Molly Graham: [00:02] This begins an oral history interview with Suzanne McCarthy on August 8, 2023, for the NOAA Heritage Oral History Project. The interviewer is Molly Graham. It's a remote interview with Mrs. McCarthy in Portland, Oregon, and I'm in Scarborough, Maine. So, I transcribed our first session, and there were a few things I wanted to follow up on that maybe I overlooked in our first conversation. You mentioned your mother was part of the Art Students League in New York. I didn't know a lot about that, but I did some reading on it. It was a pretty exclusive group, and lots of famous artists came out of it. What do you know about her experience there?

Suzanne McCarthy: [00:45] Nothing. Nothing in terms of her professional development. She worked at it. I don't know whether this was a result of her studying there or whether it was just a concurrent coincidence, but she did work for designer Walter Dorwin Teague, probably ending in about 1933 or '34. That was when she went back to Wheeling. Yes, it was. I think if you carried on with a professional career in painting, that was a good boost. You were in good company. But she didn't continue on. Later on in life, she painted. She did sell her paintings but not all, and I've got about fifteen of her paintings hanging around the house here. But she was good. She really was, in the sense that she could recreate what was there and make it look pretty. If you wanted an expressive person, that wasn't her. She was not that. Anyway, your first question, to answer it, no, I don't know.

MG: [02:24] The school you attended was PS 41.

SM: [02:27] Yes.

MG: [02:28] So, did you and your mother live in Greenwich Village?

SM: [02:31] Yes. On 13th Street. 14th Street is the northern border of Greenwich Village.

MG: [02:39] What was Greenwich Village like back then?

SM: [02:42] I was a kid. It always had that bohemian air to it, but I was a little girl. We didn't do village life, and village life has gotten to be much more village life now than it was. I'm sure World War II had a big dampening effect on bohemian artistic activities. I could go to Washington Square Park by myself in the afternoons or with a little girlfriend. Up the street was a small Macy's store, not the main flagship store but a branch, and they had art classes for kids. I went maybe once a week or something. I would go, interestingly, through the back door; there was an open back door. I'd go up steps, and there was the art studio. And I was a Brownie, and [we] met in some church. I don't know what church it was, but some church. So, I was a brownie. We did interesting things. You asked me what I did for fun, and I don't think it was for this part of my life, but in the two years I was there, I count up some nice things that we did. We went to the circus. I guess it was in Madison Square Garden. There was a pretty famous at the time radio show. Of course, radio was bigger. TV was just in its infancy. But we went to a performance of Henry Aldrich [*The Aldrich Family*], and Henry Aldrich was this teenager who was always screwing up. The show opened with the mother calling, "Hen-reeeeeeeeeeee! Hen-ree Al-drich!" That's mostly what I remember about it because I was too little to catch the plot. We also went to some stage show. I remember that performance. I don't know if you know this

song, "On the Atchison, Topeka, and the Santa Fe." It was from a movie, *The Harvey Girls*. Judy Garland was the main female lead. So, I remember that. There was a woman singer named Jane Froman, and she had been badly injured in a plane crash; I think maybe even going to entertain troops someplace. But she came out on stage in a sort of a – it wasn't a wheelchair, but it was a brace that allowed her to appear to walk. So, we did things. My school was – I told you about Mrs. Zerner's class and being in the third grade, and then all of a sudden, she went, "Okay, now you're in the fourth grade." I don't ever remember complaining about the lunches, but the ones I remember were vegetable soup and bread and butter, which is nothing wrong with that. But I get a big kick out of – not a kick, but I'm kind of taken aback these days by children not eating their school lunches. What? Aren't you hungry? You're not eating? I had vegetable soup and bread and butter sandwiches, and a little box of milk. But still, it wasn't – I didn't get pizza. After we moved out of New York to Clifton Forge, Virginia, we moved back in time in food preparation in the sense that there was no pizza. If you had lived in a bigger city – I think it was probably in New York – we just weren't of that type. We would sometimes go out to eat at a Childs restaurant, which was a chain. In the summer, we went to Jones Beach, which is not Coney Island but a little bit farther out. And we went to Staten Island, where there were parks. So it wasn't as though I had nothing to do ever. No.

MG: [07:37] You mentioned the actress in the brace, and it reminds me to ask you about the 1952 polio outbreak and epidemic in the United States. Do you remember that? Did you know anybody who was impacted?

SM: [07:49] Not in the slightest. By then, I was in Richmond, Virginia. I don't remember anything whatsoever about it. There was no – [it] passed above and around me. I don't know. I had little cousins that I knew – I mean, my uncle and aunt – my oldest cousin was then eight, and the next one was five. And my aunt just had a baby. We went off that summer. I believe we went in '52. Yeah, we did.
But there was no talk about polio.

