U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION
Transcript of National Archives History Office Oral History Interview
Subject: Noah Durham
Interviewer: Stephanie Reynolds
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**Stephanie Reynolds:** Okay, so I've got the recording started here, and I just want to start out by saying thank you for participating in this National Archives Oral History project. We are trying to document the 1973 National Personnel Records Center fire in St. Louis and the impact that it had on the National Archives and all of the procedures and processes that we have now. My name is Stephanie Reynolds, and I'm based out of our Denver, Colorado, office. I'm assisting the National Archives Historian, Jessie Kratz, on this oral history project. And today is Thursday, June 29, 2023. And I'm speaking with Noah Durham. Okay. Noah, would you mind just giving a brief history of your hometown, your educational background, maybe how you got started with the National Archives?

**Noah Durham:** Sure. I grew up in St. Louis, Missouri, where I'm currently working. I was a photography major in college, and I thought that I would teach photography. I got an MFA [Master of Fine Arts] in photography, but as it was, I was very interested in the science of imaging and the science of printing. So instead of going through that track, I went and got a Master of Science in Printing Technology from the Rochester Institute of Technology, and I was recruited out of Rochester to go to New York City and work for the auction houses, Christie's and Sotheby's. So there I worked with art and cultural heritage objects, managing the photography studios, and was involved in the conversion to digital photography. So I did that for many years in both Christie's and Sotheby's auction houses around the world, which gave me a particular kind of expertise that involved cultural heritage.

And with that background, I was able to get on here at the National Archives. I didn't think I would be coming back to my hometown, St. Louis. But when the job opened up here in St. Louis with the Preservation Unit and there was an imaging component to it, I applied. So I started working in 2008 for NARA, and I've worked here since.

**Stephanie:** And always in the Preservation Department?

**Noah:** Well, I worked in the Preservation Department until 2013, and then I did a special project with the Iraqi Jewish Archives, which was an imaging project conducted at College Park,

Maryland, with some community records that NARA had possession of that came from the secret police building in Baghdad, Iraq. They were community records of the Iraqi Jewish community, and they needed treatment, but they also needed digitization so that they could be shared broadly with interested individuals, in particular the Iraqi Jewish population throughout the world that no longer resides in Iraq. So that was a two-year project. And we made available all those community records for anyone who wants to find them on the internet. So I worked on that project. Then I came back to my permanent position, which is in St. Louis. That was in 2015.

**Stephanie:** Okay. When you first started at the National Archives in the Preservation Department, was the preservation program still getting off of the ground there or was it in full operation mode at that time?

**Noah:** It was at full operation mode. It had been started in the early 2000s. But they had one primary project, which was a microfilming project. So the microfilming project ended about the time we moved into our new facility, 2011–2012 timeframe. And at that point, we started doing a broader array of projects, including more digitization of high-value military personnel records and digitization of award cards and other records.

**Stephanie:** Okay, so you started at the old location, so that would have been where the fire happened?

**Noah:** Yes. Yes.

**Stephanie:** What was that building like? Did it still smell? What did it look like?

**Noah:** No, it didn't smell. In a lot of senses it was an incredible building. It had wide corridors and escalators and it had a nurse's office. And it was like a little city community. At one time, because the Army was there, it could have held maybe 1300, 1400 people. The storage spaces were terrible. But there are aspects of that building, the common area—there was a little garden in the center of it. There were a lot of things I really liked about that building then, although the new building that we have is much better for records storage. There was a certain pleasure in working in that kind of a structure that was different. Like, I feel like our current building's a little more institutional like a hospital building or something. But it has great records storage areas, which is, you know, our primary role is to preserve and protect the records. So it's a fair tradeoff.

**Stephanie:** Did you have to help with that move?

**Noah:** Yeah, I did. I specified a lot of the space planning for our labs. I didn't work on moving the records. Some of our staff did work on that move. We had a contract with a mover, and NARA staff would assist loading boxes, unloading boxes, and shelving boxes. They would assist in terms of tracking it all, but they didn't do the manual labor of filling up the stacks at the new building.

**Stephanie:** So for the burned records, the burnt files, did they have to be prepared a certain way in order to be able to move them in the first place?

