



Monomoy National Wildlife Refuge 75th Anniversary Oral History Panel



Ed Moses, Matt Hillman, Sharon Marino, Dave Brownlie
September 26, 2019

Interview conducted by Libby Herland
Video by Peggy Hobbs
at Assabet River NWR, 680 Hudson Road, Sudbury, MA

Oral History Cover Sheet

Interviewees: Ed Moses, refuge manager from 1966-1969 and 1988-1997; Sharon Marino, biologist and refuge manager from 2000 – 2003; Dave Brownlie, refuge manager from 2010-2014; Matt Hillman, refuge manager from 2015 – 2020. Bud Oliveira, manager from 1997-2002, provided answers in writing (see addendum 1). Mike Brady, refuge manager from 2004-2009, submitted remembrances (see addendum 2).

Brief Summary of Interview: The interviewer, Libby Herland, asked former refuge managers Ed Moses, Sharon Marino and Dave Brownlie, and current manager Matt Hillman to discuss what the Monomoy NWR was like when they worked there, what their major activities and accomplishments were, what the most significant issues were, and to highlight some of the memorable staff. Monomoy has always been an important refuge for birds, beginning with capturing and banding American eiders in the late 60's. Efforts to protect the avian diversity of Monomoy in the late 1990's through present day have focused on habitat management and active wildlife management including predator control, to protect common terns, roseate terns, and piping plovers. Protection of horseshoe crabs resulted in a lawsuit that upheld the Service's decision to prohibit horseshoe crab harvesting. Research conducted in the early 2000's proved how valuable the refuge is to red knots and other migrating shorebirds. Northeastern beach tiger beetles were introduced on the refuge and will now serve as a source population for translocation to other protected coastal habitats. Gray seals are now abundant on the refuge as part of the North Atlantic population. The establishment of the Monomoy Wilderness Area is discussed, along with controversies associated with cabin removal. Completion of the comprehensive conservation plan, a more than 10-year effort, is described. Staffing and infrastructure improvements, working with partners, volunteers and the Friends of Monomoy are also highlighted.

People named in interview: FWS Staff: Lawrence (Larry) Smith, Deb Long, Mike Brady, Don Grover, John Organ, Pat Bosco, Tom Horn, Hal O'Connor, Dave Houghton, Anne Hecht, Paul Nickerson, Ronald Lambertson, Stephanie Koch, Susie von Oettingen, Mike Bartlett, Tom Eagle, Sharon Ware, Bud Oliveira, Libby Herland, Tim Prior, Monica Williams, Dave Nicely, Doug Boudreau, Chad Roderick, Kate Iaquinto, Matt Boarman, Peggy Hobbs, Brian Willard, Chris Kelly, Tony Léger, Scott Kahan, Sharon Marino, Linh Phu

Federal, State, Municipal, or Other Conservation Staff, Friends and Volunteers: Howard Mendel, Jim Forbes, Laura Hensly, Senator Edward Kennedy, Brian Harrington, Robin Lepore, Eddie Horwitz, North Cairn, Tim Wood, Judy Horwitz, Steve and Jackie Keenan, Dennis and Meg Morris, Gordon Waring, Lisa Sette, Graham Geis, Bob Prescott, Mark Faherty, Cathy Parsons, George Price, Mary Hake, Dave Crary, Ted Keon, Bob Duncanson, Stuart Smith, Renée Gagnon, Jeff Colby, Dan Tobin, Jill Goldsmith, Ed Lincoln, Jan Lincoln, Keith Lincoln

The Interview

LIBBY HERLAND: Hi. Good afternoon. I'm Libby Herland, the retiree representative on the Fish and Wildlife Service (FWS) Heritage Committee for what had been the northeast United States, maybe it's the North Atlantic [region]. [Back to Region 5 as of 2022.]

SHARON MARINO: Let's just say the northeast.

LIBBY: The northeast United States. We're at the Assabet River National Wildlife Refuge located in Sudbury, Mass. Today is September 26, 2019. We are here to commemorate Monomoy National Wildlife Refuge's 75th anniversary with a special interview panel. So, we have with us today former and current refuge managers. We are going to start with Ed Moses. Introduce yourself, tell us your job title or titles if you worked at Monomoy more than once, and the years that you worked there.

ED MOSES: My name is Ed Moses. I was assigned to Monomoy which was a satellite refuge to the Great Meadows National Wildlife Refuge in 1966, so I had Monomoy from 1966 to '69 as the project leader/refuge manager, and then fortunately again I re-complexed, reassigned Monomoy to the Great Meadows 'cause it had been taken out and put under Parker River [NWR]. In 1988 I re-created the complex and Monomoy went back under the Great Meadows National Wildlife Refuge Complex [later renamed as the Eastern Massachusetts National Wildlife Refuge Complex]. I was involved with Monomoy, my lovely spot, from 1988 to 1997.

LIBBY: Great.

ED: I might add that I think everybody that has had the opportunity, and that goes right back to the very first manager, Lawrence Smith, 1951-1953, everybody that I have ever spoken to that has had a working relationship with Monomoy has fallen in love with the place. That is so true.

LIBBY: Okay. Thank you. Sharon?

SHARON: Hi. I'm Sharon Marino. I worked at Monomoy from 2000 to 2003. I started as the wildlife biologist at the refuge and then in 2002 I became the refuge manager there. When I was the wildlife biologist there, Deb Long was the refuge manager. And I also fell in love with Monomoy. (laughter)

LIBBY: Great. Thank you. Dave?

DAVE BROWNLIE: I'm Dave Brownlie. I succeeded Mike Brady as refuge manager in early January of 2010. I retired from the Service and from Monomoy in late September of 2014, after which I was succeeded by the gentleman to my right, Matt Hillman.

MATT HILLMAN: Matt Hillman, 2015 until present, refuge manager at Monomoy. Interestingly enough, my previous supervisor in California was Mike Brady who should be sitting just to Dave Brownlie's left right here.

LIBBY: I know that Mike Brady wanted to be here, but he'd already made one trip to Monomoy this year, on vacation, and he just couldn't get away, especially since he's stationed up in Alaska now. Let's say that to Mike Brady, Monomoy is incredibly special. It's a special place. Great. Well, I am so thrilled to have all of you here and to take time out of your very busy lives and those of you who are still working. Really, really appreciate this. All right, so we are going to just start by having you describe your day-to-day responsibilities. Not really issues or projects you worked on, but just what your job was like, because it did change over time. If you weren't the manager, who was the manager at that time if you haven't already mentioned it. I know that both Ed, you, and Sharon both had different jobs, so talk about both of the jobs that you had.

ED: Okay. In the '66 to '69 period, right at the beginning, I was a staff of one. A project leader with no staff for quite a while. I was assigned the responsibility of continuing with the development of a viable technique to capture and band significant numbers of American eider. That was the paramount project in the early years – '66, '67 – for Monomoy because we weren't doing much else in terms of tern management or anything of that nature. I'd have to borrow staff from Parker River to assist me. One of the maintenance men there had fallen in love with Monomoy also – a fellow by the name of Don Grover, who is recently deceased. Don and I spent some wonderful times down there with the cannon net project development that I initiated. The eiders would come onto the beach at least once every 24 hours to re-oil. We had small pods of them. We did end up doing most of our successful work off of Chappaquiddick Island off of Martha's Vineyard.

LIBBY: Can we - we'll come back to that later. So, would you say that the first time you were at Monomoy, you were really doing more biological work?

ED: That's correct.

LIBBY: Then, your second stint at Monomoy, when you were the manager?

ED: That was also more biological work because we were – I mean, Monomoy is just a tremendous area in terms of avian diversity. We had a serious problem with over population of gulls. They were slowly taking over. All the dumps on Cape Cod were open, open landfills. It was the dinner plate. The place was set for the gulls. With ample food, population is an inverted pyramid. It just exploded. So, we initiated [the] gull removal program which consisted at that time of adding eggs on the nest and doing a lot of shooting. Both shotgun and scoped, small caliber rifles. On that second tour, I was assisted by staff, John Organ biologist from the Regional Office, Pat Bosco United States game management agent who again was as enamored with Monomoy as we all were. He just loved the opportunity. He waited for the phone call. I'd call and say "Hey, are you available for such a period of time?"

LIBBY: So, we'll – I want to talk about the avian diversity program in more detail because that was something that all of you have dealt with. But it started under you [Ed] and it was very successful but very controversial. I think we want to cover some of that for this oral history. So, anything else you want to talk about, your day-to-day responsibilities there?

ED: Part of the problem in the area was that when I first went there, the community animosity towards the Service, and what the Service had done with the private cabins that were on Monomoy. The refuge supervisor at the time, this was '66 to '69, the refuge supervisor – I know I'm flashing back here – but the refuge supervisor Tom Horn, prior to my arrival, had taken a crew from Parker River. They went down and removed all the contents of three of the family cabins. The permittees had deceased, and the conditions of the permit were that once the permittee dies, then it cannot be extended to family. Everybody had politically tried to get it extended, etc. But Tom Horn went down, and he got the name, nickname, "Tom the Torch" because of his activity. What he did - he cleaned the cabins out, inventoried all the materials, stored it in the Coast Guard building at Morris Island, and then they burned the cabins. This as you can imagine, especially with the families attempting to continue - because they just loved the place like we did - extending their use of the cabins. This was just so abruptly and inhumanely, as far as they were concerned, terminated. You can just imagine the animosity. That carried forth because word of mouth, obviously. When we were down there doing eider work, we'd go into a restaurant, and you could cut the feelings with a knife. The looks that you got, the way you were treated by the people there. It was difficult. So, we tried to initiate a turnaround on that which was, I have to say, was not successful, because you'd have to go through a complete generation before that would go.

LIBBY: Sometimes it takes longer than that.

ED: I don't know if it's gone yet.

LIBBY: Well, I know that working with the Town [of Chatham] has always been a part of people's responsibility, so I am going to turn it over to Sharon. Tell us a little bit about some of your biological work you did and then [as] manager.

