

Please stand by for realtime captions

Good afternoon, everybody welcome to the FDLP Academy. Welcome the little things to do for big storms, simple collection preparation for tornadoes and hurricanes. Our presented today is David Walsh, the presentation librarian, with the library services and content management here at GPL. Before we get started I'm going to walk you through our usual housekeeping reminders. If you have any questions you would like to ask David, or if you have a technical issue, feel free to chop them in the chat box which, for people using desktop computers or laptops, is located in the bottom right-hand corner of your screen. I will keep track of the questions as they come in. At the end of the presentation I will give it back to David. They are also recording today's session and will email a link of the recording and slides to everyone who registered. We will be also sending a certificate of participation using the email you used to register for today's webinar. If anyone needs additional certificates because multiple people watch the webinar with you, please email FDLP outreach and include the title of today's webinar, along with names and email addresses of those needing certificates. Desktop computer or laptop users may zoom in on the slides being presented. Click on the full-screen button in the bottom left side of your screen. To exit the full-screen mode, mouse over the Blubaugh at the top of the screen so it expands. Then click on the return button to get back to the default. Finally at the end of the session we will be staring at webinar satisfaction survey with you. We will let you know when the survey is available and the URL will appear in the chat box. We very much appreciate your feedback after the session is through today. And, including comments on presentation style and value of the webinar. I did not double check with David, if he was going to be doing any screen sharing, going to life websites etc. once he starts doing that you would not be able to see the chat box in that case, if you want to ask a question or watch the chat as David is presenting, screen sharing will begin mouse over the Blubaugh at the top and when the menu drops down click on the chat to enable the chat box. With that, I will hand the virtual microphone over to David and we will take it from here.

Thanks, Joe. No going to outside websites, just sticking with the slides. Thanks for joining me today. I am the preservation librarian for the United States government publishing office in the Federal Depository Library Program. Today's webinar is on my belief that knowledge is power and the evidence that small acts of risk awareness and planning to mitigate those risks prevent costly [Indiscernible] and ensures continued access for readers. Just a little about me. Have had the privilege of being a preservation librarian for 25 years. I have served on disaster planning and response teams at the Georgia Department of archives and history and Yale University and finally in the publishing office today. What I want to do, we all know what tornadoes, hurricanes and thunderstorms are. What I want to do is delve into a little about some of the issues. So, tornadoes typically affect the Southwest and Midwest. There is an area of the United States called tornado alley that pretty much compromises the states of Texas all the way up to the Dakotas. If you live in Alaska you live in the least tornado prone part of the country. If you live in Texas you live in the state that has the most tornadoes in the U.S. though every single state of the U.S. experiences them. In Maryland, where I live, we have tornadoes throughout the summer and according to the National oceanographic and atmospheric Association, storm prediction Center, there were over 1500 tornadoes in the U.S. last year

alone. And, as they track this over time, the number of tornadoes is increasing. These typically develop when warm, moist air mixes with cooler air and creates a vortex which eventually reaches a speed as it spirals down to the ground. The good part is the National Weather Service issues watches and warnings and most tornadoes touchdown in the middle of fields and don't do any damage. However there are a few that do land in urban areas and do extensive damage. Hurricanes are the deadliest of storms and they are the costliest. Typically 2 - 3 in nature each season, minor ones typically occur throughout hurricane season which is June 1st through November 30th. They arise out of tropical storms and according to the National Weather Service there is a 69% probability of a major hurricane in the year 2020. Puerto Rico is still recovering from a major hurricane, Maria, that hit in 2017. Again hurricanes are driven by the heat energy in the ocean mixing with cooler air in the atmosphere. A lot of interesting things you can read about hurricanes on the tropical weather assignment research Center sponsored by Colorado State University.

