

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
VOICES ORAL HISTORY ARCHIVES

IN PARTNERSHIP WITH
NOAA HERITAGE AND THE NATIONAL WEATHER SERVICE

AN INTERVIEW WITH MARY GLACKIN
FOR THE
NOAA 50th ORAL HISTORY PROJECT

INTERVIEW CONDUCTED BY
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Molly A. Graham: This begins an oral history interview with Mary Glackin. It's our second session for the NOAA 50th Oral History Project. The date is December 8, 2021. The interviewer is Molly Graham. It's a remote interview with Mary in Jacksonville, Florida. I'm in Scarborough, Maine. So last time, we had talked about your various roles during the modernization, and I just was hoping we could go over a little more concretely the years and the roles and the positions. What year did you become the program manager for AWIPS [Advanced Weather Interactive Processing System], and is that the right title?

Mary Glackin: So there were actually a couple of things. Let me see if I could sort through the years. I'm not sure I'll entirely get it. But around 1994, I was named what was called the modernization systems manager, so I actually had some scope on not just AWIPS but the other two programs, the ASOS [Automated Surface Observing Systems] program, which is surface observing, as well as the radar program. Both of those programs were in different states, so I didn't actually spend a lot of time in a day-to-day thing. Radars were being deployed across the country, so they were turning out – not to trivialize the work, but they had been over their hump of development. ASOS was also doing incremental improvements there, so it was really the AWIPS program that was trying to complete the development phase to be able to go out the door. NOAA had established a systems acquisition office, which probably was in existence for about four years. That eventually was disbanded. What they were really doing was looking at the actual acquisition, managing the contract with the contractor, but there's a broader set of program-management responsibilities. Would our field offices be prepared and trained to accept this system, facilities issues as the systems went in, and all of those kinds of things, so I was working with that Systems Acquisition Office. Then we got to a point where it didn't make sense to have that office. As I said, ASOS and NEXRAD were in a particular place, so all of that came under me, and I took on the title of program manager probably around 1995 or '96. I'm not quite sure.

MAG: How did your role change after that? I have something in my notes about the Advanced Weather Information Processing System.

MG: Advanced Weather Interactive Processing System should be the title there.

MAG: Advanced Weather Forecast Information System is what I meant to say.

MG: Advanced Weather –

MAG: Forecast Information System.

MG: Interactive Processing System, A-W-I-P-S, Advanced Weather Interactive Processing System.

MAG: Right. I have that for AWIPS. But in my notes, I have that you were the program manager for the Advanced Weather Forecast Information System, and I didn't know where that fell in the timeline.

MG: Yes, that's just inaccurate. That must not have come through right.

MAG: It's probably my mistake.

MG: Yeah. Well, I'm sure I could have misspoken easily. I was just going to try to get some timelines for you, so I was just pulling up a resumé real quickly.

MAG: Yes. I just wanted to understand better your scope of work beginning in 1995 and what you were doing for AWIPS.

MG: Let me just see the best way to describe this. Well, first of all, just allow me one second. Let me see if I can get these dates right for you.

MAG: Sure. Take your time.

MG: Yes, because that would be helpful. I actually think I took that on in 1994, but I'm not sure, so let's just see what this – this is an early bio that might list it. I don't have a date here. It's probably in some of my archived files, where I'd have a detailed look. So again, I guess what I remember is it was about 1994 when I took on this role of modernization systems manager. That included this broader scope of the AWIPS program as well as the ASOS program and the NEXRAD [Next Generation Weather Radar] program. At some time, I would say, '95 or '96, that systems acquisition office was disbanded, and my scope included the interactions with the contractor as well as all of the necessary preparations and activities in the Weather Service in preparation for AWIPS coming. That included coordinating with the Office of Oceanic and Atmospheric Research that was doing some prototype work for us. It included training. We were still moving ahead, training the workforce with the new NEXRAD data and with the satellite data. AWIPS was going to be the system that actually delivered the high-resolution satellite data to them, so there was training going on with that. There was a lot of facility preparation work. Each deployment of AWIPS not only required internal facility preparations, but we had an antenna that had to be sited externally that required often permits with local authorities and those types of things.

MAG: When were you fully operational with AWIPS?

MG: So we made, in 1996, a decision, a key deployment, what they called (KDP1?), which was a key deployment – I'm sorry – I had my terminology – anyway, we made the decision in 1996 that we had developed enough of it for an initial deployment. We had by that time adopted a philosophy that we would iterate and continue to add capabilities to it. But in 1996, we started the deployment, and that was a decision that required approval from the Department of Commerce to do that, so we signed a particular document with the contractor, which was PRC at the time, just as they were being bought by Litton, and began deployment of, I think, like fifty sites in that time period. All of that culminated in 1999 when we were deploying the last sites there. It was like a hundred and fifty-some-odd sites that had to be deployed, something around that number.

MAG: In 1999, there was a tornado outbreak in Oklahoma. Was that an opportunity to test these things out?

MG: Yeah, it was, certainly. I think it's May 5, 1999, if I'm remembering correctly. It was in early May. I think they issued a record number of very specific, detailed warnings, which was a real validation that, instead of having to look at this system over here for radar, this system over here for satellite, and this other system to actually enter the warning, having that all integrated allowed them to really be much more efficient and effective in their work.

MAG: This might be a silly question, but does the public appreciate and understand these changes? Do they realize they're getting these warnings faster and can plan and recover more quickly?

MG: So, I think that there was an appreciation with the emergency management community. We were sharing this radar data, which was really one of the big things. As people could start to see the real detail in the radar data, there was a real appreciation for that. I think the public at large, I don't think – in some of the tornado situations in the tornado belt, there was probably some appreciation for it. But, I think, in general, I'm not sure that that was really a defining moment if you will.

MAG: What do you personally remember about that tornado outbreak? What role were you in, and how were you relating to it?

