Please stand by for realtime captions. we would be getting started in five minutes at 2:00. Good afternoon, everyone. Have a great webinar for you, today. It is entitled Introduction to Geosciences Library Research . Again, my name is Joe. And with my colleague for support our presenter, we welcome her back. She has presented eight webinars for us rigorously, Emily Wilde, Emily, joined the Princeton University's science library us or chemistry geoscience and environmental studies librarian into number, of 2018. I'm going to read you more about Emily. She has a bachelor of arts in geology from Heartwood College and a master of library information studies from the University of Rhode Island. 2018, from 2008, 220 18, Emily was a librarian, a physical scientist at the U.S. geological survey library in Denver, that is where she resented her previous webinars from, she helped library users find and use legislative materials provide science and government outreach information, instruction and map instruction, as well as develop and present online in person training on topics of chemical and physical properties of the atmospheric rock, sediment and water geochemistry, and geophysics organic and inorganic chemicals and availability of mineral, energy and water resources from 1996 until January 1996 until July, 2008, she was a U.S. geologic [Indiscernible] in the New England states, she enjoyed fieldwork, modeling, report writing and stem outreach Wellman lighting, as an academic reference librarian. Oops. Can anybody hear me coming out? Now? Okay did everybody here what I was just saying, about Emily? Okay. We are getting mixed messages on somebody that can hear me, and good, I will continue on getting to the end of Emily's impressive bio. Anyway, her scholarly interest include library instruction, reference on Tatian and data management spatial datasets and physical laboratory sampling methods okay. Very impressive, and we have some housekeeping tips to go over. Before we turn it over to Emily for questions or comments, feel free to them in jet box located in the bottom right-hand corner I will keep track of questions that come in at the end of the presentation and Emily will respond to them. We are recording today and we will email a link to everybody who registered for the webinar. We will send you a certificate of anticipation using the email used to register for today's webinar. If anybody needs additional certificates because multiple people watch this with you, email outreach and include the title of today's webinar along with the names and email addresses, of those needing certificates. If you need to zoom in on slides shown by Emily click on the full-screen button in the bottom left side of your screen. To exit full-screen mode, mouse over the blue bar at the top of your screen. Click on the blue return button. You'll get back to the full view. At the end of the session will share a webinar satisfaction survey. We will let you know when the surveys available on the URL. We very much, appreciate your feedback. Also, keep in mind to reserve your comments about presentations on the value of the webinar and use the chat box for questions you would like to ask Emily, and to report any technical issues. With all of that I will hand the virtual microphone over to Emily, who will take it from here. Great,.

Hope everybody can hear me. Used to chat box if you need me to speak up I will put it at the highest volume. Thank you, again for participating in this Introduction to Geosciences Library Research is still mentioned, I was at the U.S. geological survey one of the great asked vector for net Princeton Princeton University has a long-standing commitment to service and the motto is Princeton in the service of humanity. So, when I approached Princeton about continuing the presentation webinar, through the GPO programs they were completely on board. I'm very excited to have this is my first one I will do additional ones throughout the year. This is a quick intro to the library of geosciences. This is a snapshot and with the Geo magnetism and all the

earth layers, let me get my pointer out. All the different earth layers here how the earth is with the plates how they are constantly moving and plate tectonics and also, I help people and describe two people hydrology and geology everything within geosciences, but also throughout the solar system. If there's anybody looking for more information, please let me know.

This is me. My official photo. My background is still mentioned, I've been a employee for about 23 years. So, as you may imagine most of my content has U.S. geoscience imagery and it. There are a lot of photographs available within the website that are available to the public if you're looking for instruction tools. One of the aspects working this is scientist and librarian that I look to incorporate is environmental law help a lot of attorneys. That is another as if you're ever looking for that information, as well. So, this is a list of the previous sessions I have given through the years. I started in 2014, which I guess, is quite a while ago. What is this for, I still have copies of the PDFs and originals. As Joe mentioned, they are still online. What I use this for one am working with researchers, if they are interested in how something used to be within government websites, I have the original links and you can use those within the archive.org. You can use the way back machine to see the history through time. But it is useful for, is climate change. When I was in the government we had categorized as global warming, global change in climate change. Sometimes when's they are looking for documentation, you have to search for all three of those terms. Those are three different keywords or subjects.

So another tip, this is my favorite tip to show people, when the U.S. just changed web content from HTML to XML, this happened in December 2019, not everything was exactly the way it looks however, you can still go back and if you that you archive.USDA.gov you can obtain that information and here are two examples that people are usually looking for human health aspect and this one the data for let's see, the geology.USGS.gov data it is kind of fuzzy hair but if you go to the links, you can see you can keep clicking within this and get information. So, this is I'm going to go over the geosciences and what is geoscience and who is a geoscientist and geoscience databases and difference inserts options between Princeton labor and specific databases within geosciences and research at Princess and the survey library. I used these webpages daily is easier in some ways because the U.S. is library has cereals listed by Tuttle and Arthur. It can save time if you are looking for specific subjects. And I will give some examples.

