

## Digging Up the Soil Surveys: A Case Study for Inventorying Historic Government Documents - Transcript

Please stand by for realtime captions.

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Hello and welcome to digging up the soil surveys: a case study for inventorying historic government documents. Before we get started I have a few housekeeping matters. Please use the chat box for all technical issues and we will see questions and address in the end of today's recitation. We are recording today's conference at all registered will receive links to the comforts after the event. So please join me in welcoming our presenters today. Jen, Helen, Sandra and Ann. Now I will turn the microphone over to Jennifer to start the session.

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Thank you Jamie. Thank you to the [ Indiscernible ] for letting us to desperate [ Indiscernible - low volume ] I am joined by my colleagues today, they will be introducing themselves. Helen.

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Good afternoon everyone, or it's afternoon where I am, it is, I am Helen Smith and I am the agricultural librarian at Penn State University.

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Hello, I am Sandra Winder, that garage that cultural science is an animal health library and at USU.

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[ Audio cutting out ] I am Ann Hedrick, and engineering, agriculture and science library and at Utah State.

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And we're happy to be here with you all today to talk about our inventory of the soil survey presentation.

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Will give you a brief overview today. This presentation will cover a soil survey inventory process [ Indiscernible - low volume ] that's been undertaking over the last year and histories for researching the case studies of government documents.

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And that's a he may be interested in doing something similar. The presentation will be providing information about the loan surveys, talking about why this inventory was needed, in our institution. What we did to create the inventory, and how we hope you and others my do this.

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To tell you more about the soil survey, I will not pass it to Helen.

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Thanks Jen. So I thought I first would start with what exactly is a soil survey. And I look this up in the glossary for the soil science fact America. The soil survey is the systematic examination description classification and mapping of soils in a particular area. And why we do this? Or why is this done? Soils are very important in agriculture, and different types of soils affect crops and agriculture in different ways. So in other words you have to do with the soil type is, so you

know how best that the land that that soil is on can be used. What [ Indiscernible ] would be best for picking up a crop would be best for.

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The soil surveys for the main source of information in the United States from 1900 to 2005 when the print was phased out. They were produced by various bureaus, all within the US Department of Agriculture. And they usually covered a County or an area which is not exactly a County.

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They do offer a very unique view of local areas. Again they were often documented in the same area over time. Many counties and areas were surveyed more than once, as techniques changed and improved. As an example there, Lancaster County Pennsylvania has for print surveys published between 1900 and 99 five. So you can see how things can change over that time period.

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So about the project here, why did we need to do this? At Penn State I personally have been frustrated for years not knowing what was actually published, where they were located, what we should have, what we were missing. And so my original [ Indiscernible ] for this was a personal mission to answer those questions for myself. There are various difficulties in providing access to the survey, and they depend on the library. Lack of cataloging is one. So are they in the government document section and not catalog? Are they on catalog any branch library and an academic situation? So lots of things plan to that.

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Unique shelving decisions, this can vary across libraries in all honesty. Some libraries kept the soil surveys in Sue Doc duct rotation. And Penn State were actually classifying our soil surveys but we don't show them in LC. We actually shelf our soil surveys by state and the county.

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And that is because that is how people ask for them. They would walk up to our reference desk back when we can walk up to reference desks, and they would say I want the soil survey for such a town Pennsylvania the sympathy to do would be to walk over the soil survey section in Pennsylvania, subject survey and there was.

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Is also complex publication details the depending on when the survey was published and how is catalog, this can confuse things. Some surveys were published as series and catalog that way. Somewhere my graft, some were my graft as series and different libraries tended to treat the same piece in different ways.

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Yes of course have an interest in preserving historic materials, as I said the surveys can look over the same area over time and actually see changes in the land.

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So comprehensive and inventory of the soil surveys will help librarians promote all of this historic information is available.

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And Sandra.