MG: Well, I think we were working closely with field offices, trying to get feedback on the system that we had deployed and trying to understand what their needs were there, so what I really remember at the time is just this – like a big hurrah coming out of Norman, Oklahoma saying, "Oh my gosh, look what we did yesterday. We could have never done this before." So I think that was probably a big part of it.

MAG: Were you still with the Weather Service at this point?

MG: Yes, I stayed for that final deployment decision. I think that was maybe in May or June. It was like right after that that I went over to the sister organization, the Data Satellite Information Service.

MAG: That's part of NESDIS [National Environmental Satellite, Data, and Information Service]?

MG: Yes it is NESDIS. Yes.

MAG: Just a few more questions about AWIPS. I was curious who else you were working with in that office and as part of that effort?

MG: So I think it really stretched across NOAA in terms of NESDIS and OAR [Oceanic and Atmospheric Research], those two line offices. There was a pretty deep involvement with both of them. We had a strong external partner in the COMET [Cooperative Program for Operational Meteorology, Education and Training] program. I don't know whether anybody's talked to you about COMET, but it's the meteorological education and training, so we had set that up through NCAR [National Center for Atmospheric Research] and UCAR [University Corporation for Atmospheric Research] – so they were pretty key to some of the science understanding that was there. Our prime contractor, Litton PRC – obviously, that's where a lot of the money was flowing for the hardware and things like that, so that was very close. Within the Weather Service itself, we were a systems program office. The system, once it was deployed, had to be maintained. That was done through the Office of Systems Operations [OSO], so there was another part of the Weather Service that we had to go through what was called a commissioning step, where things were declared operational, and then responsibility for maintenance of that would be taken over by OSO. I think there were a lot of scientific algorithms that were being written, so the Office of Hydrology was deploying pretty extensive sets of software for the River Forecast Center to use. What was then the Techniques Development Laboratory was doing a lot of development, and that was eventually renamed the Meteorological Development Office, so it was TDL at that time but MDL now. They were very active in this and all the local applications. Then we worked very closely with the regions. We would work very closely with the regional headquarters, and they would actually reach down to local offices for the most part.

MAG: In Mark Brown's interview with Barry Reichenbaugh, that series of interviews you were a part of maybe ten years ago, he talked about how you and Steve Gallagher would go to the Appropriations Committee quite often. Can you talk about what that was like and what their involvement was?

MG: Yes. Well, I guess what I would say is there were a whole host of entities that were very interested in AWIPS, so the Department of Commerce, Office of Inspector General. GSA, at the time – General Services Administration had to give the Department of Commerce some authorities to be able to work with this contractor. We had a lot of oversight from the Hill, so appropriations is one part of it, but there was also authorization, oversight from authorization. We would often joke that we thought that everybody but alcohol and drug people were interested in us; we got so many letters, reports, and things to reply to. So yes, there was a lot. I don't remember Steve Gallagher, per se. I would actually say Susan Sutherland. And Jill Melden was my budget officer at that time. There was a lot. We had a congressionally mandated cap to complete the program under – I think it was four billion dollars. That's the kind of the whole thing, which we ended up, in the end, easily doing – easily doing. But there was a lot of angst around that. The Secretary of Commerce, Bill Daley, was involved in that. We had a new director of the Weather Service, Jack Kelly. I think there was endless scrutiny on our books, all of which were validated and justified in what we had done.

MAG: What were the moods of these meetings? How would you prepare for them?

MG: So there were all different entities with different aspects of this, so the Office of Inspector General – [Telephone rings.] Can you give me one second? [Recording paused.]

MAG: We were talking about the appropriations committee meetings and what those were like.

MG: Yes, so I think, in appropriations, one of the things that had happened is, from the initial estimate of what the overall modernization would cost until it actually came to fruition, the estimates for that changed pretty dramatically. I couldn't quote you numbers now, but there are records back there. So the satellite program, which NESDIS was responsible for a new generation of geostationary satellites, and for the first time, they were using a technology where they would continually look at the Earth – those costs really ballooned by an order of magnitude. A similar thing happened with all of the Weather Service programs. NEXRADs were more expensive, and AWIPS was, for sure, and then the ASOS system as well. The ASOS system, in the end, we had to augment it with some human personnel, which added to ongoing costs for that, so there was a lot of – in a sense, there's really nothing unusual about that, because typically, what happens is people make the most optimistic budget estimates to sell a program. Then, once you do that, then you get in this thing about, well, it is actually going to cost more money. You have to slog through all of that. Interestingly, when, at the end of my career, when I was working with the NPOESS [National Polar-orbiting Operational Environmental Satellite System] satellite program, and then eventually we spun that into JPSS [Joint Polar Satellite System], we actually did cost estimates that had like an eighty percent confidence level that we would make them. They were high estimates, and people didn't like them, but they eventually accepted them because we said, "This is actually what it's going to cost. We could tell you it's this other number, but this is what it's going to cost." It took a lot of education around town. But that wasn't where we were in the modernization. The other thing was we had moved – we had written a lot of requirements for what AWIPS should do. AWIPS was actually replacing – or maybe this was the acronym, Molly, that we got confused on before – it was replacing a system called AFOS [Automation of Field Operations and Services], the Advanced – I'm not even sure I could tell you what AFOS stands for anymore. I'm sure the F was forecast, and the S was system, and the A was probably advanced. I might have it here on my coffee cup. [laughter]

MAG: Automation of Field Operations and Services.