MG: [08:50] Last time, you mentioned how you and your mother would move around depending on where you had family members living.

SM: [08:57] Yes.

MG: [08:58] Were you living with family members or just adjacent to them?

SM: [09:01] In the same town.

MG: [09:05] You said that for kindergarten, you attended the Catholic school because it was right across the street from you. That's when you were living with your grandmother. You said you weren't Catholic. But was religion a part of your upbringing at all?

SM: [09:18] Yes. Yes, it was. My mother's family was Presbyterian. I think my father's family was either Baptist or Methodist. I went to the Presbyterian Church. When my parents' marriage broke up, my mother embraced but did not join the Catholic Church. She embraced it, but she never converted officially. She really became a dedicated attendee. So, I had both strains of

education. Not at that tender age, but later on, I went to various Bible schools. Somebody gave me a Bible for my sixth birthday, a children's storybook Bible. I kept it all these years. And finally, when I had some grandkids, I gave it to them. It was from the Protestant viewpoint. I don't know. There are their viewpoints, but I'm sure it was adequately researched. I had a Bible story comic book, which was fantastic. [laughter] But I went to kindergarten and first grade at that Catholic school. My mother remained friends with a nun who was a teacher of the first grade for some years. She got transferred to a different school, and she and my mother would write occasionally to each other.

MG: [11:21] The other thing you mentioned last time was your enjoyment of swimming and going to local pools. I was curious if, in the area of Virginia where you lived, the pools were segregated, if you were going to a "whites-only" swimming area.

SM: [11:37] Oh, sure. Absolutely. Clifton Forge had this pool. I am quite sure there were no Black people. Continuing on segregation, the main movie theater in town had a balcony with three sections, and Blacks were allowed in one section of the balcony. So, white people had the main floor and two-thirds of the balcony. When we moved to Richmond, nothing that I went to was not segregated. In other words, everything was segregated. They did not have swimming pools for that very reason. So we didn't go swimming. There were state parks available, both in Richmond and Clifton Forge. Unless somebody was working there, it was all white. I did not realize how unequal it was, this separate but equal. I thought, "Well, that's the way the world was ordained." What did I know? It's only recently, bit by bit, that you find out how unfair that was, really, and how the equal part never came up. Anyway, that's the answer to your question. They were segregated.

MG: [13:22] *Brown versus the Board of Education* was in 1954, so I'm curious if that decision impacted your school. [Editor's Note: Brown v. Board of Education" was a historic 1954 U.S. Supreme Court case where the court ruled that racial segregation in public schools violated the 14th Amendment's equal protection clause, marking a significant step towards ending racial segregation in educational institutions in the United States.] I know that William and Mary changed their policies around integration. Was that by the time you attended?

SM: [13:38] No, no. I was halfway through. I graduated in 1957, and plans were being made. It was probably about that time that Virginia started to work on desegregating. They were really dragging their heels, Virginia did. They tried all kinds of things not to have to integrate, which is a darn shame. But that's what they did. By that time, I had moved to Washington, DC, and then to Maryland. So, no, it didn't affect me in my personal life at all. Plans being made had not been put into place. I don't know when William and Mary actually integrated. I don't know when it happened.

MG: [14:36] I want to ask you now about your education at William and Mary, but is there anything we're missing up to this point or things we forgot to discuss?

SM: [14:45] I don't know. [laughter] You don't know what you don't know. No, I was a good student. I think what I have is a memory. And consequently, I don't need – for lots of schooling, you don't need to work things out; you just need to remember what you're told. So, in the

working out department, I don't feel that's my strength. But that's a good thing to have, the ability to work things out; it'd probably be better than a memory because you can go on. But anyway, I got some minor awards. I got Honor Society in high school. I was the business manager for the literary magazine in high school. I did not write. I just managed, which wasn't a whole lot, but I got into Quill and Scroll, which is the journalism honor society. Then, in college, I studied enough French and got enough good grades in French to get into the French studies honor society. I don't even remember the name of it. It's a couple of Greek letters strung together. I got into that. But I didn't do well enough to get into Phi Beta Kappa. So, that's a B-plus for you.

MG: [16:21] You were involved in some other groups on campus. I think I saw that you were president of the math club for some time.

SM: [16:27] I was. I was president of the math club. Yes. I was the secretary of the sorority chapter. And that's it.

MG: [16:41] Tell me more about these activities, starting with the sorority. Did you pledge your freshman year?