SHARON: Sure. So, I started as the wildlife biologist. I was really responsible for the avian diversity program there and all the wildlife. That was my responsibility, to manage the field camp in the summer when we hired a bunch of interns that lived out there in the summer. All the terns – during my time there we had roughly 10,000 pairs of common terns. The avian diversity program was hugely successful. We kept the gulls out of Areas A and B. We had wading birds that we monitored. We had tons of seals that were using the refuge. We analyzed scat from the coyotes to see what the coyotes were eating. We did predator management, was huge during that time to keep the birds safe. We also did a ton of work with horseshoe crabs. There was a lot of concern over harvesting of horseshoe crabs when I was there. We'll get into that later as one of the big projects I really focused on. So, my day-to-day job was really managing the wildlife. Then I transitioned to serve as the manager. I was at one time a staff of

one there, during that transition. We were going through a major remodeling of the dorm during that time and work on the headquarters. I was alone. I just remember. Not alone entirely – we had the Complex – but I was alone and really relied heavily on volunteers to help me with all the boats, all the management and everything. So, I learned a lot. It was great growth opportunity for me. When I was the manager, I transitioned more to the entire operations of the refuge. The budget, purchasing, all the boats, the maintenance, oversight of the biological program, community relations, outreach with the community. I went in and did education programs with the schools. My duties really were broader, but really our priority at the refuge when I was the biologist and when I was the manager was protecting the wildlife on the refuge. That was our number 1 priority when I was there for both positions.

LIBBY: Yeah. Great. So, Dave?

DAVE: I was blessed to reap the fruits of my predecessors because the level of activity and resources that we had to dedicate then to avian diversity actually were fairly modest. Once I reported, largely trying to stay ahead of the coyote population and not let the gulls start catching back up again. But the gull situation was largely stabilized, and the tern populations were continuing to increase. Plover productivity was continuing to increase. Really, the one avian diversity problem we had, on the field station, was and I think still remains, coyotes.

LIBBY: Right. By the time you got there, we'd been operating the whole program and running the summer colony for quite some time. Right.

DAVE: Right. I think Sharon gave a pretty good overview of what a refuge manager at Monomoy does. I had the blessing of having two full-time year-round staff members that were very familiar with the refuge and the biological operations. So, I do not have to devote as much of my personal time to the biological aspects of what was going on, on the refuge. I just had to make sure there was day-to-day oversight, and somebody was looking more beyond the end of this week.

LIBBY: Or the end of the day. (laughter) Right.

DAVE: Because, between tides and boats and trucks and trailers and all kinds of busy little things that could disrupt a day's schedule that really evolved around tides and weather more than anything else, somebody had to be looking a little farther beyond and really make those decisions that have to do with allocating the resources that are in scarce supply...

LIBBY: Those tough decisions.

DAVE: ... to go to where they will do the most good for wildlife.

LIBBY: Right, right. Matt!

MATT: So, to echo what you first said, I'm kind of following on the coattails of these amazing people before me. Specifically with Dave, one thing that he was very instrumental in formulizing was our comprehensive conservation plan, which is, by the way, a document that I

continue to review on a weekly basis all the time. It's a very impressive volume of incredible information both historical and biological, all about the refuge. So, I would say maybe first and foremost, in a very broad sense, what I do at Monomoy is implement the plan that was made for many years before me. That most recently includes the hunt plan, but it also includes a lot of visitor services components, trying to revamp some of and retool some of our visitor services and programming. Community outreach as well. So that's a big part of my job, and we will get into this a little bit more later, is trying to make Monomoy, which is this beautiful offshore wilderness that relatively few get to actually step foot on, is trying to make that wilderness more accessible to the wider general public who does step foot into our front door where you can drive. So, we are doing that in a number of different ways that we will get into a little bit later. Then, of course, I had the same two dedicated employees that Dave mentioned. [They] were there to train me in my first year and a half, year on the job, which for continuity purposes was a huge asset to me. Those two folks have since moved on to greener pastures but now it's my role to impart a lot of that knowledge on newly arriving employees. So, that's a big part of my job - leadership, training, continuity. And then, probably one of the most significant things is coordination with volunteers and with community partners. So, that takes up a huge amount of time whether it's volunteers – 4 to 5 thousand hours of volunteers every single year at Monomoy. Our Friends group, which is quite active, and they do a lot of work for us. So, coordinating among all those different partners and other local agencies is a big part of my job too. It's really a jack of all trades type of position. And boating, on the water – field work is a big part of it as well. It's a little bit of everything.

LIBBY: It's a challenging place to work. Definitely have to have a flexible skill set. So, I'd like you to talk about what the refuge was like at the time that you were there. Maybe talk about who your supervisor was. You've all kind of addressed the staffing level, so I don't know if we need to go into that. But one of the things I'd be really interested in having you talk about is what was the island like in connection to Morris Island, because I'm sure that it changed over the years, and it would be kind of neat to get a sense of that for the history. So, we'll start with you, Ed. In 1966?

ED: That's what it looked like [pointing to a map]. (laughter)

LIBBY: Well, tell us what it looked like. (more laughter)

Ed: It had just gone into the phase where the low tide connection, that's the sand barrier, the low tide sand, between North Monomoy – what is now North Monomoy which was at that time, Monomoy – and Morris Island had just been breached. Prior to that time, and back when I was 8 years old and made my first trip to Monomoy with my father, we floated a jeep across from Chatham onto Morris Island and drove this area that is shown roughly there [pointing to a map] that sand at low tide which strands you on Monomoy at high tide to surf fish down off of the south tip. That got, with one of the winter storms, got breached. So, but you had a much larger land acreage at that time than what exists current day. Something happened that I had personally predicted would never happen and that was a connection of the mainland to

Monomoy during one of the storms. That did occur and stayed extant for a few years. I was very surprised at how it has blown completely out. The storms last year, Matt?

MATT: '17. Yeah. And '18.

ED: The activity with the remaining cabin uses which were extant at that time in '66 was a constant issue for the summer hires that I had on the island. We had a garage and a vehicle at the north end of Monomoy which we would boat to with either a rental boat or our own that we finally got. We would drive down to the very south end where we had a Coast Guard building that was identical to the one at Morris Island. That was basically our field base of operations. The Massachusetts Audubon Society had a vehicle parked there, also, that they used for their tours in connection with the inholding which included at that time two cabins owned by private individuals and a 2-acre piece owned by Massachusetts Audubon. The Coast Guard building down at the end had three bays in the garage and a living area up over what would be the office area at the Morris Island facility. So, that's what we used for the base of operations for all our eider work. Most of the eider work was done off the very south end. In the acreage wise at that period of time, it was somewhere close to 3,300 acres and of course there's another approximate 2,000 acres of subwater surface lands to the west, that western boundary. So, you know, an area of wildlife value of over 5,000 acres under Service control.

LIBBY: So, when you were there first, you could actually drive to the island. You said, float a jeep, so you would ...

ED: That was back in 1948, when I was 8 years old. You could no longer drive to it after I believe 1953 ...

LIBBY: Oh, but they still had vehicles on the island so that you could get up there.

ED: We left vehicles on the island.

LIBBY: I get it now. Okay.

ED: A garage was floated over from on a I think it was not the LARC [Land Amphibious Rescue Craft] that the Coast Guard but had an amphibious duck. The garage was, the duck drove in underneath it, the garage was placed on top and driven, floated out. That was put on the north end of Monomoy, and we kept a vehicle in that. That happened I believe under Hal O'Connor's time.

LIBBY: Wow. Interesting.

ED: I've got the managers list here to help me remember names and the period of time. Hal was the fifth manager. I followed Hal as the sixth manager there. I had the fortunate experience of serving under Lawrence Smith who was the very first manager when I was assistant at Iroquois [NWR], and I had numerous stories related to me about Monomoy. And then lo and behold, I get a phone call from Supervisor Tom Horn advising that I was going to be the project leader for

the Great Meadows/Monomoy refuge in 1969, '68, '66 excuse me. So, have I digressed too far away, Libby?

LIBBY: No, I think that's fine. Let's go talk to Sharon, oh, just one other question I had was, where was your office? You said you did a lot of your field work out of the Coast Guard building on the south end of the island.

ED: On the island.

LIBBY: Did you have an office anywhere?

ED: We had an office that was actually the visitor contact, the old building, that space was just total office space.

LIBBY: Okay. On Morris Island. Okay. Great.

ED: On Morris Island. Yeah.

LIBBY: All right. Sharon.

SHARON: So, when I was there, the islands were separated, so we had a clear distinction between Morris Island and North Monomoy Island and then we also had a clear break between North and South Monomoy Island. South Beach was not connected at the time, and we had a very clear separation. With that being said, we saw a lot of sand building up and Minimoy - we found Minimoy when I worked there one season, which was a small island off the west side of the refuge, off of the north tip of South Monomoy Island. We saw roseates [roseate terns], found roseates nesting out there. I think we had 15 pair. We had skimmers nesting out there, least terns, oystercatchers, plovers. It was a wonderful, wonderful discovery. But the reason why I bring up Minimoy is because it is such a dynamic system, and the sand is always shifting. Just for the four field seasons I was there, the channels changed so much. Just getting out there changed, and the sand, it was always very challenging. But we were not connected to South Beach. Then, in terms of buildings, we used the lighthouse as a base camp. We also created a field camp at the north tip of South Monomoy Island and the building at Morris Island was where our headquarters was. We also did a lot of work to the dorm and maintenance shop, so we were able to house seasonal staff in the dorm that's currently being used. So, that was where ...

LIBBY: So, when you were there, all the cabins were gone and the Coast Guard buildings [on South Monomoy] were gone, just the slabs remained.

SHARON: Correct. Correct.

LIBBY: So, I hope that we can talk about all that building removal at some point today. Maybe it will come up a little bit later. So, Dave.

DAVE: Okay. So, between Sharon and then my arrival, a little patch of sand reconnected South Beach, managed by the Town of Chatham, and the tip, northern tip of South Monomoy, so

South Monomoy was connected to the mainland when I arrived. It did not stay that way the entire time I was there, because just before I left in 2014, that connection breached and a new break that was getting the hopes of all the mariners up that they would be able to be able to resume going straight out into the Atlantic without going all the way around the south tip of Monomoy, had gotten peoples' hopes up. So, just again to illustrate how dynamic the sediment movement is, it formed in 2006 and was gone by 2014, in terms of the connection. North Monomoy was separate from the mainland on Morris Island and was separated still from South Monomoy. There were no buildings on any of the islands except Morris Island and the Monomoy Point Light station structures – the historic oil house, the lighthouse itself and the keeper's station. The Coast Guard building down at the south tip that Ed and Sharon were referring to was a concrete slab and was gone.