Hurricanes, other than being named after people, for our benefit they are classed by spin speed. Within each class something weather watcher is developed about 50 or 60 years ago to try to describe potential damaging effects you will hear the hurricane is a category one storm and though hurricanes typically affect coastal regions because they come out of the ocean, the effects of wind and torrential rain that results from storms can cause major damage and flooding far inland and the wind speed from a category one hurricane is still quite powerful. Enough to cause damage to roofs, windows and the real damage to flooding. Thunderstorms can spawn tornadoes. They are the most common type. Because they come so often and are so localized the effects of damage they can do may not be widely reported. A lot of the thunderstorms create down bursts of damaging [Low volume - Indiscernible], they are not tornadoes but they tend to have a twisting motion, snapped trees and can cause flash floods with a season of rainfall, 4- 5 inches of rainfall in a short period of times, flash flooding is typically worse in urban areas where most laborers are, because of impervious cover a lot of concrete, blacktop not many places for rain to run off to accept in the sewage system and rain gutter systems that were designed at a time when storms were not as violent. What seems to be happening is systems in buildings are overwhelmed by torrential rains that fall happily we live in an era where we can know about storms the instant they happen instead they begin to form. We can be informed about the storms long before they reach us and also learn what to expect from past storm damage and experiences. These websites provide lots of data about tracking storms, how storms behave, what they are like, what damage occurred from past storms things like that the type of damage that can befall a library these are the forecasting websites were used to find data about storms and how the government tracks them. The type of damage that typically will fall on libraries is really three different categories and typically we are talking about minimal damage to the building. But the storms, WHETHER a tornado, hurricane or thunderstorm, typically just does enough damage to the systems in the building due to outages or compromising mechanical things or overwhelming drains and outsize drainage to cause flooding and if the power is out in a minimal situation high humidity with no air circulation may cause mold to bloom on collections. Moderate damage may result from torrential rain backing into plumbing drains. This actually happened in the library I worked out. So much water went roaring down that the intense thunderstorm backed up through the

plumbing and came out in restrooms and sinks. And floor drains in the basement. And flooded the basement with 6 - 7 inches of water. Because of the high [Low volume - Indiscernible] to moderate damage windows maybe blown out. Once a window was out and a large window typically most libraries have, there are more modern buildings, then you seriously compromised the ability of the building to maintain any kind of climate control. Again you've got high humidity and temperatures that can cause mold to begin blooming in addition to whatever water came in to the building from the window being blown out in the first place. Had of course nearby collections are inevitably going to be damaged. Severe is the least likely Kaiser of damage which the tornado or an intense storm was able to significantly damage the roof that the water is coming in the building or windows were blown out or the collection itself is getting so blown up floodwater coming into the building fortunately does not happen that often, but does happen. Again, it is the overwhelming of mechanical structures of the building that protect the collection and the people inside, provide a barrier from the outside environment and the storm the damages that building envelope through wind overwhelming mechanical systems, cutting power were physically damage buildings. So with all of these different risks from these storms in mind, we can go to a risk assessment for the library building collections, and other areas.

Unless you libraries on Minecraft, you're probably well aware of the building is in perfect. It may have some well-known issues. The age of the building, the type of the structure, the type of the roof. How that roof drains. Flat roof strained very differently than pitched roofs. Are Windows small older building with smaller windows or larger building were windows on the whole section of the wall. The location also plays a part in assessing risk. You may discover that your building is actually in a floodplain and the link I have included on the slide there allows you to type in the address of your library, home or any building you want to check on, and it will tell you what the likely risk of flooding is based on data added to the maps. Flat roofs also are concerned because they collect leaves and other debris which can clog roof drains and under roof flashing at the edge. While your library may not be at risk of hurricane, you maybe surprised to find it fact that your building is in a floodplain. Floodplain data is changing again because of the increasing violence of storms and occurrence. You typically hear this area has had their 100 year flood meaning the typically it will be 100 years before something like this would've happened. But, the other issue typically is these floods are happening more often. Floods that were considered to be an extremely rare occurrence because of the violence of the flood, the storm that produced it they are happening more frequently. Depending on the age of our building what the urban infrastructure is surrounded, any issues that affect that, any issues that are a weak point, the storm will exacerbate the damage resulting from that leak and flood. The collection inside the building is also something we need to assess the risks of. What makes up your collection? Do you have special collection items or research collection valued by researchers valued by users? Are those collections in a room near windows? Specifically a large window do you have collections in a basement area that might flood do you have items that are old and less easily replaced? Do you have items with historical artifactual value? Do you know where these collections are in your library building? Do you also know how your library is insured? You self-insured? Is the collection included in the insurance. There have been occasions where libraries have discovered their collection, the value that collection is based on

very old estimates in terms of placement. And you might discover artifactual collections are things with very high value may not be in fact covered by the volume replacement value they want to give you to restore the collection. Some things, as we know, cannot be repurchased again.

