in Dothan, Alabama. I remember sitting in a motel room at this Alabama hurricane conference, and Bill was the first one that I remember ever talking about the need for such a thing – we didn't call it a Hurricane Liaison Team – but the need to make sure that the states and, if possible, the locals got the information from the horse's mouth. I remember I was drinking a root beer, Bill was drinking a beer, and he had a vision for this. I'm sure he helped guide this along the way. I'm sorry, I don't remember the exact dates there. But I know I could probably dig out that letter from Lawton Chiles. I'm sure that happened after Erin. That got the ball rolling. How long it took, I don't remember. I do remember James Lee Witt was the head of FEMA when he sent this huge plaque thanking us for the establishment of the Hurricane Liaison Team, and that would have been in the Clinton era (1993-2001). But it's much more efficient now than it was back then, I'm sure.

MG: This was an era where a lot of changes were taking place in the larger National Weather Service, such as the Modernization and Restructuring. I was curious how that impacted you and the center. In my interview with Lixion Avila, he talked about going to Oklahoma with you for a month for Doppler training during this time. This marked a big shift for the Weather Service.

MM: Well, it was. The biggest thing that came out – and then this really helped – Joe Friday was the director of the Weather Service. Ron McPherson was head of the National Center for Environmental Prediction. They both had a huge part in that modernization. Basically, what happened – we had talked earlier about how, in the early days, for example, the Miami Forecast Office did the forecast for all of the Florida peninsula and the Florida Keys. Well, in that modernization – I'm sure other people have talked about this, too – they established all these local Weather Forecast Offices that had their own Doppler radar and were responsible for their own area of coverage. So, the way that helped the hurricane program – and we talked about this one time before, I believe – right before every advisory goes out from the Hurricane Center on a tropical cyclone, one hour before that advisory goes out, we have a conference call with all the potentially impacted local forecast offices. So they hear that, and that helps them get ready to put their forecast out as soon as possible after the Hurricane Center releases its forecast. So, anyway, we're all on the same page. We all understand the uncertainty in forecasting. They get the National Hurricane Center information, and the local Weather Forecast Offices are the ones responsible for making the more detailed local forecasts and briefing those local emergency managers. That is so critical. So, the Hurricane Center has the big picture. The Hurricane Center can't talk to all these municipalities all over the hurricane-prone areas; the local offices can do that. So, for me, that was the biggest thing out of the modernization. I mean, the technology, especially with the Doppler radar, was wonderful. But just the concept of having these local offices makes such good sense. It all comes down to that local area and those local decision-makers. So there's communication in place now. I know that's always a challenge with the budget. It's pretty labor-intensive to have all these stations and as many people as they do. But if I look at the lives that have been saved, I think that you can certainly justify that.

MG: Somewhere in my notes, it says that your staff did pretty outstanding and that you had success with the budget items that you were tasked with.

MM: Well, especially after 2004 and 2005. We had some help with the budget then. They're still benefiting from Stepped Frequency Microwave Radiometers [SFMR] on the Air Force planes and the buoys that we got. Those were multimillion-dollar programs. Then, the four additional staff members, additional hurricane forecasters, were a tremendous help that is still helping today.

MG: Were you dealing with any resistance to the personnel changes and technology changes during the MAR?

MM: Well, at some of the local offices, the smaller local offices they had, there was pushback. I remember in one place in Florida, they didn't want to close the office. But it made sense to relocate these offices. But, if it's in your community, it's a major deal. They did have to close some offices and move them elsewhere to make sure that they had the appropriate radar coverage. You want to select those offices in places that are strategically located to cover the nation. They also tried, if at all possible, to locate them at universities, like the Hurricane Center ended up moving to Florida International University, their campus, and some offices are co-located with emergency management offices, which is a fantastic idea. So, a lot of benefits there. Joe Friday, Ron McPherson and I'm sure there are a lot of others that get tremendous credit for that.

MG: Can you talk to me now about becoming the director of the National Hurricane Center in 2000 and what you remember about that time and transition?

MM: Well, I had been there since '72. I'd been there almost thirty years, and I'd worked several different jobs at the Hurricane Center. I knew everybody. I would eat chicken with these people. I mean, we'd go out, and we just felt – the only way I even thought about putting in was that I was so confident in the staff that we had there. I knew the director's job would be a challenge. I'm a meteorologist. I loved forecasting. That's why most people get into meteorology – because they like the weather. So, management was a whole new ballgame. I had been the deputy director there for a short period. So, when I became director, there was one person who stood out above everybody else, and that was Dr. Ed Rappaport. I know you've already talked with him. I still talk with Ed often. He was a detail guy and loved strategic plans and all that. So, when I was on travel, for example, in the offseason, Ed just did a fabulous job. I mean, we would call or text or email to coordinate often when I was on travel. He just made it happen. If I had not had Ed, I don't know what I would have done. The challenge for me was just the unending requests. You felt like you were getting pulled into all the state hurricane conferences, from Texas, Louisiana, Mississippi, Alabama, Florida, Georgia, South Carolina, North Carolina, Virginia, Maryland, Delaware, New Jersey. They all have their own hurricane conference, and they all want the director of the Hurricane Center to speak. Well, they didn't have to have me, but it helped them, and they made pretty compelling arguments that they wanted me to come. Then, you have international commitments with the World Meteorological Organization. You've got the insurance community over here; they're a big player, too, and they want the director of the Hurricane Center. Different universities had projects. Anyway, it just felt like you're getting pulled in a lot of different directions, but it was all worth it, especially when it came down to the hurricanes; the director and the deputy director are still very much involved in that. I've still got good memories. I really do.

