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Ann B. Hodgson (AH): Good afternoon, this is Ann Hodgson with the Tampa Bay Oral History Project and with me today is Bill Fonferek. Bill, welcome to the Oral History Project.

William J. Fonferek (WF): Thank you.

AH: Bill's been a biologist with the Corps of Engineer, Jacksonville district, throughout his career and other positions as well. Bill, I'd like to start by asking you: As a child, how did you get interested in the environment, and how did that carry forward into your education and your career?

WF: Well, growing up my folks managed a county park in Wisconsin. The park was located on Chute Pond, which was a 440-acre reservoir, and originally, that facility was built by the WPA¹. After it was a wooden dam, the lumberjacks used to use it to store the logs, and in the spring they would take them down river.

So growing up from first grade till senior in high school, I got to swim a lot, I got to fish a lot, and then in the fall and winter timeframes, because of the tourists had all gone away up there, that I got to go hunting. It was a family sport, and we did that. When I got a little older I did have my own trap line where I trapped mink and muskrat as a little way to make some extra money. So that's kind of growing up, I mean, it was idyllic for a boy. Got the boat and swim and do all kinds of stuff during the whole time we were there.

¹The Works Progress Administration was a New Deal agency created during the Great Depression to employ the unemployed in several public works projects.

After high school, I was interested in science, this was '50s and '60s, and the space program was big, and my uncle was an electrical engineer for the Navy, so I kind of was siding on that area, that field, I was looking at it.

But somehow or another engineering just wasn't for me, but I did still like electronics and electrical things, so I enlisted in the Navy, and I was accepted into their advanced electronics program. And after I graduated from their classes and stuff, I was assigned to the *USS Albany*, which was a guided missile cruiser out on Mayport, Florida. Mayport and Orange Park and the places we live in right now were really not too existent in my opinion because they hadn't grown up just yet, so I was in the Navy for six years.

And after I got out, this was Vietnam time frame, I decided to go back to college, and I got enrolled in the University of Wisconsin-Green Bay. And it was an environmental school, and that's kind of where my heart was, at the time. I don't want to say I thought of myself as the John Denver² kind of person, but that's kind of where my heart was in that. I graduated with a bachelor of science degree in environmental science, and my first job that I was hired for was with the Nashville district, Army Corps of Engineers, and I was hired on as an environmental specialist.

And, at that time, that's when they were developing their wetland identification program and they needed someone not only as a biologist but someone who had soils experience, and so that was part of the program, as you may or may not know, the multi-parameter approach about using soils and hydrology and wetland plants that was all part of how you identify those wetlands. And so I stayed with them for 10 years, I also built up different expertise up there because there's a fresh land water system. We worked a lot with the Tennessee Valley Authority³ identifying mollusks and things like that, and so it was a good experience. It was regulatory, so we were issuing permits and dealing with the public, and so I had a hand in that.

Then I transferred down here to Jacksonville district. I saw there were opportunities down here that weren't available in Nashville district, and so I was here 17 years with the Jacksonville district. At first, they were trying to find a place where I could fit in, the different areas that were available to me. I did some work in Puerto Rico because I was part of the district and started to do some different kinds of projects. But then an instance happened where there was a realignment of the environmental duties. The maintenance dredging and the environmental NEPA⁴ process was done by the operations division. And

²Henry John Deutchendorf, Jr., known professionally as John Denver, was a popular American songwriter, actor, humanitarian, and environmental activist during the 1970s.

³The Tennessee Valley Authority is a government owned corporation in the United States that provides services to the Tennessee Valley region, such as economic development. The organization was created during the Great Depression as a way to assist the Tennessee Valley's population.

⁴The National Environmental Policy Act (NEPA) is an environmental law enacted on January 1, 1970. The law is seen as an early step of the United States' environmental policy.

they decided that they were going to move that to planning division; I was in the environmental branch there.