You may discover you are self-insured. You have a catastrophic damage policy with a large deductible. After you have expended a large amount of self-insured or local funds, the disaster policy kicks in. Floor storage was an issue in every library I have ever worked in. Simply isn't enough room to put everything on the shelf. Of water began seeping into a storage area where there are unprocessed collections or donated materials or reasons these exist based in libraries I worked in, a water began seeping into this, usually a basement area or some area where these things are sometimes out of sight out of mind, you can imagine how differently the books and boxes on the right would fare in a flood compared with those on the left. Cardboard picks up water. How board can absorb twice its weight in water especially like the arrangement on the photo on the right and not only of the protected the boxes from water below they put plastic sheeting on the top and attach just enough to keep water from trickling on the ceiling reaching the boxes directly. The arrangement on the right gives you space, water can flood the floor about 5 inches deep before it gives -- reaches the boxes and hopefully that's enough. Pallets are typically very cheap. You can get them any number of ways. It really is a risk to leave books and cardboard boxes sitting on the floor.

You may have had some experience with the disaster in your building and maybe it is an experience you want to improve or you haven't and you are wondering if it is a disaster of whatever scale did occur, who would respond if you walked in and found the scene in the picture on the right. You typically response to that? What is your role in that response? Do you know your facility staff? Who monitors the building? Nights, weekends and holidays when you are not there? If water were found to be falling from under a locked door, who has the keys to the door? If you need supplies to stop the water who has access to the water valves? Or water simply leaking into the wall where you get supplies? How you get them? and because no one can be everywhere all the time do you have any remote monitors that can tell you, where people don't go that often collections maybe stored? One of the risks we need to be aware of is risks to our information technology. Not only the records of collection for readers for access to our collection, but also a very big sense our business records. Records of the holdings of our library. Are those systems backed up? If the systems in the building would be destroyed, are they backed up appropriately? And try to get the library back in business after the water is cleaned up, however long that takes. Who would restore those systems in the event of a disaster? As we know our library users are for all kinds of services and the library in an area where users don't have a lot of Wi-Fi or Internet access at home so they may rely on the library for those services. As systems come back online in a restored, in a disaster that affects the community, the library would typically be, potentially a place for people to go for information on how to get their own lives back together. Restoration of those IT system, infrastructure, library catalog, databases, people search and Wi-Fi for the public as part of the restoration of those online services that are really needed. Any response to these risks, assessment of these risks has to be based on people.

People on our staff, once you assess the risk to the building, to the collection and how well for the good or how will not your organization typically will respond to those risks. The best way to assess, document and plan a response to those risks are the people you have around you in the library. Forming a disaster preparedness, response team, is an essential part of mitigating all those risks. Communication is really the key. It is not something you can do in your office by yourself. Engagement is something that is essential, with all the stuff in the building, with the administration, services and security come all those people are essential to the success of your response plan. They are the eyes and ears, security and services like that, custodial services, are essential to be your eyes and ears and a part of the building and you don't typically go to, and access to the building when you're not there. Get to know them and involve them in your plumbing. Build as much administrative support as you can. For developing a response plan. And the best way to do this is do a walk-through, introduce staff to the building and what they know about certain locations that may have issues you may not be aware of. And worked in library buildings for storms were found leaks that typically this window leaks when a storm comes from the direction water comes under the basement wall when it rains consecutively in the fall for a number of days. Do a walk-through of different people, to a walk-through, go through some of the checklists of risks I talked about earlier and the need to have a response plan try to make the case for the issues repaired at the next storm will likely come first before those repairs were done. Going over the checklist we've been talking about the building type, roof, location kind of storms you're likely to face WHETHER the floodplain, leaks drainage high humidity collection stored in the basement any materials directly on the floor collections close to large windows and essential collection items be inventoried in the catalog further documents that's your proof of loss your proof of insurance what you need to be insured for. Are your IT systems backed up and restorable? Hinder the building and collection areas monitored not just by security staff but do you have a particular need in an area when you got a collection stored in a remote location where you don't go that often if that situation were to have a flood from a disaster, how would you know and there are mechanical systems you can have installed that would automatically follow you if it situation, or notify you of those situations would arise.