MG: It's great when the number one and number two people can get along and work so well as a team. It sounds like Ed was very reliable, and you had a great working relationship with him.

MM: Right. Even the former directors, we still communicate. I'll never forget one time at the National Hurricane Conference. We had former directors there. We had Bob Simpson, we had Neil Frank, Bob Sheets, Jerry Jarrell, and I were there – and Bob Burpee. We were all there at this conference, talking to one another and laughing and telling jokes and stories. The director of

the Mexican meteorological service came up to me, and he said, "I can't believe you all get along so well. In Mexico, the only way" – he was probably exaggerating, but he said, "You became director because they fired the guy before you. We don't like each other usually." Even today, I still occasionally talk with Neil Frank. He's ninety-something years old. He's just amazing.

MG: It seems like the folks who work at the National Hurricane Center are motivated by their passion for meteorology and hurricane research and not so much climbing the political ladder; maybe that helps contribute to the positive workplace environment.

MM: That is definitely correct. I don't know if I've shared this story before, but there was a guy who was the meteorologist in charge of the New Orleans Weather Service office. Have I told this story? I remember one time at a NOAA hurricane conference – usually, after the hurricane season, NOAA has a hurricane conference to get their story together. Then, there'll be an interdepartmental hurricane conference with the military and other people attending that. Then you have the state hurricane conferences, and then the national conference – there are conferences all over the place. Can we take a short break here?

MG: Sure.

## [RECORDING PAUSED]

MM: I remember at one of the NOAA hurricane conferences, the meteorologists in charge of the New Orleans office because Billy Crouch was there. We were talking, and I made the comment, "I don't know why anybody in their right mind would ever want to get into management in the National Weather Service." Like you say, most people get into meteorology because they love the weather and not the management part of things. He just looked at me. He was a lovable curmudgeon if you will. He said, "If you don't, the SOBs will take over." Anyway, after I got selected as the director, I called Billy and said, "Hey, you're one of the reasons I put in for this job." This was years later. He said, "Yeah, that sounds like something I would say." Anyway, it all worked out. Again, I'm thankful that we do have people who really strive to get into those leadership positions. But most of the people – you're right, most of the people are at the Hurricane Center because they have a passion for meteorology. But once they get there, they know they're saving lives every time they put out a forecast, even those that remain over the oceans. I remember some people like to call the storms that never hit land "fish storms," the storms that stay out at sea. If you look at how people died in hurricanes in the early days, most of them were ship-related accidents; ships sank. So, we'd take that very seriously, too. The Navy and the Marine community benefit from the forecast, even if they don't get anywhere near land.

MG: Speaking of ships out at sea, I was hoping, if you remember, that you could tell me the story about Hurricane Michelle. You and the team were prepared to downgrade it, but then you heard from a sailboat operator off the coast of the Bahamas.

MM: Right. We were ready to downgrade it based on the information that we had. The lack of data was another thing we had to deal with. The first thing to go in a powerful hurricane is usually communications. We had a very active ham radio club that would come in when there

were hurricane watches and warnings posted, not just for the United States but in the region too. They could talk just about anywhere. So, in Michelle's case, I remember this very well. We were ready to downgrade it. I think we already had the advisory written to downgrade it to a tropical storm. And a ham radio guy came running in and said, "I just got this report." Actually, he handed me the report. They write these things down – still getting hurricane-force wind. I don't remember which island it was in the Bahamas. But fortunately, we did not downgrade it. We changed the advisory at the last minute there. But that's another example of other team players. It's a team sport, and we need to help as many people as we can. The ham radio folks have done a marvelous job, especially when the power goes out; they'll be talking to some country and can pass along some things that their own Weather Service Office may not even be aware of. They're a proud member of the team.

MG: Are they still as involved today? I don't hear much about ham radio. So I don't know if it's facing obsolescence or there are fewer ham radio operators today.

MM: You know who's still a ham radio operator? Craig Fugate, the former FEMA Administrator. He's been a ham operator for years and years. Even when he was FEMA director, he had an antenna wire stung outside his apartment in Washington DC hanging down the wall of the building he was in. [laughter] They perhaps don't get the credit that they should. It's maybe not as high-tech. Well, it's not as high-tech as a lot of things, but when the cell towers are down, the power's out for extended periods, and the cell phones don't work, those ham radio guys are extremely important. We've even talked to other meteorological organizations in other countries through the ham radio people before. So, it's been very helpful.

MG: Are there newer generations of ham radio operators coming down the pike?

MM: The outstanding founder of the ham radio group at the NHC was Julio Ripoll. Julio founded the NHC group in 1980. I saw Julio last week, and he is still active with the group at the National Hurricane Center. Today, Julio serves the group as a co-coordinator with John McHugh. Most of the members have other jobs and volunteer in the ham radio club. For example, Julio is a full-time architect. And he assures me he is always on the lookout for younger volunteers at hurricane conferences he attends.

MG: You talked a little bit about Hurricane Awareness Week in our previous sessions. Was there anything else you wanted to say about how that was formed and what it accomplished?