And so when that was shifted over then I assumed the role of doing all the environmental assessments for the maintenance dredging of all the harbors and waterways, so I became very familiar with all of those. And how that happened has to do with Tampa in that, they were dredging Tampa Harbor and placing it on one of the disposal islands, and it just happened to be least tern nesting season and the Florida Marine Patrol stopped the project, and so the Corps of Engineers assigned me to go to Tampa and figure out what the problem was and how to fix it, basically. So I started spending a lot of time in Tampa and trying to get a handle on migratory birds.

Now I want to let you know that I had no background in ornithology and so here I was, stuck in the middle of all these knowledgeable people: Rich Paul, Nancy Douglass, Jim Beaver, the whole gamut of professionals down there that were very knowledgeable about birds, so I had to do a lot of on the job training. And so I looked at what was happening and the Corps decided to forestall all the operation until migratory bird nesting season was over, so during that time it gave me some time to start interacting with all these people and learn about the birds of concern from the state and Audubon⁵.

And I coordinated with a lot of people: Cornell Labs⁶ and the Archbold Center⁷, in addition to all these professionals in the area, Rich Paul was definitely my biggest helper. He helped me gather the information about that, and out of that came what I call the migratory bird protection plan, which guided the Corps of Engineers as to how they would do their projects, and today, of course, DEP⁸ has adopted those. They've done some minor modification, but in the whole, they adopted that way of dealing with migratory birds.

And so I guess that's my biggest accomplishment in this area of—in contribution to the environment. While I was down there, I found out that there was a thing called the Agency on Bay Management⁹ and I'm going, Hmm, this is an interesting group. And so I started inquiring about it and found it that the Corps of Engineers was a participant even

⁵The National Audubon Society is a conservation group mainly focused on birds and wildlife.

⁶The Cornell Lab of Ornithology is a nonprofit group that specializes in the conservation and study of birds.

⁷The Archbold Biological Station is a biological station that conducts long-term ecological research of central Florida ecosystems.

⁸The Department of Environmental Protection (DEP) is a state run government agency that handles environmental protection.

⁹The Agency on Bay Management is the natural resources committee of the Tampa Bay Regional Council and was instituted in 1985 as the primary community organization focusing on the protection of the Tampa Bay estuary. The ABM's accomplishments include the SWIM program, and the designation of the Sarasota and Tampa Bays into the National Estuary Program.

though they weren't actively involved in it because, I guess, it fell on the shoulders of the area engineer. So I asked him and others, if I could be the participant in that because we had a lot of activity going on down there, including this migratory bird issue.

And so I started going to the meetings and getting acquainted with people and the prejudices that they have. There was one lady who, I don't even know today whether she still thinks of the Corps of Engineers as a decent group of people, but I had to deal with all those different biases that everyone had, and so I felt like, with that, I could participate and keep people up to speed and briefed on what we were doing so that there was no last minute, Here's what we're doing, you have no input into it.

And so I was very happy with that, that I was accepted down there. After a while, I was just another face in the crowd. I would give presentations on what we were doing and how that was working. And I had some help from the Tampa Port Authority¹⁰ as well because they were one of our local sponsors, but there were a number of different projects and people that I interacted with in order to, I thought, do good, beneficial things.

Probably one of the biggest one was working with Jim Spangler from the Egmont-Key Alliance¹¹. And part of that, my assignment was, I saw, to be the beneficial use of dredge material coordinator for the district, and so I would look at projects and see if there was a possibility that we could use the dredge material beneficially. And with the help of my project manager, who was Tim Murphy, who was very supportive of my efforts in what I was doing down there because that was his area that I worked with Jim. And then we had maintenance dredging of parts of the harbor, we were able to use the material to protect the gun batteries on Egmont Key, and so I felt very good about that project and working with him.

We were always looking for places to put the dredge material because if we did that, if we used them beneficially, we would save the space and the two upland disposal areas, and therefore they wouldn't have to be modified in the long term so that was part of the emphasis of using the dredge material beneficially. I think it was EPC who led us to a place called Highland Lakes; it was a subdivision right on Tampa Bay. And in the spring of the year, they would have a cold spring rain and they would have a turn over and a fish kill, so we worked with them to take dredge material and pump it into the bottom of that so we had no stratification and therefore no turnover so that helped them with their environmental problems. So that was another project we did.