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Thanks Helen. So we would talk pretty briefly about some of the protocols developed for the survey. And 1899 the national soil survey was established of the joint program between the USDA and the state agricultural experiment stations. With cooperations from other local and state entities. That first year, nearly 3/4 of 1 million acres were mapped and first locations around the country. Including the Connecticut River Valley, with areas in Massachusetts. People County and Maryland, the Pecos Valley in New Mexico and that [ Indiscernible ] Valley here Utah. The field work was done in 1899, but the surveys were published a year later as part of the field operations division a soil. This is beginning of the surveys to be dated as from the air they were connected, rather than the year in which they were actually published, which becomes one of the trapping and shelving issues.

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So fast forwarding a couple of decades, if you want to talk about the history of the soil surveys and American soils, you can't do that without mentioning the desk bowl era where hundreds of billions of tons of valuable rich agricultural soil blew up the prairies and down the members. For questions. So it was given these challenging times that soil conservation [ Indiscernible ] was established, the soil conservation service was established and most importantly, to share that knowledge with farmers across the country, so that the knowledge can be complied. And local areas.

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And so this was when the responsibility of the survey was transferred from the division of soil to this new agency. In the soil conservation service.

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To the middle part of the twentieth century, there was a lot of major advancements in the production of soil surveys went from doing fieldwork walking around, writing meals and I can make up a hand, in the 19 fifties they switch to aerial photography which was much more process to what they were like.

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On the publication side this was the beginning of publishing them as a standalone my graph.

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In 19 seventies, a huge shift occurs when urban lands began to be included in the soil surveys. Previously the folks, it was excessive to -- the land-use areas were important as well.

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In the 19 eighties, the essay began acquiring conservation practice for any pharmacy wanted to take part in any USDA programs. Again for promoting the preservation of the vital soil at the local level.

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In 19 nineties, USDA recognized that officially recognized, that soil is not the only natural resource with conservation, water and air also quite crucial. And so that was reflected in the soil conservation service become the national resource [ Audio fading in and out ]. And then of course moving into the new millennium, new methods of distribution came into picture and the soil survey, the web soil survey was launched in 2005 which is available today online to this day, and print surveys were phased out for the last 15 years now, as Prince have been issued.

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And a course we can move into in 2010, move from being something that people use on the desktop in the county extension offices, so that extension personnel, farmers anybody else is using the soil survey can look at it on the phone right there in the land.

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The next slide is Ann.

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Okay I will talk about the uses of soil survey. The information on local server oils, soils including six are the doctors district are the service of they also contain a wealth of information about on and are related to the soil [ Indiscernible ].

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What makes up the bulk of surveys, some surveys have areas of greater numbers of types of soil and some practices in soil survey creation that change in approach and focus from state to state and over time. For example later surveys have much more emphasis information change land-use other than [ Indiscernible ] such as development and community planning.

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And so for soil information this so discussions are always in there and include information on landscape, drainage and compositions with style character six. And [ Audio cutting out ] the surveys offer guidance and best practices. Basic information on good management practices and soil planning and copy system and improving drainage. In managing and retaining and perennials and managing perennial pastors, information specific to the side of her most I can capability limitation information. And then your information for different crops.

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Research Specialist at the for service managers, wetland scientists benefit from the technical information that is provided in soil surveys. Other useful information from the management, watershed for wildlife habitat. Tree species and the availability of planting, waterways and drainage.

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Community and urban planners can use the surveys for ladies. For recreation, recreation, residential and commercial planning is assistance with information in the soil surveys. Such as septic tank information and water table levels, which are important for consideration in buildings with patience paid

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Planting characteristics of efforts type in shape claim contain so much detail of women mental trees and windbreak species, all community planners choosing it's a separate are designing appropriate landscape. Engineers benefit from test data and information and construction materials such as roadkill, sand, gravel, and shrinks out dental and risk of erosion that are provided in certain surveys.