MM: Well, the whole idea is we wanted the media to have access to educational information on hurricanes. My recollection is that we did this – and I think at the time I was the deputy director. Joe Myers from Florida gets tremendous credit for making that happen. He helped populate the webpage in the beginning, and the idea was to educate anybody and everybody that was interested. One day, we'd talk about storm surge; another day, the wind hazard; another day, the rainfall hazards; another day, the tornadoes and the importance of getting your own hurricane plan. So, that's evolved so much now that we've got the graphics the media can use and anybody can look at if they're interested. The idea is to do this before the hurricane season, so it'll be available there for the kickoff to the season. So, the Hurricane Center, I think, got a lot of credit

for that, but I want to thank Joe Myers and the state of Florida for giving us some help in that in the very beginning.

MG: We talked about Katrina quite a bit last time. I just was curious if there's anything else you wanted to say about that time, something you might have left out. I was curious about what the year or so after Katrina was like for you before you decided to step down.

MM: Well, I think we talked about the congressional hearings. I talked about when I would go to Mississippi and Louisiana. Did I talk about getting Mayor Nagin and Governor Blanco together?

MG: I'm not sure you did.

MM: Okay, well, that's another short story. [laughter] That Saturday evening, before Katrina's landfall on Monday, when I called the governor of Louisiana, the governor of Mississippi, and Mayor Nagin, the response was not the way that it should have been, especially in New Orleans. So, I don't know if it was a year later or exactly when. Hopefully, it was before the next hurricane season. I wanted to get Governor Blanco of Louisiana and Mayor Nagin of New Orleans together. There was a little bad blood there, and they didn't communicate real well. I had a friend in FEMA that was willing to help set up a meeting. I wanted to have it in the local forecast office in New Orleans. Well, technically, it's in Slidell, right outside of New Orleans. So, the Weather Service was all on board. They had the local office. Paul Trotter was the meteorologist in charge there. We wanted to meet there, but I didn't want it to turn into a media circus. So, I told Blanco and Nagin, "This is not for the media. This is just for you two, me, and the local forecast office to sit down and talk about what was available back then and what's available now. So, no media." The day before the meeting was scheduled, both of them scheduled press conferences. The one thing I'm a little proud of is that I called Governor Blanco. I said, "Okay, you remember what I said? No media. So, I'm going to meet with Ray Nagin, but I'm not going to meet with you." Then I called Nagin's office and relayed the message, "Remember what I said? No media. I'm going to meet with Governor Blanco, but not you." And they both backed off. They both canceled their press conferences. They both came and sat on opposite sides of the table. They certainly did not hug each other or anything like that, but they listened, and we showed them the storm surge data that was available in real-time in Katrina. Actually, I remember, at the end of the meeting, after the meeting was over, Mayor Nagin stayed there, played on the laptop, and looked at the storm surge values in and around New Orleans. Anyway, maybe some good came out of that. Of course, politicians come and go, and there's this whole new regime there now. I think, maybe for the next year or so, we might have done a little bit of good.

MG: Well, I think it's so important to just put people at the same table and bring people together in that way.

MM: The local forecast office is a tremendous asset there, and they couldn't communicate for various reasons. The mayor was in the Hyatt Hotel. He did not reach out to the local forecast office. There was a disconnect there that should not have happened.

## MG: What went into your decision to step down in 2007?

MM: Oh, I should let my wife answer that, maybe. The congressional hearings went really well. But the real-time stuff may end, but the questions go on. I remember the Thanksgiving after these were the year following, some of them. Anyway, months later, I'm still getting additional questions from staffers on the Senate or House committees. I remember I had one complicated request – all these questions that could have been answered by just about anybody, but they came in to me the Wednesday before the Thanksgiving weekend. I'm not going to have my staff work on something like this over Thanksgiving. And they had to have a response before the end of the day Monday. I remember staying there working on it over the weekend. The questions just seemed to never end, and I didn't have the help I needed on some of that stuff. Weather Service headquarters just gave it to me, so I did it. It seemed like I was getting pulled in so many directions that I couldn't really focus on what I wanted to focus on at the Hurricane Center and improving the Hurricane Center. That was part of it. Then, I remember travel - I don't remember what meeting I was at. Anyway, it was a week-long meeting. I called home to talk to my wife, said "Hello," and she said, "Who is this?" [laughter] And I thought, "Uh-oh." Actually, I had a cold, and she said that she didn't recognize me because I didn't sound like myself, but I'm not so sure. Anyway, my father-in-law, Vaughn Carmichael, who we talked about, worked at the Hurricane Center for a number of years. I remember asking him, "When do you know it's time to retire?" He said, "Don't worry, you'll know." And I knew. It was time to go. Again, I'd been there thirty-five years. That was long enough for anybody. Katrina and the hyperactive 2005 season. I went through 2006, and then I finally retired in January of 2007.