So, what is geoscience. This is the Institute and the link is there, as well. This will be, -- fees will be clickable when you get the -- the reason have these different colors, and I will talk about these leaguer separately, it is how I organize the different information. So this includes any asked backed including humans and because of that, one of the aspects of the Aegean science is not just the department and environmental studies groups but I also have most of the humanities and social sciences as well as photos from nearby universities or government agencies or oil and gas companies, etc. My job in some ways, is very similar to the weight used to be when I was at USDA. Looking for the same types of information when I started working out.tran16. This is kind of an example of using imagery of the different levels of Geoscience information out there. So, there is Michael organism and there is a visual level of standing on earth and seeing a volcanic eruption. There is the looking down from earth from a satellite. There is looking at data sets of the entire earth. There is also looking at Geoscience information for different planets [Indiscernible]

Within the oceans atmospheres, rivers and lakes and glaciers, it is atmospheric science biology and hydrology and oceanography when you take these subjects together this is a snapshot of the different type of information that students are researchers are usually looking for. These are all USGS images I use this critical zone is a description of how the information is available. This is from the USGS and other entities. It's a good visual aspect of that. I used the layers and so again, with the humans here, this is where humanity and social scientists overlap with all the different other Geoscience layers . This is the data set map, publications by different types of layers within the ecosystem, itself very.is the type of information that I help people it's Laura that you can help within your library. And, so, I used to be a hydrologist. I always include some type of hot water data is collected did and so, this is [Indiscernible]. It goes across kind of like this.

Many data are collected to create summary data, of the flow velocity for a river. This is chlorine and the [Indiscernible] of the coral reef. These are water cycle images these are available in several languages. Depending on if you are working with international [Indiscernible] you can use the English version or whatever language available, for the country or people within your demographic you are helping. So, that is quite popular, though water cycle in multiple languages. So the other aspects, there is water and there is rock. The court stuck structural geology oil and gas and deal chemistry and geophysics and this is a picture that [Indiscernible] webpage and usually, I have the link on this, but because it is updates to all webpages, I have to find the image and link. I'm behind on that. This is a different plate magnified three times this is present-day, earth here at the bottom this is a rock cycle. The rock cycle is constantly going in different directions and changing through time. And, when people interested in just you try to give a quick snapshot, about the three different types of rock which are sedimentary, metaphoric and the volcanic and I use peanut butter and jelly sandwiches as an example for metamorphic rock. There getting smashed and this is the Grand Canyon. It is the horizontal bed.

So, another aspect of using these two cycles, images, is that if you are searching for databases or raw databases, and you're looking for terminology, a lot of the info is right here. You can use these words, to search us to what you are looking for if you don't necessarily know. If you are not quite sure, it's helpful, because this has a rock cycle, by type and different types of rock within each. Sedimentary rocks and [Indiscernible - muffled] marble and metamorphic rock and igneous, is like a basalt. Those are some tricks. Within oceans, this is a these two figures I've used a lot throughout my career. Especially in the library a lot of times people ask why, oil and gas is inland for example in Colorado. This is why because this is [Indiscernible - muffled] so this report, by USGS has Paley allowed the kids in them they shows how the plates have changed. It gives the history of that and data information. This, I is to compare two different coastlines. This is 5 million years ago and this was [Indiscernible] this is from 20,000 years ago when the coast was more out along the Atlantic. So, climate is changing and so, it can go -- there are different ways it can move up or down, depending on what the future holds. This is a snapshot from. This is at the bottom. This is from the same page the link is here. It has the gulf stream and different currents and how everything moves, like this hurricane patterns. This is from yesterday. It's the cliff of the ocean contour. So, if that is of interest who is a geoscientist? Here are some examples from the University. Last fall, there was a hurricane came through, Dorian. But, I looked it up kept finding information about, Princeton. That was interesting, because my past job when the hurricane was happening, there was somebody from the survey on television. That was interesting change. For the outreach. This goes through different

information about what's happening with climate change related hurricanes and it's informative. Another example, is Princeton's [Indiscernible] who has info about dinosaurs and they were extinct because of volcanoes. This is interesting and when this came out in the Atlantic in the fall of 2010, I had several inquiries about, this topic here from within pension and also the public. Researchers looking to get more info about it. This is a press release from last year. This was about the I'm sorry to Indian subcontinent slamming into Asia, which allows for more oxygen in the oceans increasing which [Indiscernible - muffled] similarly, when I was working the [Indiscernible - muffled] chemist engineers, geologists, hydrologist, librarians, mathematicians and physical sciences, and many, many more. There is a list and it's insured disciplinary when it comes to the subject matter. You are looking at the Earth from different aspects. These are examples of colleagues from the USGS.