SM: [16:46] Yes. I don't know. I don't know if you had sororities in the college you went to. It was probably better if you didn't. But being a person who didn't have a lot of family, joining a sorority was a big thing to me; I wanted a group to belong to. I'm pretty sure that that was one of the driving things. Also, it seemed pretty nifty to be chosen. Some huge campuses, particularly in the Midwest and out here in the West, rush for sororities and fraternities the first week of school; you pledge, and you move into the house. William and Mary was not like that. You had to make your mid-semester grades in order to rush. So, rush was carried on in November or so at the time the classes were going on. You had to keep going to school while you were doing all this. The college owns the sorority houses. The sorority houses hold about what they would deem to be the senior class. So everybody lives in dorms or did, at that time, live in a dorm for at least two or three years of your college career. So, the sororities were not as restrictive on your social life as they might be someplace else, which was probably a good thing. You had friends who were not necessarily in your sorority. Nevertheless, my roommate and I both ended up pledging the same sorority. Our dorm had suites, which were room for – well, as it turned out, our suite only had three because the room on the other side was a single. In the middle was a room with the toilet and the bathtub, and each room had a sink. So, the three of us all pledged to the same sorority, and we stayed [with] the same three people for three years. At the end of the third year, the single room gal got married and left, but my same roommate and I moved on into the sorority house for our senior year. So, the sorority, yes, does provide you with a lot of your social activity. I mean, there were little parties that the sororities had, and then occasionally, we would have socials with fraternities. I worked on the student newspaper my freshman year. But when I look back at the activities that are listed by my name in the senior pictures, I find that really I was – I didn't have very many, not compared to some others. Now, what they did, whether they did a better job than I did or whether they studied more or less, I think I just spent a lot of time just trying to hang around.

MG: [20:17] Do you remember the name of your sorority?

SM: [20:19] Oh, yeah. Gamma Phi Beta. That was actually one of the things that I did when we moved here (to Portland OR in retirement) was to contact them because it was nice to start meeting people. I mean, without children in school – you say you moved to Maine, where your parents are, which I don't know whether or not they moved there in retirement or whether that's kind of where you grew up anyway, but it's nice to – church, clubs, and so forth. So, I contacted the Gamma Phi Betas. And they're a nice group here. Yeah.

MG: [20:57] Was there a service element to the sorority?

SM: [21:05] No, I don't recall that we had any. But they do now. As I read the things that come from the college, from William and Mary, my alumni magazine, or any further information from the chapter, they do have active charities that they support or services, but they didn't so much then, at least I don't recall. The national sorority supported a camp or two camps, but they were all out West, and there we were in Virginia, so we didn't pay much attention. I'm sure it was just monetary support.

MG: [21:48] And you mentioned the dances and socials. Was this an opportunity to meet other people and go on dates?

SM: [21:55] Sure. I mean, not necessarily. The socials weren't that common, maybe one a semester. The Alpha Alpha Alphas would ask the Beta Beta Betas to something, and you'd spend an afternoon. But the fraternities had lost their houses during World War II. So the guys all lived in the dorms, and they had lodges, which were just social meeting rooms. One or two young men would stay in that lodge as their residence just to maintain it and make sure that somebody was always on site. Since I left, they have either re-bought or rebuilt houses. So the lodges are used for something else. The big 'Greek' houses didn't exist at William and Mary either for the guys or the gals.

MG: [23:10] Were there different rules at William and Mary for women than there were for men?

SM: [23:17] Yes. Let's see. I don't think there were any hours laid on the guys whatsoever.

MG: [23:25] Like a curfew?

SM: [23:27] Right. And the gals had to be in the dorm by ten o'clock on a weeknight and midnight on Saturday. I guess Sunday counted as ten o'clock also. You had a certain number of lates, and you could sign out to stay out until eleven. So you went to the second show at the movie theater, and it wasn't over until 10:45. Well, you could sign up for a late in advance. If you were on the dean's list, you had unlimited lates. You had to be in the dorm by those times. Dorms had campus phones, one per floor. You could call somebody else on campus from that phone. No phones in rooms. No air conditioning in the rooms. No air conditioning in the classroom buildings, as I recall. It got pretty warm in the spring and the fall in Virginia. But that was it. You did it. This is an interesting one. Young ladies were not permitted to wear shorts or slacks on campus unless they were covered with a long coat. So, if you were wearing slacks,

you had to roll them up so that the coat would cover it. This was not to offend the tourists in Colonial Williamsburg, so we were told. When the tourists in Colonial Williamsburg started dressing more poorly than the students, I think they relaxed the rules. [laughter] I mean, less carefully. Tourists started showing up in shorts and T-shirts, and gals on campus could do the same. But if you were going to something like gym class or working on a theater production and working on a set or something, you were allowed to wear slacks or shorts, but you couldn't walk across campus with them. This was the 1950s.

MG: [25:39] Do you remember your first pair of slacks or putting on your first pair of slacks?

SM: [25:43] Oh, no. I had jeans and slacks and things; it wasn't a big event. I mean, it wasn't a big event, except that you always wear a skirt or a dress to school. You didn't wear slacks to school or pants, even in cold weather. But I had jeans and slacks and shorts for playing around in. So, the first pair was nothing special.

