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RISK  
EVALUATION: FIRST STEP IN  
DISASTER PLANNING.  
PRESENTER ALEXANDRA ALLARDT.  
>> THIS IS JENNY.  
THANK YOU VERY MUCH FOR JOINING  
US.  
IT LOOKS LIKE YOU CAN HEAR US.  
THAT'S GOOD.  
>> FANTASTIC.  
AND NOW ALEX, IF YOU COULD SAY A  
QUICK HELLO THAT WOULD BE GREAT.  
>> I AM HERE.  
WELCOME EVERYBODY.  
GLAD TO SEE YOU.  
WE'RE GETTING READY FOR A  
BLIZZARD HERE.  
AND I HAVE TO SAY WHEN WE HAD  
OUR BIG BLIZZARD IN '78 I WAS  
LIVING IN HONOLULU, ANOTHER  
REASON TO LIVE IN PARADISE, I  
THINK.  
>> THANKS SO MUCH.  
IT LOOKS LIKE -- JENNY, WHEN YOU  
ARE SPEAKING, THERE MIGHT BE A  
LITTLE BIT OF A VOLUME CONTROL  
ON YOUR HEAD PHONE, ON YOUR  
PHONE.  
IF YOU COULD RAISE THAT, OISES,  
IF YOU COULD JUST SPEAK A LITTLE  
LOUDER MUCH IT LOOKS LIKE BOTH  
ALEX AND I VOLUME IS GOOD FOR  
EVERYBODY.  
YOURS IS A LITTLE ON THE LOW  
SIDE, SO . . .  
>> SOUNDS GOOD.  
>> SO EVERYBODY I JUST WANT  
TO -- WE HAVE ABOUT TWO MINUTES  
BEFORE WE GET STARTED SO I JUST  
WANT TO SAY HELLO AGAIN, WELCOME  
YOU TO THE SECOND SESSION OF

RISK EVALUATION.

AGAIN I'M JUST GOING TO TALK AT YOU FOR A MINUTE OR TWO BEFORE WE ACTUALLY GET STARTED.

IT'S GREAT TO SEE SO MANY PEOPLE, YOU KNOW, SAYING HELLO. THE NUMBERS OF PARTICIPANTS ARE GROWING.

AT THE LAST SESSION THERE WAS OVER 250 NOT EVEN INCLUDING ALL OF THE GROUPS AND VARIOUS EXPONENTIAL -- HOW THAT ADDS EXPONENTIALLY TO OUR GROUP.

SO THERE ARE A LOT OF PEOPLE SAYING HELLO AND JUMPING IN AND PARTICIPATING AND THESE HAVE BEEN WONDERFUL COURSES.

I HOPE YOU'RE ALL ABLE TO TAKE ADVANTAGE OF THEM THROUGHOUT THE COMING MONTHS.

WE HAVE ABOUT A MINUTE BEFORE WE'RE GOING TO START.

I JUST AS A REMINDER WANT TO ENCOURAGE FOLKS IF YOU'RE NOT COMFORTABLE OR FAMILIAR WITH USING THE CHAT I WANT TO POINT OUT IT'S IN THE LOWER LEFT CORNER, OR I SHOULD SAY ON THE LEFT-HAND SIDE UNDERNEATH THAT PICTURE OF ALEX.

YOU WILL SEE IT SAYS LIKE "SAY HELLO HERE."

SO THAT IS THE CHAT WINDOW. ONCE THE SESSION OFFICIALLY GETS STARTED AS JENNY PASSES THE MIC OVER THE -- QUOTE UNQUOTE THE MIKE OVER TO ALEX WE WILL BE MOVING THAT AWAY AND SETTING UP MORE OF A Q AND A MODERATE CHAT WHICH MEANS YOU CAN TYPE IN QUESTIONS AND COMMENTS AT ANY TIME AND WE REALLY WELCOME ALL OF YOUR GUESSES AND COMMENTS.

ALSO IF YOU'RE HAVING ANY TECHNICAL ISSUES THAT WOULD BE THE SAME WINDOW TO USE.

I WILL FOLLOW UP WITH ANY

TECHNICAL ISSUES I SEE COMING.  
IF YOU HAVE ANY QUESTIONS ABOUT  
ANYTHING, JUST TYPE THEM IN AND  
I WILL FOLLOW UP WITH YOU  
PRIVATELY.

QUESTIONS, I BELIEVE WE WILL  
TAKE THEM AT CERTAIN TIMES.  
SO DON'T WORRY IF YOUR QUESTIONS  
AREN'T ANSWERED RIGHT AWAY.

WE'RE GOING TO PROBABLY SAVE  
THEM UNTIL MORE OF A Q&A AT THE  
END OR DURING CERTAIN TIMES.

SO TYPE YOUR QUESTION IN, SIT  
TIGHT, WE WILL GET TO IT.

IF YOU SEE YOUR QUESTION OR IF  
IT LOOKS LIKE YOUR QUESTION IS  
SHOWING UP TWICE IT'S REALLY  
BECAUSE YOU'RE SEEING YOUR  
PRIVATE VIEW OF THE QUESTION AS  
WELL AS THE QUESTION BEING  
SUBMITTED TO THE MODERATED Q&A.

SO DON'T TOO MUCH ABOUT ANY OF  
THAT AND JUST TO CLARIFY THAT.

SO IF YOU FIND BEEN CHATTING AND  
IF THIS IS THE FIRST TIME FOR  
YOU TO PARTICIPATE IN A CHAT  
LIKE THIS, FEEL FREE TYPE IN THE  
WINDOW, FEEL COMFORTABLE, GET  
FAMILIAR WITH IT.

WE KNOW WHERE YOU'RE IN FROM  
BECAUSE MOST OF YOU HAVE YOUR  
LOCATION NEXT TO YOUR NAME.

BUT YOU CAN TYPE IN, ARE YOU  
GEARING UP FOR THE STORM, ARE  
YOU NOWHERE NEAR THE STORM,  
SINCE THIS IS WINTERTIME FOR  
MOST OF US, WE'RE IN SOME  
CONSTANT READY MODE FOR THE NEXT  
WINTER STORM.

SO YOU CAN TELL US WHAT YOU'RE  
DOING TO PREPARE FOR THE WINTER  
STORM.

SO YEAH, SO IT LOOKS LIKE -- IN  
GREAT LAKES ILLINOIS I'M SEEING  
TRINIDAD IS SAYING THAT YOU  
CLOSE THE MUSEUM AND YOU HAD TO  
DRIVE HOME.

I DON'T KNOW IF THAT'S BECAUSE THE STORM IS EMINENT OR YOU JUST -- THE MUSEUM WAS CLOSING FOR THE DAY AND YOU DECIDED TO DO THIS DAY FROM YOUR HOME OFFICE.

BUT THAT'S THE BEAUTY OF THIS, TOO, IS THAT WE HAVE THE OPPORTUNITY TO PARTICIPATE FROM ANYWHERE.

SO AT THIS TIME I'M GOING TO DO A COUPLE THINGS IN THE BACKGROUND.

SO HANG TIGHT FOR ONE SECOND.

>> MEETING RECORDING HAS STARTED.

THIS MEETING IS NOW BEING RECORDED.

>> AND WHAT I'M GOING TO DO IS RECORD THE SESSION FOR ARCHIVES. AND JENNY, WHATEVER YOU'RE READY, THE FLOOR IS YOURS.

>> THANK YOU VERY MUCH, HOPE.

ALL RIGHT, GUYS, YOU HAVE TO TELL ME IF YOU'RE HAVING A HARD TIME HEARING ME BUT I WILL TRY TO SPEAK UP.

THANK YOU GUYS FOR JOINING US TODAY.

WE'RE ALMOST AT HUNDRED SO WE'RE LOOKING LIKE WE'RE GOING TO HAVE ABOUT THE SAME AMOUNT AS WE HAD YESTERDAY.

SO IF YOU'RE JOINING US, I'M SURE YOU ALREADY KNOW, THIS IS THE SECOND WEBINAR FOR THE COURSE "RISK EVALUATION: FIRST STEP IN DISASTER PLANNING" AND THIS COURSE IS A PART OF THE SERIES CALLED "CARING FOR YESTERDAY'S TREASURES TODAY" WHICH IS MADE POSSIBLE BY THE LAURA BUSH 21st GRANT FROM THE INSTITUTE OF MUSEUM AND LIBRARY SERVICES AND JOINING US FROM LEARNING TIMES AND LEARNING TIME IS ON BOARD TO HELP US PRODUCE

THE WEBINARS AND PROVIDE SUPPORT ON OUR WEB SITE.