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so I wanted to point out, that, every USGS employee has a professional profile like this. There is contact information and now, that there's info in the news she can feel free to contact them. These are my two favorite publications one from [Indiscernible - muffled] have used these often helping people to start research and students with papers. This critical analysis and I've been using that. There is detail. So, one of the ASP that they do as a librarian, like to see where this publication has been cited. So, I go through the basic -- somebody asked me how I find [Indiscernible] this is my method. Go through all the different kinds of databases and I checked the Princeton library. This is a quick aspect of it. This particular one is cited and it's not in [Indiscernible] there is a link, to attend Princeton University library there's not a link in the USGS it's in the warehouse. Starting in January, 2009, she is me. They decided to stop putting in the record, for I'm sorry USGS online only publications. That is why all publications are in the USGS library. They are coming into Perl, that is my habit within the Princeton University library. The central African diamond database this was only available within geographic and the publication warehouse. If you are in a rush, most of the time I recommend to use geographic first but you can use the other databases, as well but often, including all the content that somebody may be looking for.

Okay so this is in the link for the survey and also geological survey and I still use the geologic column organizations of the world because of this with every country on earth they are linked to the [Indiscernible] the American Institute has a lot of information about geology. Did you the dictionary of geology. There is more information, as well for the members of society. One of the members is the geological [Indiscernible] of America and the two of them, geoscience organizations, I is the most is the GSA and the union. I'm also librarians specialist the information society which I am part of and have been for quite some time. I want to click on this, the coalition and the liquid dad. You have to use this archives, to see this coalition what they have done, in the past. When I worked for them it, they're basically an advocate for the USGS. These are the members of the American geoscientist Institute. Likewise, these next two slides from the geological Society are a large group of them. There are 40 of this page. There are 76 results. If you are looking for specific types of geoscience, this is also a good place to go. One of the things Grafana this is overseen by the American geoscientist and the kid. It covers the geology of North America from 1566 to the present. The rest of the world for geology from 1933 and it is an incredibly comprehensive and so, I finally had to use one database, if I was doing world type searches, I would use this one. It is available through the think they still have it. I am not sure. The habit and they did when I was there. So, one of the things that I'd don't think is

necessarily 100% true date include references from the geological survey and the reason is that, I searched it myself. The only found 45 results per I know I have over 70 citations. So, just searching myself, I couldn't find all of them. Keep that in mind when you do searches within any type database. So, another thing you can do. Is, if you go through this USGS index is 1970, you will find them not all the bibliographies [Indiscernible - muffled] there are still citations I need to be added . The third time it will USGS this is more links you can search. And, this is the second one. It this is the other length is 70.

So, I continue as an example to show different publication databases. So, when I search, I found one citation. This is from an abstract I did last year for the American chemical Society. I found two documents, about myself. They were both about the online sources on hydrology. That is the same publication. One was published as of book chapter the other was a journal article. You are one of these databases has work I did as a hydrologist. When I was helping students, one of the most important aspects I go through with them, is that in some cases it is easier to use Google, then it just use one of these. It is capturing more of the geoscience content. So, if you do not have access to geographic, a lot of times on is working out in Colorado for mining companies or gas companies or consultants etc., they didn't have access to commercial databases. So, these two databases, you can search them for citation for free. There open. You can still at least search for the publications. Also when people root tire, especially from USGS, I used two recommend these to them. They are easily searchable.

I use this to enter methods of wastewater alert. These are habits of mineralogy and transit if you are not familiar with these, it is by AGI. It's available for free and searchable. It is not the full text, but part of the library considerations, this was it one online last September, September 2019. So, this is an effort for the web archiving program. They are Brown University of Chicago and Columbia, for now. University of Pennsylvania Stanford and this particular project, was but they are housed through Columbia University. Columbia, Dartmouth Duke and Princeton were involved in the archiving. This is an example of one of the archiving guidebooks. There is tons of information content and it is very, -- it's one of my favorite aspects of geology. There so much information in these books. They are not available forever. Sometimes it online. Sometimes there published in print and scanned or etc. That's the program.