When you have assess your risk you can make a list of the things you need to do to respond to those risks. This will typically include monitoring WEATHER, planning for the results of the storms, your risk assessment may not top of or may keep you awake at night. But the important thing is to document those risks and respond by developing a response team developing contingency or response plans and sharing those plans with your administration and support networks. And I am emphasizing this again on purpose. This as disasters happen frankly outside normal library hours, security and building maintenance may need to call you to inform you of the situation. Make sure they know how to reach you. One of the important things in a risk assessment plan is an accurate telephone tree of who you can count on to be responders. Who's going to help you assess damage to a collection or help clean something up where collection is involved. The telephone tree should be essential, essential that we type things and create things online. The last thing you want to have happen is have a disaster preparedness response and recovery plan which we are proud of but it is stuck on your computer at work in a building without power. You want to have a paper plan at home with you, you want to have it

accessible and you probably want to have more than one copy out there with your staff that are part of your response team. And it should be somebody's job on that response team to monitor the weather and to raise the level of awareness among members of the response team better weather event is occurring or disaster will likely occur. Here is a checklist of typical supplies you might need. The list of very common ones. I don't recommend that you go out and stock lots of this. However, I do recommend if you buy any of this that you invest in plastic sheeting and duct tape. In the 25 years of my career, duct tape and plastic sheeting have been a preservation library and's FRONT. Because if you can protect an area where water might come in or get to an area where water is coming in on collections it is faster to cover them in plastic than to try to move the books. And, because disasters ever happen when it's convenient, and you might run out of supplies you have on hand depending on the scale of the emergency, it's good to have some acknowledgment by the administration that you might have to spend some funds outside of normal working hours up to a certain level of expense approval. Through credit card or some way you can spend your own funds to get reimbursed it's good is good to let you know this part of your planning this might be a situation.

If books get wet, if materials to get wet, it's good to simply plan for the space where you can set up tables or have an area on each floor where you could dry them. Paper towels are great to interweave into books to help with out water. In an area in the building where humidity increases due to the HVAC system being off for a while it's good to keep the air stirring because mold spores don't like fast-moving air. There is the supply checklist and again plastic sheeting and duct tape are more likely used. These are three examples of plastic sheeting being set up in the collection space due to water coming out of the ceiling. WHETHER a storm or mechanical issue really doesn't matter, water will find its way into the building from the roof, windows or door seals or through basement and it will find the lowest level possible if already in the basement has got nowhere else to go but if it comes from the roof you will be amazed where that water will end up and it will find a path out of the drop ceiling or out of the ceiling onto collection materials and it will have picked up lots of dirt, rust and other things on the way and usually come out of the ceiling quite grimy and will stay materials and soak them. Having something you can grab really quickly and put over stacks, tie it down with duct tape goes a long way to keeping things dry and safe. I mentioned data loggers. Data loggers are used a lot of libraries for temperature and humidity. There is also different kinds. This is simply one brand, I'm not particularly recommending this over any other. There are ones that keep a certain amount of data that you can download and see what the temperature and humidity has been over a 24 hour period or certain amount of calendar days. There are some that have very sophisticated reporting where if the temperature and humidity go beyond certain setpoints, they will automatically, through a Wi-Fi system or computer network, sent a warning to whoever you have set up on the system to receive warning. If there are data loggers for temperature, humidity as well as water ingress, there are loggers that have a sensor that can be put on a the floor where water may come in and again you can have in a reporting system of these loggers depending on the design and set up, so you would receive emergency warning that water was coming in. This keeps you from bad surprises later. Also the locker will document the date and time the incident occurred. Also good data for insurance purposes. I've got a request to show the supplies checklist again. I apologize I didn't click advanced or clicked

it and realized as I was talking it didn't advance. We can go back to it at the end if you would like but there it is again.