## MG: How long did you enjoy retirement before going back to work?

MM: I had seriously planned to retire totally. When the word leaked out, within a couple of days, I got a letter from – well, it started with a letter from the local ABC station in Miami. The news director, Bill Pohovey, said he'd like to talk to me about becoming a hurricane specialist for WPLG-TV in Miami. Well, I had never had any formal training in media work whatsoever, and I've got a radio face, not a TV face. But that was the first. Then, The Weather Channel (TWC) - they were really good. I remember TWC's Ray Ban calling me - actually, he eventually flew down and talked to me face to face and wanted me to come to Atlanta and check out the Weather Channel. And I did that. They were the big dog around, and they made me a very attractive offer, more money than I made at the National Hurricane Center. Then NBC and Fox also talked to me. They all took me out to dinner or lunch. Anyway, I had some offers on the table there. I remember talking to -I had a friend, Pat Roberts, the President of the Florida Association of Broadcasters. He's the head of the radio and TV stations in the whole state of Florida, the local stations in Florida. Anyway, he said I really ought to consider one of the local offers. I didn't really want to move. I mean, The Weather Channel – they were going to put me up in Atlanta during the hurricane season. They were really good, and the offer was amazing from them. I went to bed. I had a date picked to make a decision, and I had decided to go with the Weather Channel. Then, I tossed and turned all night, and I kept thinking, "I love sleeping in my own bed here in Miami. Our friends are here, and our church is here. I love the house we're in. I love South Florida." Anyway, I changed my mind and ended up working for the local ABC station in Miami, WPLG-TV, and ended up staying there for thirteen years. I don't want to spend too much time talking about this, but they had a chief meteorologist when I first started

there. His name was Don Noe. They had a promo: "Don Noe knows weather." He was a really good guy and came from the University of Wisconsin. He was really into hurricanes. He was a pleasure to work with. Don and I loved talking about the weather. Back then, I'd put on a suit and tie and go in. We would always talk about the weather before each show, and I'd always ask Don, "Well, tell me what we're going to talk about before we go out there on the set, before we go live." And he said, "Just trust me. Don't worry about that. Just trust me." So, we'd go out there, and he would lead off as the chief meteorologist, and then he tossed to me. Well, the first week, he would regurgitate everything I told him before we went live. And then he'd say, "Max, what do you think about that?" [laughter] Anyway, I was a little slow there. It took me a while to figure that out. But I finally figured out I needed to hold a little something back there. That was kind of funny. I remember it always seems hectic in the background there before we go live. I remember I'd go out there and sit or stand out the set and be ready for when they'd toss to me. But that was the only time I really had peace and quiet so I could collect my thoughts. One time that first week, I was thinking about what I was going to say in the short time that I had, and the anchors tossed to me, and the first thing I said was, "Well, not much going on in the tropics today." Well, if I'd been listening to what they said just before the toss, the headline, the banner said, "Trouble in the tropics," and the anchor was hyping a tropical wave. Anyway, I made her look silly, contradicting her, and said, "There's not much going on in the tropics today." Don Noe straightened me out and made sure that I understood, "Don't ever, ever embarrass an anchor." Anyway, I tried to pay a little more attention. It was all new to me. I mean, you had to wear an earpiece, and sometimes the producer would – maybe I'd have thirty seconds on some days, and you have the graphics prepared in advance. It takes so long to get through the graphics to tell the story you want to tell. And then many, many times, they would come in my earpiece right before I started and say, "Cut to twenty." One time, the chief meteorologist - sometimes, they'd combine our time, my time with the chief meteorologist. Let's say you had a minute combined. Well, the chief meteorologist might take forty-five seconds and then leave me fifteen. And by the time they introduced me, my time was up. A couple of times, they would just say "cut" or "wrap" before I even opened my mouth. Anyway, I finally turned the volume down in my earpiece and couldn't hear what they were saying to me. I felt bad. If I went over the time limit, that usually meant that sports at the end of the show got cut. So the sports guys probably didn't like me at all there. I remember one time, one of the producers came in in tears after the show. We had our number two meteorologist working that night, and he went way over his allotted time, and I did mine in about the time I planned to. Anyway, together, we were way over the time limit. She came in after the show, crying and in tears, "You ruined my show." There were some times like that. Everything is scripted for the anchors; they read nearly everything. But the weather guys, we only had a time limit with no written script, so you have to know what you're going to say before you go out there, and I never was very good at that. I'm surprised they kept me around as long as they did.

MG: Those are things I hadn't thought about in terms of transitioning to this new role and having to deliver these messages in very precise time segments.

MM: Right. Now, oh my goodness, they have – on Channel 10 in Miami, there's a 3:30 show, 4:00, 4:30, 5:00, 5:30, 6:00. And then they have another one at ten o'clock, another one at eleven o'clock. And they don't want you to say the same thing over and over. Well, the story doesn't really change. I mean, a hurricane is out there. It's so strong. It's coming. The story

doesn't really change significantly. You can only change it so much. You can give a portion of it and then another portion, but then you don't get the whole message. That was always a challenge for me. Anyway, once we went under hurricane warning and would go into twenty-four-hour coverage, then it was a lot easier. We had all the time we needed. Sometimes, if the anchors had been sitting there for hours and needed to take a bathroom break, they'd say, "You got it," and so we could say whatever we wanted there for a while.

MG: As a TV meteorologist, were you still staying in close contact and coordinating with the National Hurricane Center?