So another asked that of geoscience, and as I mentioned this geographic am I decided with to develop or come up with development plans. I decided to look at what has been cited and how people can [Indiscernible] citations and what gaps exist within the library catalog and databases etc. So I pulled everything from 1560 two 2019 to look at different citations for Princeton and even though the survey -- their published publishers in journey and that would capture all of it and, so I looked at the publishers American [Indiscernible] and geological Society of America. This is what I found and I used three different sets. One was 1894 to 2019. I looked at the difference total and I looked at 2019 or 2010 to the 2019. For Princeton, itself. When it to see where people were publishing and the topics. Okay. I wanted to see how the content had changed and I wanted to see how it would affect the development plan from now on. Sometimes as research -- subjects are evolving. One thing that popped up when I did 2010 10 to 2019 there so much chemistry. One of my colleagues was frustrated. Anyway, this is helpful, just to see what pops out and you can do this through time. I also was looking at set of interest to see what the discoverability was between the publications and affiliations compared to what the USGS

warehouse but I was a little overwhelmed, because I never really looked at this before. I was USGS and so, it was a little overwhelming to see not as much was countered that I thought. And so, look at different time scales or different groups the total content until citations from total years. Then, I looked at 2010 to 2019 and 2019 and that was kind of flooring, to see how much was not captured. I thought Moore was captured. It looks like within the last few decades, Moore has been captured. So, I need to look into this a little bit more, to see. One thing that stands out, [Indiscernible - muffled] so this is the actual -- compiled all of this through searches. Dissertations, reports, books and compared it to what they had and so, the USGS warehouse is the source of publications and the only aspect that wasn't in there is the [Indiscernible] but I'll get to that later in the presentation. I also wanted to look at was, and, this is something I used to do every year when I worked at USGS. Thank you to the survey for providing us again. This is the USGS publication warehouse download. This is for 2018. One of the aspects, when I'm doing instruction, I like to show students, is that, where is it? This groundwater resource has always been in the top 25. It's one of the most popular publications, but it's not in a lot of library catalogs. It's in a lot of databases. Is not captured. This is incredibly helpful as a source. The other one that popped out was the data test site. Did not realize how popular that still was. But, I get questions all the time, about the data test site. These top 10 downloads completely reflect the type of information people are asking for from me when I'm helping them. So this is for 2019. The one that popped out the most was this. When that was published it was my number one topic, here at Princeton for [Indiscernible] people were interested in how it was raining plastic. Again, it had 26,000 downloads. Is it even discoverable in a library catalog? But people are definitely interested. That's the type of information I'm looking for. That has been incredibly popular. I think in my whole career, somebody always had copy that on their desk. Used to have copies but I gave them all away. So libraries. I mentioned that the Princeton University library and the USGS geological Ebright use these every day. A lot of academic libraries, have government documents listed as serials where is the entity itself geological survey has materials by title and director. So, if you are searching my subject, it's easier, because you can have multiple subjects in a series. It's easier for me and I show the students how to find stuff too. In addition to the publication warehouse.

This is information for New Jersey for the library program. We are open to the public, because we are federal library. So we have a sticker on the library. So we are here. Sorry it's blurry 370 and it lists Firestone. A lot of the geoscience material essentially here in the science library for the other facility I'll get to that in a minute. The first thing I did when I was coming here, I like to look to see how how the citations are being captured. So when I am showing students how to use different resources on various topics, especially if they are looking for water use and availability, show them I use myself as an example. These are the different methods and resources you should use. This retrieves six records. But if you go to the USGS library this is in here an exception is the abstract I did for professional conferences. I don't think this is correct. I think there's another person with my name or because my name is an adjective, it's coming up including different things. From what I could tell, it says half my work in there. Then USGS has 64 Dan . Within the warehouse, that don't include the abstract. That's why it's not as highs other areas. This is science-based. The society can find additional information. These are just citations this is an easy way to find that type of subject matter. So, that's kind of a quick overview I give somebody's entourage. We have many different libraries. If you are looking for any type of information you can contact us. We have chat. We are spread all over campus. We are part of the [Indiscernible]

direct. That's listed here, as far as how we within our group, if somebody's looking for interlibrary loan, etc. As possible, you might have to get it from another university but internally, often we get looks from all of these. You also can get but we also have recap. It was created, in 2000. It's Columbia, Harvard and Princeton and it is here across the lake and this facility. Sometimes, Princeton students will request a book. Often, I have requested items and received other it is not Princeton, is another group within recap here. That can happen as well, if you're looking in our catalog, it actually might be singing the Columbia version that comes up in the records. If you have questions, let us know. Please, don't hesitate to contact us for that. And, this is an example of this. This is an example. This is one of my favorite tricks to show somebody. This is Kevin if you have a question please feel free to contact me. This is from the geoscience department. He says there are two copies. One is recap and this one, you can request. If you -- we might have a renovation template I'm not sure if this will be active. There is a reading room for people that are affiliated. You can request something and with this one particularly, this is Eugene Shoemaker. There are Shoemaker words. He is also the founder of the program at the USGS and so this get 100% sure that this dissertation he did that is on my desk actually, it's the same report in the USGS publication warehouse. So, there is questions and anybody needs help please let me know. This is information about this program at USGS. So another example is I think my entire career in Denver, everybody was [Indiscernible] then I got a question about his dissertation, and realized that it also became a USGS report and it's not available online. There is a more current version available from the warehouse. So, likewise this is available for interlibrary loan. It is also the content online in here for the USGS. So, so, this is a quick summary of the U.S. just inquiry. The reason why I used this term obligation database there is the raw database of calculated data I have been using this figure for several years because when scientists come in, they usually come in with the publication citation. They are doing library research and see what calculated data and essentially they want raw data. When I was working at USGS for scientist doing the investigation, they are collecting raw data and calculating it and mapping it and then they publish it. So, these are two different ways I see how this goes further inquiry. In