LET ME PULL UP THIS SLIDE OF OUR SCHEDULE.

SO AGAIN TODAY OUR WEBINAR, WE HAVE A GREAT ONE IN STORE FOR YOU.

IT'S EARTH WIND AND FIRE, IDENTIFYING STERNAL HAZARDS TO YOUR COLLECTIONS.

AND AFTER THIS WEBINAR WE HAVE TWO MORE, NEXT TUESDAY AND THURSDAY AT 2:00 WILL BE OUR LAST ONES.

THEN THE SAME PLACE THAT YOU ARE HERE.

THEN JUST A QUICK REMINDER, TO ARYN CERTIFICATE WE CHECK A COUPLE OF THINGS.

AND I'M GOING TO TRY TO SPEAK UP GUYS.

SORRY YOU'RE HAVING A HARD TIME HEARING ME.

SO TO EARN THE CERTIFICATE OF COMPLETION YOU MUST BE REGISTERED SO YOU'RE IN OUR DATABASE.

WE ASK THAT YOU TURN IN A PERMISSION FORM AND THAT YOU SUBMITTED ALL FOUR HOMEWORK ASSIGNMENTS AND WE'RE ASKING THAT YOU TURN THOSE IN BY FEBRUARY 21st SO E-MAIL US IF YOU HAVE ANY QUESTIONS ABOUT THAT:

EVERYTHING YOU COULD NEED FOR THIS COURSE IS ON OUR RISK EVALUATION COURSE PAGE.

THE LINK IS ABOVE AND YOU CAN SEE LINKS TO THE HOMEWORK ASSIGNMENTS, YOU WILL SEE THE POWERPOINT SLIDES AND ALL OF THE RESOURCES THAT HAVE COME UP BASED ON THE WEBINARS AND WE TRY TO KEEP THOSE UP DATED SO, FOR EXAMPLE, LAST COURSE WE HAD A LOT OF QUESTIONS ABOUT

RESPONDING TO THE MEDIA AND SO WE HAVE NOW PUT UP THERE SOME RESOURCES THAT YOU CAN CHECK OUT SO WE WILL KEEP THOSE COMING AND KEEP THOSE UPDATED.

AGAIN YOU CAN FIND EVERYTHING THAT YOU NEED FOR THIS COURSE. NOW YOU HOPEFULLY NOTICED, AFTER TUESDAY, THAT YOU GOT AN E-MAIL FROM US WITH A RECORDING OF TUESDAY'S WEBINAR AND YOU SHOULD GET THIS E-MAIL AFTER EACH COURSE SO WE HOPE TO HAVE THE NEXT ONE OUT BIT THE END OF THE DAY TODAY.

WE ARE KEEPING THE REGARDINGS JUST LIMITED TO YOU GUYS. EVERYONE WHO IS REGISTERED FOR THE COURSES AND WE WILL EVENTUALLY POST THEM ALL TO OUR WEB SITE SO EVERYONE HAS ASSESS TO THEM.

BUT RIGHT NOW IT'S JUST YOU GUYS SO YOU SHOULD BE GETTING THESE E-MAILS.

IF YOU'RE NOT GETTING THESE E-MAILS THERE MIGHT BE A FEW REASON RAS FOR THAT.

THE E-MAILS ARE COMING FROM HERITAGE PRESERVATION.ORG AND THE E-MAIL ADDRESS IS INFO@HERITAGEPRESERVATION.ORG. IF YOU'RE NOT GETTING THEM THERE ARE TWO REASONS.

WE MIGHT BE ENDING UP IN YOUR SPAM FILTER, SO CHECK THAT OUT. THE OTHER REASON WE'RE ONLY SENDING THESE TO PEOPLE WHO ARE REGISTERED FOR THIS COURSE.

SO IF YOU HAVE A QUESTION ABOUT IF YOU'RE REGISTERED OR WHY YOU MIGHT NOT BE GETTING THIS E-MAIL, SHOOT US AN E-MAIL AND WE CAN FIGURE IT OUT.

WE HAVE ALEX AGAIN WITH US TODAY AND I'M GOING TO MOVE THIS. MOVES OVER THE MODERATED CHAT.

AGAIN AS HOPE SAID, YOU WILL TYPE IN YOUR QUESTION IF IT'S AN ISSUE, A TECH ISSUE, WE CAN ANSWER YOU PRIVATELY SO NO ONE ELSE CAN SEE IT.

BUT WHEN DO PUBLISH YOUR POSTS SO THAT EVERYONE CAN SEE, YOU WILL SEE YOUR COMMENT TWICE.

DON'T WORRY YOU'RE NOT SPAMMING THE CHAT BOX.

IT'S JUST ALL A PART OF THE SYSTEM.

SO LET ME MOVE THIS OUT OF THE WAY.

AND ALEX, I WILL GET YOUR SLIDE UP.

>> THANK YOU, JENNY.

AND THROUGHOUT THE PRESENTATION PLEASE FEEL FREE TO TYPE IN QUESTIONS AS THEY COME TO YOU AND WE WILL HOLD ON TO THEM AND AS SOON AS WE HAVE A BREAK WE WILL TRY Ø GET TO THEM.

AND ALEX, IT'S ALL YOU.

>> ALEXANDRA ALLARDT: THANK YOU, JENNY.

WELCOME.

IT'S HEARTENING TO SEE SO MANY PEOPLE BACK AND I WANT TO SAY A LOW HAD A TO HONOLULU, WE GO AS FAR AS NEW ZEALAND TO SWEDEN AND ABERDEEN THIS TIME.

I WAS JUST IN GLASGOW, I HAVE FAMILY IN ABERDEEN AND DOWN TO BELIZE AND THERE ARE PEOPLE IN ALASKA AND ALSO THE 48 STATES, SO I'M HOPING YOU'RE GOING TO HAVE A GOOD TIME HERE.

THIS IS A PRETTY DENSE PRESENTATION TODAY SO MAKE SURE YOU HAVE YOUR COFFEE AND YOUR TEA WITH YOU.

I HOPE HAVE I HAVE SOME INTERESTING SLIDES THAT PROMPT SOME QUESTIONS AND WE WILL TRY TO GET GOING.

BECAUSE WITH MORE THAN

4.8 BILLION ARTIFACTS HELD IN AMERICAN INSTITUTIONS YOU KNOW, AMERICA'S HERITAGE HAS A LOT AT RISK AND THIS INCLUDES

1.7 BILLION RARE AND UNIQUE BOOKS, PERIODICALS AND SCRAP BOOKS.

WE HAVE 800 MILLION NATURAL SPECIMENS AND 700 MILLION PHOTOGRAPHS, 200 MILLION ARCHAEOLOGICAL ARTIFACTS AND FOR YOU GUYS ARE HISTORIC STUFF WE HAVE 48 MILLION HISTORIC OBJECTS AND 21 MILLION PAINTINGS, SCULPTURES AND WORKS D'ART.

AS WE NOTED ON TUESDAY, WITH 8% OF THE INSTITUTIONS NOT HAVING AN EMERGENCY PLAN OR ONE THAT IS FLUID IN THEIR HEADS, WE ARE VERY AT RISK.

SO THIS WEBINAR, I HOPE, WILL BEGIN TO HELP YOU IDENTIFY THOSE HAZARDS THAT ARE EXTERNAL TO YOUR BUILDING AND SITE.

THE BETTER YOU CAN IDENTIFY THE HAZARDS AND UNDERSTAND THE EFFECT THEY COULD HAVE ON YOUR SITE, THE MORE PROACTIVE YOU CAN BE TO TAKE MEASURES TO MINIMIZE THAT COST OR DAMAGE AND LOSS OF COLLECTION.

THAT WILL SAVE LIVES.

IT WILL SAVE COLLECTIONS AND A LOT OF MONEY SO YOUR TRUSTEES WILL BE HAPPY.

AND MORE THAN ANYTHING ELSE, IT WILL GIVE YOU MORE TIME TO DO THE THINGS THAT YOU REALLY LIKE TO DO.

SO LET'S SEE WHAT THE WEBINAR GOALS TODAY, THE GOALS ARE TO IDENTIFY A RANGE OF NATURAL AND MAN MADE HAZARDS THAT AFFECT YOUR COLLECTION.

THERE ARE SO MANY DISASTERS YOU CAN BE PARALYZED TRYING TO ADDRESS THEM ALL.