MG: [26:13] Was the dining hall fairly formal?

SM: [26:17] It was the same; you would show up in a skirt. The guys were – I don't think there were any limitations. We always heard about the University of Virginia, where the men had to wear ties to class. We thought that was quite interesting. But they didn't have to wear ties at William and Mary.

MG: [26:44] Tell me a little bit more about your involvement in the math club and how you became its president.

SM: [26:49] Well, there weren't that many of us. To be president, I don't remember [inaudible]. We would meet with the faculty advisor, [who was] the head of the department, and talk about things – little oddities in mathematics, basically. I don't know. Did we meet once a week? Did we meet once a month? I don't even remember.

MG: [27:19] Yeah, I was curious what being president entailed. Would you bring guest speakers to campus? Would you organize field trips?

SM: [27:25] No, it wasn't that big. It wasn't that big at all.

MG: [27:29] You talked last time about your decision to major in math. When did you declare that major?

SM: [27:35] Oh, probably the end of my sophomore year. I mean, that was the standard time. I don't think there's anything different about it.

MG: [27:42] What percentage were women in the math department?

SM: [27:48] Probably about half. There were quite a few of us, really. That gal, our third Gamma Phi friend that left, was also a math major. So we would work on stuff together from time to time.

MG: [28:10] How were women treated in the classroom?

SM: [28:15] I do not recall any discrimination whatsoever. I think it was pretty even-handed. I think the population – men and women students were about even at that time. Young women had been admitted to William and Mary in 1918. In 2018, they had a celebration of coeds. I entertained for a while going back to it because I thought it would be pretty neat. But it didn't work out, and I didn't go. So, gals had been on campus for nearly forty years when I got there. They were well accepted. I don't know. It's interesting to think how many dorms might have been built in the intervening time to accommodate young women, whether they kicked guys out of some dorms and made it [for] girls. I do know that off campus, there was a whole apartment complex serving as dorms that was a couple of miles down the road. If you were a young woman from out of state, you were likely assigned to that apartment complex for your first year. That was kind of discrimination, but I don't know how the decision was made. But a large percentage of people that were from New York, New Jersey, Pennsylvania went to William and Mary in those days. Maybe it was an easy decision – "Okay, Virginia here [and] out of state there." I don't know. I mean, sometimes decisions are made with no more thought than that. Okay, it's easy to determine. It's done. I don't think it was – I don't know, really.

MG: [30:22] I was reading that in this post-war era, there was much expansion on William and Mary's campus to accommodate the growing population of students.

SM: [30:36] I think that hit a little bit later. We had an assembly hall/theater that burned my freshman year over Christmas vacation. They spent the whole next three and a half years building a new, beautiful theater further out on grounds that I think the college already owned. But that took them all that time to design it, get it set up, and built. It opened just before we graduated. I don't remember dorms. But my daughter went there. By the time she got there, the campus had expanded a lot. There were a lot more buildings, both classroom buildings and dorms.

MG: [31:35] Tell me a little bit about the classes you were taking and the professors you had.

SM: [31:41] Okay. Freshman year, I took chemistry, English, some weird math class, and French. Today, if you're a smart kid in math, you can start calculus in high school. My kids started calculus in high school. But at William and Mary, I didn't even start calculus until I was – that was their plan. I had this just odd math class with all sorts of tidbits of stuff in it. I started calculus as a sophomore. I have been reading about math recently, and they've begun to realize that calculus is not what's going to help you figure out how much insurance to get or what to buy in the grocery store. So they're not really emphasizing it as much, which is probably good. I mean, it's a great mental game. But most people don't need to know the rate that (sand) is falling in and out of a hopper. They need to know how to work out their grocery bill and what's the likelihood of them getting hit by a car when they step off the curb. So, they're de-emphasizing calculus. Anyway, I took this math class. I had college chemistry, which was pretty much a repeat of high school chemistry, except in high school, we had a lab partner; in college, you didn't. I had French, which I already had a couple of years of, so it wasn't beginning French. Then I was put in a slightly advanced English class, apparently because I showed so well in

English. So, instead of taking English 101, I took English 103, and we read a lot of things like T.S. Elliot, which I still didn't understand. You read poetry now as a slightly older person, and you kind of get what they're talking about, but you don't know. You're seventeen. You're eighteen. You don't know what these people were talking about with the miseries of life. It's nice to present those things to people, but they don't get it. Or maybe I was more dense than most, but I didn't get it. I can see you're nodding and shaking and all that in agreement, but you really do have – poetry doesn't teach you anything unless you're ready to hear it.