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Here's a quick exam bowl from the four corners. There is talk about the uranium mining around the Grand Canyon. How that would affect water quality or what would happen to the watershed. These are some quick information images. I'm still trying to find and get the links. So, this is the surface water and this is groundwater and this is how, through time the Grand Canyon could look like. Where it isn't other parts of the West is the same formation like here. Through time -- it's a quick way to explain geology and what is in the rock layers and what type of minerals and oils and gases etc. This is usually what I find for people that -- when I'm helping finance and economic and other majors not necessarily science majors. We have the [Indiscernible] certificate program. You can obtain that from other departments and not just [Indiscernible] science. Anyway, so within the prison University geosciences, there is [Indiscernible] geophysics and paler climate that's almost exactly the same program that I was embedded with when I was at the geological survey. The topics are pretty much the same. The associated programs are different and we still work with the government. It is very similar. So one of the things that I like to point out is undergraduates, juniors and senior papers. And they etc. so they are doing research, starting in the junior year they start to get interested in doing research, in the first year. And, so I helped with the writing seminar program, to introduce them to the library, especially in the geosciences.

If you are interested, this is the geoscience associated program. The two things I like to show people in the videos and recent podcast. If you are interested in how seismology can be used, beyond first grade this is a student project that was done last year. This is the video archive. They celebrated the 25th anniversary, last fall, so there was a conference and [Indiscernible] I felt completely at home the first day, because this is one of the images that came up. This is [Indiscernible - muffled] water and I remember when that was published and so this is the same information that was always discussed at meetings etc. when I was at USGS the biodiversity and water. So, if you are interested in receiving more information about that, please let me know. This is the USGS survey are highlighted in blue, and I was given a presentation about water to show the different parts of the [Indiscernible] connected to water. But I still like to use this to show it is quite large. The trafficking works with just about every federal agency. Even if somebody's looking for information, for public defense or USDA, EPA, the information and data, may probably be used for the [Indiscernible] product. I walk people through how that [Indiscernible] as well.

And so if you are looking for information about geological [Indiscernible] here it is. It's a version. There's also the international 2019 version. This is what I use for outreach and ASIC information about beers crust and different content I used versions of this students are learning, more about geologic processes or if the public is looking for basic information about the table of elements. This is from the los Alamo slab information. For chemistry, this comes up often. This is about the father of geochemistry. I still receive inquiries about this. And, the composition of the river and lake water of the United States this is used a lot more. If this comes up in the research group from the link is here. Let me know if you need more information about this. This is my favorite image, but water on earth. People don't realize how thin the crust is. The volume of water is not as much as people realize. This is a great information and this is, this is all water on earth. By metrically. We only have so much. So, where is the Earth's water? This is a great way to look at the total global freshwater. The systems water and freshwater, available on earth. And again, I is this about the why there's oil and gas in Texas and Colorado and New Mexico. This is the historical ocean. The other aspect of water bearing material for water supply. This is a good wine for the last [Indiscernible] this is the investigation of the lower Mississippi. It also the greatest [Indiscernible] if you are looking for that information of how the Mississippi is incredibly [Indiscernible] channels all the time. That's for the Army Corps of Engineers. And, so, this is the [Indiscernible] unit in the watershed boundaries. I usually, especially when people are looking for wider information use this to show the [Indiscernible] I compare them to the geologic promises and in fact, defined by the rock layers, how the rock -- the different aspects of geologic processes made it that way. The groundwater follows the same delineations as the ground rock formations. This is the water the water map of the four corners . at the Colorado Plateau. Here so it's just the basics of hydrology. For climate change, this is an interesting topic that came up in the spring semester 2019. We had two discussions going on. It was a public discussion, but also within alumni. We had the climate scientists analyzing what's going on with climate change. At the time, the White House the senior science technical advisor, was affiliated with Winston, was taken the other side. It brought the kids discussion on campus about why, the support, they were supporting it or denying it. These links are available if you are interested in that discussion. One of the aspects that came up during this, is that, some climate -- some people are in K with climate change happening and one of the aspects that they mentioned, was that it's