LIBBY: That's what I remember, too.

DAVE: All the cabins were gone at that point. However, if you walk around and look close enough, you can see some of those old vehicles. Never left Monomoy...

LIBBY: Really!

DAVE: ...that are buried in the sand, particularly south of the lighthouse.

LIBBY: Some of the telephone poles are still out there.

DAVE: Yes, some of the telephone poles and there were some navigational aid features down there. It's almost dangerous to talk about acres for Monomoy. I know it was a very, very slippery number when we were going through the planning process. Every month it seemed to change a little bit, and that was the official number that changed a little bit! But the official acreage while I was there was 8,321 acres and it did include below mean low water flats to the west in a lot of those acres.

ED: To the west.

DAVE: 3,244 of which were part of the National Wilderness Preservation System which was part of what I believed motivated the need to finally get rid of the cabins that were on South Monomoy, was because the wilderness legislation was being considered and was looking like it was going to pass. Some of the old annual narratives talk about an increased impetus to finish demolishing and removing the last of the cabins. We already talked about staffing, but I do want to talk a little bit about the Friends of Monomoy that was completely inactive and had lost their tax-exempt status for non-reporting when I arrived in 2010. This was probably a classic case of volunteer burnout. There was a very small number of extremely dedicated people in a very active Friends of Monomoy that just, one at a time, drifted away because of being overwhelmed with what was going on at Monomoy. Fortunately, we were able to start reactivating that in a small way. It sure sounds, Matt, with what you're talking, that they're finally back to where they needed to be.

LIBBY: Yeah, they are great now. [To Matt] So, what's the island like now and how has it changed since you've been there?

MATT: I can even, so in the last two years, we've seen significant changes to the island, to the point where in the winter of 2018, we couldn't even get to our Morris Island facilities for a period of 14 to 15 days because of large nor'easters. In fact, not even very large nor'easters. Really mild nor'easters flooding the roadways that lead to the refuge. The reason why that is occurring now or at least has occurred over the last two years – South Beach, which for many, many decades provided a barrier island that protected Morris Island, is becoming obliterated. So, a king tide, a high wind or wave event – South Beach no longer exists, really. It's underwater. So, we're seeing that break up repeatedly to the point where it really serves as more of a sandbar now. What that's doing is we're getting northeast wave impacts directly from these big storms in the winter, especially that are hitting our bluff on Morris Island directly. So, we are seeing a lot of erosion on Morris Island while at the same time seeing a significant amount of accretion everywhere else on the refuge. In the past year alone, our window for example, to get to the tern colony by boat is within an hour and a half of high tide. So, we are that limited. When I got here, we had a 3 ½, 4-hour window but it's halved in the four years since I've been here. So, I don't know what next winter is going to bring, as far as our access to those areas, but it's not just a challenge for us. It's impacting the local commercial fishing fleet; it's impacting commercial shell fishermen. When I was first, when I arrived in 2015, there would be consistently 15 to 20 boats actively shell fishing on the flats where the old Southway used to be, just to the east of the tern colony. Now you'd be lucky to see 2 or 3 of those boats. So, it's only the diehards that can afford to be in there for 12 or 14 hours during a low tide cycle before they can get back out again. So, the changes are significant. I guess the good news – a lot of habitat is being created because of the longshore drift from points north of us. We're receiving all that sand on Monomoy. So, Plover Beach where the connection used to be, much, much more expansive. It's looks like a desert out there. The habitat for piping plovers in particular is really significantly increasing quite a bit. So, it's good news for wildlife. It's not so great news for our access. Morris Island Cut isn't there anymore, really, so at an absolute low tide, things like coyotes can now walk with relative ease from Morris Island to North Monomoy Island. So, coyotes in particular have been something that we've all dealt with as managers here. Predator control, I think, we are going to see become even more of an issue as that sand continues to fill in.

LIBBY: Wow. Hard to write a 15-year plan when things change so drastically every year. Well, we wanted to talk about some of your major activities or accomplishments, and I think we are going to pick up on a lot of these same things, but from an either wildlife management, or public use, or infrastructure [perspective], just kind of explain, give us one or two examples of some of your major activities or accomplishments while you were down there. This is where you can talk a little bit more about the eider banding that you did, for example.

ED: Yes, that was – the eider program was the big Service thrust. I mean, that was my major charge of getting something. Patuxent [Research Center] was offering liberal bag limits on sea ducks, and they had no data in terms of what the population was. They felt that by getting a lot of banded eiders and possibly scoters, if that was at all possible too, then it just may help them develop a little more population dynamics and understanding as to just what was being produced. Of course, hand in hand with that, Howard Mendel up at the University of Maine was doing nesting surveys on the islands and developing a good database in terms of what certain islands that they could cover were producing. Monomoy at that time was probably the most significant wintering area for eiders. In our aerial flights that we would make down there, it was just amazing to see the salt and pepper on the water. You were only seeing a portion of the population because 20 to 40 percent were underwater at the time. You know, either going down to pick up mussels or coming back up. So, we were in the tens of thousands of birds. We did some pinpricking of the aerial photographs to kind of develop some sort of a handle on how we could estimate numbers of wintering birds. That became a fruitless project. It was just unbelievable. The cabin issue was a major project at the time. The cabin permittees were only supposed to allow members of their own family and themselves to be at the site. Everybody and anybody that was a buddy of a cabin permittee had a key to the cabins. There were some real difficult issues developed for our summer people who were on the island on a day-to-day basis. And these were not - this was hostile type situation. When - soon as the employee would show up and start asking “Who are you?”, knowing that they were not, should not be there - it posed some issues. Slowly but surely, the cabin permittees passed on and the cabins were removed. At the time the Monomoy wilderness proposal was started, there were 12 remaining, privately owned cabins on the island. They just slowly dropped off as the years passed. So, by the time wilderness was designated, and I’m hoping my recollection is correct which was in 1970 probably?

LIBBY: 1970.

ED: Because I inherited the responsibility after I went to Parker River, because I had conducted all of the visits to the island by the various organizations that were interested in either supporting or opposing wilderness designation, and I conducted a lot of tours and visits to the island by air from Plum Island International Airport. (laughter) But, by that late date, we were down to, I believe it was just 3 remaining cabins, by 1970. Mass Audubon had made a commitment to us that if we proceeded with wilderness, and wilderness was designated, that they would divest of their lighthouse property to the Service and terminate their vehicle use. There was an exception to the wilderness that is a route for motorized vehicles to travel from the area of Powder Hole to the lighthouse. That caveat was put in there just apparently to enable Audubon to conclude their program after designation.

LIBBY: Were most of the cabins removed in the 70’s, then, between when you were there in the ‘60’s and the ‘80’s?

ED: Well, like I commented, there were three removed before I got there. We removed the Crafts cabin which was the last one to go in my second tour. But the Manson cabin, which was one of the better maintained, that was owned by the owner of the Manson Food Agency in Chatham. 'cause some of these cabins were pretty rustic, to say the least.

LIBBY: Were they burned or knocked down with a backhoe?

ED: Any removal of a cabin down there was by fire. There was just no other feasible way to do it. You didn't have the manpower. The Friends program didn't begin until the second tour, in the early '80's, excuse me the late '80's. That's where we had some additional manpower. But other than that, we just had Dave Houghton on the island.

LIBBY: Can you just tell us a little bit about, on your second tour of duty there when you were the project leader and the manager of the refuge, about the avian diversity plan, because you started that. It's your fault (laughter).

ED: We had been doing removal as I mentioned earlier by shooting and addling eggs. The activity was trying to keep the gulls on a nest, so they didn't re-nest. You didn't destroy the nest. Meeting with Anne Hecht and Paul Nickerson and the endangered species folks, they were wanting to see something happen a lot faster than what the projected removal by shooting occurred. The issue of using DRC-1339 came up. I always said, "If you're not a student of history, you're destined to repeat it." Muskeget Island had been a project where the, at that time, the Division of Predator and Rodent Control was assigned the responsibility of using DRC-1339 to remove gulls from Muskeget. Now, just a little bit of background. DRC-1339 was an avicide developed by the Denver Research Center given the number 1339, but it was an avicide for blackbirds. The label was basically developed with the dosage for killing blackbirds, not gulls. All right. The label also said that the Fish and Wildlife Service was the only personnel allowed to utilize DRC-1339. Organizational change. Department of Agriculture inherited our division of Animal Damage Control, which used to be Predator and Rodent Control, changed to Animal Damage Control. It was felt that in a reorganization, that was a Department of Agriculture responsibility 'cause most of their work was with agricultural interests. So that meant at the time that we were to initiate the program, after the development of the EIS [Impact Statement] and all the hearings that went along with that, again, the beginning of all the contention about the whole process. Then onsite we had Department of Agriculture personnel that were in control of mixing the baits. Individual by the name of Jim Forbes was a previous Fish and Wildlife Service employee with Animal Damage Control and now with the Department of Agriculture. We're in the Coast Guard building on Morris Island headquarters. Jim comes in. They were mixing the butter – the DRC-1399 – to apply to the bread. Jim came up to me and he said, "Ed, she's not putting enough material in the butter mix." I said, "What do you mean?" He says, "It's too light. We learned that at Muskeget. You knew that." I said, "Yeah, I did." At Muskeget, a lot of birds, gulls, flew to Nantucket and were dying all in the populated area. So, I went up to her, her name was Laura Hensly, and I said "Laura, could you have a conference with Jim and I about the baits?" And we did, and she says, "That's what the label says, that's

what's going to be mixed." So, bottom line was, we ended up putting baits out there that had an inadequate amount of material in them in order to kill the gulls at the nest site. History repeated itself. We had a lot of [gulls] fly off the island, as far as the Town of Orleans with the gull control program. We called it, tried to avoid that word gull "control" and use the "avian diversity program", just from the public relations standpoint. So, that's where we had such negative national news. I had Fish and Wildlife Service personnel that I had trained with at the Basic Refuge Managers Academy that were stationed in California call me and say, "Jeez, you guys are on tv out here!"