MG: Yes, that's right. That's right. So it was replacing that system. There got to be a big push in the budget world that was like, okay, instead of AWIPS doing all of this stuff and bringing in the NEXRAD data and the satellite data, we just want a system that'll just replace AFOS, and that'll save us money. We had to do a lot of arguing and presenting the case about that's not what you want because people won't be able to go from this workstation to this workstation to this workstation and then issue a warning and all of this. You've got to get this together, or it's going to cost you in labor, and you're not going to have a good result in the end. So how we prioritized what we would spend

money on and all were of great interest to the appropriators. I remember one of the first times I met Louisa Koch, who I think you've interviewed; she was an OMB [Office of Management and Budget] budget examiner. She was grilling me on, "Okay, why can't you just build this much, and we'll be done there, and it'll save the money and everything?" So from the appropriators' point of view, I think their natural coming-in approach was we were building a Cadillac, and we really only needed a Chevy. From our point of view, we wanted to deploy a system where we had confidence we could continue to add to it, so we had to make sure the internal pipes were going to be large enough, the processing was going to be there, and everything. We really felt strongly that we needed to replace this NEXRAD terminal because so many of the warning things were done right on top of radars. You would be looking at a radar signature. You wanted ultimately the ability to draw a box around it and have a warning go out type of thing. That was a lot of the work with the appropriations point of view. It was all pretty understandable. In the end, even when we got to the actual deployment, we were looking for a decision. I'd have to go back and do a little bit of research, but there were these key development steps in a program, KDPs they were called. One of them would have been to give us authority to deploy to all of our sites, a hundred and fifty of them – the thing. They didn't do that. They only gave us authority to do twenty-five or fifty, to begin with, and then we had to go back and get authority to do more. Ironically, all that cost us a lot more money. [laughter] If we had placed one hardware order, we would have gotten a great buy. But we ended up placing like three hardware orders. But like I said, pulling off the modernization was a pretty remarkable thing. Even at that time, I used to compare us to the Post Office and also the FAA [Federal Aviation Administration]; there were efforts to try to modernize that never succeeded in those agencies, and ours succeeded. It might not have been pretty every step of the way, but it got done.

MAG: I was curious when you could have taken a step back to evaluate what that all looked like. On your last day, did it feel like the success it was, or did it take years to understand the impact fully?

MG: It actually was pretty immediate that we had it. It wasn't perfect. But I said at the time – and I remember going to an American Meteorological Society meeting and saying this publicly – they gave me like the first spot on Monday morning to talk – that our field forecasters were fabulous. They were willing to try stuff and give us feedback without fear. So we got some really good feedback early on that really helped shape what we were doing. We had invested for years in OAR in a program there called PROFS [Prototype Regional Observing and Forecasting Service Program]. Have you done an oral history with Sandy MacDonald?

MAG: No.

MG: You definitely should. You definitely should, for many reasons. But he was running that program. What had been set up was that not only did we write down all our requirements to give it to the contractor, but we also gave them to this program in OAR and said, "Mockup this stuff. Do a prototype." So then we would run programs there, where we'd bring in forecasters, and they would pretend they were issuing warnings.

That went on – we funded that activity probably for ten years from the beginning to the end. It was ultimately a lot of that software that we actually deployed. So Sandy could give you, I think, some really good perspectives on that. Sandy is also the person that did Science on a Sphere. Are you familiar with that? Yes. That was his brainchild. He's got a thousand stories that would be great here. With respect to the modernization, he was definitely a key player in this.

MAG: This experience at the Weather Service must have really prepared you for all kinds of roles because you really had your fingers in so many different facets of the modernization.

MG: I think a couple of things. One is I never expected to leave the Weather Service. At the time, in the timeframe, one of my mentors, Doug Sargeant, had retired. He had freed up that Office of Systems Development spot, so I thought I would just go into that and continue to do development. That was my plan. While there was this connectivity between OAR and NESDIS and the Weather Service, it was actually limited more to a systems focus as opposed to where NOAA is today, where there's a lot more integration among the line offices and talking with them. I never expected to leave the Weather Service. That's where I expected to be. I don't know whether I've told you this or not; I got a phone call from Scott Gudes, who was the Deputy Undersecretary at the time. He was in the position that I eventually took. He said, "Look, we want you to go over and be a Deputy at NESDIS, one of two deputies at NESDIS." I said, "I don't know anything about NESDIS. Why would I go there? Thanks, no thanks. I'm not doing that." Then, he arranged for Robert Mallett, who was the Deputy Secretary of Commerce at the time. We were in the [Bill] Clinton administration, and Robert Mallett was there. He called me down to his office. [laughter] I still remember it. I was sitting on a couch in his office. He said, "We want you to go over and take this job at NESDIS." I was like, "Well, I guess I can't say no to the Deputy Secretary of Commerce." So it was like, "Okay, I'll go." But I really felt like I just – it turned out to be the best move I ever made because it forced me to grow in a lot of ways. But there was just so much I didn't know about the rest of NOAA. Then, I really loved that deputy job at NESDIS. At the same time, almost, or right before me, Louisa Koch came in to be the deputy at OAR. I think John Oliver was the Deputy at Fisheries. I forget who was the Deputy at NOS [National Ocean Service]. But all of a sudden, I had this group of colleagues that had a similar job, and instead of me at the top of something trying to push something through all the time, I was on a team, and it was nice there. So I went because they asked me to go, but I wasn't sorry I went.

MAG: You mentioned there were two deputy positions. What was the other position?

MG: So the way they had it set up, Susan Zevin was there. Susan had come out of the Weather Service also. She was a hydrologist. Let me just make sure I have this right. I guess she was the deputy for the satellite part, and I was the deputy for data and information. But that didn't stay that way very long. In less than six months, she was gone, and then I was the deputy. NESDIS has had that; sometimes they have dual deputies, and sometimes they don't. But for most of my tenure there, which was about

three years, I was the single deputy, although I have to say, I didn't do lots in the satellite acquisition part at that point. There were a lot of people – I'd worked for Greg Withee, who was the administrator. That was basically all he did. It was so humongous. We had the NPOESS program, and that was joint with DOD [Department of Defense]. I didn't do a lot of the acquisition work at that time. I did international work for them. I did the data services and general HR, finance, that type of thing.

MAG: Did you work with Helen Wood at all?

MG: I did.

MAG: I just finished interviewing her.

MG: Oh, did you?

MAG: Yes. There are a lot of overlaps in your backgrounds and interests and arrival to NOAA.

MG: Yes. That's fun. Did she tell you we're both Scorpios?