I AM GOING TO PUT COMMON EXAMPLES IN FRONT OF YOU TO GET YOU THINKING ABOUT THE TYPES OF INCIDENTS YOU CAN PRUDENTLY CONSIDER.

ONE YOU HAVE MADE A LIST OF HAZARDS LURKING AROUND YOU, THEN WE THERE GO INTO THE PROCESS OF EVALUATING HOW EACH ONE CAN AFFECT YOUR SITE AND WHAT THE PROBABILITY MIGHT BE.

THAT'S THE BEGINNING OF THE PROCESS OF RISK MANAGEMENT.

AND I WILL TALK MORE ABOUT THAT LATER IN THIS WEBINAR AND THEN AGAIN IN THE FOURTH WEBINAR.

AND THEN LATER ON TODAY, ANOTHER GOAL, WE'RE GOING TO IDENTIFY THE RESOURCES TO FIND OUT WHICH ONES, WHICH KIND OF THESE HAZARDS ARE AT RISK OF AFFECTING YOUR RESOURCE OR YOUR REGION.

IT'S SORT OF A FUN EXERCISE TO SEARCHING ON THE WEB TO DISCOVER REALLY WHAT LURKS IN YOUR BACK YARD.

I'M ALSO GOING TO EXPAND ON A TOPIC WE TOUCHED ON YESTERDAY, ON HOW TO BUILD BETTER RELATIONSHIPS WITH YOUR LOCAL FIRST RESPONDERS AND EMERGENCY MANAGEMENT OFFICIALS.

THEY ARE DEFINITELY THE PRIMARY SUPPORT RESOURCE FOR YOU SO I WANT TO BE SURE THAT YOU'RE COMFORTABLE KNOWING HOW TO APPROACH THEM.

I'LL GIVE YOU SOME POINTERS OFTEN THE KINDS OF QUESTIONS TO ASK THEM, AND THE KINDS OF QUESTIONS THEY MIGHT ASK YOU IN RETURN, JUST TO PREPARE YOU.

WHILE I'M JABBERING AWAY YOU'RE LOOKING AT THESE IMAGES PROBABLY AND WONDERING WHAT'S GOING ON IN THESE EXAMPLES.

THE TOP EXAMPLE IS A MAN MADE  
HAZARD FROM A COOKING FIRE IN  
AN --

>> WOULD YOU LIKE YOUR -- IF  
YES, PRESS 1, IF -- ALL HAVE  
BEEN MUTED.

YOU WILL NOW REJOIN THE MEETING.  
>> IN PREPARATION FOR ALL OF THE  
STAFF GOING TO THE TOWN THANKING  
DAY PARADE.

SOME TIME DURING THE TIME THEY  
WERE AWAY, SOME SORT OF EMBER  
STRAIGHTAWAY FLU OUT THE CHIMNEY  
AND STUCK IN THE THATCHED ROOF.  
THE FIRE SMOLDERED AND BURST  
INTO FLAMES ABOUT THE TIME  
EVERYONE INCLUDING MOSTEST FIRE  
DEPARTMENT WAS MARCHING DOWN  
ALONG THE PARADE ROUTE.

I WOULD SAY WHAT A WAY TO START  
YOUR FEAST DAY.

NOW TO GIVE YOU AN IDEA, THAT  
REALLY HAD A LOW PROBABILITY OF  
HAPPENING BUT IT CERTAINLY HAD A  
HIGH DAMAGE EFFECT.

AND THEN THE NATURAL HAZARD  
IMAGE BELOW THAT IS CALLED A  
HABUB.

IT'S AN ARABIAN TERM FOR WICKED  
WIND.

THESE WEATHER EVENTS DROVE  
PARCELS INTO OUR BUILDINGS AND  
OUR MECHANICAL SYSTEMS AND DUCT  
WORK.

THE NARVEL WEATHER SERVICE  
INDICATES PHOENIX GETS THEM ON  
ACKNOWLEDGE OF THREE A YEAR.  
NOW THAT WOULD BE CONSIDERED A  
HIGH PROBABILITY, AT LEAST IN  
PHOENIX AND THE EFFECT WOULD  
DEPEND ON HOW TIGHTLY YOUR  
BUILDING WAS SEALED.

MAYBE IN A MODERN BUILDING THE  
EFFECT WOULD BE MODERATELY LOW.  
IN A MORE LITELY CLED CULTURE IT  
WOULD BE NOT RATELY HIGH.

SO WE WILL GO TO THE NEXT SLIDE.

SO LET'S JUMP INTO THE FIRE WITH  
MAN MADE DISASTERS HERE.

MAN MADE DISASTERS ARE EVENTS  
THAT ARE INTENTIONAL OR  
UNINTENTIONAL THREATS TO PUBLIC  
HEALTH AND SAFETY.

SINCE MAN MADE DISASTERS ARE  
UNPREDICTABLE THEY POSE A REALLY  
DIFFICULT THREAT THAT MUST BE  
HANDLED WITH APPROPRIATE PROPER  
PREPAREDNESS AND REACTION.

THEY CAN AFFECT ALL OF YOU,  
WHETHER YOU'RE IN A LARGE PUBLIC  
OR UNIVERSITY LIBRARY OR IN A  
TINY ALL VOLUNTEER HISTORIC  
SITE, NO MATTER WHERE YOU ARE,  
MAN MADE HAZARDS CAN AFFECT YOU.

NOW ALL OF THE HAZARDS I HAVE  
LISTED HERE FROM UTILITY OUTAGES  
TO FAILURE OF DAMS AND POWER  
PLANTS ARE AT RISK OF HAVING A  
TERRIBLE IMPACT ON YOUR  
FACILITIES AND YOUR COLLECTIONS.

YOU MAY HAVE HAD EXPERIENCE ON A  
PERSONAL LIFE IN YOUR COMMUNITY  
WITH ONE OR MORE OF THESE.

MAYBE DURING A POWER OUTAGE.

I'M PROBABLY GOING TO GET A  
POWER OUTAGE PROBABLY OVER THIS  
WEEKEND WITH THE BLIZZARD AFTER  
COMING THROUGH.

NOW FOR THOSE OF YOU ALONG THE  
GULF HOWEVER YOU MAY BE MORE  
FAMILIAR THAN YOU WISH WITH THAT  
OIL RIG SPILL.

AFTER THE DEEPWATER HORIZON RIG  
ACCIDENT, OIL SPILLED INTO THE  
GULF OF MEXICO FOR OVER THREE  
MONTHS.

WHILE MUCH ATTENTION HAS FOCUSED  
ON THE DISASTER AFFECTING  
NATURAL RESOURCES, MANY CULTURAL  
RESOURCES WERE THREATENED AS  
WELL, INCLUDING ARCHAEOLOGICAL  
SITES FROM SHIPWRECKS TO NATIVE  
AMERICAN CAMPS.

WHILE SITES ON THE GULF COAST

WERE MOST AT RISK, SITES ON THE FLORIDA COASTLINE ALSO FELT THE IMPACT.

NOW OIL SPILL, LIKE MOST MAN MADE HAZARDS ARE DANGEROUS TO OUR COASTAL RESOURCES IN A VARIETY OF WAYS.

CONTAMINATION CANNOT ONLY DEGRADE AND CAUSE PHYSICAL LOSS TO THE SITE BUT MAY AFFECT DATING TECHNIQUES.

ADDITIONALLY IMPROPER CLEANUP METHODS AND HIGH TRAFFIC TO THE AREA TO INSPECT OR TO CLEAN UP CAN CAUSE MORE DAMAGE TO THE SITE THAN THE OIL ITSELF.

SO THAT'S ONE EXAMPLE THERE.

ON THE OTHER HAND, AT THE OTHER END OF THE LIST ARE CIVIL AND POLITICAL DEMONSTRATIONS THAT MAY HAPPEN IN THE VICINITY OF YOUR SITE.

POLITICAL RISK MAY FEEL EXTREME TO YOU BUT THE COUNTRY REALLY IS A HOT BED OF POLITICAL ARGUMENTS AND PUBLIC DEMONSTRATIONS AS WE STRUGGLE WITH ECONOMIC AND POLITICAL CONCERNS.

LIBRARIES AND CULTURAL SITES ON PRIMARY ROUTES INTO OR OUT OF TOWN ARE PARTICULARLY AT RISK DUE TO THEIR PROXIMITY TO DEMONSTRATION ROUTES.