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Chemist, a college as a geologist use soil characteristic information, and information information, to inform their work. Researchers can use this for one-time use or for comparison over time. And how surveys will come out in areas we surveyed. And most of the surveys are done in that area.

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If anyone wants to learn about an area of a local soil surveys a place to go. For landscape, climate, water supply, native education. In addition to the physical cultural geographical, because are always also address. Soil surveys describe population, information about towns or cities and some rotation context of farming area. Residential development, and manufacturing products, and market information has some them.

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Historical information is provided as well. Once aerial photography became way to get information, places like churches and cemeteries have soil surveys which is useful information. Any changes for local features have been recorded through successful surveys. So as you can see, soil surveys provide a wealth of information for many users.

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So now we have told you a little bit about the organization that produces the soil surveys in the content page. We found in digging into that information, sorry that was the pun intended

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[ Indiscernible - low volume ]

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We found that we actually needed to have an understanding of how the publications changed over time in order to better understand the extent of the inventory. [ Indiscernible - low volume ] and also shed light on some of the publication issues that we encounter. Unlike Penn State, at Utah State we are regional depository. And we maintain the soil to [ Indiscernible ] order. However that's keeping them in SuDoc does not solve anything because of the phase reasons the Bureau has changed over time. Over the right side of the slide, you see a table with all the potential SuDoc's that we were able to identify. Either from the software that ideas publication published now [ Indiscernible - low volume ] and we have tried to build some of that information in the simplest way possible. Which I'm sorry, is not a simple. I realize looking at that [ Indiscernible - low volume ].

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One of the hardest things about the publication was that the USDA did not actually publish on the soil surveys. Many of them are state parties. I find UCLA, South Dakota, Wisconsin has some examples. Of states that produce them independently. Illinois the most significant. But many states publish any one or even two or have a dozen surveys as part of the agricultural experimentation experimentation. So we uncovered this as part of the project.

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Additionally, I would say for those SuDoc's in the graph are on the tables are represented on ourselves. And I'm not surprised to see if you have all six.

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Going on.

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Publication issues obviously bring up excess issues as well. The surveys had evolving formats much like many other government documents. While the vast majority are published in print, some are published in CD and not eligible for the program, some were issued online, and on CD. And some have now been digitized. Has been significant digitization by the USDA. There are think of the listed they have, they have that 400 to go. So the vast majority of the 5000 soil

surveys were talking about are available for free online divided by US Department of Agriculture.

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There digitization is great, but it's a little challenging. So surveys, the main components are the masks that are associated with them on the maps associated with them. And the designs that maps are difficult to digitize.

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They are digitized, but you have to follow specific links to open the PDF bookmarks to allow you to view the maps. USDA has a site called where the maps that provide instructions. But it's a challenge accessing a map.

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I also say in the digitization, not all are those yard, they are not fairly geocoded in any way.

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All right. So I've heard of the approach to the inventory that we wanted to know people like us keep them in their libraries. I know that at least 37 people in the federal depository library and contribute to the survey. So if you remember taking a survey about a year ago, about how to stored soil surveys your library, we thank you for your be significant, your participation.

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It really helps inform not only that the inventory was needed, but is components that we will go into.

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So you see some the summaries here. Most of the catalyst but not all, most of them have it in SuDoc rather than LC or do we. Most hi density storage area. That we also have people are interested in a specific region or state and collecting surveying materials. So what they want to do is inventory, you could see everything is recently published, whether it was on your shelves or not.

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And I will pass it to Helen.

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Thinks Jen.

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So I will talk a little bit about the process for creating this inventory. As previously stated come I started this is a personal project, but I quickly realized that it had value beyond my local institution. So that's when I brought in my Utah State University colleagues possess I had an interest in this area.

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And then mention site that judges talked about really bottom for me an instituti on why didn't have the SuDoc. Parts of having a having the SuDoc that it needed , and have them that way, but maybe people will.