because the new shipping routes will open in the Arctic. It's easier to extract oil and gas under the Arctic. Just in case does come up in your libraries or within your discussion within different departments or communities etc. There is other information. So, this is another topic that came up in the spring of 2019. I was helping people look at the areas that were going through [Indiscernible - muffled] when they decided to open it up, one of the questions that came up was, how much economic gain would be the mine uranium and oil and gas etc. And, so this is an aspect of looking at this from the community standpoint. For people living here, this is looking how was affecting them and [Indiscernible - muffled] I helped them by its lending to them how uranium is formed and what uranium mining looks like. The rock cycles and the uranium resources in the United States and this is a quick map put together showing -- on the previous map, it was the yellow outline was the original 2016 boundary. The solid yellow, is the current boundary it was reduced to. So blue is the uranium. Then, the pink and purple, are oil and gas. And, so it is just to show, a quick summary. So, the other aspect is looking at the service water versus groundwater. This shows what is going on. One of the discussions that happens often when I'm helping people, is uranium resources along the Grand Canyon and what will be happening with that in the future. So, these are the uranium concentrations affecting other states. This is the uranium resources evaluation and I still have a lot of information from when I was with the USGS and I still have copies of the indexes and the scans of some of the [Indiscernible] if anybody is looking for them let me know. I left copies with colleagues, as well. And so, pretty much, every day I have uranium questions still pretty because uranium, as you can see it coming -- not that there is uranium but there are other aspects. Etc. And, so, I do have information from the previous presentations and the information from Uranian minds in Colorado and other us books across the country, and the world with uranium deposits if you are looking for that, let me know. I can find uranium quickly. So, this is another interesting project that still comes up when I am here. It's the water quality that may come up when you're library research group. This is a local [Indiscernible] I still receive questions I received questions when I was at USGS and is still receive questions about what happens in the history of land use and the groundwater quality. And then most recently this was the topic when news broke in May. About New Jersey, and the TFA a and when I read the one of the documents that they were [Indiscernible] with the USGS and went to college I work with. I realized that, I remember where all of those bibliographies were anything and some of these reports are in the journal articles about [Indiscernible] I can quickly find them, if anybody wants more information about it. So, this is another example of something that some students were interested in with water quality and what happens with chemicals. And so I use this as an example. A lot of these three ports are government reports. They have tons of information data. I cannot find anything pretty much any database you know where they exist. But they do have a lot of information that might be helpful. My behalf to anybody you are helping. This is the [Indiscernible] on the Colorado River and I'm still helping people with this. There is raw data and calculated data here are the EPA reports they are findable within the [Indiscernible] and [Indiscernible] silent Springs is also on [Indiscernible] very interesting. So, mining versus no mining. One of the things I still do I help people understand and provide information. You can have no mining, and still water quality issues because the rocks are weathering. The reason why is because rock brothers in water. As a ghost or rocket captures minerals. They move along together. So, you can have water quality issues even though there is no mining and oil and gas coming on the .. So, other water quality topics and putting these in here in case anybody is interested will be doing a hydraulic water session later in the year. I guess in March. The water databases, earthquakes, more water honey

oh, here we go. So, the national geologic databases one of the go to places for finding double traffic maps and searching other geological surveys not just the USGS and also academic information. That's in here. Publication warehouse, is the first place I always go to, as well and a lot of times people are looking for the special data or data set. Go to dinner one you will find that information. So, the most current one is [Indiscernible - low volume] this is one of the most popular topics. When people find out I used to work at the USGS there is nice imagery. This is where I get a lot of my images for publication. So somebody asked me one day, they wanted to make sure they were current with all the information about oil and gas industry. There were not in sciences. They wanted to make sure they were keeping up with everything. We have the subscription on news and I know we did that USGS is one you can sign up for I think it is temporary I think you can get a one month pass. You can start a trial. This is available. There is also [Indiscernible] you can look at the [Indiscernible] alert here is an example of Earth science. I use this Rocky Mountain publication still to keep up with what is going on in Rocky Mount to keep up with oil and gas. Etc. So, this is an example from one of the -- September 20th. Has everything categorized like this. It's easy to find information. So my upcoming sessions are, get this is the intro to library research. This is in March and I will be doing climate change and energy, mineral and uranium research and natural hazard like wildfire simple candles and I also use art a lot to teach chemistry geoscience and mineral studies. So, gamma I think that, oh, thank you. -- This usually did not happen. So, if you are in the . and would like to visit the science library you are welcome to. I say good morning at the morning it's near the front entrance to the facility. So, if you are more interested in learning more about that university does more information about geosciences and the Giacomo Dynamo class which is part of the the barn and is operated by NOAA, which is the national oceanic and atmospheric administration, under the department of commerce, we have the Princeton Institute and Princeton University chemistry and also the center for energy and environment. They have other information and research, as well. So, if there's any questions -- thank you, Emily another fantastic webinar and they are always so packed with information. Any, any questions for Emily? We have time. We have plenty of time if your question. Oh, here's someone let's see, Christina and you mentioned Geo but not Geo base. Any reason for that? I've never had access to it. Any other questions? Somebody, will we be sharing slides? Yes, that will be up on the website. Probably it will be up tomorrow. So, you will have those and we will put links in the chat box for Emily spouse webinars with the and those also have slides for those past presentations too. Curry put in the satisfaction survey to fill that out when you get a chance. But, any questions? We have time. I know it is a lot to digest. It seems like a graduate course or class. Curry's put in some other information. We have one toppling the bear, the last few years on the one below that is all the webinars we have done and Corey is putting in links. Emily had nine. I think I had a I'm going to go back to do some research. I think I missed one AR webinar. Maybe it was USGS.