THINK, TOO, OF WHAT HAPPENS IN THE CITIES AROUND THE WORLD THAT LOSE NOTABLE SPORTS EVENT.

IN THIS IMAGE, THE CARNEGIE MUSEUM OF ART IN PENNSYLVANIA ANTICIPATED THE RISK TO POTENTIALLY DISRUPTIVE DEMONSTRATIONS FROM ONE OF THE ECONOMIC SUBJECTS AND IMPLEMENTED ACTIONS.

THEIR EMERGENCY PREPAREDNESS PLAN WAS TO BOX THE WINDOWS BOX THE OUTDOOR SCUM COMPUTER AND TURN OFF THE FOUNTAIN IN

PREPARATION FOR MARCHES.

NOW WE ALL KNOW THAT THE RISK OF FIRE IS ALWAYS PRESENT AND EVERYONE I HOPE IS AWARE OF THE COSTLY OR EVEN TOTAL DESTRUCTION THAT IT CAN CAUSE.

IT'S WHY FIRE EXPRSSION SYSTEMS ARE A PRIORITY FOR ALL INSTITUTIONS.

BUT FIRES DON'T ALWAYS START WITH OUR -- SOMETIMES THEY ARE FROM ACCIDENT SOURCES.

TOWN ARCHIVES AND LIBRARIES HAVE A HISTORY OF BEING ESPECIALLY SUSCEPTIBLE TO THIS KIND OF THREAT.

HERE ARE JUST TWO EXAMPLES.

FOR THIS NEW ENGLAND HISTORIC LANDMARK BUILDING ON THE LEFT, A FIRE WAS DISCOVERED AROUND 3:30 IN THE MORNING BY HAPPENSTANCE AT A POLICEMAN WAS RETURNING HOME AMP HE HAD JUST GONE OFF DUTY.

THE CAUSE OF THE FIRE WAS ARSON. THAT MAKES IT A CRIME SCENE THAT LIMITS YOUR ACCESSIBILITY TO THE BUILDING WHILE THE FIRE CHIEF CONDUCTS BUSINESS TO FIND THE EVIDENCE.

IN ADDITION IN THIS CASE THE FIRE WAS HARD TO CONTROL AND WITHIN 12 HOURS BEFORE THE ASHES WERE REALLY COLD, THIS LANDMARK BUILDING WAS DECLARED UNDER SAFE BY THE FIRE MARSHAL AND DEMOLISHED.

A WORKING RELATIONSHIP WITH YOUR FIRST RESPONDERS IN THIS CASE MIGHT HAVE ALLOWED ENOUGH TIME TO BRING IN PRESERVATION PROFESSIONALS TO ASSESS OTHER OPTIONS BESIDES DEMOLITION.

AND A WORKING RELATIONSHIP WITH THE FIRST RESPONDERS WOULD HAVE CLUED THEM IN ABOUT BRINGING OUT PRIORITY ITEMS DURING THE

OFFICIAL FIRE FIGHTING EFFORTS  
WHEN THE BUILDING WAS STILL SAFE  
TO ENTER BY THE FIRST RESPONDERS  
THAT IS.

>> THE FIRE TO THE LANDMARK  
COURTHOUSE ON THE RIGHT WAS  
CAUSED BY WELDERS DURING A  
RENOVATION PROJECT.

A SPARK SMOLDERED OVERNIGHT AND  
ERUPTED IN A FIRE BEFORE DAWN  
DESTROYING EXTENSIVE GENEALOGY  
ARCHIVES AND THE ENTIRE  
COLLECTION OF THE FIRST COLLAR  
CHATAM HISTORICAL SOCIETY THAT  
WAS SHARING SPICE IN THAT  
BUILDING.

THE HIGHEST RISK OF FIRE FOR  
MORE PLACES IS FROM RENOVATION  
PROJECTS.

A PLAN CAN HELP YOU KNOW  
MITIGATE THE RISK OF A FIRE DUE  
TO RENOVATIONS BY SETTING  
PROTOCOLS FOR THE STORAGE OF  
WORK AND EQUIPMENT AT NIGHT AND  
HOW THE SITE IS CLEANED AND  
INSPECTED AT THE END OF WORK  
PERIODS.

YOU CAN ALSO CONSIDER TRARYP  
SMOKE MONITORS TO PLACE THEM  
CLOSE TO THE WORKING AREA AND  
INSIDE THE WALLS IN THE AREAS  
THAT THEY'RE WORKING ON.

SO FIRE IS A PRETTY HISTORY MAN  
MADE HAZARD.

AS WE SAW IN THE OIL RIG IMAGE  
YOU CAN ALSO HAVE INCIDENT  
DISTANT FROM YOUR SITE THAT CAN  
STILL IMPACT YOUR SITE.

EXAMPLES THESE MAN MADE THREATS  
ARE USUALLY CAUSED BY  
EXPLOSIONS, CHEMICAL SPILLS OR  
FIRES FROM NEARBY FACILITIES  
SUCH AS AN AIRPORT, INDUSTRIAL  
PLANT, GAS OR PROPANE FILLING  
STATION, MINES, PRAIL ROADS OR  
HORROR.

THE HAZARDOUS EMISSIONS FROM

THESE INCIDENTS BECOME AIRBORNE AND CONTAMINATE THE NEIGHBORHOODS DOWN WIND OF THE EVENT.

SO IF YOU WERE HEAVY DOWNWIND OF SOMETHING LIKE THIS, DO TAKE NOTE WHEN YOU GO TO SORT OF SEE WHAT IS LURKING OUTSIDE OF YOUR DISMOORS NEIGHBORHOOD.

IF THOSE RESIDUES ENTER YOUR BUILDING THEY CAN CLING TO THE SURFACES OF UNCOVERED OR UNPROTECTED COLLECTION AND THEY CAN ACCELERATE PHYSICAL DEGRADE DEGREES.

THESE KINDS OF INACCIDENTS CAN ALSO.

REQUIRE YOU TO EVACUATE TO BE SAFE FROM FUMES AND CHEMICAL EXPOSURES.

AND THE EXPLOSIONS CAN PRODUCE A POWERFUL PHYSICAL SHOCK THAT CAN AFFECT YOUR BUILDING.

SO AS PART OF YOUR INVESTIGATION FOR YOUR HOMEWORK, AND WE WILL BE YOU LOOK INTO WHAT MAN MADE HAZARDS YOU MAY HAVE OUTSIDE AND IN YOUR AREA THINK OF LOOKING AT THE PROPANE STATIONS NEAR YOU, THE YOU KNOW THE KIND USED FOR FILLING UP YOUR PROPANE TANKS IN THE SUMMER OR FOR THOSE OF YOU THAT ARE HEARTY, IN THE WINTER.

OR THOSE USED TO FILL TANKS FOR HOME HEATING.

HERE IN RHODE ISLAND WE HAVE HAD TWO PROPANE LEAKS IN THE PAST YEAR REQUIRING EVACUATION OF ALL BUILDINGS WITHIN A HALF MILE RADIUS UNTIL THE LEAK WAS CONTAINED AND THE REPAIRS COMPLETED.

THIS REQUIRED CONSTANTLY KNOWING WHAT TO DO TO SECURE THE BUILDING TO THE BEST OF YOUR ABILITY BEFORE YOU EVACUATED THE

BUILDING.

SO IF YOU IDENTIFY THESE HAZARDS, PART OF YOUR RISK EVALUATION AND PREPAREDNESS PLAN MIGHT BE INCLUDING PUTTING COLLECTIONS YOU WERE WORKING ON AWAY IN RESPONSE.

IT MAY INCLUDE HAD A SHELTER AND PLACE PLAN, IF FIRST RESPONDERS ORDER YOU TO STAY INSIDE UNTIL THE ENACCIDENT ACCIDENT HAS BEEN TAKEN ATTEND.

IF YOU HAVE TO GO THERE OVERNIGHT, WHO ARE YOU GOING TO SLEEP?

DO YOU HAVE FOOD?

DO YOU HAVE WATER?

WE HAVE TO THINK OF THOSE THINGS FOR A SHELTER IN PLACE PLAN.

NOW WHEN YOU THINK OF MAN MADE HAZARDS, HOW MIGHT THESE AFFECT YOU, THE AGE ARE THE U.S.

INFRASTRUCTURE OF DAMS AND ELECTRICAL GRILLED ARE INHERENT HAZARDS ACROSS THE COUNTRY.