MM: Well, I was so familiar with the products, and I read everything they put out. I felt comfortable there. They probably hated it, but when they'd make a little mistake, I'd usually call them. I figured they'd rather hear from me than anybody else. But no, if there was something that I didn't understand, you bet I'd call them. I also tried to stay in contact with the local emergency managers because it's so important for them to get their message out. It's not all about the forecast. You want to get those local emergency messages out from the local emergency managers and local officials. Sometimes, they were reluctant to do that. I can understand why they, especially the politicians, want to wait until there's absolute certainty before they make a decision to open up shelters or close schools, for example. I would call them and try to get them to say something. What is it you want the public to know right now? Some were a lot better at this than others, but some just didn't want to get in front of a TV camera and commit. Politicians don't ever want to be wrong. It's still a challenge to get the message out there. I think even if you just go and say, "Right now, we're watching it. There's some potential. We'll have to take action later. You really need to stay in touch" - even if you just say that, I think it's helpful. Let people know you care and are watching it. There are some communities that don't like to do that.

MG: Something else I wanted to ask you about is the public-private partnership that I hear a lot of folks in the Weather Service talk about.

MM: You can't do it without the public-private partnership. I give Craig Fugate tremendous credit for that and others in emergency management that understood that. Now, these emergency operations centers at the local, state, and federal levels have a support function for businesses, for the private sector. So, they are at the table. Somebody is there that can help. I remember Craig Fugate saying, "Are you really going to wait for FEMA to deliver your water? Or are you going to hope that K-mart, Wal-Mart, or somebody opens up and has water for you the next day? The private sector is a huge part of the hurricane plans. I think overall, we're doing a lot better job with those partnerships. Some areas are doing better than others.

MG: I now have a list of other things I wanted to ask you about, so we might jump around the chronology a little bit. But the first thing was just to have you comment on the changing technology you've witnessed over the years, from teletype machines and flying kites to the advanced satellite technology we have today.

MM: It's just amazing to me. Again, still, every day, I look at satellite animation, radar animation, computer models and observations, and forecasts on my cell phone. And it's free.

All this stuff is free. It's a great hobby, even if you don't do it for a living. We taxpayers are paying for this. That's one thing here in the United States. Taxpayers pay taxes, and you get easy access to things like this. Most countries charge for their meteorological services. Anyway, I like the way we do it. When, and if, the day comes and I have to go to a nursing home, I'm going to do the same thing; I'm still going to be looking at all this weather stuff that you can get on your phone or laptop for no charge. And new things are coming out. Being a senior citizen now, I can look back and think about those teletype machines and the old, clunky typewriters that you used to use to type the forecast on to give it to the teletype operators. It's amazing what has come along. So, I just can't imagine what the next few decades have in store, but it's going to be exciting. I'm looking forward to this. Even these Zoom meetings and WebEx or Google Meet, all this stuff is just amazing. We use it to talk to the grandkids; it's not just related to science. I'm not sure where artificial intelligence is going to take us, but I know people are working on that. You can use that in weather forecasting, too, and for a lot cheaper than these super-computers. You just want to make sure that you can catch the extreme events. We had an example here a couple of weeks ago on the Pacific coast of Mexico. A system went from a tropical storm to a hurricane in twelve or twenty-four hours – to a Category Five hurricane. That is really scary. How do you handle that? That was always one of the nightmares I had something developing rapidly that was not forecast. We've still got a long way to go. But it really is truly amazing what you can do with the technology now.

MG: I was also curious if you could comment on your involvement with the World Meteorological Organization or the American Meteorological Society.

MM: Yeah, I have good memories of both of those, especially some of the travels. I didn't get to enjoy traveling as much as you might think; you're always busy. For example, the AMS, the American Meteorological Society, would have yearly conferences, and they always wanted the director of the Hurricane Center to do something. So, I really enjoyed it. I remember one time, it was held in Phoenix, Arizona, and my wife, Linda, and I went out together and went up to the Grand Canyon on a vacation after that. I've had meetings all over – Seattle, Houston, Atlanta, San Diego, and numerous other locations. A lot of those were fun times, too. But international travel was just really, really interesting because the World Meteorological Organization has several tropical cyclone centers or something similar to the National Hurricane Center. There are six different regions around the globe: the Atlantic and Pacific, the Indian Ocean, and the north and south hemispheres. For example, in our region, WMO Region IV, we have a Hurricane Committee, and the director of the Hurricane Center is automatically the chairman of that committee. There are just a lot of wonderful trips involved in that to some really interesting places. This was WMO-sponsored, too. Did I tell my Mozambique story?

MG: No.

MM: Okay, well, I keep thinking of some of these things. I hope I can remember this right. Bob Sheets was the director, and I was the newest hurricane forecaster. This would have been, I think, '91 or early '90s anyway. Dr. Sheets asked me if I wanted to go teach a class on tropical cyclones in Mozambique and Madagascar. I was so honored. I said, "Oh, yeah, I'd love to do that." Part of that training was with the Dvorak technique, which I could do. Then, I found out later that he'd already asked every other hurricane forecaster in the whole office if they wanted to