This is something custodial services usually has. I know you all know what this is, this is not high-technology we probably all have one at home. Frequently this is a better way of removing water from a floor than a mop. The problem with the mop and bucket tends to be squeezing it out, taking it somewhere else to dump out the water. A lot of commercial wet dry vacuums have, you can attach a hose to it you can feed water directly into the drain or into the sink. They tend to remove with the water because you don't have wet mops around which have to dry out and for the mop to dry out get the humidity back into the air which could potentially cause more mold. So, the vacuum tends to just get the water out of the air off the floor and keep it from evaporating into the air air circulation and dehumidification are essential to keeping mold from developing and blooming after a flood or any kind of water that's got it into the building. I don't typically recommend setting up a home type dehumidifier in a flood situation because the amount of water typical dehumidifiers we can buy at Home Depot are only capable of removing a very minimal amount of water from the air. Been somebody has to monitor it to keep emptying it. What you tend to find is it runs wide open for days somebody has to keep emptying it and it's not really up to task. Drying the floor as much as possible with a wet dry vac , keeping the area open putting fans to keep air stirring is the best way of preventing mold from developing in those areas. As much as it might seem like it is a lot of work to keep the air stirring, making sure water doesn't build up, humidity doesn't spike, try to treat material that suffered a mold bloom, concerns we have today of allergies and what kind of effect handling those materials might have on the public. People with compromised immune systems and other asthmatic and respiratory issues, to say nothing of COVID-19 were that is a concern for all of us as well. Better to keep things dry and not risk a mold bloom. It's time consuming. I mentioned earlier if folks get wet one method is to have ordinary disposable restroom paper towels which you probably have in stock anyways, interweave them into the book to work out water. When they get wet set them aside to dry and reuse them or dispose of them however you need to. This is one way to remove a moderate amount of water from a book. Of course the old, traditional tried-and-true methods standing books upon their own and naturally opening the pages to form a fan does allow air to get into the book and try it out from the spine, the gutter, all the way out. Having said all about this, you and your staff responding to a disaster, it's very, very important you establish what the limits are. You know your staff, you know your situation. You know your administration, you know your own liability. Nobody is expected to injure themselves or be a hero in this situation like this. The response and recovery plan should have definite limits that you communicate as to what you can be expected to handle. Extreme damage to collections, books that are absolutely floating in water by the hundreds, is not something ordinary library staff typically can handle. The building environment maybe too compromised. You may not even be allowed back in the building for some time. Mold and other issues maybe a situation beyond your ability to control. One of the reasons for setting those limits is that you can try to arrange service contracts for disaster recovery and response services. Disaster response and recovery services. Plenty of commercial firms out there that do this as part of their business. There is lots of data you can find about libraries that abuse the services to great success. The reason I mentioned insurance earlier is the frequently -

- contracts can be developed in advance where you develop a policy with them or contract with them. Services can be paid for by insurance, by the catastrophic insurance policy.