LIBBY: It got national coverage, yeah.

ED: National, national coverage. We had a session; you know this was after the program was completed – I'll get to that later – but the interesting event that occurred the night before the program was to launch - Regional Director Lambertson called me. It was like 4 pm, and he said, "Ed, I just received a call from Senator Kennedy's office." Now, one of Senator Kennedy's major supporters is a resident on Morris Island, and they wanted the program halted. He said, "Would you call the staff person and explain the thing to him." And I said, "Whoa, didn't you do that, Ron?" "Well, no, I'd rather have you do it." "Because I'm closer to retirement than you are?", jokingly. Ron and I had had a lot of dealings together back when he was in the Solicitor's Office, so we were quite friendly, and I felt I could do that. Anyway, I placed the call and the individual wanted us to terminate the program. At that time, just to give you some history, we had to close because of death threats that were made to the staff and myself, we had to close the air space over the refuge. That was through a Federal Register publication. There were no flights to go within a mile of the refuge. I had every United States game management special agent in the region assigned to us. We had every floating craft that the Service had under its control at that time plus the Service aircraft assigned to the project. And just a tremendous pulling in of every available body to handle that program. So, when I called the Senator's staffer and said, "Well, do you have some problems?" "Yeah, we want you to hold off with the program." I said, "Well, I'm not able to do that." "What do you mean you're not able to do that? You're in charge of that, aren't you?" And I said, "Well, yes sir, I am, of the field operation." And he said, "Well, then you can shut it down." And I says, "No, I can't. It's not within my authority to do that." I said, "We've done an EIS, we've been sued in court. We've been given approval by the Secretary of Interior to proceed. So, if you want to try to stop the program from proceeding, then why don't you have Ted call Bruce [Babbitt] and proceed." He says, "You're not being very cooperative", and hung the phone up.

LIBBY: And you carried it out.

ED: And we proceeded.

LIBBY: Great. All right. Well, I know that's a big issue too but that was a big accomplishment, to get that going, even though I know that there was some negative fallout for that, but we know

in the long term it was a, it had some very positive results. I don't know if you want to talk about that or [looking towards Sharon]?

SHARON: Sure. I was going to talk about the importance of the avian diversity program, just briefly, that because of all of that work, the results we saw, almost immediate results, were the terns returning back to the habitat and we were committed to keeping the gulls out of those nesting areas and I have to say, from the time I arrived at the refuge to the time I left, which was only four field seasons, the sentiment in town was very different. We didn't wear our uniform in town when I first got there. By the time I left, I felt safe wearing my uniform in town and I did feel like the tide had turned. We showed huge success in that the project was successful. I was interviewed almost every year about the importance of the program, and we did a lot of outreach, talking about why that program was so important. That was a huge, huge success. When I left, there was about 10,000 pairs of common terns, roseate terns, I think we had roughly 30 pair, and then just tons of other birds. Piping plovers, American oystercatchers, skimmers, least terns, just such diversity.

ED: Just what we hoped for.

SHARON: Yes.

ED: But it didn't get national coverage?

SHARON: No, it didn't. But I also just wanted to highlight a couple of other projects that I was heavily involved in. The one I started talking about earlier was the horseshoe crab harvesting. It was recognized that Monomoy was a critical spawning area for horseshoe crabs. If you go out there during shorebird migration, the thousands and thousands of shorebirds that use Monomoy, it's really astounding. It's a critical, critical area. So, we had a permit – we were allowing somebody to come out – Brian Harrington I believe was the individual – to actually harvest crabs, horseshoe crabs, and I believe they were being bled. So, the biomedical industry - a lot of the attention was focused on bleeding the horseshoe crabs, especially the females, and then returning them back to the wild. Well, there are consequences to that bleeding. Is the female going to eventually die? Is she going to be able successfully have eggs? There were a lot of concerns. So, we worked really hard to stop the harvesting from happening. He had a compatibility determination which we allowed him to harvest, and we wanted to stop all harvesting. Well, we got sued, and so we actually had to prove the importance of horseshoe crabs and horseshoe crab eggs to shorebirds. Our Solicitor, Robin Lepore, worked with us. We actually had - we did a ton of surveys. So, I was heavily involved in surveying all the horseshoe crabs. I worked with Mass Audubon. So, we were out in the middle of the night doing horseshoe crab surveys during the spawning season. We also were noticing that we had boats in areas where we believed there was harvesting. We caught illegal horseshoe crab harvesters on multiple times when I was there. So, we stepped up our law enforcement efforts. Finally, we actually did some mist netting. Stephanie Koch, who's the biologist – still the biologist at the Eastern Mass Complex – I worked with her closely. We actually worked with a veterinarian from

Tufts University. We set up mist nets to catch shorebirds at night, and we flushed their stomachs to actually prove that they were eating the horseshoe crab eggs, and that this was an important part of the documentation of why we should shut the harvesting down. So, we ended up prevailing in that lawsuit. At that time, we also exerted our authority over the waters, which was I think precedent setting, where we started to reference the submerged lands and waters. We actually set up buoys outside, out in the water at that time. So, there was a significant amount of work. I'm really proud of all the work that went into stopping the horseshoe crab harvesting, there. I think that was pretty significant. I just wanted to touch on one other, actually two quick other accomplishments. Northeastern beach tiger beetle. When I was there, I worked with Stephanie again. Martha's Vineyard had, we actually worked with Susi von Oettingen from the New England Field Office. We got larvae – third instar larvae – from Martha's Vineyard, and we released them I believe it was three or four seasons. We only released roughly like 13 to 25 or so third instar larvae three or four years in a row. I don't have all the numbers in my head right now, but we would just bring them out to the north end of South Monomoy Island and let them burrow into the sand. Then, we would monitor them the following year. From what I hear, there are thousands and thousands and thousands of Northeastern Beach Tiger Beetles from those years of actually bringing them from Martha's Vineyard. I understand Matt can talk about now how those, some of the beetles we're trying to do that in other locations from that source population at Monomoy. So, that was a huge success. They're federally threatened. We learned so much from it. Again, I was really just so, I feel so fortunate to have been part of that. And then finally, a lot of my time was spent on infrastructure. So, building rehab. We actually established some of the first exhibits in the bookstore. I also worked with the Friends group. At that time, they created the bookstore. So, I worked with the Friends group to establish a bookstore. For the first time, we were actually generating revenue, which was really exciting. They ended up paying for some of our interns which was really exciting because we were always struggling for staff. So, I'm particularly proud of that bookstore even though in the end it sounds like the Friends kind of fizzled. But they go through cycles. I am pretty proud of that.

MATT, DAVE and LIBBY (all talking at the same time): It's still there. It's back. Just a little one.

SHARON: Well, a lot of people – I can't believe how many stuffed horseshoe crabs we sold.

MATT: We still do!

SHARON: That was a popular item. It was.

MATT: Now it's stuffed sharks.

SHARON: That was all I wanted to highlight.

LIBBY: Well, that's great!

DAVE: You'd have to buy at least one seal with each shark. (laughter)

LIBBY: So, Dave. How about some of your major accomplishments or activities? Somethings didn't get finished while, you know, while we're the manager, I don't know.

DAVE: Yes, you always leave a lot for the next person and that hopefully will continue on in perpetuity. Matt already mentioned probably the biggest time investment for me turned out to be the draft comprehensive plan (CCP) and EIS. Herding that almost to the end of the public comment period, within a couple of weeks before my official retirement date. I think one of the big accomplishments was just the refuge staff continuing to sustain a high level of threatened and endangered species population growth, recovery and really moving into some cutting-edge research. We had a number of different kinds of projects that were looking at different kinds of tags including nanotags on different species. Some getting ready for putting tags on a handful of roseate terns that involved putting them on common terns first and then I believe later on they got to working with some of the plovers with the tags. The reactivation of the Friends of Monomoy group started. I can't really take credit for restoring it, but the only thing I know I can take credit for is restoring the tax-exempt status because I applied on their behalf when the Internal Revenue Service cracked the door back open for re-instating tax exempt status. I didn't wait; I just went ahead and applied. Then I found some friends to be part of the group.

MATT: Many of whom are still there, actually.

DAVE: Right, right. Eddie Horowitz probably still cusses.

MATT: He's there.

DAVE: Another thing that I did manage to do was that I submitted and actually secured grant funding for a refuge shuttle and other refuge access improvements. The Monomoy Point Light station historic structures – turned out to be more stabilization than restoration – by the time it was all done, had actually been funded prior to my arrival under the ARRA (American Recovery and Reinvestment Act) legislation. The headquarters and dormitory energy conservation projects were completed while I was there. We finished the very first few minimum requirements analyses for our management activities to try to raise our wilderness stewardship game just a little bit from where it was. Probably last would be a grant that paid for design and installation of interpretative panels along the Morris Island trails, because the old ones were getting very, very worn by the salt and sand blast that they had been subjected to.

LIBBY: You were named National Wilderness Area Manager or something. Remember you got that special designation?

DAVE: Yeah, in 2014. I think it was a retirement gift.

LIBBY: No, you had done some innovative stuff with wilderness.

DAVE: Well, we did minimum requirements analysis. We tried to do more programmatic than discreet projects so we could cover more activities under a big umbrella.

LIBBY: Didn't you have some artists come in and do some art?

DAVE: We did, that was really, it was an interagency artists-in-residence to celebrate the 50th anniversary of the Wilderness Act in, I think that was 2013, 2014. Yes, I was named the Service Wilderness Employee of the Year in 2014.

LIBBY: That's great.

DAVE: After my retirement, by the way! (laughter)

LIBBY: What year, I can't remember, everything just kind of runs together, maybe - was Stephanie Koch doing some of the shorebird research at Monomoy when you were the manager? She must have started when Mike Brady was the manager.

DAVE: She did. We had transitioned from maybe influenza funding to the more discreet migratory bird funding with a focus on red knots. So, we were still banding, cannon netting shorebirds, most of which took place off refuge, 'cause we actually were having better success on Town of Chatham lands, actually. It's where we had our best success with the shorebirds.

SHARON: And we weren't doing, when I was there, we didn't have as much of an emphasis on shorebirds or red knots. So that was definitely newer work that we weren't doing when I was there.