¹⁰Tampa Port Authority is a Hillsborough County agency that overlooks the Port of Tampa Bay.

¹¹The Egmont Key Alliance is a conservation organization that assists the Florida Park Service in protecting and preserving the Egmont Key, an island located in the mouth of Tampa Bay.

And another person I dealt with was Bran Hanningson, who is Mr. Restoration and SWFWMD¹² and stuff like that, and his big project was the Cockroach Bay restoration of the shell pits, and we did a report for, I think the port was the sponsor for the report, but we looked at using dredge material beneficially of filling those in. And the report was supposed to have funds directly available that we could just go ahead and do that project without having to wait for maintenance dredging, but it didn't come around in a timely manner. So we were able to, when maintenance dredging did come up, we were able to use the dredge material and we pumped it into those shell pits and shallowed them up and helped that project, so I felt very good of our interaction there.

There were a few other projects that we were looking at in the area. There was an old navigation channel at Port Sutton that was no longer used, and so we filled that in and raised the bottom elevation so it would be more natural bottom part. There was Big Bend was a project we worked on, and as a part of the mitigation we created some better flow into the adjacent wetlands, the tidal wetlands that were adjacent to the project, and also allowed more boater access as far as canoes and kayaks to that particular area, so hopefully that was a benefit.

I have not been down there in a long time to see what, you know, what happened to it, but I was pleased with that. And later on, after all these projects were going on, the maintenance dredging of the entrance channel of Tampa Harbor had not been done in a while, so another aspect of my job was sea turtle protection. I also worked with sea turtles because of the maintenance dredging, the type of dredges that were used, the hopper dredges, were having adverse effect on that.

Before I got to the district, working with the waterways experiment station, they came up with a modification to the drag head of the hopper that would move the sea turtles that were on the bottom, move them out of the way and not cause them harm, this similar to a cow catcher¹³ on a steam locomotive, and so that was an interesting part but working with National Marine Fisheries Service, their office is down in St. Pete, and so we were always visiting them as well. That we worked out a project with them because we didn't know how many sea turtles were in that area, so we contracted with our waterways experiment station and we had them capture sea turtles that were out there and tag them with satellite tags so they could monitor their movements.

And we found out that through that project, and I think the sea turtle—I forget their name now—Sea Turtle Protection League, that they have a website, and they posted those findings on there, the satellite information that we had, so they've been doing that a lot now. A lot of people are tagging sea turtles, and so that was some of the first tags in the

¹²SWFWMD Pronounced "swiftmud", the Southwest Florida Water Management District manages water and other related natural resources for their continued and sustainable use.

¹³A cow catcher is a device attached to the front of a train in order to clear obstacles off the track.

state of Florida in the Gulf side, and we were able to track some Kemp's Ridleys and green turtles to see where they moved during that time frame, so that was kind of exciting.

All this time with the migratory bird issues and the sea turtle issues that I was asked on several occasions to give presentations to the Bay Area Scientific Information Symposium¹⁴, which I was really pleased to be able to be asked to do that, so I participated in that. Some of the other things that came out of my time down there was working with Robin Lewis¹⁵. And Robin Lewis, as you know, is one of the master sea grass people down there—Roger Johansson is the other—and so we were always talking about what happened to the sea grasses, what can we do to fix them.

And so two things came up: one was the hole study that happened and the other was part of the beneficial use of dredge material. So we did a pilot project to fill in one of the holes off of MacDill Air Force Base¹⁶ to see how that might affect the sea grasses in that particular area. The other we talked about, and I don't know if it ever came to fruition, was to create a berm on the edge of the flats to see if cutting down the wind and wave action from the boats, and just the wind and wave action itself might help the sea grasses in a particular area. We weren't able to do anything while I was there and, like I said, I don't know if that was ever followed up with to do that.