MG: [34:24] Well, it reminds me of what you were saying earlier about how you are good at memorization but maybe not so great at abstraction and analysis, which poetry really demands.

SM: [34:33] Right. Yeah, that's possible. Anyway, that was freshman class.

MG: [34:41] I was reading about Alvin Fountain, a math professor at William and Mary. Was he someone you studied under?

SM: [34:46] Fountain? Fountain, like water fountain?

MG: [34:50] Yes. Dr. Alvin Fountain. He was credited for shaping the Math Department during the '50s.

SM: [35:03] Don't remember that name. No. There was a Dr. (Lee?) who really liked his calculus, but he wasn't – the problem with math teachers is that they aren't really very good public speakers. It takes a lot to explain why you're doing these things. As I said, I could do this. I could integrate functions. I could differentiate functions. I could follow all the formulas without really gaining any particular feeling as to why you had to do it. I don't know. I'll look that up. I'm sure we'll talk again. I'll look it up. I've got the yearbook. [If] he was there when I was a senior, I'll find him. But the head of the department was not the same guy. He came in while I was there. I don't remember the one at the beginning, and I wouldn't have had that. But it was Yates, Dr. Yates.

MG: [36:09] Speaking of the yearbook, were you on its staff?

SM: [36:12] No. The yearbook says I was. I don't know how they got that. But I wasn't. I never was on the yearbook staff. I don't know how they got that. I look at that every once in a while and think, "Where'd that come from? I didn't do that." I don't know.

MG: [36:28] I'm glad we're setting the record straight. How were you spending your summers in college?

SM: [36:36] Well, the first one, I just hung around the house. The second and the third one, I worked for the local Richmond power company(Vepco). They had been doing a survey, and they wanted somebody who could read numbers. I mean, there was a group of us, and most of what we did was just punch numbers in an adding machine. I had calculators. They were slightly different. But they were still all mechanical. Somebody – a friend of a friend – knew somebody. I applied for the job, and I got it. So, for two summers, I worked, and that was nice.

It augmented income and all that. When I graduated, they offered me a permanent job, which was also very nice, but I wanted to leave home, so I didn't take it. My mother's family rented a cottage in the small town of Stone Harbor, New Jersey. That's a long story, but that was picked. They had the month of August. So, in '52, '53, and '54 – is that right? Maybe '55 – we would go there in August. So that was August, and then you come back, you get ready for school, and go off to school.

MG: [38:22] So I'm curious now to hear about how you connected with the Coast and Geodetic Survey. What awareness did you have of the organization before you interviewed with them?

SM: [38:31] None. [laughter] I knew they had tides, and I was probably aware that someplace there were tide gauges. A recruiter came to the college. I don't know whether or not only certain people were invited to interview. I don't remember that part at all. But I interviewed with them and with AT&T Long Lines division in White Plains, New York [and] the Coast and Geodetic Survey. And didn't really interview with Vepco , but they offered me a job anyway. I went up to Washington. I don't know how – I don't remember how I got there, with whom I went – oh, I also interviewed at a place outside Fredericksburg, Virginia, the Naval Ordnance lab. I went there also. I was discouraged from – there were several reasons why I didn't take that job, but back to the Coast Survey, I believe it was Mr. [Lindsay Pettit] Disney, who came, and then when I went to work there, he was part of the staff. He was there. But they came, and they talked about it. It seemed like an interesting thing. Somehow or another – I don't know whether I took the bus, the train, or somebody else was driving up, but I went to Washington, interviewed with them a bit, toured the place around, and then went back to William and Mary and finished up. I started to work for them in the middle of July 1957.

MG: [40:24] Where was the Coast Survey headquartered at that time? Where in Washington?

SM: [40:29] In the Commerce Building, 14th and Constitution Avenue. You have worked with and for them for some time. Are you familiar with that locality?

MG: [40:44] No, only through these stories. I've only ever been to the Silver Spring headquarters.

SM: [40:50] Okay. Well, the Commerce building, until the Pentagon was built, was the biggest office building in the country anyway. I don't know. It's always a little bit dangerous to make these superlative statements. But it was the biggest office building in the country anyway. It had been built under Hoover's instructions, and it was called Hoover's Folly for a while. It was a beautiful building, really, and probably still is. The Coast Survey had the south end of it, which bordered 14th [Street] and Constitution and 15th [Street] and Constitution. So the building was sort of in segments; it had courtyards that you could drive into, at least in the early days. Sort of in one-third – here's the building, and a third in, and another third in, there were these courtyards. We had the bottom third. The patent office was in the north third, and we were in the south third. I don't know what else was in the middle – all kinds of stuff. I didn't pay any attention to it.

MG: [42:11] How did it get this nickname, Hoover's folly?

SM: [42:15] It was probably built in the Depression when things were expensive, and people probably thought we had better things to do than building buildings. But building a building on the government tab didn't seem like a folly to me; it paid a lot of workers. That's all I know.