TAMS SPILLED OVER THE LAST 150 YEARS WERE CONSTRUCTED USING THEN CURRENT CONSTRUCTION TECHNIQUES AND SEISMIC KNOWLEDGE OF THE TIME AND MANY WITHOUT THE BENEFIT OF GOVERNMENT REGULATION.

DAMS BUILT TO HOLD THE WATER IN RESERVOIR CAN BE DAMAGED DUE TO A HUGE STORM, AN ASSOCIATED RUN OFF, AN INCOME, SMOKE FAILURES YOU KNOW, LIKE LAND SLIDES, OR TRARM EVENT.

THAT'S WHAT FEMA IS WORRIED ABOUT NOW.

UNDERSTANDING THE IMPACT OF A DAM FAILURE AND IF YOUR FACILITY IS IN THE PATH OF THE WATER IS CRITICAL FOR TWO REASONS -- THEIR CATASTROPHIC FAILURE CAN CAUSE MANY FATALITIES AND DESTROY ANY CULTURAL RESOURCES

DOWNSTREAM FROM THE FACILITY.  
AND THE SECOND PART IS THE  
STORAGE CAPACITY IS LOST WHICH  
MAY AFFECT THE AVAILABILITY OF  
WATER AT YOUR FACILITY EVEN IF  
YOU'RE NOT DIRECTLY AFFECTED BY  
THE DAM FAILURE.

SO SEE IF YOU HAVE ANY DAMS,  
WHERE ARE YOUR RESERVOIRS IN  
YOUR AREAS.

NOW THE U.S. ELECTRICAL GRID IS  
MASSIVE BUT ALSO AGING UTILITY  
OUTAGES CAN AFFECT YOUR SITE AND  
SHUT DOWN NOT JUST  
TELECOMMUNICATION NETWORKS AND  
WATER SUPPLY BUT YOUR ABILITY TO  
REGULATE YOUR HEATING AND  
COOLING SYSTEM.

THIS WOULD BE ESPECIALLY HARMFUL  
FOR THE WARMER CLIMATES OF THE  
SOUTH OR THOSE SPECIALTY  
COLLECTIONS THAT REQUIRE VERY  
COLD STORAGE TO PRESERVE THEM.  
SUCH AS NITRATE NEGATIVE AND  
BOTANICAL AND SCIENTIFIC  
COLLECTIONS.

HAVING BACKUP GENERATORS IS A  
REALLY GOOD PREPAREDNESS STEP TO  
MITIGATE THIS RISK.

LET ME BREAK FOR A LITTLE BIT OF  
WATER HERE.

JENNY IS THIS A GOOD TIME TO  
MAYBE HAVE A POLL?

>> SURE, YEAT.

LET'S GIVE YOUR VOICE A QUICK  
SECOND REST.

WE ARE CURIOUS IF ANY OF YOU OUT  
THERE, NOW UP TO 235  
PARTICIPANTS, IF YOU HAVE  
EXPERIENCED A MAN MADE HAZARD  
AND/OR DISASTER SO WE HAVE  
LISTED HERE ALL OF THE ONES ALEX  
HAS GONE OVER.

AND OF COURSE GIVING YOU THE  
OPTION TO CLICK "OTHER" AND I  
WILL GIVE THIS IS SECOND AND  
SEE -- HOPEFULLY THE ANSWER IS

NO AND IT LOOKS LIKE THE  
MAJORITY IS NO BUT A LOT OF  
UTILITY OUTAGES.

>> YOU ALWAYS WANT TO KNOW WHAT  
THE OTHERS ARE.

>> OH, YEAH.

FEEL FREE TO SHARE IN THE Q&A  
BOX.

ALEX, YOU DO HAVE A FEW  
QUESTIONS ON FIRE SUPPRESSION  
BUT WE WILL GET TO THAT ON OUR  
NEXT BREAK.

>> IF YOU WOULDN'T MIND I WANT  
TAKE ALL OF THIS BECAUSE I WILL  
BE LOOKING AT -- WE WILL BE  
WORKING INTO NATURAL HAZARDS SO  
WE WILL BE GLAD TO TAKE ALL OF  
THESE QUESTIONS THEN.

>> IT LOOK LIKE 99 PEOPLE SAID  
NO.

A LOT OF PEOPLE HAD UTILITY  
OUTAGES.

A FEW MENTIONED FIRE, HIGHWAY  
TRANSPORTATION DISRUPTION, DAM  
FAILURES AND A FEW WE HAVE 34  
PEOPLE THAT SAY "OTHER" SO FEEL  
FREE TO SHARE IN THE Q&A BOX  
WHAT "OTHER" MIGHT MEAN.

ALEX I WILL PULL THIS BACK OVER.

>> ALEXANDRA ALLARDT: THANK YOU  
EVERYBODY.

I WOULD LOVE TO KNOW WHAT THE  
OTHER MEANS THERE.

I'M ALWAYS COLLECTING PICTURES  
AND STORIES SO IF YOU EVER WANT  
TO E-MAIL ME ABOUT ANY OF YOUR  
STORIES, FEEL FREE TO.

MY E-MAIL CONTACT INFORMATION  
WILL BE IN THE LAST SLIDE.

THE FIRST FEW SLIDES WE WENT  
THROUGH WHAT MAN MADE HAZARDS  
CAN DO.

NATURAL HAZARDS CAN CALL BIG  
INCIDENTS THAT HAVE LONG  
REACHING NEEDS AND COSTS.

THE IMAGES THAT YOU SEE HERE IS  
A HEART BREAKING PICTURE OF THE

DEVASTATION TO THE SAWN AT A CLARA PUBLISH OWE IN NEW MEXICO IN 2011.

THIS WAS THE FOURTH MAJOR FIRE IN 13 YEAR TO SCORCH THE PUEBLO LANDS.

THE FORESTED AREAS INCLUDED DOZENS OF PROTECTED CULTURAL SITES AND MANY OF THOSE AREAS WERE NOT ACCESSIBLE FOR MONTHS AND SOME WILL NOT BE FOR YEARS: THIS MAY BE AN EXAMPLE OF THE TYPES OF FREQUENT INTENSE WEATHER PATTERNS THAT FORECASTERS ARE ALERTING US TOO. 2012 RECORDS WERE MADE IN THE U.S.

JULY WAS THE HOTTEST SINGLE MONTH EVER RECORDED IN THESE LOWER 48 STATES.

SPRING AND SUMMER AREN'T THE WHOLE STORY THOUGH.

2012 IS VERY LIKELY TO BE THE WARMEST YEAR OVERALL, EVER RECORDED IN THE U.S.

SO IT DOES SEEM THE TRENDS MAY BE CHANGING.

AND WHY IS THIS IMPORTANT TO US?

IT'S BECAUSE EXTREME WEATHER EVENTS INFLICT TREMENDOUS RECOVERY COSTS IF YOU'RE AFFECTED BY THEM AND YOUR PROBABILITY OF BEING AFFECTED IS INCREASING.

SO I'M HOPING TO ENCOURAGE YOU HERE TO GET YOUR HEAD OUT OF THE ALEXANDER AND NOT BE AN OSTRICH AND KEEP STRENGTHENING YOUR PLAN AND GET YOUR STAFF OR AS MANY AS YOU CAN TO WORK WITH YOU.

SO WE'RE IN THE SEASON OF SNOW FOR SOME OF US.

WE HAVE THAT BLIZZARD COMING HERE TO ME PROBABLY IN THE NEXT 24 HOURS STARTING LET ME START ABOUT NATURAL WEATHER EVENTS WITH BLIZZARDS AND HAIL.

I WANT TO GET YOU THINKING ABOUT THE TYPES OF WEATHER PATTERNS AND WHAT TYPE OF DAMAGE THEY COULD CAUSE TO YOUR SITE. NOW A BRINGARD FOR THOSE OF YOU WHO HAVE SNOW, I UNDERSTAND IN AUSTRALIA IF THEY HAVE ANY SNOW ON THE GROUND IT'S CONSIDERED A BLIZZARD.

BUT HERE, A BLIZZARD IS A RECEIVER SNOWSTORM THAT IS CHARACTERIZED BY STRONG WINDS AND LOW TEMPERATURES.

IN ADDITION TO EXTENSIVE POWER OUTAGES THAT AFFECT US FOR DAYS AND POTENTIALLY FOR THOSE BURST PIPES, BLIZZARD FORCE WINDS AND SNOW CAN CAUSE DEVASTATING DAMAGE TO YOUR BUILDING ENVELOPE, EITHER THROUGH TREES FALLING DOWN OR COLLAPSING ROOFS.