**Noah:** Not really. But you should ask others about that, because it's possible that there was more going on that I wasn't aware of.

**Stephanie:** Okay. Okay.

**Noah:** Well, we moved them into cold bays. They're not technically cold storage, but they're 50 to 55 degrees.

**Stephanie:** Okay. So you said that you are a supervisory preservation specialist. Can you tell me a little bit about what your day-to-day job looks like? What are you working on?

**Noah:** Sure. So, one of the big functions of our job is to care for the burned records. So staff who report to me are always going to have the task of when a burned record is requested and pulled, they're going to do a quick condition assessment of the record to see if it needs any stabilization, or any surface cleaning prior to being released to the requester of the record, which could be an internal employee. It could also be an outside agency like the VA [Department of Veterans Affairs], or a requestor in the research room. What we're trying to do is we're trying to make the record serviceable, meaning that it won't degrade or flake or break apart during its handling by the requester. And we also want to ensure that it doesn't represent a health risk to the person with any active or inactive mold that might be in there. So we do give all of the records a sort of triage, and then we route them appropriately, depending upon what their needs are. So that's about 50 percent of what our department does and the people I supervise.

And then the other 50 percent is trying to make access happen in terms of digitizing records in the unit here, not just the burned records, but non-burned records, high-value records, name indexes, anything that can be used to assist reference. We digitize where it's appropriate to digitize. We put items in the catalog [National Archives Catalog]. There's a preservation component of getting something on the catalog. If it's available via the catalog, then it's likely

that it won't be handled as frequently. So certainly our high-value records like the military records of famous people are mostly now on the catalog. There's a specialized imaging process for the burned records that we employ as well. It doesn't apply to every record, but it's a topic of interest for people because we're able to recover content in charred areas of records.

**Stephanie:** That's amazing. And is this something that just recently came about? Like the technology has evolved enough that we're able to do this or has this been going on since the fire happened?

**Noah:** Yeah, no, what happened was, well, it's a technology that's been used a lot in forensic applications and even a little bit with cultural heritage. For example, the Dead Sea Scrolls were photographed using infrared. They weren't burnt, but were just deteriorating. And so the best images of the Dead Sea Scrolls were infrared transmissive images. That was in the '50s and '60s when that took place. Infrared is used in forensics, everything from detecting whether a banknote is real or being able to better visualize blood splatter on a dark piece of cloth and check forgery. These are things that infrared has been used for for a long time. It's just like regular photography. The only exception being that instead of visible light being reflected and absorbed and then captured by the camera, the visible light is blocked out and only the infrared light waves reach, in our case, reach the paper and then reflect back to the camera.

And for a burned area with char, we view that as just a dark mass. But in infrared there's actually infrared light being absorbed by the carbon and the ink, the residual ink in that charred area. And infrared light is reflected by the charred area without that ink. So an image is formed in the camera that shows the text under that charred area so that we knew that effect existed.

So when I started working here in 2008, 2009, we first experimented with the process. We bought a small camera and had it modified to be infrared and started doing it. The problem with the small camera systems at that time was that although we can make the content recovery effect of revealing text happen, we had to use a lot of manipulations in Photoshop, and it was more of an art project than an actual reliable, consistent method for revealing the text. So it took a few years to work up to the point where we could get to the technological level in terms of procurement and specification and working with a vendor.

So when I came back from the IJA [Iraqi Jewish Archive] project, this is the 2014, 2015 timeframe, we were able to work with the vendor and experiment with different camera systems and filtration systems and put together a system that met our requirements. It was installed in 2015. So we've been doing that process since 2015. We've done approximately 500 records. This way there would be the worst condition records that come through our request

queue. These are records in which they have a lot of intact charring. Mostly when records burn, paper is consumed. But if the paper is more or less roasted and not burned or consumed, then the page is browned and charred. And if that char is still intact, then it obscures the text. So as we look through all these burned records, as they come through our system, we find ones with intact char and we'll route those to that process.