MG: [42:37] Tell me more about this interview. What was the position you were being interviewed for?

SM: [42:52] I think my title was Oceanographer, but I'm not sure. And it was a GS-5. The starting salary was $4,480 a year, which was a fortune for a young single girl. What did the interview talk about? I don't even remember. They must have talked about what I might be doing. I'm certain they talked about what tides did. I know what I ended up doing, but I can't really remember what we talked about. I'm sorry.

MG: [43:38] That's okay. I was curious about what appealed to you or interested you in working for the Coast Survey.

SM: [43:45] Well, to tell you the honest truth, I knew who I could be rooming with. The most intriguing job actually sounded like the AT&T White Plains, New York job. Just briefly, they didn't have area codes in direct distance dialing. This job was part of the design to create that system throughout the country. It sounded pretty intriguing. The Coast and Geodetic Survey job did not sound the best, but it was the best location. You can edit that out if you want to. It didn't sound bad. It just didn't sound like a great puzzle to be solved, which is what the AT&T one did. And it didn't sound familiar at home like the (Vepco) one did. The Naval Ordnance lab, outside Fredericksburg, Virginia – two things went bad on that one. The head of the W&M department had said, "You don't want a job where you're working in computers. Once you figure it out, it's all done." Was he wrong? And I didn't know where I'd live or how I would get to the job because it was outside of town, and I didn't have a car. So, there were a number of factors that drove me to take the job that did not necessarily include the actual work. I mean, it would be a good, solid job. It seemed like good working conditions. And if the work itself wasn't that wonderful, that would be all right.

MG: [45:49] What did you know about the history of the Coast Survey before you came on board?

SM: [46:03] Almost nothing. I knew the Coast Guard. But I didn't know anything about the Coast Survey. I did find out – I was impressed when I found out a lot, how old it was, how long it had been around, and all the work it was doing. And not just the water part, but the measuring of the country up and down and back and forth. I was really impressed. And the fact that it's important to know where you are, what size you are, where you're up, and where you're down, and all that.

MG: [46:48] Do you remember who the head of the Coast Survey was at the time you were hired?

SM: [46:55] No, I don't.

MG: [46:58] I may have that in my notes.

SM: [47:03] The admiral? Well, there was an Admiral (Bolt?). Whether he was there when I got there or whether he took the office after I was there, I'm not sure.

MG: [47:27] Had you taken any oceanography courses up to this point?

SM: [47:31] No. There wouldn't have been any at William and Mary. They did later open the Virginia Institute of Marine Science, which, ten or fifteen years later, I could have, but that wasn't in existence at that time.

MG: [47:50] I think I'll ask you more generally about the Coast Survey during this time, and then I'll ask you next about your role and your job. The 1950s seemed like a significant era for the Coast Survey. Many advancements and modernizations took place in terms of technology and operations. What do you remember specifically about this time period in terms of those changes?

SM: [48:13] Okay. One, we began taking ocean current or tidal current observations, which I don't believe they've been doing before then. Two, that wonderful, old "Brass Brains" tide predicting machine was – they added this electronic machine that would run it automatically, more or less; you didn't have to crank it. Three, they began exploring deep water oceanography, really. I think those were the three main thrusts. We worked with the Naval Oceanographic Office, also, a lot. They did more deep water stuff, but there was a lot of cooperation, as I recall, between the two agencies.

MG: [49:12] And would that be for nautical charting?

SM: [49:15] Yes.

MG: [49:17] Were you involved in any of that?

SM: [49:19] No.

MG: [49:22] And how was it determined what you would be doing for the Coast Survey?

SM: [49:26] I don't know. [laughter] They said, "Do this," and I did it. I didn't ask to be transferred to anything. I mean, which I guess is one of the questions that might be underlying the other question. I didn't ask. I did not leave the division that I was in, which eventually ended up being the Marine Data Division, I believe. So that's when I started reading the tapes from the tidal current observations, and we did chart them, map them, graph them.

MG: [50:11] You mentioned an admiral earlier, and I think Admiral [H. Arnold] Karo had headed the Coast Survey.

SM: [50:18] Yes. Thank you. You're right. Maybe there was never a (Bolt?). There was a Captain (Bull) who was head – yeah.

MG: [50:56] Were there other folks that you were aware of that were major figures or players in the Coast Survey at that time?