It was GPO. It was not a webinar. It was a link to the GPO website of how to use the maps.

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went okay. Okay. So, we might have more questions here. How about, science.gov. Is that useful for geoscience?

No. I have not used it in over five years, because it was so outdated. I stop using it. It was not -- so many things changed and so, yeah, I don't really use it. Okay.

Other questions. How do you best find the most current, appropriate data and location?

In the United States? He said yes. Sure.

It's the national database. It is this here. It has to map available, for each and each type. An Hasid for, and JPEG formed the interactive Google Earth. Unless you are looking at topological maps.

Let's see. Yeah, this leads into what are the key resources for finding maps?

That will be in my next presentation. As far as the police the national geologic map database in maps there is the MAPI in the topological view. That is a good way to search for everything. There's also science or is it find the best.gov? Science base.gov it is the children with all the different maps etc. If you want one all stop shopping type of information, you can search there. That will capture maps, images etc. Then there is USGS data.gov . It really depends on the -- that is why I use that one figure. There's that one flowchart that I had. It is about the type of information available and a research question. This one. And, so these are actually completely get but there are raw data sets on data at USGS.gov and the calculated map data information, which is the national geologic map database that has all the different schema maps etc. It's a map interface version. There's publication information. Each publication if it has to map all of these together, the record itself, will have multiple links to the map in the database, etc. So, if it is oil and gas, that is why, I will get more in-depth at each session if you are interested in all maps and data is, I will walk to all of it from Noah, from universities, from the U.N. and all those types of, anything related will all be in the next presentation and likewise with mineral and this is kind of like an overview. There is so much available. It usually takes eight hours to go through all of it. So, --

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Okay. We have a question here from Mark. Can you reread the difference between the publication warehouse during the regular online library?

Oh the publication warehouse was started in water actually and it was to document the citation and provide the online link and any other materials related to that publication. Within the formal publication and whereas, the library is more about what is in the library, specifically. And, so the library includes all geological surveys and all geological societies in the world. All the journals, publishers, everything. And, so they -- because of time they put it out in 2009, so that instead of duplicating the effort, because we had that paper reduction act we were told to not produce printed locations and publications anymore from 2003 2004 we were told why do you want to print report? I used to order two or 300 of my report to get them up for the public. A lot of -- you'll see must reports that were published online only. And so instead of duplicating the record, the warehouse is the official warehouse of publication, they have it there, instead of duplicating it into the library catalog. Within the new catalog you can search the catalog and the publication warehouse likewise if you're searching [Indiscernible].gov you will find additional publications and imagery and data set.

Okay, Susan, asks do you use any engineering databases for hydrology information?

I do. But likewise, it's very specific, so, I will be addressing more information during the water resources session in March.

Okay, Christina asks what other good resources are there, for ocean mining?

What type of mining, Christina? Mineral. Oh, Aaron. I'm getting mixed up, but anyway somebody type in Mineral. Does that make sense? Segment yeah. I'll be going more into that in the mineral one. There is ocean mining and landmine as separate data. And, so depends on who has the information, as well. There's information on -- if the mining hasn't happened it would be for Noah. If the mining is happening it might be [Indiscernible] or country. It depends on where you are.

I think Christina clarified. She said that the metric Mark Noah. Segment yeah, the USGS has a lot of them, as well. They work on them together. And so you will get the map in the USGS publication catalog as well with no sometimes it's the same map in the same data source. There is a huge overlap with USGS and Noah.

Thank you. The I don't know if I mentioned that sometimes the government reports especially USGS, there will be three agencies and each one is the same report. But it will have three different report numbers on it. That happens a lot. Also similarly when I mentioned that it Princeton the exact same thing became a report. Sometimes it is the same but it has two different federal agencies that cited. I will provide more information for more cases, like dad. Susan asks thanks. With it slipped away. Hold on. Check I had a subscription to eight. Yeah, I used it but I don't -- I find it easier to use the other sources. I have I did have a subscription to see what it was about but I never really -- I didn't find it as useful as others might. I was able to find a what I needed using other sources.

Okay. Corey is putting in links to Emily's past webinars. Great presentation and great question.

Our librarians are good. It might take a few seconds for the links to go into the chat.