**Stephanie:** So you are not working on some of the worst burned records, but ones that still have that char intact?

**Noah:** Yeah, exactly. Because in a lot of cases, char will just flake off. And there was a time when the employees here got a record with a lot of intact char, before they photocopied it they would wipe off the areas that would break apart. And so we're lucky when we find ones where we can recover text in charred areas.

**Stephanie:** So these records had not been treated previously. This is the first time that anyone is seeing them since the fire, essentially.

**Noah:** Yeah. There could be a few re-requests in there, but if a re-request has happened since the Preservation Unit existed, then we would have stabilized the record. So part of what we do is when we have a poor condition record, we may humidify it to flatten it. We may put it in a mylar sleeve to prevent sections from breaking apart and becoming disassociated. So we know when we encounter something we've already treated. But most requests when they come through as pulled from the burn bays are first time requests for us. If they're in poor condition, we would know that we had handled them before because of the way they've been treated.

**Stephanie:** Okay. You also mentioned health concerns with some of the mold or anything else. Was there something that you did to kind of lessen those effects for the staff? Or how do you protect the staff?

**Noah:** Yeah. I'm tangential to this sort of thing.

**Stephanie:** Okay.

**Noah:** But definitely we've always had four-hour shifts, so we limit time. We've done respirator fit testing in the past. We currently have some positive pressure respirators for staff to wear. The records themselves are kept in a cold environment. And we also have fume hoods or biosafety cabinets under which a record with a lot of mold can be processed. But you'll get a better description of that from other individuals.

**Stephanie:** Okay. This is the first time that I've heard about all of these methods for protecting the staff, so I appreciate you mentioning that.

**Noah:** Yeah, there's good stuff that we do about that. We're also very concerned with repetitive injuries. Like some of our processes are very ergonomically difficult, so for that reason, we don't assign more than four hours on these processes.

**Stephanie:** Wow. Okay.

**Noah:** Four hours a day. We split up the shifts.

**Stephanie:** Okay. When you're digitizing the records, do you have to adhere to certain standards? You know, the PPI [pixels per inch] or anything? What level of quality does the stakeholder or the requester need usually?

**Noah:** Well, initially we have standards for archival preservation masters. Those are very high standards.

**Stephanie:** Okay.

**Noah:** So, for example, with the high-value records, we did the famous generals, the actors, those records. I have a set of images that are very large TIFF [Tag Image File Format] files. The basic requirement, though, for accessing these images is just that you're able to read them. Although we have a very high resolution version of it, unless you really want to inspect some close feature on a document, that file performs exactly the same as a smaller file like a JPEG [Joint Photographic Experts Group] or a PDF [Portable Document Format] would. So we don't use the TIFF file for any form of distribution. Instead we make smaller images that are used for distribution. So those are our high-value records and the heavily burned content image recovered records. These are unique imaging products, very high resolution. But, once again, by the time it reaches a person who's reading it, they're more likely to be using a smaller file.

We have other imaging projects that go straight to catalog, like index cards that run through an automatic scan feeder. Those don't reach an archival standard of high-quality imaging, but they're being processed very quickly, and they're going up to the catalog. And when this project was initiated, we sort of looked at the trade-offs in terms of storage space, in terms of ease of handling, and where they would ultimately reside. And we kind of came up with a specification for that based on those criteria. So it depends. It seems like every project is different. I get asked a lot about DPI [dots per inch], and there are a lot of factors that go into whether a quality of an

image is high or not that have nothing to do with resolution and have more to do with the type of imaging that's taking place.

But we're learning more about the federal agency government's standards, the FADGI [Federal Agencies Digital Guidelines Initiative] standards, for characterizing image quality and image devices. And soon I hope St. Louis will have the FADGI system employed with the golden thread target to better understand what level of quality our images are being produced at on various imaging devices.

**Stephanie:** You brought up the FADGI. And I know that NARA just put out their permanent records digitization requirements. Were you part of providing input for that requirement?

**Noah:** Not really. That's more done in the DC area because of the collaboration between different government agencies, I think.