SM: [51:04] Well, we hired a Ph.D. named – I can't remember whether it was Harris Stewart or Stewart Harris. [laughter] I think he was Harris Stewart. Because there are some Stewarts as first names, but there are very few Harrises. I think his name was Harris Stewart. We had hired him, and he was an oceanographer. So, he was a Ph.D., and we were expecting great things. There were people who had been there forever. William Shofnos was there. He was a local boy. He was a Washington, DC, guy. After my previous meeting with the NOAA crew, just several months ago, the folks sent me pictures. There was a Clem Arens, A-R-E-N-S, who had been in the Navy in World War II, and he was a nice, big, friendly guy, but I never talked to him about his history or anything. But he had water studies from the field. I mean, he knew about water [being] in the Navy. This Captain Bull(?). There was Mr. Disney, who was either the head or the vice chief of our division. He was a very sweet, kind, courtly gentleman who contracted cancer and died – died in 1961, after [John F.] Kennedy's inauguration; I think that was about that time. And there was a man named Bernard Zettler, who was my boss for a while. And another one named Burt Wilcox, who was also my supervisor. Burt Wilcox was older than Zettler, and he was my first supervisor when I was working on the tide machine. He always called me Miss Tully to my face. And then, after I was there for a while, I heard him refer to me as Suzy. -What? He always calls me Miss Tully.- But it was nice. And there was a man named Woolheiser. They knew what they were doing. You could ask them questions, and they knew. We had tech people who were not quite professional people. There was somebody who worked on a light table designing something. That is a blurry memory. Don't have that one at all – what they did.

MG: [54:12] These are mostly men you're mentioning. Was it a mostly male workforce?

SM: [54:16] Yes, it was mostly. There were maybe three or four professional women and support staff. Have I told you about Mr. Zettler asking me not to bring coffee and tea?

MG: [54:47] No.

SM: [54:48] Okay. Well, I didn't know whether to be a girl or a professional – or a woman or a professional. I didn't really know where my spot was. One of the secretaries was a good friend of mine. She would go around in the afternoon and ask people if they wanted a cup of coffee or tea and go down to the cafeteria and get it. So, I started going around with Barbara to do this. And Mr. Zettler didn't mind if I went down and got myself a cup of tea or coffee – he didn't care. That was not the point. But one day, I came back into the office space from the hall. And he told me – he said, "You're a professional. That's not part of your job. You don't have to. You don't do that." Which, for the early 1960s, was – people fuss about women not getting their due. Well, he knew. He knew that was not my job. So, I give him credit. You know? I think there were people in those days who [inaudible] step on women's necks for doing their jobs. He was saying, "This is your job." Now, whether he thought I wasn't doing my job enough or whether

he thought he needed to encourage me, I don't know, but the effect was the same. So there you go.

MG: [56:21] Did that clarify whether you were a woman or a professional in the workplace?

SM: [56:26] Sure. Yeah. It helped a lot. Right.

MG: [56:30] Can you tell me more about Burt Wilcox? He was known as sort of the master of the machine, the Brass Brains. What was his background?

SM: [56:40] I never asked him, but I did find out later he was from Ohio, I think, and had gone to Ohio State. He did not build that machine. That was earlier; some other genius did that. He knew about where the tides were – where we predicted tides for was a small number of stations, and every other place was a modification which was given to that location. Okay. So, if you live in Portland, Maine, that's probably where the tides are predicted for. But if you then went to Belfast, it'll be minus an hour or plus an hour from Portland. That friend Barbara I was talking about eventually married a guy and moved to Belfast. We did drive through there once. It's the only time I've been to Maine.

MG: [57:51] Were you going to say more about –?

SM: [57:53] I don't know, Mr. Wilcox. I don't know. He didn't divulge a lot about himself. I don't know. I feel like I'm coming up short on the part that I should be telling you about. But I don't know. He was just the boss. He told me to do it, and I did. And then what I did to analyze – golly. I wasn't on that machine all the time. I did other things. I probably read tide rolls that were created. There were scrolls, and the observation machines made marks on. And then you read the marks. I probably did that.

MG: [58:48] Brass Brains has a reputation for being one of the earliest government-designed computers. Were you aware of its significance at the time that you were trained on it?

SM: [59:00] No. They just said, "Do this." Yeah. Because I think, in those days, there was no hint of the tidal wave – keeping the water analogy going – the tidal wave that was going to hit anybody. In other words, this was just a machine that was being used. There were other machines around. Its significance, in terms of its history, I don't think was really even thought of.

MG: [59:42] What did you know about the history of current tables and tide recording instruments?

SM: [59:53] Again, I'm coming up empty. I knew the tide existed. But the study of it? I think I had a vague realization that the tide advanced along with the moon's advance. You knew that the tide was going to change if you were at the sea coast. Today, at two o'clock, it's this much, but it has to be three o'clock tomorrow. It has to move along. I have that vague information/knowledge.

MG: [1:00:41] Were you doing anything else for the tides division before you started working on the Brass Brains?

SM: [1:00:46] No, no, that was one of the first things I did.