MAG: No, but that doesn't surprise me. [laughter]

MG: Yes. We would go like this sometimes. We almost have the same birthday. I don't know whether she was there precisely when I got there but pretty close to that if she wasn't. She definitely had lots of background in things like that. She was, I think, on really solid footing when I got there. She ran something like the satellite and data processing, so when the satellite data came down, she would take it and make it into the products. She did a lot of international work and things like that. So yes, Helen technically worked for me at that time, as much as Helen works for anybody. But it turned out – I have dinner with Helen when I'm in town.

MAG: Mary, you were clearly very impressive in your time at the Weather Service. But I was curious, what do you think it was that got you on the radar so that these heavy-hitters were inviting you into their office and really wanted you for this position?

MG: I think it was a couple of things. One is, if I have a skill set, it's actually being able to talk to people and make complicated things sound easier than they are, so I was a good presenter. I think I was a good face at OMB and on the Hill. I considered myself the queen of PowerPoints. I did so much work around town. So that's a valuable skill in DC. I was likable, I think. In the Clinton administration, they were clearly looking to advance disadvantaged groups and women. It was in that administration that we had a workshop about women in the workforce. There had been a number of diversity workshops there. I think all of that came into play. I also think they wanted to mix things up. They didn't want people that just went through a line office in their whole career. They were trying to cross-fertilize, so I think that was a large part of it.

MAG: I was curious what opportunities came up because you were so friendly with the other heads of the line offices. You mentioned Louisa and a couple of others.

MG: Yes. I think all of that laid the groundwork for how I got my next job. When Conrad Lautenbacher came in as NOAA Administrator, he asked me – he created, quote, “a new line office.” It wasn’t a whole line office, obviously, but this Office of Program Planning and Integration. As he said to me, you’re the natural person to lead this. So all of that set me up for that. But I think those three years I spent at NESDIS, I always would talk about the line offices are very different in culture and approach and things like that, so the Weather Service is very operational, analytic, kind of cut and dry. They’ve evolved a bit from then in that now they have social sciences, or they’re trying to integrate social sciences and all. Then, Fisheries is a whole different thing, with so much litigation in fisheries. Their decision-making at that time was very dominated by economics and things like that. Then, in the middle, you had OAR, which was doing research, and NOS, which is working with a lot of coastal programs and grants to states. They had an operational aspect to them but weren’t really operational. So there are all these different cultures in NOAA. When I was in NESDIS, I really got a chance to look at those issues. We were routinely meeting among line offices about issues and challenges, so it was a lot of fun.

MAG: Were you also engaging with NASA [National Aeronautics and Space Administration] on different projects and efforts?

MG: No, I didn’t really start working with NASA until I became Deputy Undersecretary. Have you interviewed anybody with the NPOESS program or JPSS?

MAG: I’ve interviewed Thomas Wrublewski.

MG: What had happened is there was a very large program called NPOESS, which was the National Polar-Orbiting Environmental Satellite System, something like that. It had a number of components to it. The big players, money-wise, were DOD and NOAA. NASA was also a player, though, in that NASA was going to prototype some of these satellite capabilities in advance of these big operational things coming. There was also an international aspect. There had been an agreement that the US would cover morning orbits, and EUMETSAT [European Organisation for the Exploitation of Meteorological Satellites] would cover afternoon orbits. So when I was at NESDIS, I was involved in some of that, particularly the international part. I would get on a plane and go over to Darmstadt, Germany, for some official functions and things like that. What ultimately happened with that program is that its own weight brought it down. We were using an acquisition approach designed by DOD. It also broke its budget once and in a fashion that’s called Nunn-McCurdy, which is – that’s a law or an act that has been passed in this country that if a DOD program is going to exceed its budget by – I forget the number – twenty-five percent or something like that, you’ve got to formally notify Congress that that’s happening. At this point, we’re talking about huge numbers, billions of dollars. They went through one Nunn-McCurdy. When I got to be Deputy Undersecretary, it was really clear that they were going to break their budget again. So we proactively got in

front of that to start shining a light. Ultimately, the problem was that billions of dollars don't mean anything at DOD; they deal in trillions. But they're huge in the Department of Commerce. So eventually, we parted ways with DOD and aligned ourselves with NASA. That became the JPSS program there. I worked very closely in that timeframe, like 2007 through 2012, with NASA, Chris Scolese, who was the center director at NASA Goddard at that time, and then some of the folks downtown at NASA headquarters.

MAG: Was there anything else about your time at NESDIS that stood out to you those three years?

MG: I think the data centers themselves – there were three data centers, which have subsequently been combined. That was something I wanted to do in 2002. I thought that was the right thing to do at that time. They've now all been integrated. So they were very stove-piped, and there weren't a lot of performance measures around them, so I was really trying to bring them together more. When I was at NESDIS, that was the first time where I got involved with USGCRP [United States Global Change Research Program], which is the US program on global change, the global change program, which is basically the program in the federal government for climate change information. Tom Karl was the director of NCDC [National Climatic Data Center]. The evidence was mounting about climate change. NCDC was a prime voice in that. They held data records and things like that. The time in NESDIS also gave me a foundation in climate, which is actually the one thing in my – I don't work for money anymore, but I do work, and that's the one area that I continue to work in is in climate change.

MAG: Good. Well, how did you get involved in the GCRP? You also co-chaired a CCSP [Climate Change Science Program] workshop, "Climate Science in Support of Decision Making."

MG: What happened [was] we had a change of administration. The Clinton administration, you recall that Al Gore was there, so all things climate were wonderful. Then the [George W.] Bush administration came in. Almost the first thing they did was say, "Oh, we have to ask the National Academies to see whether this climate thing is really real." They brought in Jim Mahoney, who was a known quantity to us. He's an atmospheric scientist. And Sam Bodman was the Deputy at the Department of Commerce. Don Evans was the Secretary of Commerce. So NOAA ended up in that time period taking on – first of all, this was a White House that really wasn't embracing climate at all. Bush had come out of Texas, a big oil state, and things like that, so they were definitely dragging their feet. We were supposed to do a national assessment. Jim Mahoney was trying to figure out how to do something good and check the box and be able to get it through the White House, frankly. At this point, I had gone over – it was right when I was leaving NESDIS and going over to be that Assistant Administrator in Program Plans and Integration, PPI. So I ended up at that point taking on the representative to USGCRP. The idea was that it was a cross-cut program in NOAA, that we should actually be looking at Fisheries data with respect to climate. We should be doing more in sea level rise and things like that. Jim was a wonderful guy. He was easy

to work with, so – and I felt like, when I got to PPI, I actually had some capacity to do some things. I was no longer directly managing five thousand people. I really had like eleven people. So I had some more capacity to do things, and I had a big interest in climate change, so that's how I got into that.