So that was one issue and then, of course, as you may or may not also know that Tampa and St. Pete and a bunch of these places were all, the near shore areas, were all wetlands at one time, and in order to build useable dry land they dredged out Tampa Harbor, and so throughout the whole bay there were a lot of holes that were constructed. And so we looked at—well, what is the purpose of these holes; what do they serve; are they valuable enough to keep; should we fill them in with dredge materials so that it might help the sea grasses, and so it was a long-term study, an issue that went on, and, like you said, I don't know the outcome of that either. We partially filled one in down by Port Redwing and that was behind a small island out there, and so the purpose of that was also to see if it would be colonized by sea grasses, so don't really know the outcome of that either. Like I said, I left too soon to go to other thing, to fulfill my career.

Tampa, I love the area; I love the environmental ethos that's there, the people that are there are concerned about Tampa Bay. I was involved in the first parts of the study of the Tampa Harbor deepening and left before that was finalized, looking at different alternatives, what we could do, you know, what would protect the environment, but yet

¹⁴The Tampa Bay Regional Planning Council and the Bay Estuary Program has sponsored BASIS (Bay Area Scientific Information Symposium) since 1982.

¹⁵Roy "Robin" Lewis III was interviewed as part of the Tampa Bay Oral History Program on June 15, 2015. See DOI T43-00003.

¹⁶MacDill Air Force Base is an active United States Air Force base located in downtown Tampa, Florida.

allow the different businesses, the different ports there to do their jobs. And that's kind of what the biologist for the Corps of Engineers does. It's a balancing act between environment and development, and so we always tried to make a win-win situation where we do that.

I was involved in the later stages of looking at other restoration projects in the area. One of the things we looked at was the Palm River, which has a big sink in the middle of it, and it's protected by the railroad bridge—I believe, there was a big berm underneath that—and how we could open that up and maybe take some former dredge material that was now being used as berms and try to fill that in so that we had better flushing. And so that report was completed, but nothing was ever done.

Then somewhere after all that there was a sturgeon found dead in Tampa Harbor, and everybody surmised that there were maybe pheromones being emitted from some sturgeon that had been transplanted into the Tampa Bypass Canal¹⁷ that somebody experimented with to see if they were viable in a water quality and such. And so I started thinking about restoration, that the Corps of Engineers built those, and what would be the possibility of putting in fish ladders¹⁸.

So I did some research on my own, and I found out that there was a professor up in the Northeast who had conducted studies and came up with a fish ladder for the Atlantic sturgeon. And so I had started the ball rolling to see if there was interest in possibly doing that because the Hillsborough River was one of the historical sturgeon habitats that was out there, the lower portion, of course is quite disturbed, but the upper portions are still viable habitat for the sturgeon, so that was a possibility. I felt like the dam was possibly too much to go around and the funding sources wouldn't be there because it wasn't a Corps project where the bypass canal was and you had a lower lift in the amount of water that was going on. We also looked at the Hillsborough River, in general, for restoration areas and things that we could do. And the funding was cut short on those in later years, and so there wasn't much going on.

So that was some of the projects I was involved with in Tampa. I worked with the Agency on Bay Management for 12 years. I was in the area for a little longer than that, but I thought I was very successful at getting relationships with the people, painting the Corps in a little bit different light. Not all the time we agreed with everything but, you know, to show people that we were there to be active and to participate in the agency, which I thought was a very viable solution. After a while, I got a promotion to go to Savannah

¹⁷The Tampa Bypass Canal (TBC) is 14-mile waterway that connects the Lower Hillsborough Wilderness Preserve with McKay Bay. The canal provides flood protection for the cities of Temple Terrace and Tampa by diverting floodwaters from the Hillsborough River.

¹⁸A fish ladder is a structure on or around artificial and natural barriers to assist fishes' natural migration between the sea and fresh water sources. The structure consists of barriers that can be passed by either swimming or leaping up a series of low steps into the waters on the other side.

district, in a field office in Atlanta, where I was supervisor and supervised the senior biologists in a small field office at Lake Lanier, and so that was where I ended my career. And then we decided that since Florida was our home that we would move back here to Jacksonville, and this is where we made our home.