LIBBY: Well, I think we began to realize how important Cape Cod is and the waters around Cape Cod and the lands to shorebirds, migrating shorebirds. There was a collective – we started getting some of this data and began to realize it's a critical place for them, especially the juveniles during their migration.

DAVE: The very first few tag returns that we started getting back were actually showing that the Cape Cod shoreline was almost like the last point of departure, with just a couple of stops after the New England coast, in near shore waters. The rest of their migrations, very, very long-distance migrations, were over water for very long distances.

ED: It's like the end of Cape May in New Jersey. It's a staging area waiting for that long flight across open water.

LIBBY: I think really educating the locals about the biological value of Monomoy was a challenge. You all tried to do it. I don't know, Matt, do you think they really understand that now?

MATT: I think that message is sinking in. Yeah, I do. We're in the news a lot at Monomoy. In the local news, I think, which is really important for good reasons. We work a lot with media to get that very message out. I can talk also about it being our 75th anniversary this year. We rented out the Chatham Orpheum for example, which is a local theatre – a big theatre, a relatively big theatre - about 150 seats in town. We had a free program that displayed a 45-minute feature length presentation about all things Monomoy. This was something that we don't have the staff for. It was entirely volunteer led. The long list of partnerships that made this very professional video possible is incredible. It's a list this long, led by one very dedicated volunteer who has a

background in multimedia. So, now, not only did we rent out this Chatham Orpheum for the actual showing of the 45-minute feature length, in our visitor center we've stepped into the 21st century and we have segments of interactive, 8 different segments of 4 minutes each. People can come in and they can learn about horseshoe crabs. They can learn about the tern colony. They can learn about the lighthouse and the history of Morris Island. And so, instead of seeing static exhibits, which we also have, there's an interactive display that was thousands and thousands of volunteer hours in the making. So, by doing that, we are able to bring the wilderness and the Monomoy islands into our visitor center so people can, for the first time, see it in an interactive way. That's really been very exciting for us. Then we are also, in addition to showing people those kinds of interactive displays, we are taking more and more people out to the islands, and especially shoulder season visitors. So, locals who may not have ever gone out there, they've been out with us on our new vessel. We have a 20-person landing craft, drop down door vessel that we can now for the first time take those who are maybe mobility limited, and get them out there into the wilderness, and get them off on the beach, and actually see the island for the first time, many of them. We had a tour back in May with that vessel of a woman whose great-great-grandfather used to be the lightkeeper out there at Monomoy Point lighthouse. She had never stepped foot in that building before. She was in tears when she went out there. It was really meaningful for me to see someone who, and she brought her whole family with her, was local to Chatham, had lived there her whole life, had very strong roots and ties, specifically to that place, and now for the first time ever was able to get her family out there and climb the tower and see the facility.

ED: Was that the Beers family?

MATT: I'll get you the name after.

ED: Beers. B-E-E-R-S.

MATT: It wasn't Beers. I'll get you that information. It's not on the top of my head. So, we ran three tours just this year to get folks out there into the wilderness and those who can't, we still have a nice visitor center; they can enjoy it and appreciate it from there. And then, I do want to also mention, 'cause Sharon talked a lot about the biology - I cannot take any credit for this but I do want to provide some current updates.

LIBBY: Yeah!

MATT: 14,000 plus common terns currently nest on South Monomoy Island. It's the largest, by far, tern colony on the entire Eastern seaboard throughout the United States and Canada. It's unmatched anywhere else. It's really incredible to be in this colony. And, if not for Ed's work and Sharon's work, and Dave and everyone before me, that would absolutely not have happened because it would be a gull only zone. So, that still takes a lot of active management. We're still out there, our biologists are out there, on a day in, day out basis, to control gulls and into burn. So, we're doing a habitat burn, a prescribed burn, in the next month or so, to make sure that we maintain that habitat. The success is just unbelievable and it's so nice to see. That

message has absolutely got across to town folks. Even folks for the first time have said to me that the project was a success. So, it's still contentious, there's still some who aren't in agreement with it, but they do understand its value and I've heard that many different times. Tiger beetles – we can't even count them anymore! We don't even try. So, we have an index count now. Sharon's right. We're translocating them and working on a project now for next year to have Monomoy be a source population which was the intention all along. So now we're going to have Monomoy's beetles be a source to the mid-Atlantic states, National Park Service lands. That's going to happen next year. So, we're really excited about that project. Horseshoe crabs are still harvested throughout all of Cape Cod for both biomedical and conch fishery. They're not harvested at Monomoy. We're the only site on Cape Cod that I have ever been to where you can still see these vast numbers of horseshoe crabs coming up on our beaches and doing what they have done for millennia. It still happens at Monomoy and it's quite sad that you don't see that happening at other spots in the northeast or on Cape Cod, but fortunately we have Monomoy as a place where they can still do what nature intended.

LIBBY: Yeah. You're making me cry, you know! (laughter) It's so amazing. It is very gratifying.

MATT: For a relatively small spit of sand, it has an outsize role in conservation. It really is amazing what this 3,000 plus acres of terrestrial habitat plus the offshore waters. The utility that that has for wildlife and the foresight that our elected officials and Audubon and other folks had back in the '30's to recognize that and actually take action on that in the '40s, to where we have a national wildlife refuge instead of a collection of private inholdings and additional cabins that probably would have been built up to houses. It's just amazing that we have that refuge there. I think the public really does appreciate and loves having it there, even if they don't get to it. Just knowing that that wilderness is in their back yard and that it's a national treasure is remarkable.

ED: Does the Cape Cod Chronicle have an outdoor writer like North Cairn did when she was there?

MATT: Yes, so it's the editor Tim Wood. He comes out all the time with us.

ED: That I think was the beginning of the turnaround for us at the time, was the regular articles that North Cairn was writing from the lighthouse, because I had set up with the Cape Cod Museum of Natural History to conduct tours using the lighthouse as a base. This was following the first restoration of the lighthouse with money left over from the Great Point [Nantucket NWR] light project. North was a phenomenal writer. She and a photographer put out those weekly supplements which they then published as a whole brochure. The readership on the Cape I think is pretty heavy for the Cape Cod Chronicle. That is the paper out there. Then, prior to that, we'd had that Chronicle program which helped a lot to give statewide coverage.

LIBBY: Oh, the Chronicle, the television show on Channel 5.

ED: Yes, that was very interesting working with them. They did a beautiful job. We couldn't ask for a better – following that program, I get a call from Mike Bartlett, saying, “Oh my gosh!” Just the wildlife photography that they wove into that program was just everything that we were, to the public, everything that we were trying to do and try to get forward for terns. Dave Houghton was narrating some of the biology with a least tern flying back to the nest with a fish in its mouth, bringing it to the female so that she would select him as her mate. It just was very good educational program, but it was prior to the avian diversity, and they so badly wanted to talk about that. I had told them that was off limits. It was pre-decisional; we weren't going to go there. They tried.

LIBBY: Well, so, we've covered some of the controversies and issues, but there may be others. I wanted; this may be a little out of turn, but you were talking about the landing craft. Maybe you can tell us a little bit about how we came to acquire that landing craft, because that was the result of an issue.

MATT: Correct. That story may have begun with Dave. So, Dave did mention that he got some transportation money. So, with that money, the plan - which was a very good plan - was to widen the causeway that brings visitors to the refuge. Now the causeway, for those of you who aren't familiar with it, is very narrow. There's, especially in the summer months, there's a lot of cars that park alongside it, and it really becomes kind of a one-lane road. So, Dave and I believe even Mike Brady beforehand, both worked to apply for this funding. They received it. \$400,000 plus dollars to give to the Town of Chatham to widen that road, not just for the safety of refuge visitors but for the family shell fishing folks who use that area and that beach to park and to shellfish. It was a project that the Town was fully onboard with. They were thrilled to be receiving the money. Unfortunately, I think back in 2016, the Conservation Commission did not approve the project that the Natural Resources Director provided to them. So, the Cons Com declined that money, declined the project. The Department of Transportation, or rather Federal Highways [Administration], was not interested in taking that \$400,000 back. So, we looked toward the next best thing which was to try to find a way to allow the public to experience not just Monomoy but the other islands and refuges throughout the national wildlife refuge complex here, which would include Mashpee, Nomans Land, and others in the area as well. So, Tom Eagle, my supervisor was kind of really instrumental in selecting a particular vessel that would work for all parties. What we came up with was a 38-foot landing craft which is a very unique boat and is incredibly versatile. It can go to Nomans Land and drop off heavy equipment just as easy as it can bring 20 passengers and members of the public to South Monomoy Island for a day tour. So, we use that vessel I think more than any of us thought we would for both for utility purposes and for providing public tours. Those funds went towards that landing craft but also to a 16-passenger van which we've also used in conjunction with the landing craft to get people to our islands and do volunteer work for us, too. Beach cleanups? We removed thousands of pounds of lobster traps with that boat. We beautify the Monomoy wilderness, we make it look better for the public, so it's just a really versatile craft. It's great that the money,

even though it couldn't be used for its designed purpose, is used currently for a really important purpose as well, which includes transportation still.

LIBBY: So, it really ended up being better for the Fish and Wildlife Service in the long run. That's really great. Ed, do you, can you think of any other significant issues that you faced? Again, it could be resource issues or budget or community involvement, but is there anything else you wanted to share with us?

ED: I'm looking at my list here. There's stuff that we already covered.

LIBBY: Yeah, we might have covered it.

ED: No, I guess there's not anything else that I have.

LIBBY: Do you have any other issues, Sharon?

SHARON: Yeah, I do want to spend a little time talking about the community relations because I think that was critical. So, when I was there, there was definitely a lot of concern still from the avian diversity program over the gull control, so we were constantly managing through that. Predator control – a lot of concern over coyote removal. We also had the Humane Society constantly sending us letters. We did receive some death threats during that time for our predator control. Huge concerns from the animal rights groups over that, so we were constantly managing through that. We also experienced a high level of seal disturbance. We witnessed fishermen trying to hook and hurt the seals. We also witnessed a lot of aircraft buzzing the seals and so we were working with NOAA/NMFS [National Oceanic and Atmospheric Administration/National Marine Fisheries Service] and our law enforcement officers to try to follow up on some cases. Also, we were just witnessing a lot of seal disturbance and also seals with entanglements. So, we were working with a lot of volunteers - seals that had cuts or who were all wrapped up in fishing line. So, we dealt a lot with seals. We haven't really talked about that, and the sentiment that there were too many seals from the fishermen. The neighbors did not want visitors so, I remember Libby, when you were there, and you were my boss for a short time before I left, us meeting with the neighbors.