MAG: What led to Climategate? That kept coming up in my research. Does that ring a bell?

MG: Yeah, it does ring a bell. I think that what happened was there was a climate scientist in the UK. I won't remember what his name is, but his computer got hacked. What was released was a bunch of emails that were about the sausage-making of IPCC [Intergovernmental Panel on Climate Change] reports that were there. There was a belief – and I never read all the Climategate stuff, but some of it was less than elegant, especially talking about climate deniers. So this was an area through the – well, it's still an era that exists today, where FOIAs [Freedom of Information Act] are used continually. People like Tom Karl and other people at NCDC would regularly get hate mail – nasty stuff. Nasty, nasty stuff. They would get threats at their home. All of that was like fuel on the fire. I really believe that what's happened with climate is what happened with smoking and cancer; people don't like the answer, and they do everything possible to deny that answer. There were a lot of nasty, nasty things.

MAG: Can you say a little bit more about the PPI position? This was at the NOAA level? What were you doing there?

MG: Yeah. So Admiral Lautenbacher, who was a three-star admiral, came. He looked at our planning and budgeting system. What he wanted to do was put in place what had been done at DOD, which was called PPBE, Program Planning, Budgeting, and Execution system. He had a budget person, which was Maureen Wiley, by that point. But he didn't have the other two legs of the stool, so he wanted somebody to do programming, and he hired Bonnie Morehouse to do that. Then, he needed somebody to do the planning part. At the same time, he also wanted to bring the line offices closer together. He wanted us to be able to respond. He had a whole degrees of – was it Kevin Bacon – degrees of [separation]? If you touch somebody at NOAA, in two things, you should have your answer. So he wanted to do that. That's why he asked me to go over and set that up. There were a couple of aspects to it. One was strategic planning, which I like to do planning. I'm kind of a policy planning person. One of it was strategic planning, but the other was matrix programs. He wanted all of our programs to find their connections in NOAA. So, for example, the Habitat Restoration Program; there were parts of it that were in Fisheries and parts of it that were in NOS. So we then begin to look at that money jointly across there and have common goals and try to advance them. So we set up quite an elaborate system. I would say there were a lot of people that thought it was great, and there were a lot of people who thought this was just a lot of overhead. He was trying to break down – you would hear people say, "This is my money, my program's money." He would say, "No, it's not. It's not your money." [laughter] We need to look at this as program money. So he was at NOAA for almost eight years, and I would say he made some really fundamental changes at NOAA.

MAG: How were you thinking about your career at this point and the steps you wanted to take next?

MG: Well, I think, at that point – and I actually said this to Scott Gudes – the job I was interested in was the deputy undersecretary job because I thought that I could do a good job at that job. It felt more substantive than the PPI job. So eventually, towards the end of the Bush administration, Jack Kelly, who had come from the Weather Service, took that job. He left. I applied for that job, and I was selected in, I think, 2007 for that job.

MAG: Before that, had you served as acting director of the Weather Service between Kelly and Hayes?

MG: So it wasn't between Kelly and Hayes. What happened was Jack Kelly was there, so he had come back in the '90s. Then, at the beginning of the Bush administration, Scott Gudes left, and Jack went up to be Deputy Undersecretary. And at that time, I think Jack very much wanted to see Jack Hayes be the director of the Weather Service. That didn't happen. They hired another – well, a one-star general from the Air Force. His name was D.L. Johnson. And so D.L. was there for a couple of years. Eventually, he left. I don't know exactly the inside baseball of that. But I went over for about less than six months to help out there until Jack Hayes came back from WMO [World Meteorological Organization]. That's how that happened. I was probably a good player to send over there because I knew the operations and things like that. They needed some stability. I think John Jones was Deputy over there at that time.

MAG: Does anything significant stand out to you from that brief period of being the acting director?

MG: Nothing really too big. I would say Jack Kelly had put in this Weather-Ready nation concept, which has been very durable. At the time, what I was talking about was actually decision support. My mantra was that we didn't produce products; what we did was help people make better decisions. We needed to look at it through that lens. I think that's evolved into integrated decision-support services, which is what Louis [Uccellini] has named it. I think that was a part of that.

MAG: Well, talk to me about what it was like to be deputy undersecretary for operations. This was really a high-ranking position.

MG: Yes, it was. It was the most senior position in a career thing. I think it had a lot of exposure to the Department of Commerce. In fact, almost through my whole tenure, my prime – well, my prime office was downtown. After me, NOAA changed that, and I think that was a smart move to do that. But this allowed me to look at the other parts of the Department of Commerce. So if you look at the Department of Commerce, you have some player – well, let me give you my analogy. I would often say this, including at Department of Commerce meetings. I feel like the Department of Commerce – if you think about a barnyard, you have some things. So you've got some chickens and ducks,