go. They said, "Are you crazy?" They were actually fighting a civil war in Mozambique at the time. I didn't know anything about that at the time. Actually, the trip to Madagascar, that part of the trip was canceled because rebels had taken over the weather office. Anyway, we couldn't go there. I was looking forward to that. Anyway, I remember flying to Mozambique. I went from Miami to London overnight. Then, the next day from London to Johannesburg, South Africa. Then, a small plane to Maputo in Mozambique. They had ten different countries in Africa that were represented at this meeting, and they had an Australian meteorologist and an Indian meteorologist from New Delhi, similar to the head of the National Hurricane Center, from Australia and India. One good thing about the WMO is that, through the United Nations, they have interpreters, so a lot of people in different countries can understand even if they don't speak English. I remember when I flew – when I got to Johannesburg, I couldn't find my bag. They lost my bag, and the plane was late. The plane getting into South Africa was late. I remember I got off the plane, and I saw another airplane taking off. I said, "Tell me that's not my plane going to Maputo," and they said, "Yes." This was a Sunday. I was going to get there on Sunday for the meeting to start on Monday, I believe. They said the next plane was on Wednesday. I said, "I've got to get there somehow." Finally, I found my bag myself. I'm looking in this giant warehouse. I finally made it. I had separately shipped all this material, all these satellite pictures, and some boxes, and we never saw them. I remember when we landed in Maputo, in Mozambique, it was about midnight, and I went through their security or customs at the time. They didn't speak English, and I sure didn't speak Portuguese. They kept throwing my passport back at me. I had everything I was supposed to have, I thought. But I couldn't understand the form they wanted me to fill out, and the translation into English was not the best. I didn't know a soul there. They had guards with Russian guns, standing there. They finally told me – after an hour or so, I was the last one; they finally let me out. The lighting was terrible. They had a couple of old fluorescent bulbs in this airport, and you could hardly see anything to even fill out the forms. Anyway, I finally got through there, and someone told me, "Yeah, he wanted some money. He wanted you to give him some American dollars to get in." Well, I didn't know that. What am I going to do? I don't speak Portuguese to get a cab to go to the hotel. There was this missionary from Nebraska that was still in the airport, and he knew I was in trouble. So, he said, "Come with me. Go in my taxi. We'll drop you off." So, we were driving to the hotel, and it was just like something out of a National Geographic magazine. A lot of people in the outlying areas had come in close to the Capitol, and they lived in these grass shacks. Every tree around smelled like urine, and it was pretty bleak there. Those areas didn't have running water. I don't know how they did it, but they had a few hundred thousand people in these shacks on the outskirts of the capital. Anyway, we finally made it to the hotel, and I made it to the weather office. I remember the opening ceremony had to be in Portuguese, but they had interpreters. The Australian went first in English, and I can understand his accent in English fine. Then, it was translated into Portuguese. Then, the gentleman from India went next. So, the Australian and I put our headphones on for the translation, and then we looked at each other across the table and realized that he was speaking English already. It was very difficult for me to understand some of the other languages there. Then, they came to me for my introductory remarks. There's a big Russian presence in Mozambique. A lot of the buildings were Russian-built. The cars were Russian. I had taken Russian in college at Oklahoma. I got to say a few words in Russian. I think I got points for that. It was an interesting time. Then, we finally got to the workshop. Every single day for the week there, the power would go out. The rebels would cut the power lines, and it would take them maybe thirty minutes or so to crank up a generator to get power

back on. We had thirty-five-millimeter slide projectors in those days. It took a while, but we got through it. It was an interesting trip. Certainly a beautiful country, but it was not a very good time to be there. Then, on the way back, I remember, some of my clothes and a new pair of shoes were stolen from my suitcase. I'm sure they needed those more than I did there in Maputo. Anyway, that was just one example of one of the trips that I went to. Through the Hurricane Committee and the WMO, they would have a yearly meeting. There are twenty-six member countries in our Region IV. They have a meeting to go over the regional hurricane plan and talk about how to do things better every year. They'd have them in Bermuda, Jamaica, the Cayman Islands, Barbados, Costa Rica, Venezuela, Mexico, Nicaragua, and elsewhere in the region. I got to see a lot of different countries. I didn't really have time to enjoy a lot of this. After the meeting during the day, somebody had to stay and put the meeting notes together, and that was usually me and a couple of others. I thank goodness I would always take – every year, I would take Dr. Lixion Avila with me because he was from Cuba, worked in the Cuban Meteorological Service, and spoke Spanish. There are many Spanish-speaking countries within our region. He was a godsend. I couldn't have done it without him. He was accepted as one of them. He helped pave the way for me and smooth things over. So, Lixion and I and the WMO representative would also be the ones yearly to get together – plus a vice chairman of the Hurricane Committee, usually from the Bahamas, or the Netherlands, Antilles. We'd put the reports together. It was a lot of work. I'm told some of the representatives from other regional committees like in Japan, they have a full-time person that does this job. And I did much of the international work on the plane going or coming to the meetings, and it was just another duty. I made great friends on that Hurricane Committee. I used to get more Christmas cards from some of the Cuban meteorologists than I did my own staff. I don't expect to get Christmas cards from my own staff at the Hurricane Center, but I made some really good friends, and I still talk to a few of them even today. One story is about going through the interpreters. On that trip to Mozambique, it was a challenge for me to understand the representative from Indiawe got through it. A very nice gentleman, but I remember I had to try to translate what he was saying. I mean, put it into something you can understand. I finally said, "You've got to help me on some of this. My hearing is not good. Can you write down what you said?" Anyway, his writing was worse than mine. I couldn't read the writing either. But somehow, we got through it. I should add that my counterpart from India's English was much better than my Hindi, given that I don't speak any Hindi. So, I've got a lot of good memories. Usually, most of these – at least the yearly Region IV Hurricane Committee meetings – usually met for half a day on Saturday. Then, on Saturday afternoon and Sunday, you'd have free time, or they arranged a trip someplace. I saw some very interesting things. I also had international meetings in Fiji and Australia. Those were really good times. I regret not being able to take my wife on many of those, but we had three young kids back then and couldn't do it. But a lot of really good memories. The travels were amazing. It is good for the communication. The Hurricane Center in our region, which covers the Atlantic, Caribbean, Gulf of Mexico, and Eastern Pacific, focuses on that long-range forecast. We started when I was director, making a five-day forecast. This was an increase from the three-day forecast that we had made for decades. But you still want the local countries to put up their own watches and warnings. You don't want the United States to do that. If it's an island country, like the Bahamas, for example, whose economy is based on tourism and you put up a hurricane warning, that can paralyze the economy. So, it's their responsibility to put up their own watches and warnings, but we would help coordinate those. We would call them and say, "This is the track and intensity on the next forecast. What do you