**Stephanie:** Yeah.

**Noah:** I think still imaging specifications are not as rich because they don't cover things like audio compression and video formats and frame rates. A still image is just pretty simple. You can say it has a certain DPI. You can say it's in this particular file format. But it doesn't have as much nuance as those other categories. But you know, I've always felt throughout my career that it's really important to create files that are usable, and there's nothing worse than when you digitize something and then it's too big to attach to an email or it crashes somebody's computer when you send it to them. [laughter]

And as the creator of those things, I'm always trying to find ways to make the files good, but more accessible. And then behind me, I have these lurking standards people telling me I need to make the files larger and less accessible. I'm not going to lie, there's a little bit of tension there. [laughter]

**Stephanie:** Well, I guess for keeping something permanent, you know, having those standards are good. But if you're providing access to a requester, like you said, they don't need all of those big requirements. Right?

**Noah:** So yeah, looking at the fibers in the document–yes, that's true. Also, if there isn't a paper original, or it's being disposed of after digitization, it's particularly important to digitize to a high standard.

**Stephanie:** So now in some of the...[cross-talking]. Oh, go ahead.

**Noah:** I was going to say, and we've yet to put our highest resolution TIFFs into the NARA repository, but we stand by ready to do that when the ERA accepts the digital surrogates of the military records, the high-value military records, we digitize.

**Stephanie:** Okay. So right now you're just keeping these files on the server somewhere?

**Noah:** Yeah.

**Stephanie:** And then do you keep the actual burned paper also?

**Noah:** Yes, we keep the burned records that we digitize. A lot of the highest value records that we digitized aren't burned at all. They're the famous generals, the actors, the sports celebrities-types of people. But just whenever we get a military record that's heavily burned, we don't discard the original. We keep the original. But we put what we call a charge-out, or basically a charge-out card, in that location in the stacks. So if that record is requested again, that card says "Come to preservation. There's a digital version of this file." So what happens is then we supply the digital version on the request.

**Stephanie:** Okay. Are there any photographs in these papers as well? Or is it strictly just a document that's got their service history on it?

**Noah:** So, sometimes there's induction photos, and if anyone was an officer, there's officer photos. Like Navy always has an induction photo in the burned records. And a lot of our high-value OMPFs, like famous people, would be military officers; they'll have several photographs in those. But for the average military record, enlisted, unless it's Navy, it's unlikely that there's going to be a photo. But sometimes there's chest X-rays. If medicals are in there, we'll have some chest X-rays.

**Stephanie:** Wow. So that's kind of unusual, or at least to me, it seems unusual. Have you found any other things that were unusual that you've come across in those files?

**Noah:** Well, yeah. There's been a lot of stuff that's been found in the files. But I'm not the right person since I don't handle them every day.

**Stephanie:** Okay. Okay. So, you're not doing anything with that chest X-ray? [laughter]

**Noah:** No, no, no. Occasionally there's the DPAA [Defense POW/MIA Accounting Agency] and JPAC [Joint POW/MIA Accounting Command]--I'm sorry to throw all these acronyms at you. It's based out of Honolulu, and it's the unit that goes and looks for remains. So, they'll either come to our facility or they'll queue up a bunch of records requests. When present, X-rays are useful for identifying human remains. So, that's an interesting process here in the building. The research room deals with that. The archival unit deals with that a lot. I just kind of see that occasionally from afar that that's going on.

**Stephanie:** That's remarkable. In terms of the records, the burn records that you're working with, it sounds like there's a set process in place, that they're stabilized and then you're actually imaging them. How long would you say that it takes to image one page, one document?

**Noah:** Just 15 or 20 seconds. And we'll take a photograph of it under visible light and the nice thing about our camera is we can switch it to infrared without moving the document. The same camera does the visible and the infrared. So when we're doing that process that we call content recovery, it's pretty fast. We can do a whole record in a couple of hours. And a record may contain anywhere from 60 to 250 or more images. But so that's just the specialized process. And then for the routine digitization that we do, we do that on a different style of camera or scanner, and it's about the same–10 seconds per page, perhaps–but that doesn't do any infrared. That's just standard imaging. We do a lot more of that than we do of the infrared imaging.