and these are these little agencies that are there. Then you've got a cow and a horse, so you've got Census there, you have NIST [National Institute of Standards and Technology], which is pretty big, and you have Patent Office, so you got a cow and a horse and a goat. Then, you've got a giraffe, which is NOAA. So we're like sixty percent of the department's budget. We're half of the department's people. It's this real mishmash of things. But let me backup a little bit. I got that job right before Admiral Lautenbacher left, so we were in the last year of the Bush Administration, and he didn't want to be there at the end, so he had left. The new incoming administrator was Jane Lubchenco. She didn't get there until April or May after the election. There were about six or eight months there where I was basically the acting head. Bill Brennan was still there up until the time of the election or maybe on the last day. But you had this real flip in politics. You had the Bush administration leaving. You had [Barack] Obama coming in. Jane was a fisheries, ocean biologist kind of thing. We knew climate was going to be back on the agenda and things like that. But I think when things change like that, it takes a while to settle in for things, so I think it took a while for the career people at NOAA to really form – for trust to form between the new political team and the NOAA team. I think things like Jane wanted to implement fish shares, which is – I don't know whether that's come up anywhere or not. I think we could have done that lots faster than we actually did, so those kinds of things were issues there. We had some real trials by fire. Deepwater Horizon is one thing, Hurricane Katrina and what needed to be done in the wake of Hurricane Katrina, so all of that. There were just lots of issues that were there. I felt a bit like I was running a firehouse for issues and things. I think, again, it was probably the right thing to do to restructure that job, which they did eventually. After I left it, they tried to put three other people in it. None of them stayed. [laughter] They eventually restructured the job, which was a good thing, I think, to do. But at that point, I was pretty steeped in NOAA. I had literally known every NOAA program when I was in PPI. So I knew the budget, I knew the people, I knew the issues and things like that. I was able to do some things. I was pretty deep at that point, though, in two issues. One was the NPOESS program and getting that eventually restructured into JPSS. Jane and I were really allied at that. We worked with the Office of Science, Technology, and Policy [OSTP]. DOD did not want this change. Let's see if I can remember who was the secretary and deputy secretary. Well, the secretary of Commerce, at this point, was out of Washington State, Gary Locke. Anyway, we literally had a visit from the Deputy Joint Chiefs of Staff trying to talk us out of getting a divorce on NPOESS, so there were a lot of big players in the whole thing at that point. [Gary Locke's] deputy, I won't remember his name. I can picture him, but I can't remember his name. But this was arguably one of the larger – it was one of the top three issues at the Department of Commerce. It was definitely an issue at OSTP. We were worried about continuity of satellites and things like that. So that took up lots of time. Even when I left NOAA in January of 2012, Becky Blank, who was then the Deputy Secretary of Commerce, asked me to come back part-time for another six months to help out with that program. So that was a large thing. The other large issue was trying to create a national climate service within NOAA, which did not work. It's literally interesting that the same issues are around today, and Rick Spinrad, as NOAA Administrator, is actually grappling with these same things. I'm trying to help from the outside. So Jane and I tried to work through some of those things. Also, we had a lot of responsibility with the national climate assessment that was being

done, so I had people on my staff help with that, so that we would have in place the right mechanisms, like federal advisory committees, that we needed to be able to handle NOAA's part of this. So those were, I would say, the two dominant issues that were there.

MAG: Were oil spills another issue?

MG: So the oil spill was excruciatingly painful for thirty days. I don't know how long the oil spilled, and then with a very long tail on it. But if you take two steps back, what had happened was the US government leased some land at the bottom of the Gulf. They had no observing technology to actually look at that. [laughter] So NOAA had a number of responsibilities. One is we were key in oil spill response. So David Kennedy, who was the head of NOS, was key in that. But impacts on fisheries and what would that mean for the Gulf fisheries things, lots of questions about – we were being asked questions that we didn't have the science answers in the time that they needed it. So I would say there was extremely heavy political involvement in all of that. I think my role turned out to be more supportive in trying to help move things through there – lots of White House conference calls and things like that. So that was large, for sure.

MAG: Yes. I saw some of your testimony. I think that was before Deepwater Horizon.

MG: On?

MAG: On oil spills. You mentioned that your position was restructured after you left. I was curious how it was restructured. What changed?

MG: So what happened is, at the end of my tenure there, I put in place basically somebody that – so who was reporting to me at that time were all of the line office directors, except for Fisheries, which was a political position. So I had OAR, NESDIS, NOS, and the Weather Service, and then also NOAA Corps and then the CFO [chief financial officer], the CAO [chief administrative officer], the head of Human Resources, and Acquisition and Grants, and two other ducks and chickens. So I had a lot of direct reports, and I had administrative issues as well as programmatic issues from both. So I was moving to put in place a chief administration officer that would really cap all of the CFO, CAO kinds of things like that. That was being done at the end of my term. But I think that what eventually happened – well, I know what eventually happened – is they ended up with three political positions under the administrator, the chief scientist, and OAR reported to the chief scientist, and then an assistant administrator or an assistant secretary for Oceans and Marine Resources or something, so NOS and things. They split up the line offices to report to a different political head. And then the deputy undersecretary really had all the administration stuff under there. I think I just made that, I think, simpler because I think the chief scientist was actually interested and has purview over all the science at NOAA. In the end, there wasn't a perfect way to do these kinds of things at all. What remains today – and I know it was really true in the [Donald] Trump administration, from talking to people – is that deputy undersecretary position, no matter who reports to it, is that kind of senior position with a face of NOAA to the department

and the White House, especially in times of transition or when we have no political leadership.

MAG: That's been Ben Friedman for the last couple of years?

MG: Who's done, I think, a fabulous job. Yes.

MAG: Then you started to talk about the climate service office or work. It didn't end up coming to fruition, but what was your vision for that? Why didn't it materialize?

MG: So the vision for that was – so the way climate had been looked at in the Weather Service was that's research over there, so we're always – because we don't have all the answers, so that's all research. I think what I was trying to do, which Jane agreed with, is we need to start to treat this as operational, and we need to start to think about how we provide decision support, that there's an authoritative voice around for climate. What I was trying to do was pick up the pieces of laboratories and offices that were primarily climate and organize them. Part of what was on my mind – if I knew then what I know now, I would have never done this, but you learn. I was trying to get it on a more operational footing. People know they have to fund the Weather Service, so it's not clear they know they have to fund Argo floats for climate, but we have to keep that observing record going. So I was trying to do that. I think there was support for it through the White House. It went through in a budget proposal that was there. But there was not support for it on the Hill. I think Barbara Mikulski, who was our appropriations [chair] in the Senate at that time, wasn't in support of it. I don't know what all the thinking was up there, but it's probably just as well that it didn't happen because, in a Trump administration, it kind of put a target on the back. You could argue the same thing today, except that maybe the demand or the acknowledgment that climate is impacting things is maybe more obvious today than it was at that time.