A NOTABLE CASE AT THE BALTIMORE MUSEUM IN THIS SLIDE ILLUSTRATES THE AND OUR DESTRUCTION OF THESE WINTER STORMS.

IN THE EARLY MORNING OF FEBRUARY, IN 2003, HEAVY SNOW FROM THE PRESIDENTS' DAY STORM COLLAPSED HALF OF THE ROOF OF THE MUSEUM'S ROUNDHOUSE.

THE MUSEUM SUFFERED HEAVY DAMAGE NOT ONLY TO THE ROUNDHOUSE ITSELF BUS TO THE COLLECTIONS WITHIN THE ROUNDHOUSE.

SOME OF THOSE ITEMS WERE DAMAGED BEYOND REPAIR.

THIS IS NOT AN ISOLATED EVENT AND THESE EVENTS ARE NOT JUST REGULAR GATED TO THE EAST COAST. THEY'RE ALL OVER SO AS PART OF YOUR RISK EVALUATION FOR YOUR HOMEWORK, ESPECIALLY IF YOU HAVE FLAT BOOTHS THAT WILL HOLD HAD A LOT OF SNOW AND IF IT'S WET THAT'S AN NORM AMOUNT OF WEIGHT AND IF YOU HAVE ANY STRUCTURAL

FAILURES 0 ARE IF YOU'RE IN AN OLD BUILDING WHERE YOU PERHAPS WEREN'T BUILT UP TO CURRENT CODES I CAN REALLY STRESS YOUR ROOF SYSTEM.

NOW OFTEN ACCOMPANYING SEVERE WEATHER EVENTS LIKE BLIZZARDS YOU CAN FIND HAIL.

THEIATION'S AREAS OF GREATEST HAIL ARE ALONG AND JUST EAST OF THE CENTRAL ROCKY MOUNTAINS WHERE IT AVERAGES 6 TO 12 PER YEAR.

BUT HAIL ALSO OCCURS, LESS FREQUENTLY BUT STILL DAMAGING AMOUNTS, EVEN IN THE SOUTHEASTERN U.S. LIKE FLORIDA AND IN THE WARM SOUTHWEST IN PLACES LIKE ARKANSAS AND CAL CAM.

SO DO THINK ABOUT WHAT YOUR HAIL RISK IS AND WHAT THE PROBABILITY MIGHT BE OF IT HAPPENING.

BECAUSE IN THE PAST YEAR, I LOVE THIS, THE ICE HOUSE MUSEUM IN CEDAR RAPIDS IOWA, YOU GUYS IN IOWA HAVE A LOT OF HAZARDS COME YOUR WHAT THEY, AND THE MISSOURI BOTANICAL GARDENS AND THE 45th INFANTRY MUSEUM IN OKLAHOMA CITY SUFFERED EXTENSIVE DAMAGE AND COSTLY DAMAGE FROM HAIL.

IN THE WARM CLIMATE OF DALLAS, THE DALLAS ASHER AND SCRIPTURE PARK IN TEXAS, SIX OF THE STURDY GLASS LILY PADS BY THE ARTIST DALE CHIHULY WERE DESTROYED BY HAIL THE SIZE OF QUARTERS.

AS PART OF YOUR PREPAREDNESS PART OF YOUR PLAN THAT WE'RE GOING THROUGH NOW, UNDERSTANDING THE DIFFERENT LEVELS OF WINTER WEATHER ADVISORIES IS A GOOD PRACTICE.

UNDERSTANDING THEM ALLOWS YOU TO ANTICIPATE THE PREPAREDNESS ACTION NEEDED TO PROTECT

YOURSELF SIDE FROM THE HAZARDOUS  
CONDITIONS.

FOR INSTANCE HERE IN NEW  
ENGLAND, WE HAVE MOVED FROM A  
STORM WATCH TO A BLIZZARD  
WARNING.

WITH A PREDICTION OF UP TO TWO  
FEET OF SNOW.

RIGHT NOW WE'RE CHECKING OUR  
PIPE INSULATION AND THIS YEAR'S  
MITIGATION ACTION WAS INSTALLING  
BACKFLOW VALVES TO HELP PROTECT  
US IF WE HAVE ANY FROZEN PIPES.  
WE'RE'S ALSO DOUBLECHECKING OUR  
GENERATES TO MAKE SURE THEY WILL  
TURN ON.

NOW OFTEN IN THE VICINITY OF  
RECEIVER HAIL ARE TORNADOES,  
WHILE TORNADOES OCCUR IN MANY  
PARTS OF THE WORLD, THEY'RE  
FOUND MOST FREQUENTLY IN THE  
UNITED STATES.

AN ACKNOWLEDGE OF 1253 TORNADOES  
OCCUR IN THE U.S. EACH YEAR.

THE ONLY PLACE THAT HAS NO  
TORNADOES RECORDED AT LEAST IS  
IN HAWAII, AND I GUESS THAT'S  
ANOTHER REASON TO LIVE IN  
PARADISE.

MOST TORNADO RELATED DAMAGES  
RESULT FROM WIND VELOCITY AND  
WIND BLOWN DEBRIS, AS WELL AS  
LARGE HAIL AGAIN.

WITH MORE FREQUENT WEATHER IS  
EVENTS, TORNADOES ARE BECOMING  
MORE FAMILIAR IN AREAS THAT HAVE  
NOT SEEN ACTIVITY IN MANY  
DECADES, IF AT ALL.

FOR EXAMPLE WHILE THE BRANSON  
AUTO MUSEUM IN THE MIDWEST IS  
LOCATED IN PART OF THE COUNTRY  
PRONE TO TORNADOES AND SUFFERED  
DAMAGE, AS YOU CAN SEE IN THIS  
IMAGE, THE BARNHAM MUSEUM ON THE  
COAST, IN BRIDGEPORT CONNECTICUT  
ALSO SUFFERED MULTIMILLION  
DOLLAR DAMAGE FROM TORNADOES

JUST THIS PAST YEAR.

TORNADOES IN NEW ENGLAND ARE RARE, ABOUT ONE EVERY 50 YEARS, AND THEY HAVE OCCURRED IN THE HILLS FURTHER NORTH ALONG THE BORDER OF CONNECTICUT AND MASSACHUSETTS, NOT ON THE FLAT COASTAL E. COASTLINE.

SO THIS IS AN EXAMPLE OF A LOW PROBABILITY BUT ONE WITH A HIGH EFFECT.

SO I ENCOURAGE YOU TO KNOW YOUR REGION'S HISTORY OF TORNADO ACTIVITY AS IT WILL HELP YOU ASSESS THE PROBABILITY AND YOU CAN START BY LOOKING AT THE TORNADO HISTORY PROJECT, THE WEBSITE IS OFTEN THE BOTTOM OF THE SLIDE AND IT ALSO IS IN YOUR PACKET, SO YOU CAN MAYBE USE THAT TO LEARN MORE.

NOW LISTENING IS ANOTHER FARM WEATHER HAZARD.

IT'S ONE OF THE OLDEST OBSERVED NATURAL WEATHER PHENOMENA ON EARTH.

IT'S CAN BE SEEN IN VOLCANIC ERUPTIONS, FOREST FIRES, SURFACE NUCLEAR AND OBVIOUSLY THUNDERSTORMS.

WHILE WE MAY THINK OF LISTENING AS HAD A LIFE SAFETY ISSUE, IT ALSO AFFECTS OUR CULTURAL RESOURCES.

THOSE IN THE MID WEST ARE PROBABLY FAMILIAR WITH THE HIGHLAND BARK WORK NAMED TOUCHDOWN JESUS.

62 FEET TALL AND 42 FEET WIDE, HE WAS TOTALLY DESTROYED BY A LISTENING STRIKE THAT CAUSED THE PLASTIC FOAM AND FIBERGLASS TO GO UP IN FLAMES LEAVING BUT THE BLACK AND STEEL FRAME.

HAVE YOU OUT YOUR COLLECTION, ART IN OPEN AIRWAY CAN FALL INTO TO DAMAGE.

AND HERE ARE THREE OTHER  
EXAMPLES.

THE LANG DAMAGE IN NEW YORK AND  
THERE ARE A LOT OF TALL  
BUILDINGS THERE RENDERED IT  
UNUSABLE IN JULY, 2012.