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So we begin with existing resources. First of all, there's a list of surveys by state at the natural resources conservation service online listing. And you can throw in a Google search for that which would be simple, simply just soil surveys by state. You will find the states listed. They

tried to list all of the surveys, even if they were digitized yet, submit them to have, well most of them have links to digitize survey, but there are some that do.

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There's also several older list of publications, 1939 which is a list of all the publications from the barrel of soils up to the time. And then there was a list of published soil surveys from 93 and 94 in the joint year publications.

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That we also use.

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And then you talk specifically can contribute a finding aid from there depository, and this is where the LTS -- where the SuDoc came from. So I didn't have SuDoc numbers, LC numbers.

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And also compared to other published bibliographies and indexes, there's several sort of regional things like here is a certain surveys for the Northwest, here's a soil survey for Wisconsin, that kind of thing. So we sort of parsed through all those to try find them. Obviously compared to the physical shelf, so this is where some information came from actually, pulling surveys off the shelf and actually looking at them.

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And then more research in both world catalog publications. [ Indiscernible ] trust in other places where were poking around trying to find more publications.

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So here is a sample look at the inventory. This is what it looks like. It is available at Penn State's institutional repository. I think the lake already went to check for that. In that repository there is a PDF of the entire inventory organized by states with an expiration. There's also a CSV file see could take that and manipulated, data or whatever. I would encourage you also if you do that to take the company explanation PDF which explains college. But I will briefly get here. So state the obvious. And there are some surveys that cross state lines. For example there's one for the Duncan area of Arizona, Arizona New Mexico, and in the case it's in both places, but the needs are, Arizona and New Mexico. There was a really another way to do that.

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That's a total of 5308 entries, but again is a little bit duplication because of states of surveys that cross state lines as previously stated.

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The location. This is usually the county. They could be an area. Have an example that the screenshot there. There's some it has an area that might be part of the county part of another County, so sometimes depending on the geography of the land, and my do something that they can call in area.

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If that is the case, then we add it in the location, the actual name of the county.

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So for example that Duncan area of Arizona New Mexico, it also says we added in parts of Greeley Arizona and [ Indiscernible ] a looking for that although County New Mexico information, you could find that.

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But most of the different counties, more so as you go to the West which were even states when many of this inventory was happening. So they might not have counties in the same way, and there's a lot of federal land out there as well.

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And by the way, Washington is the most common County name in the United States. 35 states have a Washington County.

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So your published is sort of obvious. However it's not usually the year that work was the survey. It was the year or the series year, if you sometimes will see that, but it is the year that actually came out. Series information, this is for the older years other than the original. They came out as Bureau soils and all soil survey. And then for the once prior to 1928, which were in the field operation of the Bureau soil, they often include page numbers and appropriate maps.

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So example there for the South Dakota grant County 1928, that's when it was published, it was in the 1922, volume, pages 6049 to 1679, and also needed number 44.

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Additional information, this is where we added all these oddities. So most often this would be though this was only issued as a bulletin in the South Dakota experimentation. Sometimes it was also issued at the bulletin in the South Dakota experimentation. So any that information is noted.

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And this is the most common things that are in that other information. Occasionally there will be some other odd things. I was previewing it just the other day, and I remember that in Virginia, Alexandria County there is no survey for Alexandria County and it was really old announced a new one because Alexandria Virginia was renamed Arlington County 1920 we added that note in the other information.

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And that SuDoc is likely the SuDoc number for the survey, and most likely, not a guarantee, in the CF the file does have assorted by SuDoc as well that's not in the did PDF.

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And that is basically how that's all survey inventory is organized.

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Next slide and back to Jen.