MAG: Well, does anything else stand out from these years? It sounds like every day must have been pretty unpredictable.

MG: Yes. I think it was. What was I going to say? I think that captures it. The Department of Commerce was also trying to figure out whether they could integrate across the entities that were there. That never really got off the ground in a big way. So there had been threats – which there are periodically, like every ten years – to disband the Department of Commerce and just divvy up the parts of Commerce to other parts of NOAA. So we went through one of those cycles that were there, so we were asked to justify why we were in Commerce and things like that. That's one of the things I remember. It does seem like there was another Katrina-like thing besides the oil spill, but I can't really remember that right now. Well, there was the Japanese tsunami that happened there and all the debris in the Pacific and all. But compared to some of the other things, it was relatively mild, I would say.

MAG: What did you do next? What was your reason for stepping down?

MG: My family was really on me to leave this job because it was such an exhausting job. I thought it was time to leave it. Even though I didn't stay retired, I was fortunate enough that I could retire. I had the right number of years in federal service and things like that. It just felt like the right thing to do for NOAA to let somebody else come in. I didn't think you should keep jobs like that for a really long time. [Telephone rings.] Let's take a two-minute break again.

MAG: Sure. [Recording paused] You were getting some feedback from your family that it was time to change gears?

MG: Yes. I wanted to have some more free time to do some things that I wanted to do. But there was just an overall sense that enough was enough with this. It had gotten to be like a twenty-four-by-seven job, where you couldn't really sleep through.

MAG: Yes, I was going to say it must be hard to take a day off because there's so much to do and organize, and then there's so much more to catch up on when you come back.

MG: Yes. When I think about it now, there was never work from home, and there was never a casual Friday. So one of the things that I committed to when I left NOAA was I wasn't going to put on another suit again, and I haven't. I worked for almost five years in the private sector. I never wore a suit.

MAG: Good for you.

MG: Yes.

MAG: You mentioned your family, and I just was curious a little bit about your family life and your life outside of NOAA. Then, you can tell me a little bit about how the rest of your career unfolded.

MG: So we didn't mention it when we were going through the whole AWIPS thing, but it was at that time my husband died. My second husband died. He died in July of 1996. There was a lot going on with the program at that point, and I pretty much was out of action for – I would appear once in a while in meetings or something, but he was pretty sick. He got sick quickly, and he was pretty sick for six months. At the same time, that same year, my oldest daughter went off to college, and so that left my younger daughter and I. It was actually kind of fun in that I brought her to a number of NOAA things. She was my date there, so when NESDIS celebrated, I think it was forty years of satellites or something, they had something at the Smithsonian Air and Space Museum, and she came with me. But she eventually went off to college in the early 2000s. That was when I was going into PPI. I think that was the other reason. I have a tendency to work a lot. I have a really high work ethic, so if there's work, I will do it. I think I brought that on myself, just doing so much work all the time. I had a group of friends in DC that I was friendly with and got together with, but all of my family was pretty much up in the Philadelphia area. Everything was a multiple-hour car ride away. We still had the house at the Shore, and it would take me four and a half hours to get there. So I didn't get to see things. My

mother was also starting to fail when I left NOAA, so my sister had been dealing with the brunt of that. I wanted to have a little more freedom to be able to help out there, which I was able to do.

MAG: Your second husband, Henry Schmidt, was also a NOAA employee, so I was curious what his role was. What did he do?

MG: Interestingly, he actually started out – he worked at NASA first, and then he came over and worked for NESDIS. I can't describe in detail everything he did there, but then he came to the Weather Service. He was, I think it's fair to say, one of the brain-[children] of putting together the systems part of the modernization and also some of the sales things. So if you looked at historical documents, you would see his signature on a number of [things]. But he left there on detail and went to work for Al Gore on the GLOBE [Global Learning and Observation to Benefit the Environment] program, which was just getting in place. So GLOBE was like Global Learning through Observations and whatever. It was a global program. The Internet was just coming into play. It was a way to get kids connected to the Earth through observing and sharing information via the Internet. It was a way to get the Internet into schools too. He was there on the ground floor of that, and that's where he was when he got too sick to work. He was working at the White House on that with Al Gore, and he really enjoyed that. He was a real techie person. He had access to the Internet before a lot of us, those types of things.

MAG: What were your next steps in 2012? I don't have anything until 2014 in my notes, so I was curious what those next two years were like for you.

MG: Okay. I left in January. And around April, I got a call from the Deputy Secretary of Commerce asking me to come back to work part-time, which I agreed to do. I worked twenty hours a week. I worked directly for the Deputy Secretary of Commerce, and I worked solely on the satellite issues. So they were trying to get all the right documentation in place and things like that. I did that until the end of September or October. Then I actually did some consulting work through the University of North Carolina that was on climate information and climate services. That's where I was working when I was approached by the weather company, the Weather Channel, to come and work for them. I always get this confused. I think I started to work for them in January of 2015. I took on a role there that was really – it had a label of public-private partnerships. I was vice president for public-private partnerships. It was working to improve their relationship with not only the US government but governments globally. I had only been there a year when they were bought by IBM. That was a big game-changer. So IBM is this huge thing. So when they were bought by IBM, I ended up taking on, in addition to public-private partnerships, which IBM was very interested in – governments are their biggest client or were at that time their biggest client – I took on the science and forecasting role for them. I once again had people working for me that were working twenty-four by seven and things. In the last year and a half, I actually took on product development responsibilities for them. I progressively moved ahead in the IBM structure. Although, because I had learned all my lessons at NOAA, in addition to never wearing a suit, I also made a commitment that I would never go to IBM

headquarters. It was kind of like the Department of Commerce headquarters, and I never went. They kept trying to get me to come up to Armonk, New York. I was like, "Nah, I don't need to go there. I can call in for that meeting." [laughter] By the end of that, I did one year before IBM and then three and a half years after IBM. I just looked around and said, "This isn't making me feel wonderful when I get up every morning. It's a lot of money, but it's not really what I'm living for." I had been elected President of the American Meteorological Society, so I was going to go in and take that role. So I just gave them notice, and they asked me to help hire my replacement, which I did, so it was all fine. It was just enough.