LIBBY: Oh yeah.

SHARON: I still remember one neighbor saying to me, "Well, there are a lot of neighbors here that are from new money. I'm from old money." I wanted to say, "I'm from no money." (laughter) So, anyway, I [it] was quite interesting all the visitors and neighbors, and the neighbors did not like the visitors. And of course, you were a refuge. We want visitors but we also had to manage that. Finally, I just want to mention concerns over the potential closure for shell fishing. That really started heating up when I was there because of the wilderness and allowing a commercial use within a wilderness area. We were starting, believe it or not, I worked on the CCP when I was there, and I spent many days, many, many days working on the CCP. It took us a long time to get it completed. But I remember being in town meetings with the shell fishing community freaking out. Heated, heated, awful, awful meetings. Bad meetings,

bad. And so, we haven't really talked about the shell fishing, and I just wanted to bring that up because there was huge concern we were going to shut commercial shell fishing down. So that generated the need to study the use and evaluate it. A lot of interest from the Regional Office. I left when we started to transition into that, but I did want to bring that up.

LIBBY: When we had our draft, our scoping meetings for the draft CCP, we had 600 people at those meetings in Chatham. The majority of them were there because they were concerned about the shell fishing, and the potential for closure.

ED: The Town has always contended that they needed to control that. That was a guarantee way back early on, that the Town would be able to issue permits and get funding for the permits. But I think a lot of that animosity that you were encountering at that hearing was probably from second generation "Tom the Torch" activity. I cannot believe that it's not related, and it's basically and it's also a general ...

LIBBY: Tom "the Torch" Horn?

ED: ... individualist type approach of the Cape Cod water, we call them water people, watermen, that earn their living from the resource that they just have a basic animosity towards government, us specifically.

LIBBY: Well, we received death threats also during that part of the planning process for the CCP, but it was because of the predator control.

SHARON: Yes, that was what the death threats were related to, predator control.

LIBBY: And I think now, there's not much conflict associated with predator control.

MATT: It's accepted. The public knows; we're very transparent. It's just an accepted fact of managing the bird population, so it's fine.

DAVE: But it took decades.

SHARON: We were transparent, but it wasn't accepted at that time. (laughter)

DAVE: Even if, even though it is more accepted within the local community, the local community has a very long memory. When I first moved to town and was meeting local folks for the first time, and they asked me what I did and who I worked for, they didn't really know who the Fish and Wildlife Service was, until it clicked with them. "Oh yeah, you're the people that poisoned the gulls." (laughter)

LIBBY: Yes. I know.

DAVE: The memory was very, very long.

LIBBY: Yeah, it is long. Well, can we talk about seals for a little bit, since that was an issue and still is. Big issue at Nantucket but still an issue at Monomoy. Did you have ...

ED: It was a positive issue at first. It was the first pupping of a gray seal was documented on Good Morning America. The film crew came out. They then asked Dave Houghton and I authorized it for him to go to New York and to be interviewed by Jahn? J-A-H-N was the interviewer. It was a great tv shot. But it was covered with on the site photography of a nice little gray seal pup. That was the very first thing. Big event! 1989 I believe and look at it today!

MATT: The seal story is another amazing conservation story. It actually sometimes gets lost in the media. You know, there was a very sad event last year. There were two very sad events on Cape Cod, where great white sharks, which have now since moved back into our ecosystem because of the seals, attacked two swimmers up in Truro, points north of the refuge. One of those was a fatality. So, since that time, just about a year ago to this day, there has been a lot of talk among, especially local Cape Codders, of culling the seals, of killing the great white sharks, of keeping them just to Monomoy. So especially in the last year, a big part – the number one question we get from visitors in our visitor center is – tell me about seals. Where do I see seals and sharks? So, a big part of our job, as government officials now, is to sort of communicate that conservation message and communicate the risks that everyone assumes when they enter the water, whether its great white sharks or whether it's something that is much more dangerous like drowning and even getting to the beach. It's still a very small risk, to go swimming, getting attacked by a great white shark but it nevertheless is a risk. So, it's our job to make sure that the public a) knows if you're going to enter the water, you assume a level of risk, no matter where you do it, but that b) it's another one of those conservation success stories where humans over many decades for hundreds of years were very successful in killing every last gray seal on all of Cape Cod, which therefore the great white sharks never, they couldn't live here, so they also moved. They were always here in smaller numbers but what we're seeing now is a rebounding of the seals to the point where we have anywhere from 30[000] to 50,000 gray seals in the northwest Atlantic. Now they are not Cape Cod seals. These are very highly migratory species that go from Sable Island, Canada one week and then next week, they're off the continental shelf. The next week, they are on Cape Cod. So, we don't have a resident seal population which is one thing we have to also communicate to the public, but what we are seeing is a rebounding of what historically we always did have before the slaughter over many hundreds of years of gray seals. There used to be a bounty on seals heads in Orleans as late as the mid- '70's before the protection act was passed for marine mammals. So that's our job now really is to communicate the success story of seals but also how that is a perceived conflict between fishermen as well as beachgoers. It's a struggle.

LIBBY: A couple years ago I was in Chatham, and I saw these sharks that were on sticks – like cut-out sharks. It looked like it had become kind of a tourist thing. A cool thing.

MATT: Right.

LIBBY: Is that still there, or now that you've had the fatality ...

MATT: No. They changed “Sharks in the Park” to “Art in the Park” so now it’s a different spin. But there is a strong contingent of folks who are of the mindset that this is a good thing, and you should not be wholesale killing any marine mammals or any animal for that matter anymore. There’s a vocal minority that is opposed to that.

ED: The Cape is experiencing the same type of economic disaster that was portrayed so well in the movie “Jaws”. Just the fact that the beaches are now not going to be an attraction to the, and not draw all the people onto the Cape. I just kind of harken back to that, say “Jeepers, crow, it’s almost a parallel story”.

MATT: I would say that it’s the opposite that we’ve seen. We have our highest visitation on record, 45,000 visitors, to Morris Island headquarters this year alone. We’ve had remarkable visitation and the number two things that people want to see and the reason why they’re coming is sharks and seals. It hasn’t been our experience, anyway, that it’s actually decreased.

ED: What’s the beach utilization down on Nauset Beach, though? That’s the comparison.

MATT: It’s parking lot is full.

ED: Is it?

MATT: Now people are changing their behavior, which is good. So, people aren’t swimming a hundred yards out like maybe they used to. We’re seeing fewer surfers. That part is true. People who want to come to the Cape though, they still are going to go to the beach. They’re still going to go wading in the water, and there are safe ways to do it, or they can go to the many ponds or Cape Cod Bay or safer areas. So, people are changing their behavior, but they’re still coming.

LIBBY: Well, we have about half an hour left. So, we want to just get through a couple more questions and see if there is anything that we haven’t really covered. So, one of the questions we had were who are some of the memorable staff that you worked with and are you still in touch with them? Did some of them go on to bigger and better things in the Fish and Wildlife Service? Ed, as an “old-timer”, you mentioned some names that I know of. Tell us who some of the people were that you worked with even including some of your supervisors that you think were memorable.

ED: In ’88 - there was no staff in the first time, ’66-’69, - but in ’88, Dave Houghton was on board down there as the assistant refuge manager. Dave was really, really good at working with the public and was instrumental in getting the Friends group started. He stayed until an opportunity came and went on to Rhode Island and then left the Service and went with The Trust for Public Lands, working primarily for projects, for land acquisition for the Fish and Wildlife Service. Somebody working for that kind of an agency that is so important to buying up lands that has the insight and the experience with the Service to know what was really needed. Then he became the director of New Hampshire Audubon. So, I haven’t followed Dave since that time, so I don’t know. But he was an outstanding individual. Sharon Ware followed him.

Sharon was a biotech on the staff at Great Meadows. I selected her for that position to follow behind Dave. And Sharon just did a phenomenal job down there. The most hardworking young lady that I have ever run across. We're talking very, very, very strenuous activity she would get engaged in.

LIBBY: She actually was Fish and Wildlife Service employee of the year one year. I don't know what year it was, but I think it was shortly after you were there. [Clarification: Sharon was named the Refuge Employee of the Year in 1998 by the National Wildlife Refuge Association].

ED: Shortly after I left, yeah. But those are two of the, and of course I was gone after that, and Sharon left after I had retired.

SHARON: Sharon is the deputy at Parker River [NWR] right now.

ED: Yes. We will see her tomorrow.

LIBBY: Well, I wanted to mention what Bud [Oliveira] had said in terms of memorable staff. He wanted to recognize Stephanie Koch, Deb Long, who was the manager when you started there, and Sharon Marino. He said that you were the heart and soul of the refuge while he was the project leader at Eastern Mass and that you spent countless extra hours working to make Monomoy a better refuge. That was a great team you had when you were there.

SHARON: Absolutely. So, I can just touch on – if you [looking at Ed] are all done. I don't want to cut you off. So, Deb Long was the manager when I got there. I've since – she was wonderful. She was only there for about a year and a half to, a year and a half! She moved on. I believe she went to Forsythe National Wildlife Refuge as the deputy. I recently was working with her – she was the Chief of Facilities, our Division of Field Support in the Regional Office. She's a dear friend of mine. And then, Stephanie Koch I also want to recognize. I was a brand-new biologist, freshly out of grad school. Worked at Rhode Island National Wildlife Refuge for a few months in the SCEP program [Student Career Experience Program] and they moved me to Monomoy. Stephanie taught me so much when I was at Monomoy. She's an amazing biologist and just an incredible leader. She was just incredible to work with. Bud Oliveira who was the project leader for the complex. He moved on and held different positions – the deputy refuge chief in I believe Region 6 and I think he was in Region 4 too. But Bud, I loved working for Bud because he supported me. He was an avid, for getting resources from the Regional Office to support Monomoy. You can kind of feel isolated out there, but he worked really hard to get us boats that worked, money to rehab the buildings and staff. So, while we were short-staffed a little bit, he fought to get us resources. Also, Libby, you stepped in shortly after Bud left. I think Tim Prior was acting for a little bit, so I worked directly for Tim for a while and then you stepped in. We didn't have a lot of time working together but you were a phenomenal boss and I again felt really supported. Monica Williams was the biologist when I was there. I trained her and really enjoyed working with her. She was just a caring, hardworking woman and she is now at the Long Island Refuge Complex as the biologist. And then, finally, I just wanted to mention for law enforcement, I worked with Dave Nicely who moved on to be a zone law enforcement officer.