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Thanks Helen. So hopefully if you saw the inventory, there might be some patients might be interested in, [ Indiscernible - low volume ] we decided with a couple of specific uses. One, the first is still in collection data. It can easily be used as a needs list, for a specific state or region. If someone is interested in the entire collection on the soil survey it can be used [ Indiscernible - low volume ] for that. It can also be used for selective weeding. It allows me places to see surveys that they collected in the past that may not be [ Indiscernible ] anywhere pertaining or depending on the region, you may be able to formally sensitive. A lot of these surveys are older than five years. And are eligible for new parts. But what else is you can also replace of the digitized version from USDA. We hope this inspires some folks to consider becoming a preservation steward for this significant collection. It is nationally known, it's basically national



collection about soils. And the hardest part of the preservation steward thing I think is coming up with the inventory. So hopefully this makes a part a little easier for you.

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We also, Sandra and I previously did a project on soil survey, vision to try to provide better average. We all work in a land-grant institution that originally started as an agriculture college, so preservation lands are important to us and for the University. So we were trying to figure out a way to make things better. And I was actually able to use the inventory to do that.

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So here are some demonstration projects. Involved with that. The first is a live guide. That provides links to the inventory, back on information about soil surveys, all on key links at USDA national resource conversation service. And then the second two projects are actually things that I did with the inventory. All of the texts from the, his projects is taken from inventory. And they are focused in Utah. So the first is a timeline. Allows everyone to see basically when those surveys were published. And what areas can be surveyed at any time. We also did interactive map for this more interested in the geography of it. And you can then look at that. Previously Helen said the counties of the most popular, that is definitely true. They are not the most popular for you so. So almost all of ours are areas. Which made geocoding interesting. I think they're still somewhat again with the actual batteries of his short surveys so that people can drill down and see exactly the boundaries that were undertaken. I haven't, for this project. But that is an option.

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If anyone is interested to see more about those, I have a little bit more about this in exercise but I wanted to the questions are before we get into that.

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So with that beingsaid, we're now at a point where we can have some questions and discussion. I haven't seen the chat. Hopefully with more than just darling, but we welcome any questions or feedback from the audience.

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S Gentile UK couple question so far. And if anybody has any questions, please put that in the chat box, but the first one is how our state docs organized if not by SuDoc ?

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That's a great question. We did not include that in our survey because we discovered the state document, we had discovered the state documents until we had done this that's easy to the location of the library. Here at Utah State, ours are organized by state, by publishers. In the department. And then by the three titles.

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So for example we have the agricultural experiment Station. Waltons come before circulars on the shelf [ Indiscernible - low volume ].

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I can speak to Penn State's way of doing that, at least in agriculture which I am most familiar with obviously, we LC catalog almost all of those publications. They were sort of standard experimentation publications. They were catalogued as various.

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Next question. Curious as to how many of them have geographic metadata included in the record?

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Yes. None. From what I can tell.

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We are talking about skin set, the process has been going on for about a decade I think. Parents are correct me if I am wrong.

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I think that's about right.

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And digitizing 5000 documents takes a long time. As I mentioned, I think not all of them are this yard, which is a concern for ADA. But it's solvable. The geocoding [ Indiscernible ] and we [ Indiscernible - low volume ].

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Is question. Did you use US documents master file database?

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Now for this project, no.

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How often, if at all, and is a soil survey get an update or even be done? McAllen, do you want to take this one?

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Sure. Is, varies by never two four five times. In the past come in different once. And that often depended originally on how important that Tony was. As I mentioned at the start, Lancaster County has four printed soil service, information is available. Lancaster County facilities and like the most production are productive agriculture area east of Mississippi, the counties that were marked rural, but had a huge effect on agriculture, very important agriculture, were surveyed more often. In the earlier years. As urban areas and other things came into play, 80 some of his counties had only been surveyed once. We have counties in Pennsylvania that were only surveyed once as part of the rented version. Some of the counties that are all for us, they weren't agriculture and that Pearson's, they were more for street. So it varies. So for the web soil surveys for the current information, some of that is updated every year. And they don't have the actual data on how much it overturns over time.

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But they do, I know what data they uploaded at least once a year for the web soil survey.