MAG: When I spoke to Helen Wood, she said it was a really big deal when she wore pants for the first time at work instead of a dress or a skirt. I didn't know if you had a similar moment.

MG: The only thing I always remember is I thought, "I'll never wear a sleeveless top or something like that." Then I did. [laughter] But yeah, fashions change. Louisa never wears pants to work. I don't know whether she told you that or not. She only ever wears a skirt or a dress. But no, I didn't feel that way so much. I would not say the Weather Service itself, in all the years I spent there, was a particularly formal place. I dressed professionally, for sure. But it wasn't that big a thing. When I was down in the Commerce Building, it was a bigger thing, I think, being dressed because literally, you might be called to the White House, so who wants to be in the Oval Office looking scruffy?

MAG: Were you aware of your being a woman in these roles and in this work, or did that go away at some point?

MG: I think I said before, if anything, it probably gave me a bit of an advantage. One thing is I felt like people remembered me more than I could remember them. [laughter] I think that probably my gender played into that because I looked different from other people at that level. But no, I think I felt like, when I was in the Weather Service – and forgive me if I said this before – a number of the people I worked for and with had daughters that were professionals, so I think there was a real tendency to try to help. People that were in that deputy undersecretary role, I think, were helpful in that regard. Diana Josephson and Scott Gudes were helpful. But no, the only time it really, in the last half of my career, came into play is when I worked internationally for IBM in some of the Arab countries; definitely, it was palpable. You weren't even worthy of a look. They wouldn't even look at you. That was true in Asia too, in China, not so much in Japan, but in China.

MAG: Did you have to run for your position at AMS? How did that work? What was your motivation to be in that position?

MG: Well, they had actually asked me twice before to be president and once when I was taking the PPI role, and I felt that I couldn't take it then and focus on a weather issue when I just took a role that's looking across NOAA, so I said no. Then they asked me a

couple of years later when I was deputy undersecretary to run. I said no again for a lot of similar reasons. Then, when they asked me this third time, I was like, “Well, third time’s a charm,” and I agreed to do it, although I wasn’t particularly happy because I was actually running against Kevin Petty, who is an African American. I have been committed to diversity and stuff like that, so my goal now is to get Kevin elected as president of AMS, so I’m working on that. It’s not like you run a campaign at all. You just write up your statement, and then people vote. Not a lot of people vote is the other thing about it. So I think I was probably advantaged over Kevin because I was known in the Weather Service community, which draws a lot of members, and Kevin was in the private sector.

MAG: What does this work look like? How has it translated to the remote working world?

MG: So it actually turns out to be a four-year commitment. You spend one year as president-elect, a year as president, and then I’m about to enter my second past-president year. I would say I had a year as president unlike anybody else. As far as I know, there is no picture anywhere of me in an AMS role as president. Our conference was online completely last year. All the awards were done virtually and things like that. It was hard. I think it’s been a hard thing. We’re in the process of hiring a new executive director, which initiated right before I took over the presidency, so there’s been a lot about that transition and everything else that – work that needed to be done that probably, in the end of the day, wasn’t the most rewarding work.

MAG: I was also curious how you’ve been impacted by COVID and what the last almost two years have looked like for you.

MG: I’ve spent almost all of it, except for the summers, here in Florida, despite still having my place in DC until recently. Last year, my grandson and his friend, who were in second grade at the time, did remote learning, so I was the adult in the room keeping seven-year-olds on task for what they were doing. That was a lot of fun, including recess and lunch with that, so totally different from anything I’ve ever done, really, because I was a working mother, so I never really had such long stretches with that, so that was all great. I think we’re all happy that the kids are back in school now, though. It’s a better circumstance, for sure. What was I going to say? If there’s anything else I would add to that – I’ve been out biking. I was pretty locked down during the pandemic. I guess I’ve come to the conclusion now we’re all going to get this Omicron thing, whether we want it or not. It just sounds like it’s going to be like the common cold. But I’m out doing a few more things now, which feels good.

MAG: Will AMS be virtual again this year?

MG: It’s a hybrid, so you can make your choice. We’ve had a pretty exhausting and trying discussion on the fact that it’s in Houston, Texas, and whether we should be going to Texas with the voting rights things and other things that are – open gun carry and other

things that are happening in Texas, but we're going to Texas. So I haven't actually bought an airfare ticket yet, but I expect I will. In fact, I need to put that on my list.

MAG: Yes, that sounds like a lot to manage.

MG: Well, I think it's been for anyone. And actually, I think there's pretty good documentation that the pandemic has hit younger people like yourself and younger much more than my generation. I think, overall, I didn't have to worry about going to work. There was a lot of stuff I didn't have to worry about.

MAG: Yes. I would say it's just incredibly inconvenient. Then there's this dull ennui I feel every day being the same.

MG: Yes. And I think the political climate that we live in is draining. Maybe it's invigorating for somebody, but most everybody I know finds it very draining.

MAG: Well, is there anything we're missing, anything you wanted to put on the record before we conclude?

MG: I don't think so. Remind me of the next steps.

MAG: Sure. I'll do that once I just turn off the recorder if that's okay.

MG: Yes.

MAG: But Mary, I want to thank you for all the time you spent with me. This has been such a treat to get to know you in this way, and I'm really glad we finally had this opportunity.

MG: Thanks, Molly. It's been nice.

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Reviewed by Molly Graham 2/5/2022

Reviewed by Mary Glackin 3/14/2022

Reviewed by Molly Graham 4/24/2022