I see another question. The catalog of publications. Yes, so, I it is funny, I never used it. Because, in geosciences so much of it is literature doesn't make it to the publications, because the catalog itself doesn't define it there are different intents for certain things. And, so, the monthly catalog for the survey used to exist then it became the publications warehouse. But but U.S. government publications has more the policy type information or legal aspects and because the USGS is it regulatory and a lot of the science groups that do research on regulatory they do research and provided the people that are doing it it doesn't usually make it into the government publication. So, I was going through the OP list at one point. There's a lot of series that are left out completely. That's because that's what -- USGS doesn't decide what goes in that. It decides, what goes in it. I hope that makes sense.

I'm curious Emily, how much scientist how much to the communicate by college and get information that way? Maybe publications are not created in some cases. Dissent happen much?

It happens a lot. When I was doing a report, -- you know, your list of what needs to be done. But, in some cases you know, when I was working in Rhode Island I was hired in Denver, I was switching careers and going from hydrologist to laboring, the [Indiscernible] that were in that I never publish them I wrote them but, I gave the information to the cooperator, but because some people had quoted it, it doesn't necessarily -- it's considered written and oral communication and so, it happens a lot. Check I can just imagine being on a cutting-edge field and you are probably sending emails and texting back and forth. Anyway, we have a question, how do you organize all these databases for your own use?

It's all in my head. I have a photographic memory. And so I type it.

That's a valuable resource. The it's convenient. Just like any other question for Emily? These are fantastic questions, on top of a fantastic webinar. We have time we have the luxury of more time. Two questions coming in. Corey put up the links.

Okay. I'm putting in a link. I'm working on an update to the paper. It's the online focus on hydrology. I look at and describe how geoscientists communicate with each other. It is very informal. It's one of the most informal subject matter. It's very common to have somebody call somebody up and say hi, I heard you do this type of research and geoscience. Can I have your latest report? What you have so far? Everything is informal. It's very open and shared a lot. That's why I think some of these cetaceans are captured. Because the field itself, so incredibly informal, that -- and it is open. That's something I forgot to mention. A guy has a list of free journals open access it's been available for a long time. Let me get the list for you. And, for some reason I think, because there has been so many materials available in geosciences, for so long, it's really available, the index it because it is available. This is a list of open access journals in the geosciences which is gigantic. When you look at it, most of this isn't included in any library catalog I have ever worked in. These are completely available for free. People are working at smaller mining oil and gas consulting or colleges that don't have money specific to geosciences. I put together a list and other information on how to get this information for free.

Fantastic. Susan asks with these links be included in an email? Susan, are you talking about the presentation? It should have links. Anyway. I hope that clarifies it. Go ahead. Go ahead. I have a quick question. Will it have all of this chat? You should be able to see the chat that will be part of the package. If I can but in quickly. The world's water, that has dropped. Does that mean there is only that much water compared to what the land?

Yeah. That big one over the Western United States that's all the water under the. People don't realize, when you look at Earth volumetric lead the crest is quite thin and so if you were to take the volume of water in the ocean and ice etc., put it into a globe of the it's not that much. That's why water resource issues are so important on earth.

People always always say 70 or 80 percent of the world is covered in water you know and oceans and lakes etc. but you put it in a whole different perspective. Ejectment yeah, it is sin if you look at earth as a solid orb.

I never would've known into the pointed it out thank you. Any other questions were getting close to the end but these are great questions. Corey put this in the chat box doesn't article by my former colleague it tells about the cabin in the webinars we do etc. so you might want to take a look at I want to get a chance. Okay here's a comment from Suzanne she had a conversation last night with somebody thinks watcher is renewable and does not disappear. Oh, God.

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have to disclose I was a hydrologist yeah there is only so much watcher between land like the crest you know the geology heart and you know space you know the critical zone where we live you know there's only so much. It isn't renewable. There is a finite amount. There's only the amount in our atmosphere in the eyes and oceans and lakes in groundwater. We actually have water balances and there's only so much within the basin. So. Check if you asked people they would send this water everywhere. There such menacing you point out here. I didn't know this I didn't realize it oh yeah that's a common question. Depending on what program you are in at the university and college. Some say that they think Waters always renewable I you don't have to worry about it from studying it professionally, and using it, it's definitely important. There's also the water quality aspects. Okay fantastic. Fantastic information I should say any other question? We have a couple minutes. I feel like everybody should get three credits or something really great information. Check my great questions too I don't think I've had this many questions before. Well, let me go to my wrap-up comments. Again thanks Emily fantastic webinar. Also I'd like to think my colleague Corey for great work thanks for keeping everyone running smoothly. Thanks, to the audience I know you enjoy this as much as we have don't forget the upcoming webinars we have two more scheduled for January the next one is next week. This is a big webinar. Wednesday January 29th 2020, it's very important. This ties in with that. You will receive notice of all of them when they are announced.