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Okay. Can our patients use it as well?

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Absolutely. It is, the inventory is in the Penn State digital institutional repository and is open to everyone.

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Have you ever considered how libraries keep their list updated? If the collection is open, things can go missing. How the section a week ago, also how are people storing their collections? We have are saluted and shelved.

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Yeah, that's a great question. From Suzanne about keeping inventory updated. [ Indiscernible - low volume ] we have a complete corpus of material to look at. As far as for access, how does libraries keep their collections, for core collections like this, we have in the past shelters to actually inventory, previously we did on annual basis and I love to do that on in will basis but every 3 to 5 years we go three with [ Indiscernible - low volume ] so I can completely understand. We didn't get into exactly how people restrain their collections. We also have ours folded and shelved, but we did ask specifically meant to permit and many of these were in maps areas separate from the actual publication. But not all.

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Agents use this as part of the business?

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Yeah. As I said , the inventory is available. It is freely available on our repository. So it's got a creative Commons license on which means I did want attribution and the CFE file in particular, I wanted that out there so you could manipulate. So for instance for Penn State version of the CSV file, to know what is specific and maybe what date I noticed that we find we have to do an inventory. On this was missing on the state, you know? And do I want to go back and try to find it, whatever. But you can manipulate in any way they wanted to, and I don't really, I don't care, we just want attribution for the work we did.

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Yes. So I wanted to add on to that. And just dropped out of my head. It will come back. Sorry.

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Okay, we'll take the next question. How to make the timeline?

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Great question. His our references. [ Indiscernible - low volume ] so I created the timeline and hoping for projects from night lab on timely and, timeline and to provide the text from the inventory using options in itself. And many added the survey links for each Utah soil survey and then I took a screenshot from a representative screenshot of the surveys that I and also I have 54 Utah surveys . And by far the most process was choosing screenshots. Because I want people to see the diversity of soil surveys. So this things like that tables we saw early the presentation, but that they are beautiful photos of areas that have not been developed in Utah, and I want people to see that I dig into the carbon Emery area, which have parts of carbon counties, they will be able to see that. But yeah. So it's truly just something to get people into the documents while also providing the quick links, as you know that's a hard sell sometimes.

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Do you have information on where to find the same sort of information online nowadays?

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So I just put in the checkbox where they web soil survey is located. And that is where the current soil information is housed by the and RCS, and you can drill down to the specific area if you want. They have all sorts of data in there that I would not even try to understand. Honestly. Because it gets more into that science , soil science attribute things like that.

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And then I just shared the link to the digitized surveys in the links. But yeah. So those are there. If you don't have the SuDoc.

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How long did it take to do an entire state-by-state inventory? We would have to ask the USDA on that one

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Yeah come see me the inventory that we did? Is it the question?

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Yeah. I started , I did my initial work last summer. So a year, like over a year ago. At the summer. Which is a good thing, because I actually had to physically look at the soil surveys and of course am working from home right now. But it's not that I worked on it constantly. It was like I would work on it for an hour a week. So from when I initially said I'm just going to stop putting office project to inventory my soil surveys, with only May 2019.

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But then the whole inventory was I think done May 2020, when I send them finish working on this.

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Yes. Sandra, did you want to talk about the [ Indiscernible - low volume ]?

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Certainly. So the web soil survey on the website is deep and rich and has all kinds of stuff, but there's too much and it to be using out in the field. So you see David developed an app for the fieldworkers to use so you can grab your phone and actually look up data on a piece of land while you're standing there discussing what you want to do differently about it. So yes the desktop version is too much for [ Indiscernible ] but he app has really made it much more formal and much more useful for those on the leading edge, as they say.

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They, and I can remember what I forgot earlier. Which is that after Helen vanished the bulk of the inventory, and we combined with our inventory, so there's still several locations that she had an inventory, so those were checked on the publications in that process each week to do that. So the inventory can actually use to identify [ Indiscernible - low volume ] which I will be contacting GPO about in the future. Some of them are the publications that made with the skill set that many of them are [ Indiscernible - low volume ].