to give a picture of what I'm talking about in terms of scale,, I mentioned, we all know dehumidifiers we typically have a home. The large machine on a 5-ton trailer is a dehumidifier. This is the kind of dehumidification needed for building a house incurred a huge amount of water, soak materials, so carpeting trying to dry. One of the tubes is out the moisture laden air, goes to the system. The water that comes out is pumped out through the system dry air is blown back in little things with big impact. Your library has risks. All sorts of risks due to the age of buildings, locations, systems. Collections inside, because of age, value, vulnerability. All these things go hand-in-hand. Processing at risk is a major part of knowing how you are going to fare, how you will come out if a storm damages windows, compromises the roof, water falls on collections. What you want to do is work with your folks to figure out what a reasonable, documentable plan, a tangible plan you write is a document and print and share with folks, you get administrative buy-in and get buy-in from your security and building services people and that you have their buy-in and support that they are part of your team, too, to respond to risks when weather threats arise. Somebody needs to monitor the weather. This plan needs to be ready to go up into effect should a weather event compromise the building and create a flood or other issues. The team should be able to communicate without team to call them into action and they should all be aware of what the limits are in terms of safety of what they are to respond to and not respond to and that team needs to follow the lead of first responders and other security people who may deem them in fact that the library simply not safe for anybody to go into until the power has been turned off or other things have been dealt with. Communication, knowing who all is part of this group and available are aware of each other, and have met with each other before the disaster is essential. While you are cleaning up the disaster responding to it, you need to document the recovery effort. I would recommend a digital camera, take pictures, if you are discarding deteriorates materials you deem to damage get a record of what you are discarding. Say those photos, make sure there is backups. Communicate with the administration and your superiors in any kind of way that communicates your recovery effort was on target. You met and responded to the disaster and did what you could in here is the effort of what you were able to do. Then you need to keep track of the supplies you've used up in the disaster. Make sure they are cleaned after used so you don't find Stillwater in the vacuum a month later and after the disaster, everybody needs to sit down, on that response team, and have a group chat about what went well and what didn't. Did people know what they were supposed to do? How was effective -- how effective was the plan? Was there additional training people might want to participate into learn more about the response and recovery effort? Are there additional resources you don't have? the concluding event is the planning for what worked well, what needs to change. Of something didn't work well and you are back to preparing for your next disaster. These are all effective things that you can do to assess your risk and plan appropriately to ensure that the little things that you do have a big impact. I believe we've got time for questions. Joe can help me.

Thank you, David. Great webinar. Lot of information. Let's see, Diane says I would like to show the recording, I know will that be possible yes no problem anybody can attend the webinars

anyone can do the recordings. The whole webinar recording will be available tomorrow or Monday at the latest. Download there e-mails you can share. Jean says, in one of life's ironic situations I said my living room in Puerto Rico for this webinar while watching 40-45-mile an hour wind gusts from Tropical Storm Isaias. Leaving Puerto Rico and the Dominican Republic. Interesting. Sarah just mentioned the programming reported yes it will be e-mailed, you get the slides e-mailed to you and the recording will be up tomorrow. As Cory mentioned. Thank you. Kevin mentions going by category they must be monitored constantly that's interesting concept. Yes always see these levels wondering how true they are.

He is correct they don't typically stay at a level. They start out come the All-Star out of one and they dramatically increase depending on the strength of the storm can diminish or decreases the usually hit land. But there have been quite powerful ones that started out with category one and went all the way up to scale.

Sheila says slides are not appearing is this a problem for anyone else? I hope you so the slides, Sheila? They will be e-mailed as I mentioned earlier. Jane mentioned, FEMA has an app which will send emergency alerts in a number of situations to your area that allows you to add multiple locations and to switch to Spanish. And then Jane gives a link to the mobile app. I don't know if you're aware of that?

Thanks she says she didn't realize that was a practice outside of the military. Please show the supply chain again. Vicki said it is also a good idea to take before photos and videos of collections on a good day, then take video photos of the disaster for insurance purposes. That's excellent, interesting. Sounds good, good advice.

Documenting things the way were before the disaster struck sounds good.

Eleanor mentions as a mold cleanup contract something you pay for regularly over time you set up anyplace just in case of damage defense? Good question.

In my experience usually you can do it one of two ways you can either have the disaster and reach out to a company and say please come in and clean this up. It is likely better to have some sort of arrangement or contract ahead of time so that it is a more automatic process. When you talk to the company they know you are. In my understanding how a couple of libraries have done that -- I should back up and say the way the library stated they were self-insured up to a certain amount of money meaning that it was like a giant deductible. The library system or city government or university paid for a certain amount of upfront cost. Of the cost exceeded a certain amount, catastrophic insurance policy would kick in and the disaster recovery service which included the mold abatement if mold did occur came out of that insurance. That is part of the insurance coverage the disaster response as part of the insurance coverage built-in.

Interesting. Is the twice a year cleaning because there has been previous mold blooms? I don't know what that is referring to exactly really, you made.