THERE'S A HUGE HOLE IN THE ROOF,  
I THINK YOU CAN SEE IT THERE  
WITH THE STEEPLE.

ONE GENTLEMAN WAS KILLED, AND  
ONE OF THE STAINED GLASS WINDOWS  
WAS COMPLETELY DESTROYED.

THE EVENT CLOSED ALL BUILDINGS,  
BASE PROGRAMS AND ALL ACTIVITIES  
FOR SEVERAL WEEKS, AND THE  
STREETS WERE CLOSED TO PED AND  
VEHICULAR TRAFFIC FOR SIX DAYS  
DUE TO STRUCTURAL INSTABILITY.  
SO THINK WHAT KIND OF PLAN THEY  
NEED TO BRING THEIR BUSINESS UP,  
NOT TO MENTION TO STABILIZE THE  
BUILDING ITSELF.

NOW THE SILVER WAR MEMORIAL  
STATUE ON THE UPPER RIGHT IS A  
PART OF PHOENIXVILLE  
PENNSYLVANIA SINCE THE 1870'S  
AND IT'S CLEARLY NOW HEAVILY  
DAMAGED, FOLLOWING AN APPARENT  
LIGHTNING STRIKE.

THE FORCE OF THE BLAST KNOCKED  
THE PEDESTAL OUT FROM UNDER THE  
STATUE AND TOOK OFF THE  
GENTLEMAN'S HEAD.

THAT HAPPENED IN 2011.

AND THE GUILDED ANGEL ATOP THE  
NEWLY CONSTRUCTED MOUNTAIN  
TEMPLE IN UTAH HAS A NICE BLACK  
ARM.

THAT WAS THE RESULT OF BEING  
STRUCK BY LIGHTNING IN JUNE 2009  
AND YOU CAN SEEP THE LIGHTNING  
ROD EMERGING FROM THE TOP OF THE  
STATUE'S HEAD.

THEIR MITIGATION SLEUCTS BECAUSE  
TO PUT A DOUBLE ROD THROUGH THE  
STATUE.

MOVING ON TO ANOTHER WEATHER

EVENT, WE THINK OF LIGHTNING, BLIZZARD, HAIL AND TORNADOES AS BEING RECEIVERS AND DANGEROUS. YET THE CLIMATOLOGICAL BASIS FOR THEM IS A THUNDERSTORM.

THERE CAN BE AS MANY AS 40,000 THUNDERSTORMS EACH DAY AROUND THE WORLD.

TAKES ARE MOST COMMON IN THE U.S. AND THEY CAN PRODUCE NOT JUST HAIL AND TORNADOES BUT FLOODS AND REALLY DAMAGING WINDS.

NOW FLOODS ARE THE MOST FREQUENT AND COSTLY OF NATURAL DISASTERS. AROUND 90 PERCENT OF THE DAMAGE CAUSED BY NATURAL DISASTERS IS CAUSED BY FLOODS AND THEIR ASSOCIATED FLOW OF DEBRIS.

EVALUATING YOUR RISK TO FLOOD HAZARDS AND TAKING PROTECTIVE MEASURES IS A GOOD PRACTICE THAT WILL INDEED SAVE YOU VALUABLE TIME IN RECOVERY, LOTS OF ENERGY, AND SAVE YOUR RESOURCES FOR PROBABLY DOING THE THINGS THAT YOU WOULD RATHER DO.

THERE ARE SEVERAL DIFFERENT TYPES OF FLOODS THAT CAN AFFECT US DEPENDING ON YOUR GEOGRAPHY. THEY CAN BE RIVER OR URBAN FLOODS, WE CAN HAVE FLASH FLOODS AND ICE JAMS AND WE CAN ALSO HAVE COASTAL FLOODS.

SO COASTAL, URBAN, RIBBON AND FLASH FLOODS ALL PRODUCE WET AND CONTAMINATED COLLECTIONS THAT REQUIRE COSTLY AND LENGTHY RECOVERY PROCEDURES TO REMEDIATE NOT JUST THE PHYSICAL DAMAGE BUT THE HAZARDS FROM MOLD, SEWAGE, OIL, AND MULTIPLE -- FLOODING ON RIVERS IS AN INEVITABLE PART OF THE LIFE.

SOME OCCUR SEASONALLY WHEN A WINTER OR STRING REASON COUPLED WITH MELTING SNOW FILL RIVER BASINS WITH WATER TOO QUICKLY.

THIS IS A HAZARD TO CULTURAL SITES ON OUR MAJOR RIVERS AS WE SAW LAST TIME FOR THE CHECK MUSEUM IN IOWA.

AND HERE AT THIS LANDMARK RAILWAY STATION IN MISSISSIPPI, IT ALSO HAPPENED THERE.

THESE ARE THE EASIEST TO PREDICT AND WILL USUALLY PROVIDE AMPLE WARNING TO PROTECT COLLECTION IF YOU REMAIN ALERT TO FLOOD WATCHES AND WARNINGS FROM FORECASTERS AND IF YOU HAVE A PLAN.

NOW URBAN AND FLASH FLOODING HOWEVER CAN BE MUCH LESS PREDICTABLE.

DURING PERIODS OF THESE TYPES OF FLOODING STREETS CAN BECOME SWIFT MOVING RIVERS AND BASEMENTS AND BECOME DEATH TRAPS AS THEY FILL WITH WATER.

THESE TYPES OF FLOODING HAPPEN JUST THIS YEAR AS THE VIRGINIA LIVING MUSEUM AND BLESS THEM, THEY ACTUALLY HAD IT TWICE.

THE MONTREAL MUSEUM OF THAT AND LAST YEAR AT THE KENT KEN -- YOU MUSEUM.

TO FIND OUT ABOUT YOUR IT'S RISK OF FLOOD, INSPIRE ABOUT AREA FLOOD PLANS AS WELL AS HOW WATER DRAINS IN SUDDEN AND HEAVY DOWNPOURS AROUND YOUR FACILITY.

SO ASK YOUR FACILITY MANAGER, LOOK AT THE CORNERS OF YOUR BUILDING WHERE THE RAIN COMES IN, YOUR STORMS COME.

FOR INSTANCE, I THINK IN THE SOUTHWEST MOST OF YOUR STORMS COME FROM THE SOUTHWEST AND THAT IS THE CORNER AT WHICH YOU PROBABLY HAVE THE MOST DAMAGE TO YOUR BUILDING.

NOW, A DIFFERENT TYPE OF FLOODING IS COASTAL FLOODING. WINDS GENERATED FROM TROPICAL

STORMS AND HURRICANES ARE INTENSE OFFSHORE LOW PRESSURE SYSTEMS CAN DRIVE OCEAN WATERS INLAND AND CAUSE SIGNIFICANT FLOODING IN A VERY SHORT TIME. THIS COMES WITH SALTWATER AND SAND, IN ADDITION TO A RANGE OF HAZARDOUS CONTAMINANTS FROM SEWAGE, OILS AND AREA INDUSTRIAL BY PRODUCTS.

NOW, THE HIGHLY COVERED FRANK ENSTORM IN 2012 OR HURRICANE SANDY RAVAGED COMMUNITIES ACROSS HUNDREDS OF MILES ACROSS NEW JERSEY, NEW YORK, CONNECTICUT AND RHODE ISLAND COASTLINE WITH COASTAL FLOODING AND STORM SURGES OF RECORD HEIGHTS. ART GALLERIES, CULTURAL CENTERS AND MUSEUMS HAVE BEEN DEVASTATED THROUGHOUT THOSE AREAS BY THE EVENT, AND MANY ARE STILL TODAY, THREE PLUS MONTHS LATER, STILL ALLOWED WITHOUT ELECTRICITY. EVEN THE NEW 9/11 MUSEUM WAS FLOODEDED WITH FIVE FEET OR MORE OF WATER.

SO COASTAL FLOODING THOUGH IS NOT A THREAT TO JUST THE EAST AND GULF COAST.

COASTAL FLOODING IS ALSO A HAZARD TO THE WEST COAST AND ALASKA AND OUT IN HAWAII.

A LOW HAD A.

THE CAUSE IS SEA WAVES THAT THEY ALL KNOW ARE CALLED TSUNAMIS, SOMETIMES REFERRED TO AS TIDAL WAVES.

THESE WAVES ARE PRODUCED BY EARTHQUAKES OR VOLCANIC ACTIVITY.

IN RECENT WEEKS A NUMBER OF EARTHQUAKE AND TSUNAMI WARNINGS HAVE BEEN GENERATED IN THESE REGIONS ESPECIALLY THE NORTH WITH AND THE FACT ALASKA.