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Are based on present in [ Indiscernible - low volume ].

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So you can see that here on the right column. There are a couple that are blank. [ Indiscernible - low volume ]

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So there's no question. This is great if you decide to do an inventory like this again, what series would you tackle next?

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All that's a great question. I just did this, Kate . [ Laughter ] I'm just kidding. There are plenty. Right now we need to do our formulations in the state and water supply papers, and that's a really great one. And also incredibly necessary in the air then in Utah.

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And I would say like as an act library and I would say water supply would be super important. I'm not going to do another one. A pretty particular. I think you have to have somebody who

cares about that topic. I really care about the soil surveys and I want to know what we had available and what we should have had available and I think should have that impetus first to really pull it together, almost from the subjects viewpoint. Because I really wanted to say, I chased down that last word when that was a North Carolina publication of blah blah blah. So I think that's an important piece and I did not understand all the government stuff, essentially gender so she was able to educate me on all that stuff.

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I came at it, this is just speaking again, I came at it [ Indiscernible ] as well. There's so much USDA staff that my subject areas could be using if I could get them to a more. And most guilty about is not only knowing what to do. And so let's start with that.

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Has another question from John Olson, if we find in our collection surveys that are not in your inventory, we want , do you want us to notify you?

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Absolutely. Absolutely.

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Because I can update at least the CFE file so that would be accurate. The requirement was it had to be sort of a general soil survey, you will find the publications that are like these are the best soils for growing tobacco. The big deal they are really [ Indiscernible ] by the way. These are the best soils for growing tobacco, and we did not include any of those. Okay, so this is actually one on the map and I wanted it to be about a specific area in general, not about these crops on, you know in the Connecticut Valley.

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But yes, if you find something else, absolutely.

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And then finally, I'm into the interactive [ Indiscernible - low volume ] the various colors are what decades the survey was published in. So as you can see there's a wide diversity. The warm colors, red, orange, yellow, or older, the cooler colors are more recent. So if you see the purple once a national Park were conducted in 2010.

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So there's a question, will the session be recorded for later viewing and the answer is yes.

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So if you have a questions, please let us know. We have a couple more minutes.

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If you have any questions about this session, please put them in the checkbox.

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So there's a nice factoid, Connecticut Valley tobacco is used for cigar wrappers. I did not know that. I didn't know that there are some things that growing tobacco, not just in the [ Indiscernible ] but there's certainly some of the going in Pennsylvania and Maryland.

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Just I'm from Connecticut originally and most of that beautiful rich soil being built on now, which is crushing to see, but yeah,

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When an interesting factoid Jenny, that is fascinating.

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Cool. Yeah. Yeah.

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I was think of tobacco as self-care or South Carolina or North North Carolina.

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Cool. Yeah, you know it's funny, some of the information in the counties, you actually see the agricultural histories many, especially in the older surveys, you'll see information about when the white colonizers came to the area what they did all the horrible things they did. So it's really interesting. You can get little brief agricultural histories often in the soil surveys as well. And they describe sort of the area which is very interesting.

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All right thank you offer engaging so heavily in this topic. And I placed all of our emails. So if you would like more info to send us a survey find, please let us know. Thank you all for attending.

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And thank you to our presenters today for a wonderful program. And thank you to our audience for participating in the virtual conference.

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So it makes we have digitizing history and material sets, and in our other virtual meeting with, the next program is so big that even at home large project management during COVID-19, if you want to join that, you will need to close out of this virtual room first and use the URL to enter the room in the meeting them. So this can be found on the that case which is linked to the [FDLP.gov](https://fdlp.gov) homepage and on the link it can during the session. And we would take a short break and back up at 330 p.m. Eastern time, so in about 24 minutes. Thanks.

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