MG: [1:00:52] Tell me a little bit more about the nature of your work, how you oriented yourself to it, and the significance of your work.

SM: [1:01:03] Well, there wasn't a lot to learn about working this machine. I'm trying to remember. You cranked a wheel, and there was a face like a clock with one hand on it that straight up was zero, to the left was negative, and to the right was positive. And you cranked it until the needle was just right on the zero. That told you the time. But I can't quite remember where the amplitude was. That was read out, too. Aside from just being told – I'm sorry for shutting my eyes, but it helps me remember. I was picturing this thing in my mind – there wasn't a lot of training. I mean, aside from the fact that I can't remember how you read it, you didn't need a lot of training. It was pretty simple. I mean, what the operators saw. I was never invited nor told to make the adjustments that were necessary to move from Portland to Boston, to New York, to Atlantic City, to Norfolk, or whatever. It was a simple thing: just sit down and turn the crank until the needle was at zero. I'm going to have to look at it. Somewhere, there was the readout of the amplitude. On the East Coast, the tidal amplitude is pretty much the same twice a day. On the West Coast, it's different because the sun has more influence. The sun and the moon both influence tides. The sun has more influence on the West Coast, and we get the moon's influence twice a day; we get the sun's influence only once a day. On the East Coast, it's up, down, up, down. But on the West Coast, it's way up, way down, a little up, a little down, way up, way down. Therefore, the amplitudes changed. The times are about the same. It's about six hours between each total phase. But I don't remember. Maybe if I see a picture of the machine, I'll figure out where the readout was. But that's not good. I can't remember. I'm sorry.

MG: [1:04:40] That's okay. I was just curious about how it works. I was reading an article about this. I can share this with you. There's a picture of you at the machine. It says that staff had to work up thirty-seven different factors that influence a tide. I'm guessing the sun and the moon were some of those factors, and latitude and longitude, perhaps.

SM: [1:05:04] Shape of the basin is also [a factor]. The Bay of Fundy, for instance, has huge variations, and you're close enough to the Bay of Fundy to know where that is.

MG: [1:05:18] So would you factor this data into the instrument, and it would spit out the tides?

SM: [1:05:27] That was set, I think, physically with the gears and the pulleys on the Brass Brains, but that conversion, so that it did spit it out, all you had to do was press the button to have it go through its paces.

MG: [1:05:54] Who gave it the nickname Brass Brains?

SM: [1:05:57] Don't know. I'm sure it was long gone. I mean, that was long before my time.

MG: [1:06:04] Is that what you referred to it as?

SM: [1:06:07] I don't think so. No, I called it the tide-predicting machine.

MG: [1:06:11] And it was the tide-predicting machine number two. Do you know anything about the type predicting machine number one?

SM: [1:06:16] Didn't know [of] its existence, and it wasn't anywhere around. If it still exists – I mean, I know they moved number two out to Silver Spring, and it's in a museum there. Because they don't use it, they use computers now for all of it. I don't recall anybody even talking about it.

MG: [1:06:37] Were there ever issues with the instrumentation? I imagine you would need to fix things or tweak things every once in a while.

SM: [1:06:46] It never broke, that I recall. It probably needed to be oiled once in a while. I mean, it was mechanical. I just showed up and did it. They didn't entrust me with working out much. Maybe if I stayed there longer, I might have, but I didn't. I worked there for six years and was not climbing the corporate ladder, as it were. Just staying there.

MG: [1:07:24] Would the tidal data read out on a printout?

SM: [1:07:43] I'm thinking. Before the electronic conversion, no. Possibly. Possibly would print it out on paper. Otherwise, you would read it out from dials or displays on the machine.

MG: [1:08:09] Yeah, I was curious about the process from machine to the tide bible.

SM: [1:08:14] To human. Right, right. Well, no matter which, you would have to transcribe it into something that could be printed.

MG: [1:08:30] I think during this particular time, the government was interested in tidal data in the Soviet Union. This was during the Cold War. I read that it took seven hours to produce the tides in a remote Soviet city, which was useful for the government then. Were you tasked to find the tides in certain locations? Or were you just getting a broad swath of geographic information?

SM: [1:08:57] The second one.

MG: [1:08:59] Okay. I have more questions about the machine and how it worked. But I'm aware that we've been talking for about an hour, so I want to check in and make sure you're doing okay. We can always pick up here next time or keep going.

SM: [1:09:14] I think we'll schedule another time.

MG: [1:09:18] All right. I'll pause this in a second. I just want to thank you for the time you spent with me so far. This is really fascinating to me. I'll pause, and we can look at our calendars to find another date.

SM: [1:09:31] Sure.

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

Reviewed by Molly Graham 8/16/2023
Reviewed by Suzanne McCarthy 9/14/2023
Reviewed by Molly Graham 9/18/2023