And I did a few odd jobs and, you know, looking around for something to do. Became president of our home owner's association which some people think is a thankless job, but I think, you know, it's been helpful to me to keep busy and occupied. And I also teach genealogy at a senior center here in Orange Park, and so that's kind of my career. I'm still looking for possibilities of helping out in the local area with different environmental things. And so that's kind of my career and where I've been, and I think we need to take a break.

AH: Okay, let's take a break.

Pause in recording

AH: This is Ann Hodgson with the Tampa Bay Oral History Project and we're back again with Bill Fonferek. Bill thanks so much for being with us.

WF: Thank you, so much.

AH: So we were talking about your career and the many activities that you were involved with in the Tampa Bay area. You were a biologist with the Jacksonville district for a long time, almost how many years?

WF: Thirty-one years.

AH: Thirty-one years with the Corps in Jacksonville.

WF: Seventeen here.

AH: About 17. Let's go back to what actually brought you to Tampa. And you mentioned that there was a conflict with the Corps project and a migratory bird issue, I think it was in the early '90s, if I remember that was 1991 when the tern colony was flooded out. Tell us a little bit more about how that rolled down.

WF: Well, I transferred down here in 1989 because Jacksonville district appeared to have better promotion potential here. It was a different environment; it was coastal environment, having come from Nashville district, which was fresh water, so everything was kind of on the job training. In 1991, like I said, the Corps was dredging down there and disposing on upland area which was also bird nesting colony and, at that time, there was a—like I said, the project was stopped so that we could get a handle on the migratory bird issues, and because I was working with maintenance dredging projects at the time they assigned me to find out about migratory birds and the effect that, you know, it would have and how the Corps might better manage dredging and avoid bird nesting and bird problems that were there.

AH: And we should let our listeners and our viewers know, there's a federal law—

WF: There's the Migratory Bird Protection Act, but it's very difficult in coordinating with Fish and Wildlife Service and their migratory bird people that in order to do a take you had to put in a permit, and you had to be very specific about things, and so it would just take too long and wasn't very efficient to go through that process. But there were guidelines in there that the federal agencies should try and protect migratory birds and migratory bird nesting, and so that was part of why we were going to be doing that—

AH: Your stepping-stone into the process.

WF: Right, into what was going on. We had a mandate and so we needed to be following up on that and doing the best that we could. And so as part of that project, like I mentioned before, getting acquainted with the types of birds that were of concern, not only to Audubon but to the state of Florida. That was part of the process is learning them, learning their nesting habitats, and where they liked to nest in Tampa Harbor and specifically. So Rich Paul, and I—and to some extent, Peter Clark—we would go around and I would get an education about where things were located, and what kind of birds, and where they liked to nest and why, and, you know, where their habitats were.

AH: Tell us a little bit about, I think you're referring to spoil island 2-D¹⁹.

WF: There's 2-D and 3-D. And there are other places around Tampa Bay, but it's the idea of whenever the Corps would do a project we needed to know where the birds nested, what time frame they nested, and how we might be able to avoid that particular time frames and place dredge material in those areas.

¹⁹Islands 2D and 3D are two artificial spoil islands created in Hillsborough Bay during the dredging of the main shipping channel to the Port of Tampa. The Tampa Port Authority owns the two islands.

AH: So did you go out to—you know, Rich was a wonderful biologist. Did you go on some field trips with him?

WF: Oh yeah, we went a lot of places. Like you said, in the Tampa Bay area there are a lot of nesting places, nesting beaches. When we would do maintenance dredging in different areas that—I think Lido Key is a big nesting area, as my recollection, I'm trying to remember some of the other places—but we would go, and look at these areas, and determine where they were located, and we came up with a—I coordinated with them—we came up with this plan of how the Corps might be able to do things. The first part of it was before while we historically knew where these sites were, but two weeks before the Corps would be doing anything with their contractor they would hire a migratory bird person who would go out and inspect the sites and determine if there were any nesting going on. If there was nesting in a particular site they would go and put up signs around the nesting areas and create a buffer around them.