think about putting up a hurricane watch and warning?" They almost always would say yes. So, the communication there is really good. The international commitment is strong.

MG. The other thing that I'm not sure we've talked about yet is the FLASH [Federal Alliance for Safe Homes] effort. I wasn't sure when that came about.

MM: Well, a good story there. [laughter] I need to make sure I get this right here. It was the first year that I was the director. I became director in April of 2000, and we had one of these Hurricane Awareness Tours. Bob Sheets and Neil Frank get credit for starting these trips. In the United States, we call them the Hurricane Awareness Tours. One year, we'd go to the Gulf Coast, five or six cities in a week. The next year, we'd go to the East Coast, five or six cities up and down the East Coast. By the way, Bob Sheets used to go to two cities a day. And then, on the international Caribbean trips, he'd do two islands in a day. It wasn't enough time. I needed more time than that. So, we started doing one stop per day, which was hectic enough. Sometimes, you didn't know what city you were in by the middle of the week. But the Hurricane Awareness Tours – in May of 2000, we were scheduled for a Gulf Coast trip. We were going to go to Galveston first, Scholes Field on Galveston Island, and then we had four or five other stops from there. So, we flew in on a Sunday afternoon on the NOAA P-3 Hurricane Hunter aircraft. We were going to get up Monday morning and start doing our thing. Again, the idea is to bring the airplane, the Hurricane Hunter airplane, to these stops. The local offices would invite school kids. The school kids come out. Local emergency managers participated. The media comes. You get a lot of visibility when you do these hurricane awareness tours, and they get a tour of the airplane, which was cool. So, that Monday morning, about 4:30, a severe thunderstorm came through Galveston. The P-3 was not directly impacted by the weather. It's a heavy plane, and it was gassed up, but some of the smaller planes broke loose from their tie-downs, and they smashed into the P-3 and did tremendous damage. So, I had a call – I don't know – five or six in the morning saying we've got a problem. It turned out they had over a million dollars worth of repairs. We couldn't fly the plane anymore, and it was too late to get a backup plane. So, there we are, the first stop, and we had to go to four or five more cities after that. We did commercial flights to government vans to people's individual cars. We did everything but ride a donkey, I think, to complete that trip. One of the stops was going to be in Tallahassee or near Tallahassee. I think we drove into Tallahassee if I remember, and then they had a caravan; they were going to take us down to the coast to various storm surge vulnerable areas. So, we're in this caravan of cars, and we're running late already because everything's been delayed. So, we're rushing down there because the media had a timeline, too. They were in the caravan as well. I received a call. There's this lady by the name of Leslie Chapman-Henderson who was the President and CEO of FLASH, and she wanted me to pull the caravan over and show me some "flashcards," is what I remember. I didn't know what those were. It sounded like a card game to me. I didn't know what she was talking about. FLASH, at the time, stood for Florida Alliance for Safe Homes. The whole idea is to build stronger, and actually, they're having their 25th anniversary this month in Clearwater Beach, Florida. Now, it's become the Federal Alliance for Safe Homes. The idea is to build better, build smarter for disasters, not just hurricanes. It started out being for hurricanes in Florida. That's why they wanted to connect with me. Now, they do fires, earthquakes, tornadoes – all kinds of disasters. It's a wonderful group of people that has a lot of people involved with it and trying to do some good there. Anyway, I said, "There's no way I'm going to stop this caravan." But this lady was very persuasive. So, I finally pulled over. They

actually had these so-called FLASH cards. They were hurricane preparedness tips printed on cards that were given away. Anyway, that started a relationship, and I became a FLASH leadership partner. I still am, actually. I did a recording for their 25th anniversary here the other day. So, that's how it started. She pulled me over on one of those Hurricane Awareness Tours. They've got a lot of support. Governor Bush was involved, and Craig Fugate. They always have the director of the Hurricane Center speak. I'm glad to see that continuing. It's not all about the forecast. We do know how to build better and smarter. We're making some progress, but we need to do a lot more.

MG: Well, it seems like the key to the success of these different organizations and efforts and agencies is this teamwork aspect and bringing in lots of voices and people to the table. That's also FLASH's model.

MM: They do. You should take a look at their website and look at the agenda that they've got coming up here in a week or two. Yeah, I think it's actually next week. They've got some tremendous speakers. It's hard to organize. Most building codes are done at the local level. And FEMA is a big part of this, too, the mitigation part of FEMA. They've got some great publications out there and some great suggestions, but they can't really mandate a lot of these things that are done by the local or state community. In Florida, it took Hurricane Andrew before we eventually got a statewide building code – well, an improved statewide code anyway in Florida, and it's done differently in different places. So, it's a challenge to make that work right.