We've increased the amount of imaging that we do to release a file as digital. So at different condition levels we make a determination, well, this can go straight to the cameras and be imaged or this requires a little more treatment and stabilization. But if we can go straight to the camera and image it, then that's a productivity gain for us. It speeds up the window in which we have the record in our lab and the release date. Over the years we've been able to image condition levels getting worse and worse in order to improve our own efficiencies and reduce the turnaround times.

**Stephanie:** So it sounds like it depends on the condition of the record when you first get it, how long it might take, how many pages are in that file. You've got kind of an assembly line.

**Noah:** It is an assembly line. And when I quoted 10 or 15 seconds a page, that was just the portion that you're at the camera. There's other processes like pulling fasteners and surface cleaning that takes place that take more time than that.

**Stephanie:** And is that happening in your location or is that happening with a different team? Where does that take place?

**Noah:** I supervise those individuals, but really it's a different functional team. And as you talk to more employees in preservation, you'll learn more about what we call the "decon lab" [decontamination lab]. So my technical specialization is more imaging and imaging technology. And so my functional area is in the reformatting and scanning of records. But my staff do both reformatting and the records triage, records cleaning, and records stabilization activities in the decontamination lab.

**Stephanie:** Are there any new technologies or new methods that are coming out or that you're looking at that might even improve the efficiencies, improve the process in the future?

**Noah:** Yeah. A lot of this depends on what we're actually attempting to digitize. So, they're certainly doing the touchless scanning approach at DC with the conveyor belt-style scanner. The benefit of that is that you don't have to run archival records through a document feeder which is something that is prohibited or only allowed under special permissions and with good reason. Document feeders tend to grab—they grab the documents, they grip them, and then they run them through a series of tight curves, all of which could cause any document to shred or jam. So the benefit of the drop-feed scanning system is that there's no gripping and turning of the paper through a series of rollers. So that'll take place in A2 soon. You still have to remove fasteners from documents. So it's not a panacea. There's still a lot of what we call prepping in order to get an image, an original, ready to scan. Images then have to be compared against the paper at some point in some quality-control process and refoldered and put back in a box. So imaging is just one step on that assembly line, obviously. We have that content recovery, our infrared process, and I'm always looking to improve that. I can improve it with a different light source, LED light source, where some of the diodes in the panel are infrared diodes, and some of them are visible light diodes. So a custom lighting approach is what would really improve the quality of the image. And so that's something we'll work on. One of our technicians is researching the possibility of pattern matching for fragments. So we do a process called mending. If a piece of paper falls apart and gets torn off and then is separated from its parent page, we reattach it physically. The digital equivalent of that could be software that recognizes a certain shape and reassociates two pictures to perform a digital mend. So when we photograph these poor-condition originals, we photograph the fragments as well as the pages with the hope or expectation that maybe there'll be a way in the future to combine those fragments with their parent pages. So that could be a future thing with this process.

**Stephanie:** That's amazing. So could the fragments potentially then belong to someone else's file or it would just belong to that person's file that you found it in?

**Noah:** I think it would probably belong to that person's file. What we do is we photograph all the intact char and then if there's loose pieces of char in the folder, we set those out and we photograph those. We don't have time to analyze this stuff. You know, we're in a production mode. We're getting these records digitized. These aren't single items or works of art. These are records. So we're not going to labor over them and to make these sort of connections. But it's possible that, let's say somebody's researching one of these records for genealogical purposes in the future and they get a digital version and they want to spend the time to re-associate those fragments to the parent pages. Then maybe there could be a program that looks at those shapes and tries to do that for them.

**Stephanie:** Wow. That would be incredible and time saving. Better to provide access to that.

**Noah:** But, you know, of all the things I've wanted to say, and I don't know how this gets into the oral history though, is that when I walk people through on tours, we always show them the infrared content recovery and it always gets lots of oohs and ahs. But there are a lot more mundane things that happen that provide access to many, many more records. So I don't really like to play it up too much. But it's also a topic of great interest to me. It's very interesting, but it's not the biggest impact. Like little things can be done that you wouldn't even notice that make it possible for many more records to be available. So infrared only applies to a small percentage of the records that come through. And I try to emphasize this fact because I don't want the impression there was a fire that left all these charred, and through the magical process of infrared, NARA is now able to whole cloth recover all the fire damage.