And that was one of the things, not only coordinating with Rich and other people, like I said, talking with Cornell and the Archbold Center that we came up with an area that was large enough, what we called the flush zone, where the birds would be protected in their nesting, we wouldn't chase them off, be close enough to chase them off, and so we had that. And we would allow the birds to nest, to be able to have fledglings go out, and then the project would start to start up, and we wouldn't be affecting the fledglings because they would be able to move and go on.

Some of the other things we did was that, and we talked about this, was to make the nesting sites basically uninhabitable for the nesting during the short time frame when we would be doing our dredging that way we wouldn't have a problem with that. So when we would use the disposal islands, if there wasn't any nesting within the disposal area, that monitoring would still happen on a daily basis. If there was monitoring in certain areas, we would try to avoid those areas or we would avoid those areas.

And we would also in the construction facility, we would have signs up there and a map showing where those were, and the workers were to avoid those areas and such. Sometimes when working with other people in other areas they would have fenced in disposal areas, upland areas, like the Florida Inland Navigation District²⁰. And we would not allow them to use guard dogs or anything like that because they would chase the birds and things like that, so we had that as well. And we would just try to keep the pedestrians out of it.

²⁰The Florida Inland Navigation district is a special state district that manages and maintains the Atlantic Intracoastal Waterway.

We learned that—I learned—we learned that pedestrian foot traffic would flush the birds, but especially the least terns. But we also found out that you could drive right by them, and they wouldn't move. So if there was a need for a haul road or something like that that we would allow that to happen, we would allow the thing but no pedestrian traffic. So those were parts of the plan that we had, and we coordinated that with everybody that had a part in it: the Florida Fish and Wildlife Conservation Commission²¹—I don't know what they're called now, they keep changing their name—but we coordinated with them, Fish and Wildlife, Audubon, and tried to get everybody to bless the plan, and so that seemed to work for us in that.

And I mentioned earlier, part of my beneficial use of dredging material had was that it would allow us to use the material in a beneficial way that would help the environment in Tampa Bay but also to not have to use the disposal areas. Two reasons: one, to try and not use it during migratory bird season, but also to keep from having to build a bigger and bigger disposal island should it fill up. And so there was a kind of a two-fold reason for that, and so that was part of it.

AH: Now were you involved—I'm trying to remember what year the Tampa Harbor Deepening Project kicked off. I think it was in the mid '80s, if I recall.

WF: There had always been talks of harbor deepening projects and it would start up and stop. And you know, the economy had a lot to do with it, but it really didn't start again until almost 2000, is when it started up again. I mean, we had different planning meetings with all the participants of what we would need to do, the economics of it, what would the boat traffic could be in different areas; if we made it wider then we would have boats passing one another, if we could make another channel where the boats could come in on and boats could leave on another channel, those kind of issues were all brought up.

Some of the things that were involved in that had to do with oyster beds, you know, where were the oyster beds. And if we dredged another alternate channel, returning back to the ocean, how would the water quality of that—how would it affect the oyster beds in that particular area, the wind and wave action on sea grasses and oyster beds in that area, because you had these large vessels going in and out. So we were considering a lot of different options at the time of what we could do, what were the economics of it, what were the environmental consequences. And so we were back and forth on all these different issues with the local sponsors, and so that was part of what our emphasis on that

²¹The Florida Fish and Wildlife Commission came into existence on July 1, 1999, the result of a constitutional amendment approved in the 1998 General Election. It represents a merger of the Marine Fisheries Commission, Marine Resources and Law Enforcement of the Florida Department of Environmental Protection, and the former Game and Fresh Water Fish Commission.

particular project. And at the time, before I left, I really don't know what happened afterwards, what the final solutions are.

Sometimes they check into the Agency on Bay Management to see what the local Corps representative is saying about those projects and then it appears like it's still going on, and so I really don't know what the answer is. I read where they're trying to increase the depths of some of the smaller harbors to accommodate larger vessels, which that's happening all over Florida; it's not just Tampa, it's Jacksonville, if they're going to be doing that in Jacksonville, and I'm sure everybody else wants to get on the bandwagon because of the economics of it.