Something I said that wasn't quite clear.

Could you clarify the? Eleanor?

[Indiscernible--low volume] thank you for the great information.

Sorry I was just reading it as part of the exchange she had twice your mold cleanup.

Okay.

Pamela says to Jane our heart goes out with you and your colleagues in Puerto Rico watching Tropical Storm Isaias, in Charleston, South Carolina. We divided staff in the team to prepare for hurricanes, each team is a classic sheeting and duct tape and other supplies to secure pins are checked each year. Like one of those go boxes or go bags.

That is excellent planning. It's great and I'm glad you got the space to prepare and store those.

I'm also in Charleston watching in too. People's questions coming. The satisfaction survey in the chat box, please, please fill this out. If you would. Quick question looking at putting the paper towels in between the pages of a book and standing them up after the process what kind of condition are those books? Can they ever lay flat again? Are they readable the just bulging?

Depends a lot on the paper itself and how much water it soaked up. The paper is never going to look like it did before it was wet but the best you can hope for there is a bit of swelling in the binding. Hopefully it will lay flat it may take a bit of time.

Press them down?

After they are dry some people do press them that you want to be sure you've got all the water out otherwise your level two leave mold in the book or something like that. In case of some type of paper, clay coated paper sticks together if wet and will block the book into a brick. You want to make sure that clay coated paper is thoroughly dry before the book closes.

Vicki comes back, a book preserver I can say they will be don't press what.

Don't press them went.

They won't dry right and there are other issues that can happen if the binding is swollen pressing can break glue and stuff.

Elizabeth comes back. We've been able to re- fold the plastic sheeting in use over again. My library is next to the river, in Tampa Bay. All the comments coming in here. How long does it take, how long does it typically take to recover from a major disaster?

Jane is still recovering. It can take years. Talk about recovery it's good to keep in mind as was pointed out the collections are never going to go back to exactly the way they were even if you successfully dry them, have some of them down, the evidence of the damage is always going to be there. You are simply keeping those collections available to readers putting them back faster than you could more cheaply with less expense than you would if you could replace them.

Good point Deborah makes the question, what about crazy wet materials? Is that no longer recommended?

That is recommended and maybe I should've said that in terms of what severe situation was and the amount of materials. If you have books by the hundreds that are completely soaked you need to reach out to the disaster recovery service. You can wrap books to keep them from individually sticking together putting them in a freezer to stop mold from blooming because mold doesn't continue to grow in freezing temperatures. The book will turn into a brick in the freezer, but it buys you time so you can plan for what to do and assess those collections and see if you want to go to the process of going ahead and freeze drying them. That is a process where the books are frozen in a vacuum the vacuum is pulled the water basically goes from being a solid to a gas without going through the liquid phase. But is is expensive.

Very interesting, David. Do you ever get a situation where somebody says I'm going to take out the pages of this book and somehow preserve them from readability or the binding or something of that nature? Something happens on occasion?

I have not known not to be a thing that was done to collections, no.

Interesting. Keep those questions coming. We can go a little bit longer I will go into my wrap up comments but please keep the questions coming and have David answer them.

I was going to say go ahead if we run out of time you can always come up, contact information on the screen. You can reach out to me individually.

We can go a little longer. First I'd like to thank David for a terrific webinar. I learned quite a bit I am sure the audience did also. Thank you Cory holder, for a great work in tech support keeping everything running smoothly. Don't forget our upcoming webinar probably the only silver lining of COVID-19 is we do more webinars with higher registrations and higher attendance. We've got nine webinars for August. Tuesday August 4th, titled regulation, regulation, read all about it. You will receive notice of all of our upcoming webinars when announced. Sign up for events, email at FDLP.guv at the bottom of the homepage you can view the calendar and other events, access it has webinars from the webinar link to a web form to present at the FDLP Academy. I'm sure many people in the audience can do a great webinar on any topic related to the FDLP and government information. Core is also going to put in a section on our training repository and you can access this webinar tomorrow just about every one of our past webinars. Give that a look . Let's check back and see if we have any questions. Here comes Vicki. In relation to

pressing you can press them with milk cartons filled with sand or lead Chartres or lead shot. It becomes part of the history of the book newer books with clay coated pages are absolutely lost to know anything about it? I don't know if you have any comments on that, David?