MG: I'm also curious now to hear about your life outside of work. Can you tell me a little bit about your children and family life? I think it's so impressive that your son works in emergency management.

MM: Sure. [laughter] First of all, none of my kids really were into math and science like I was. I probably pushed them too hard in that. I apologize to them for that. My son did get into emergency management, and he was actually the acting Emergency Management Director for Lee County, Florida, during Hurricane Irma in 2017. Well, first, he worked for the state of Florida Division of Emergency Management. Then, he became a regional coordinator for the state of Florida. Then, he got a job with Lee County. My son's name is Lee. I'm sorry, in Collier County. He started out in Collier County. And then he went to Lee County right next door. The county had let some people go, and he became the acting director of Emergency Management in 2017, just before Hurricane Irma hit. Irma was a really bad hurricane. The hurricane core went in just south of the Fort Myers area, or it could have been a lot worse for Fort Myers. Anyway, he's had some success there. He did that for a few years. Now, he's with a private firm. He lives in Tampa, and it's a private emergency management consulting firm. So, he travels around the country with that. So, I'm glad to see him being successful there. He went to the University of Florida. My wife and I are both Seminoles. My first two kids went to the University of Florida. Then, my son actually got a master's in emergency management from Florida State University. So, I jokingly say he's back in the will. This is what he'll do, I think, for the rest of his career: emergency management. My oldest daughter, Lindsay, is a nurse practitioner in Gainesville, for the University of Florida Health there at Shands Hospital in Gainesville, and she and her husband have two kids, almost six and nine years old. Both of them

have birthdays coming up here in the next month or so. They love Gainesville. It's about a sixhour drive to us in Miami, but we go up there every chance we can. Her husband, Danny, is a real environmentalist. He loves the outdoors, and technically, I think he was the first park ranger in the city of Gainesville and worked at a really neat place, Sweetwater Wetlands Park, that helps filter the water that gets into the drinking system. He did that for a few years, and now he's with the Alachua Conservation Trust. They're doing some really good things to preserve land and to make these places more available. People will either give land or the trust buys land, and they turn them into parks or hiking trails. They're really trying to save a lot of the land, keep it from development there. We always look forward to going up to see them. We'll see them before Thanksgiving, and we're looking forward to that. Our youngest daughter, Lauren, and her husband now live in Jupiter. They both were in New York City when COVID hit, and they both worked downtown or near Times Square, and that was not the place to be when COVID hit. They moved to Florida and have a new baby, a couple of months old now. So, they're only a couple of hours away. In fact, they're coming down later today, so can't wait to see them and the little one. Lauren worked for different nonprofits, like the Miami Foundation. When she was in New York, she worked for Hope for New York. It was run by the Tim Keller organization up there. It's church-based. They work with all these nonprofits, soup kitchens, and pregnancy centers. They did a lot of good there. She was able to work remotely all through COVID and even up until she was about ready to have the baby here. She's a full-time mother right now and has plenty of challenges with that. Her husband is head of one of five physical therapy places where they train athletes and clients recovering from injuries. They've got some really high-tech equipment that I don't think I'd ever be smart enough to operate. But he's got a really interesting job, and his company is growing. In fact, they've opened up an office in Jupiter, where they live now. So, things are working out well for them. We're glad to have all three of our kids still in Florida.

MG: That's great. I'm so glad they're nearby. I also think it's interesting. They're following in your footsteps in some ways. In their careers, they all work to save or improve people's lives.

MM: That's a good way to look at it. Yeah, I think so. They all feel like they're doing that one way or another. You know very well what it's like to be a mom, too. That can be a full-time job. I'm really proud of all three of them for all they've done.

MG: And it's great that they're within driving distance.

MM: Right. And I want to praise my wife, Linda, for being the love of my life. Linda has been the anchor that holds everything in our family together through the good times and through the occasional storms in our lives. She stayed home to raise our three wonderful children while they were young and I was working at the National Hurricane Center. After the kids got a little older, she went back to grad school and earned a Master's degree from Florida State University in Library and Information Studies. She worked at a few schools, but primarily at Westminster Christian School in Miami as the high school librarian. Linda has always put God and family first and has been a fantastic role model for our children and others. We have enjoyed our fortysix years of married life together, and we are looking forward to spending more time with our grandchildren now that we are both retired. MG: Well, is there anything else you wanted to tell me about? Anything I forgot to ask you about?

MM: Molly, I think you've done a good job here.

MG: Well, you've made my job very easy and very interesting. This has been such a treat for me.

MM: Well, I'm really thankful to you because the kids have been after me to do something, and this is going to fill some gaps for them. I know they'll all appreciate this. I apologize to you for not getting back sooner. The travels and other things have slowed us down a little bit.

MG: I completely understand. You had other priorities. Family comes first. I'm in no hurry. I was glad we reconnected when we did.

MM: So, this pretty much wraps it up, you think?

MG: I think so. But I'm always happy to get together again if something else comes up or there is more that you want to put on the record.

MM: I think we're good here.

MG: Well, thank you for your time. I'll pause the recording and just explain the next steps to you.

MM: Okay, great.

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

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