AH: As you think back about the planning effort that you were involved with for the deepening project, channel deepening project, what do you think were some of the most difficult issues for the planning? You know, the different factions that were interested in the planning?

WF: I don't know that it was difficult but just to be able to balance the different needs, the economics, and the environmental concerns and issues that were out there. It was, to me, it was a very difficult task of trying to come up with a solution. I mean, I don't—like I said—don't know the outcome, we hadn't got that far in the planning process, but through the Agency on Bay Management we were identifying all those concerns that we were going to address in our documents that we were going to do. And so I think they were all brought, excuse me, brought to the forefront for the planners and everything to look at to try to make the best decision they could.

AH: At the time that you were active and attending those meetings, who was the port director? I'm trying to remember the transition. Was that—

WF: I don't know the name of the port director but—

AH: I meant the environmental director. Was that Dave Parshey?

WF: Dave Parshey.

AH: And that—

WF: Dave Parshey and I got along very well. I guess Bill Faring was also, he was the engineer involved in that, but Dave and I worked together really good to try to identify those resources and talk about the different issues so that the port would understand since they are the local sponsor for that project.

AH: I'm going to ask you a different question related to the turtles. Sea turtles are so iconic in Florida. You mentioned some of the research that you and others with the waterways experiment station did. Can you walk us through a little bit more of that study, and what came out of that study? What was learned?

WF: The study that we did on sea turtles—the overall projects in Florida, there's major concerns about dredging and sea turtles. The East Coast is like the hot bed of sea turtles, you know, with the biggest beaches down at Cape Canaveral and the seashore down there, but there are other places where there are projects. And so working with the National Marine Fishery Service, we had different biological opinions allowing us to dredge in the time frames we had to dredge.

Now, on the Gulf Coast there was very little known about the sea turtle resources on that side. We didn't believe up in the harbor itself there was sea turtles activity there because of the distance it was from the coast, but up the entrance channel we hadn't dredged that in a long time so there was a big build up of bottom sediments out there. And so we wanted to find out what the turtle population was like there, and so the only way to do that—I mean, there were sea turtle nesting there, we knew that for information, and so we decided to get with our waterways experiment station and find out what that might be. And, like I said, that was working with National Marine Fishery Service on that issue.

So they contracted with a trawler, shrimp trawler, and we went out, and I got to ride it several days. And we would ride up and down the channel and they would put their nets down, and they would get plastic chairs and toilet seats and, you know, all sorts of debris. And while I was there I never, they never, captured a turtle while I was on board, so I was disappointed with that. And then, after we left, they were able to capture several turtles, I think there was a Kemp's Ridley and a green, and so they tagged them with a sea turtle—with the satellite tags—and then they released them back into the wild, and we monitored the satellite data to determine where they went because we wanted to know if they hung out in the channel or they migrated; and they migrated, but we were very surprised in that the Kemp's Ridley went north and the green went south, which was kind of news to us.

Now, we only had six months of data and so it wasn't truly definitive, but it looked like, to us, just from the limited data, that the sea turtles, especially the Kemp's, may decide to stay in the Gulf, where the greens are more apt to go on the East Coast and nest; they travel through Key West and go around to the other coast, and that's where they do a lot

of their nesting. So we were kind of surprised at that outcome. From that, we determined that there wasn't much of a chance for encountering sea turtles in our dredging, but we did have an unusual situation.

And I mentioned the hopper dredges, I don't know how familiar you are with those, but they have two long arms that they dragged across the bottom of the ocean. They have an open bay in the middle, and they're just like a vacuum cleaner and they suck sediments off the bottom and they put it in the middle. And then, depending on the quality of the material, if it's sandy material we have an agreement with DEP that we'll place the material on the beaches to protect them from erosion, which is kind of standard operating procedure for the district, but in again, then another situation that involves, we also have to look to make sure that we're not adversely affecting the sea turtle nesting beaches wherever we place those. So we also have sea turtle nesting conditions, which are part of the biological opinion that National Marine Fisheries has with us and which involves monitoring. And then the spring of the year we also have to do compaction testing and escarpment monitoring and make sure that the sea turtles can nest in an appropriate manner.