**Stephanie:** Right.

**Noah:** So, I try to control the narrative a little bit by tamping it down a bit. There's going to be an article coming out in *Wired* magazine that talks a little bit about what we do in our unit, and I made sure that less than one percent of records goes through that process was part of that article.

**Stephanie:** But for a veteran or a family member, they don't care if it's one percent or what that percentage is as long as they're able to access that record.

**Noah:** Right. And in a way, the good thing about this is it's a record that would be nearly impossible to access otherwise. So that makes it, like you were saying, every record has a requester behind it.

**Stephanie:** Has this whole process, your whole experience working there, has it changed how you view records? Maybe just how important they are? I don't know. Has it changed your mindset in any way?

**Noah:** Yeah, I mean, I think it's definitely made me appreciate the historical sacrifices of servicemen and the fact that I'm just a lot more interested in the history just being exposed to all these records. The sheer scale of it is remarkable. And yeah, there's a huge side of this operation, which is just about enabling people to get their benefits. And that's so important. And it's ongoing. And then also just genealogy. As people age, I think they become more interested in the lives of their parents and grandparents. And then they want to find if there's a record available that they can research for genealogy. That's really interesting. I've helped friends of mine look up information about family members and assisted them in their research of these records as well. And that's been a really fun thing to do.

**Stephanie:** I forgot to ask earlier when you did move to the new building, how challenging was that? Were labs already set up by the time you got to the new building? What was that process like? That had to be pretty challenging to start fresh.

**Noah:** Well, we did such a—it was such an upgrade really. We planned a lot of space in our labs. We planned a lot of network connections in our lab. And we have really first-class spaces here. So, it was a huge upgrade. We have electrical outlets everywhere. So actually it went really well. And we were formerly in a basement, so in a much smaller space. So it was a huge improvement. And we occupy a pretty big footprint in this building. So we can expand, and we can do more here. We can become a resource for the regional NARA facilities that don't have digitization or treatment capabilities. So our future plans are aligned with not just servicing the records here but also assisting other NARA offices in treatment and digitization.

**Stephanie:** How many people do you have working there–just in preservation?

**Noah:** In preservation, we're 17 currently.

**Stephanie:** Wow. So you make it sound like it was a pretty smooth transition, though, to that that new building. Is that pretty accurate?

**Noah:** Yeah. I know you could probably find others who would say it was a headache, but no, it seemed like a smooth transition. When I think back on it, they had prepared all the computers ahead of time so that they were all functional. We didn't have to move anything at all. Now for the process of going out and finding records, I don't do that. So I don't know how that

necessarily works. I planned the physical space around my lab, but I didn't plan the stacks and the systems that govern the casework here, the case management programs and applications.

**Stephanie:** Okay, that makes sense. Yeah. So we're kind of coming up towards the end of the hour here. I just wanted to ask, what do you think would be maybe your greatest accomplishment so far working at NARA? You've worked there for a number of years now. And it sounds like what you do is just amazing, and it's high tech and it's very specialized. What do you think is your greatest accomplishment so far?

**Noah:** Yeah, well that's very flattering, but I think my greatest accomplishment was, and I know this isn't related to the fire, but just on a personal level, it's just learning to be a good supervisor and operating my unit with integrity and care and concern for the staff. That would be my main thing I'm proud of. For my cool experiences with NARA, I think doing the Iraqi Jewish Archive would definitely top that experience. Then generally just being a resource in terms of digitization and access, trying to create good products and make things happen. NARA is not the most technologically advanced kind of place, but we can do cool stuff when we have a chance. And I was lucky because I got to do some neat projects and processes here. There are tremendously competent people in the digitization and the cataloging spaces that I interact with. So I'm always learning new stuff.

**Stephanie:** Is there anything else that you can think of that we haven't covered and might be a good addition to this interview?

**Noah:** No, there's nothing else I can think of.

**Stephanie:** Okay. Well, like I said, I'm going to transcribe this interview, and then once you have a chance to review it, if you think of anything else that you know that you want to mention, you can put it in there. So we're always open to additional information.

[END RECORDING]