He just recently retired. He was outstanding, just incredible to work with. And, Doug Boudreau, who is at Rhode Island refuges as a law enforcement officer. Law enforcement support there was critical, especially when we were dealing with horseshoe crab harvesting issues and just managing all the uses down there. They were great to work with. Chad Roderick provided some maintenance support and boat operation. I know Chad was here at the complex and is now at Conte Refuge. I recently saw Chad and every time I see him, I think about my time with him at Monomoy and it just really makes me smile. I worked with incredible people, and I feel really fortunate. We had a great team. I just want to also say the field crews that I got to work with and supervise and support - some of the best memories that I have. The camaraderie, what they got out of that summer experience, it was really important to me that they had a really awesome experience and learned a lot. I think it really made a difference in where they went in their careers.

LIBBY: Yeah. Dave?

DAVE: Well, I too have a heart and soul and really from a refuge manager standpoint they were also my left and right arms. That was Kate Iaquinto and Matt Boarman. I do stay in touch with them. While I was at Monomoy, Matt completed Refuge Managers Academy and now both Matt and then Kate [who] also just recently completed graduate school and they have both moved on to manager roles at new duty stations. Then we had the heart and soul of the Friends group when I was there, Ed and Judy Horwitz, that I ran into one day on the bluff and they've never forgiven me since because I twisted the arms and twisted every other part of them that I could until they finally said "Yeah, I'd be interested in maybe trying to help get something going with your Friends group." Steve and Jackie Keenan and then Dennis and Meg Morris, all of whom were involved in those early days of getting the Friends group back on track. Of course, at the complex level, Libby our moderator, Peggy [Hobbs] our camera person and then Tom Eagle who walked in here just a little while ago. Tom was actually my immediate supervisor. Steph Koch has been mentioned of course. Brian Willard and Chris Kelly gave us the best law enforcement support we could get given the distance that we were from Eastern Mass. It's a long drive to get there. And then up in the Regional Office, we've got Tony Léger, was the [Regional] Chief of Refuges, followed by Scott [Kahan], Sharon [Marino] and then you already mentioned Deb Long - the refuge support services we got when she was running that shop, were just phenomenal. When you try to do historic restorations and energy conservation projects and deal with transportation department grant proposals, really, really crucial bunch of folks. Then, outside the Service on the Cape we've got Gordon Waring, my go to seal man over at Woods Hole, along with Lisa Sette, seal researcher, and then Graham Geis. I think he is retired now, geomorphologist at the Provincetown Center for Coastal Studies. With Mass Audubon, particularly the coastal waterbird program, but also up at Wellfleet Bay Sanctuary, 'cause that's where Bob Prescott was. But we had Becky Harris and Mark Faherty, Cathy Parsons. Our National Park Service colleagues - George Price was the superintendent up there, Mary Hake was the park biologist, and then an old fire crony of mine, Dave Crary, their seashore fire management officer. And within the Town of Chatham, Ted Keon, Bob

Duncanson, Stu Smith the harbormaster, Renée Gagnon the shellfish constable, Jeff Colby over in public works, Dan Tobin the parks and recreation. Every time we needed to rent the Community Center building space, had to call Dan. He also helped deal with beach issues on the Chatham side on South Beach. Town Manager Jill Goldsmith and of course the Chatham Board of Selectmen. Spent many hours in many meetings with many of those people from the Town of Chatham.

LIBBY: I think you named everybody that you ever worked with there! (laughter) Now, I know there were a lot of seasonal staff. Those were memorable. How about you, Matt?

MATT: A lot of those names are still current. Every one of them from the town, I believe, actually. So, I think probably one of the most significant things that we all did and do at Monomoy is training the next generation. It really is probably the most significant thing that we do. I don't say that lightly because we do a lot of important work there. But every year, we bring on anywhere from 7 to 11 college students and fresh graduates and we give them an experience of a lifetime. They say that to me, and I've spent four field seasons for me there. Without fail everyone who has left Monomoy has said they will never forget this experience. And they have; they've carried it with them, at least for the four years that I've been working there. So, training these people, bringing these people in, showing them what it means to work at a national wildlife refuge, showing them what it means to work in wilderness and with endangered species, and then these folks have time and again communicated that message, our message, the Monomoy message to their next crews that they go to, or their family members. So, just training up that next generation is so important and we have the amount of work to be able to provide these young students meaningful opportunities over three-to-six-month periods every single year. So, I think that's really important for me to acknowledge. But beyond our seasonal staff, we are so fortunate in this complex to have an unbelievable crew of dedicated people, and that includes the biologists, Kate Iaquinto who is now refuge manager at Bandon Marsh National Wildlife Refuge in Oregon. She's out there with her family and her new baby girl. Matt Boarman has moved on three years ago. He's now the supervisory refuge specialist at Canaan Valley National Wildlife Refuge and he's enjoying his experience out there. So, I'm very often in communication with both of them. It's actually really nice for me. I learned everything from them, but we all learned a lot from each other. On a near daily basis, we're in Google chat, bouncing off ideas and talking about what it is to be a refuge manager and problems and successes and everything. So, that's been probably lifelong friendships that I'll have that I made there at Monomoy that I'm really fortunate to have had. Then, so in my tenure, you retired [talking to Libby] and we have a brand-new project leader in Linh Phu which is – your retirement – you brought me onboard here, both you and Tom, so I have, especially in my first year, learned a lot, a lot from you. It's been also a breath of fresh air having Linh come into the ranks now and just breathe a lot of new life and a lot of really exciting ideas into the Complex too.

LIBBY: The people are the best, aren't they?

SHARON: Absolutely.

LIBBY: They really are.

SHARON: I wanted to just also, if I could, some volunteers that were critical for me were Ed Lincoln, Jan Lincoln, and Keith Lincoln. I just, I forgot to mention them. I remember when I was there, there was about a six-month window when I was alone and they came and helped me pull the moorings, keep (unintelligible) boat. He would take me out to the island if I needed to. He would help me pull all the boats, do what, they helped me with so much. I just, I think it's important to recognize them. They operate the Monomoy Island Ferry and just have been incredible volunteers for the refuge. I think it's important to us to mention them.

LIBBY: Yeah. We can't do it without volunteers and friends.

SHARON: Absolutely.

LIBBY: Well, on that note, we've talked about how special Monomoy is and the people that are associated with it. And it is so special for so many of us. What are your thoughts about the refuge now and what might happen in the future?

ED: Well, I would hope that maybe the Weather Service's activities are all done there and that that big globe disappears. Is that in the mill?

MATT: Yes.

ED: It is?

MATT: Within the next five years.

LIBBY: Really!

ED: Within the next five years.

MATT: They will not be there anymore.

ED: That's a positive because that was, that will have the site a lot more presentable. They're not utilizing that any longer, are they?

MATT: So, they are. It's still a daily balloon launch, and the reason why they are looking to move to the [Cape Cod] National Seashore or Otis Air Force Base property is because of the road flooding. For them not to be able to access that facility for two weeks is not acceptable. They can't do that. They have to get there every single day, especially during storm events. So that's a big part of the reason. And they're worried about the bluff eroding, so they're thinking that at some point, regardless, they are going to have to move, so they are looking to move now.

ED: It's a real concern because as you had mentioned earlier, the stabilization of the bluff is going to become something that we're going to have to deal with, if you lose your barrier island out front. The preservation of and the improvement of that site is something that we need to

be looking towards. I'm very buoyed by hearing what is in store for educating the public better and getting them out there to enjoy the resource, especially the landing craft which I had the opportunity to go out in with Tom not a week or two ago. That is just a tremendous, tremendous acquisition. I harken back to what we had for boats at the time, and I say, "Oh my gosh. Would that ever had been a positive thing for everybody involved!" The public access to Morris Island is so limited. Are they still, the parking issue that you talked about earlier on the causeway, that is still...?

MATT: It's, from what, I've only been there for four years but from what I've been told, this year was the worst that anyone has ever seen.

LIBBY: Oh, really.

MATT: We – you know, there were fights in our parking lot. There was road rage over parking on the causeway and at our facility for July and August. There's a lot of reasons for that but I did mention sand accretion. So, at your tenure at high tide [looking at Dave], the beach was empty because the water came right up to the bluff. Now we have 100 yards of new accretion and new beach front, and people can park there all day long and they can use it more as a national seashore than a national wildlife refuge. So, what we are seeing is people taking up spots in the parking lot for 8 hours and putting their lawn chairs down there and using it as a beach.

LIBBY: We've got to implement that parking plan. (laughter) It's in the CCP.

MATT: So, that's the goal. We want to, hopefully next year. I think if we have parking limits, two-hour limits, fishermen it won't bother them because they are usually here in the early mornings anyway. It's the beach goers that just park there all day that we need to limit.

ED: It's a time-space conflict and a space issue is something that you cannot expand upon.

DAVE: Our original plan was for the Town to help us with that space by getting the cars off the driving surface of the road. As simple as that.

LIBBY: Or having a shuttle that people could take to get to the refuge.

DAVE: Reduce the number of cars.

LIBBY: Which didn't happen either. All right. Sharon?

SHARON: Well, I think just in my position now in the Regional Office [deputy regional refuge chief], and I know there will continue to be support. We're here to help support the refuge, it's resource. It's one, I think, one of the most important refuges in the whole refuge system from a biological perspective. It's absolutely critical that that refuge is protected, resources are put to keep the predators out. There's just a lot at stake. So, from a priority perspective, that refuge is really important. There's going to be strong, hopefully, continued strong support for the boundary, I think it's very important that we maintain our boundary, the full boundary with the submerged lands and waters. So, I think that is super important. Then ultimately, I think there

needs to be some thought in terms of where we may move operations because I don't know how long we're going to be able to stay at that location with our infrastructure. I know there's a strong desire to stabilize the bluff but I realistically speaking I think that at some point we're going to have to, long term, address maybe going to a different location. Those are just some of my initial thoughts.