So anyway, we have that but in this case there was a big underwater—it wasn't a berm, but it was a highly elevated—and so I mentioned the cow catchers earlier on the hopper dredge that might be there, so what they decided to use, and we coordinated this with National Marine Fisheries, was they would take a large I-beam and they would haul it over this high spot in the channel and knock it down and then be able to use the hopper dredge effectively to remove the material.

And one of the places we put this material because it was so deep and it wasn't beach quality material, was there's this big hole, huge hole, 70 feet deep or so, off the tip of Egmont Key, and so they disposed of the material in that huge hole. I don't know how it was formed or why or whatever, but it was really deep, it wasn't, you know, a normal refugia hole for the fish so that was pretty deep. So that was what we were involved with with the sea turtles there at the entrance channel, and what we did, and the studies that we did on it.

AH: That's a fascinating history of how carefully the Corps looked at that issue. Another iconic species, and I'm just kind of exploring some of the detail in the planning process, you mentioned earlier were the sturgeon, and they of course are a fascinating fish. Tarpon also were iconic in Tampa Bay. Can you go into some more detail about any of the special fishes studies?

WF: We relied on, like I said, Agency on Bay Management, Fish and Wildlife, everybody—the anglers—everybody in Tampa Bay, and from their feedback our projects, except for

the hole study where we were looking at possibility of filling those dredge holes back up to help facilitate sea grasses, that there was not much of a concern for the game fish or the other fish that were in Tampa Bay for our dredging projects. Most of the dredging that occurs we have to meet water quality standards by the state and so because Tampa Harbor is so large that the dredging does not have an effect on the water quality of the bay and so, from my experience, that has been the case.

AH: As you think about your time in Tampa Bay, what was most fascinating to you? What did you enjoy most about the bay?

WF: Wow. I think what I expressed before was that I enjoyed the ethos of the people that lived around the bay. Now, I know there's some problems that they had in some of the projects that were developed because of that, the desalinization plant and trying to improve the water quality, but then there were other projects like—oh God, I'm trying to remember the name of that emptying out the saline water from the phosphate plant, not saline but—

AH: Oh, you're thinking of the spill? The 2004 spill?

WF: Well, there was a spill but then there was also an ongoing project about emptying out the water out of the different pits that were there and how everybody was trying to work together on any of the projects that were there. To me that was the special part of being down there was the whole environmental outlook. That so many different people, different groups, had different ideas about the bay, but everybody would come together and try to work together on those, whether it was sea grasses or shell fish or the water quality or the dredging, restoration projects, especially.

There was all sorts of input from everybody, and everybody seemed to be working well together. And to me that was the draw that had me down there, I mean, the bay has all these different resources around it: all the parks, environmental restoration areas, just all sorts of activities going on, the involvement of the students in planting wetland plants, I mean, it was just the total involvement of the population in what was going on there.

AH: And so what would be your message to the citizens and the communities around Tampa Bay? Your message for the future for them?

WF: Get involved in what's going on. Be part of the solution, not the problem, I mean, you've heard that a million times over. And there has to be development, but there also has to be environmental concerns that people have to deal with.

AH: Well, I wonder, any other thoughts as we begin to wrap up our interview this morning—this afternoon, rather?

WF: I was just very happy over the length of my time there to be accepted because I wasn't part of the community; I was from Jacksonville coming down. I was representing someone who didn't have the greatest reputation in the world, and to be accepted by all those people, and being allowed to express my opinion, and to interact with them, so I was very pleased with that.

AH: Well, looking back, I think folks feel you did a great job.

WF: Well, thank you.

AH: They really enjoyed interacting with you. We've been speaking with Bill Fonferik. Bill was the biologist for the Jacksonville district of the Corps and was able to participate and present Corps policy for many years throughout Tampa Bay. Bill thanks so much for being with us today.

WF: Thank you for inviting me.

AH: Great to have you with us.

End of Interview