Knowing where your collection of picture books are, your National Geographic kind of books with photographic quality pages to them. The images put on paper, essentially finished with a lot of mineral clay. When that gets wet it turns into a sticking plaster and frequently it's very difficult to recover those.

Elizabeth makes a comment remember the disaster of the University of Hawaii, government documents located in the basement, total loss. Sorry to hear about that. That is sad.

That was before I came to GPO but I was aware of the still sad to hear about.

Jane makes the comment what is the largest disaster you responded to and what wins and losses did you discover debriefing afterwards?

If you don't mind a bit of a story, it was the failure of mechanical system during renovation. University campus , heated by municipal heating plant, high-pressure steam pipes that go underground protected in multiple layers of cladding that reached the building with steam goes into a heat exchanger and the hot steam is condensed and air from the building is pulled through that heat exchanger to provide warm air for the heating to the building. It also provides hot water for the restrooms, sinks and things in the building. The University was in the process of repairing these pipes. They had reached their life expectancy and a construction crew had dug down into the ground, taken the first layer of cladding off in a service tunnel and the service tunnel went directly into the air handle air handler into the basement of the library. Apologize for the long story but I have have to set this up so it makes sense. In a very cold December night, where they thought they had everything covered up it began to rain right about just above the freezing point. It's pouring rain outside about 35 or 36 degrees the cladding is off the pipe the pipe is still active with high pressure, high temperature steam. Unfortunately cold rainwater got under the covering and started trickling over the pipe and it could not stand the cold temperature on one side and intense heat on the other in the pipe fracture and high-pressure steam the resistance up to the corridor into the air handler and still filled multiple to multiple levels of the library with saturated steam. And I was called at 10:30 Good Night, jumped in the car and raced to the scene and it was really surreal. We could not see because there was so much fog in the building. Things were absolutely getting soaked essentially the steam was creating such a thick fog right up to the ceiling condensing it, raining inside the building.

Oh my.

Power systems were shorting out because of the high humidity. It was chaos. Things didn't work, couldn't get the steam shut off. We were trying to pack stuff up and get it out of the building. We rushed it out, by this time it's snowing, so we got things boxed up in the chaos in

the dark got it out to a courtyard area and justified it was cold enough that night it was below freezing that the material could just stay out there overnight and would be better for them being inside the building. It included some lower level storage collection areas as well as a large area of unprocessed collections for both circulating as well as special collections material. Would we learn from it? Always think of the unthinkable. It will happen. I think we realized that we needed a little better coordination at the moment because it was the most chaotic situation we've ever dealt with. And we needed to be able to do a bit more, we were a bit spooked and panicked and part of our regrouping was to say dealing with a little more methodically would have been better than rushing at it. Which we did so some things were packed up quite right. We overlook some things we had to come back several days later still finding what books. I think sometimes in the moment there's a sense of human panicked we want to protect the stuff, do our job. Sometimes going at it slower and more systematically following triage guidelines not all rushing in at once and trying to rescue everything would have been the way to go and I think that was what we learned afterwards in the debriefing. Hopefully that wasn't too long of a story.

That's an incredible story, David, unbelievable. It is like what they called the Black Swan event that will probably never happen but if it ever does, help us. Getting a lot of shout outs from people saying fantastic job. Agree with all that. Thank you, thanks to David. Cory push the information about the webinars in the recent to couple years Kevin makes the comment still recovering documents to national disposition database. Kevin says I think your story oh my sounds like a science fiction movie very informative. Great story. Great presentation both. A lot of good shout outs. That was true. Looks like the questions have run out we are little overtime which is not a problem and really appreciate this. Would like to thank you one last time, David. We are negotiating on a webinar September 1 to look for that for the disaster recovery and thank you, audience and thank you, Cory, back for more webinars in August to kick off the month so, back to the FDLP Academy and have a great rest of your day. Thank you.

Thank you all. Take care. [event concluded]