DAVE: Especially if the erosion makes the parking lot any smaller than it is. Park Service went through that, didn't they?

LIBBY: Yeah. So, Dave, what about you? What are your thoughts for the future of Monomoy?

DAVE: Well, I guess I'm still, maybe it's because I'm not gone long enough, but I'm still fixated on that fixed western boundary and a refuge that seems to want to continue to move to the west and to the south. Those that went before us when they were drawing that original boundary in the 40's to establish the refuge, didn't have the benefit of the 20/20 hindsight that we have. We have a better feel for how fast that's actually happening, and we've had an amazing amount of sediment move in just 75 years. These refuges are supposed to be set aside in perpetuity for current and future generations of Americans. I hope the sand doesn't all leave the sandbox that we drew. I'm looking way beyond the next 75 years to whatever "X" moment you want to put after the "ten" when you multiply by 75 years. But I think there's a lot of coastal barrier refuge situations that have got to come to grips with that same possibility of "do they have a fixed proclamation boundary" in the apparent direction of movement? That was the reason, was because there was a recognition that the sediments were going to move back in the '30's and '40's when they were trying to figure out where to draw that line. The interesting thing is the part that moves with the refuge, that call to mean low water, has worked pretty well on the east part of the refuge. It's maybe something that we may need to look at longer term for all of the barrier refuges up and down both coasts, is can we have a more dynamic way of determining proclamation boundaries that move with the land mass.

LIBBY: It would be interesting to be able just fast forward for a few minutes in 75 years in the future and see what Monomoy looks like.

DAVE: I say go beyond that. Go to 250 years.

LIBBY: Matt?

MATT: One thing I forgot to mention before is I don't think it's all doom and gloom for our Morris Island headquarters. As you look out to the east, you can see the formation of a very extensive sandbar, that's to the east of what's now South Beach. So that will very likely over 5, 10, 20 years be the next South Beach that will once again protect Morris Island. Who knows how long that will take and who knows how much erosion will happen before it does? But I think that's what we will see moving forward. As far as what I hope for the refuge, I hope that its story is able to be communicated far and wide. I hope that it has a dedicated staff to do it, because we do the absolute best, we can with basically two – one to three permanent

employees at Monomoy with support from the Complex. But what that also means is we don't have dedicated law enforcement patrols to be able to adequately enforce all of our rules and regulations. And also very importantly, it means that we don't have dedicated visitor services staff members who are there day in/day out to interact with the community, going in schools. We do what we do in schools – we might have time to do it three to four times per year. I'm in awe of the visitor services staff here [at Eastern Mass NWR Complex headquarters in Sudbury] who do it on basically a weekly basis because they have that dedicated staffing to do that. I think Monomoy will always be an absolute critical asset for biological purposes. I just hope that in the future, that message can be better communicated not just to the local populace but to a much wider audience with dedicated staff there who has the capacity, the knowledge, the know-how, the time to actually communicate that important message. So, that's my goal for Monomoy moving forward – is to have the staff that as we all agree, it's probably one of the most, if not the most, important refuges in the country, is to provide it the resources to where it can really be the standout.

LIBBY: Hear, hear! All right. Well, thank you very much, all of you. This has been a great panel. I'm so appreciative – Peggy and I are so appreciative of you being here and sharing this. It's great for the history of the Fish and Wildlife Service to have your thoughts today. Thank you so much for everything you've done, and that you continue to do. That's a wrap!

KEY WORDS: biologists, bird banding, birds, boats, coastal environments, communication, education, endangered species, erosion, habitat management, internship, law enforcement, marine mammals, migratory birds, partnerships, predator control, public access, reintroduction, resource management, shorebirds, transportation, wilderness, wildlife management, wildlife refuges, visitor services

Addendum 1: Comments from Bud Oliveira, Eastern Massachusetts NWR Complex project leader, who was not able to participate in person

What years did you work at Monomoy?

1997 – 2002 – Project Leader Eastern MA NWR Complex. The on-site Monomoy NWR managers were Sharon Ware, Deborah Long, and Sharon Marino

Describe what the refuge was like at that time.

When I first arrived the HQ was located in the old Coast Guard Station maintenance building in Chatham, MA. We later took over and renovated the office building across the parking lot and rehabilitated the old office and upstairs bedrooms into living space for the many volunteers and visiting staff.

My supervisors included Ralph Pisapia, Sherry Morgan and Dick Dyer

Describe one or two major activities or accomplishments, issues and resolution of those issues.

Avian Diversity Program – This program was started under Ed Moses' tenure, and a lot of the heavy lifting occurred then (gull poisoning). When I arrived, the refuge was involved in controversy with various animal rights groups (most notably the Humane Society of the United States) and the Massachusetts Congressional delegation (Rep. Delahunt and Senator Kennedy). Fortunately, RM Sharon Ware had been there through the beginnings of the program, and she had a bio tech (temp) Jen Magessi. Jen was the principal author of the Avian Diversity Plan which had to be signed by Secretary of the Interior Bruce Babbitt.

Once the plan was in place the staff was able to ramp up the tern management program. Jen's plan laid the groundwork for the management actions taken. Management was very labor intensive, involving staff on the Island 24/7 during the nesting season. As the years went on, the program was not without controversy. Mammalian predator management was initiated during the second season under the plan and another controversy came to the forefront. Fortunately, the plan addressed this potential issue and support from the Congressional delegation was overwhelmingly positive. In the five years under the plan the pairs of nesting terns expanded from approximately 300 to just over 8,000.

Many people deserve credit for this achievement, in particular - Ed Moses, Sharon Ware, Jen Magessi, Stephanie Koch, Deb Long and Sharon Marino.

Curtailling Horseshoe Crab (HSC) Harvest - Many people contributed to making this issue a success. Stephanie Koch for all her work on the Administrative Record, setting up the shorebird sampling protocols. The Solicitor's Office provided great support to the staff as we prepared documents for the court.

Law Enforcement oversight was important for this issue. Refuge Officer David Nicely provided late night monitoring of attempts to illegally harvest HSCs from the refuge. He spent many a long night on the flats of the refuge. Deb Long and Sharon Marino spent countless hours working on this issue as well as trying to manage the other refuge operations.

Memorable Staff

Stephanie Koch, Deb Long and Sharon Marion deserve special recognition. They were the heart and soul of this Refuge during my tenure. They spent countless extra hours working to make Monomoy a better refuge.

Thoughts about the refuge now and what I would like to see happen in the future.

Monomoy is a special place. It will forever hold a special place in my heart. What adds to the specialness of the Refuge was the staff and the volunteers who work tirelessly for the resource.

Addendum 2: Memories from Mike Brady, Monomoy NWR refuge manager, who was not able to participate in person

I will always think back fondly about my brief time at Monomoy NWR as the Refuge Manager. I continue to zig zag across the United States for the Service, but I know there is no other place on earth with so much diversity of wildlife and history on such a small piece of land. I just remember lots of hiking with heavy loads to the camp or the lighthouse, cold nights in the colony blind, working virtually every day during the summer, lots of boat operation time, and amazing people to work with.



Monomoy Island is beautiful but also very unforgiving and is filled with contrasts and extremes, so much life and death. One day you have a violent storm, the south end has a unique sound as the rocks on the pound and grind the entire beach face, and the very next day it could be flat calm. One day the colony was alive and so noisy that you could not hear the person next to you and then the next day the colony is empty with an eerie stillness and quiet.

There is so many stories I could tell but will put just a few memorable ones to paper.

I was lucky enough to talk to Larry Smith -the first Refuge Manager back in the 40's - about the time he spent at Monomoy as he tried to make impoundments and create habitat for ducks on sand. He supplied so many photos and fond memories of his time I only wish that I had better documentation from our discussion, but the photos he supplied and Annual Narratives only add riches to Monomoy's ever evolving story.

I had so many great stories with Dale Crandell (a temporary employee who conducted predator control on the Monomoy Islands) but the most surreal story was after a very bad week of storms in which I could not get down to the Lighthouse. Dale needed fresh supplies as he had run out of candy bars, coffee and was down to two or three cigarettes. Then the weather broke, and I headed down to the lighthouse with Dunkin Donuts and coffee and a glass ash tray I found walking through the Brandt hunt club area just a few days before. I remember sitting on the beach with Dale eating donuts as Dale smoked a cigarette with his new ashtray and just laughing. Later thinking of what memories and stories were shared over that ashtray a few miles to the north.



The large piece of coal that I carried across the island from the Eastside to the Westside and up the Morris Island stairs and now resides in the Visitor Center. That piece of coal and every small piece of coal I would see on the beach instantly transported me back to a time when coal boats were rounding the Cape and heading to Boston. I think about the lost coal, the lost boat, the lost crew. What was the night like when this coal was lost, what role did the lighthouse play on the fateful night?

My plastic figure collection that I started and added to each year. Although a fun diversion at the time on who could find the most unique plastic figure each season, again looking back it is a sad testament to societies changes and the plastic pollution that is currently gripping the oceans of the world. Walking around Monomoy items from the past are everywhere slowly degrading, being lost, then found then lost again in the shifting sands, but eventually all the glass, brick and iron items will disappear, but what happens with all this plastic which only has showed up in my lifetime. It is a sad part of our human history.

Lastly, I remember when the staff had flip phones and the summer crew did not have a phone at all, and they survived. I remember a time we had no selfies and I really only have a handful of pictures from my time at Monomoy. I remember the first electronic device an intern brought out, it was a digi-pet, an electronic device that you had to virtually feed and play with an electronic dog. Now I assume there are lots of selfies in the colony and lots of APPs on personal cell phones. The time has certainly changed.

I have visited almost every summer since I left. I cherish the time I was there and hope that I did my part to be a part of the history of Monomoy. My story is forever tied to all the volunteers and interns I got a chance to work with and the hard working staff, especially; Monica, Stephanie, Kate, Libby and Dale.