YOU MAY HAVE HEARD TOO OF THE

TSUNAMI IN THE SOLOMONS THAT  
JUST HAPPENED THIS WEEK.  
THAT WAS FIVE -- THAT'S A REALLY  
SIGNIFICANT HEIGHT.

IT'S NOT JUST A TINY LITTLE WAVE  
THAT COMES IN.

IT'S A WALL THAT IS FIVE FEET  
HIGH THAT GOES HUNDREDS OF FEET  
THICK.

SO TSUNAMIS ARE VERY STRETCH  
RUSS.

SO I WANT TO CLOSE OUT THIS  
PORTION OF NATURAL HAZARDS  
INDUCED BY WEATHER BY REMINDING  
YOU THAT MANY FLOODING EVENTS  
ARE INITIATED BY TROPICAL  
CYCLONE WEATHER PATTERNS.

TROPICAL PSYCH CLONES ARE AMONG  
THE NATURE'S MOST POWERFUL  
PHENOMENA.

THIS IS A TERM FOR A STORM  
SPAWNED ABOVE THE EQUATOR AND  
FURNACE COUNTERCLOCKWISE.

THIS WEATHER PATTERN DEPENDING  
ON THE STRENGTH AND SIZE AND  
THEN BROKEN DOWN INTO THE  
WEATHER TERMS YOU MAY BE MORE  
FAMILIAR WITH, TROPICAL  
DEPRESSION, TROPICAL STORM,  
HURRICANE, AND MAJOR HURRICANE.  
MOST OF YOU MAY THINK THESE  
SYSTEMS ARE RESTRICT TO THE EAST  
OR THE GULF COAST BUT DON'T FOOL  
YOURSELF.

FOR THOSE OF YOU IN THE SWREFT,  
THE TRADITIONAL RAINS YOU GET  
ARE THE TAIL END, FROM EITHER OF  
THESE EAST OR WEST COAST SYSTEMS  
THANK ARE ENDING UP WHERE YOU  
ARE.

THAT'S PART OF WHY YOU GET ALL  
OF THAT RAIN AND THOSE OF YOU IN  
VERMONT WHO TOOK BRUNT OF DAMAGE  
FROM HURRICANE IRENE IN 2011  
WITH THE MASSIVE FLOODING AND  
WASH OUTS, THEY WERE NOT SEEN IN  
MANY DECADES SO THIS HOPEFULLY

WILL REMIND ALL OF YOU AS LISTENERS THAT LISTENING TO AND TAKING ACTION ON FLOOD WATCHES AND WARNINGS ISSUED BY FORECASTERS IS IMPORTANT FOR ALL OF YOU BECAUSE REALLY AFTER ALL UNTIL 2012 ONLY THE MOVIE INDUSTRY FELT NEW YORK CITY COULD BE INUNDATED AND STOPPED IN ITS TRACK BY A HORRIFIC NATURAL DISASTER THAT STARTED AS A CYCLONIC TROPICAL SYSTEM WAY DOWN SOUTH.

NOW I HAVE INCLUDED IN THE RESOURCE PACKET A TROLL CYCLONE PREPAREDNESS SHEET.

IT'S BEEN PRODUCED BY NOAA, THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION AND THEY PROVIDE BACKGROUND INFORMATION OFTEN THE DIFFERENT CLASSIFICATION OF STORMS INCLUDING HURRICANES SO YOU MAY WANT TO LOOK AT IT AS A REINFORCE.

SO FROM THE WET STUFF WE'RE GOING TO WORK INTO A NATURAL HAZARD HERE THAT IS A WILDFIRE IT'S ONE OF THE SCARIEST DISASTERS TO ME BECAUSE THEY CAN CREATE THEIR OWN WEATHER SYSTEM AND BURN UNCONTROLLABLY.

WILDFIRES BURN OVER 9.2 MILLION ACRES IN THE U.S. ANNUALLY THE ABOVE INTERACTIVE MAP BY DEFENSE COUNSEL OF NATURAL RESOURCES SHOWS HOW MANY WILDFIRES WERE BURNING ON JUST ONE DAY IN JUNE OF THIS YEAR ACROSS THE COUNTRY.

WHEN YOU LOOK AT INFORMATION BY STATE, LIKE IDAHO THERE, FOR EXAMPLE, THEY EXPERIENCED IN 2012 A TOTAL OF 152 LARGE WILDFIRES.

SO THERE'S A HEIGHTENED RISK TO OUR NATIONAL PARKS AND TRIBAL NATION LANDS IN THE WEST AND

SOUTHWEST, ESPECIALLY THOSE IN COLORADO, NEW MEXICO AND ARIZONA.

MANY HAVE CULTURAL RESOURCES AND THE DIRECT PATH OF THOSE FIRES THAT ARE AT RISK OF TOTAL ANILATION.

SO IDENTIFYING FIRE MANAGEMENT AGENCIES IN YOUR REGION AND COORDINATING YOUR NEEDS FOR THE EVACUATION AND PROJECTS OF YOUR CULTURAL RESOURCES WITH THOSE RESPONDING AGENCIES IS IMPORTANT TO DO IN ADVANCE AND THE WEB SITE THAT I HAVE UP HERE ON THE SLIDE, THAT IS HOW YOU CAN TRACK CURRENT INCIDENT.

YOU CAN SEE WHAT WILD FAIR ARE HAPPENING NOW NOT COUNTRY.

THE U.S. FOREST SERVICE INFORMATION SYSTEM, THEY TRACK THAT AND HOST THAT WEB SITE.

SO BESIDE THE RISK OF TOTAL DESTRUCTION FROM A WILDFIRE, THE PRESENCE OF INVISIBLE OR VISIBLE AIRBORNE PARTICULATE IS ALSO A HAZARDOUS THREAT TO THE PRESERVATION OF COLLECTIONS.

OFTEN INVISIBLE TO THE NAKED EYE, THESE INSIDIOUS AND OFTEN NOXIOUS AIR BONE HAZARDS HAVE THE HARMFUL POARVEL TO BRING ACIDIC ABRASIVE MATERIALS IN DIRECT CONTACT WITH YOUR COLLECTION, THROUGH OPEN WINDOWS OR YOUR HEATING AND COOLING DUCT WORK.

THIS IMPACTS THE LONG-TERM PRESERVATION OF COLLECTION AND IT REQUIRES COSTLY LABOR INTENSIVE ACTION TO REMOVE ARTICULATION THEMSELVES.

SO MAKE SURE YOU CAN SHUT DOWN YOUR HVAC SYSTEM AND MAKE SURE YOUR CLOSE YOUR WINDOWS NOW NOT TO BE UNDONE BY NATURAL HAZARDS OF WILDFIRE, VOLCANIC ERUPTIONS

CAN ALSO CAUSE HAVOC.  
ALASKA AND HAWAII HAVE EVACUATES  
AND ARE WELL VERSED IN THE  
HEALTH AND SAFETY RISKS FROM  
VOLCANIC ASH AND HARMFUL GASSES  
INFILTRATING BUILDINGS AND  
ACCUMULATING ON COLLECTION.  
ASH FALL OUT IMPACTS  
TRANSPORTATION, CLOSING DOWN  
MANY MAJOR AIR LINE ROUTES AND  
ROAD WAYS WHICH IN TURN CAN  
IMPACT HOW QUICKLY YOU CAN  
INITIATE A RESPONSE AND  
RECOVERY.

SO THOSE OF YOU IN STATES WITHIN  
THIS MAP ALSO NEED TO TAKE NOTE  
OF THIS HAZARD AND INCLUDE ANY  
EVALUATION OF THE RISK TO  
EARTHQUAKES AS YOU PLAN.  
EVEN THOUGH EVACUATES FAR FROM  
THE XONTD NEGLIGENT UNITED  
STATES POSE A THREAT AS, LIKE  
WILDFIRES THOSE AIRBORNE  
PARTICULATES CAN TRAVEL GREAT  
DISTANCES ON JET STREAMS  
DISRUPTING A LARGE GEOGRAPHIC  
AREA WITH HASH DEPOSITS.  
THE MEXICAN VOLCANO WITH THAT  
UNPRONOUNCEABLE NAME THAT WE  
NICKNAME POPO IS AN EXAMPLE OF  
SUCH A HAS ORDER DOWNWIND OF THE  
SOUTHWEST BORDER SO THOSE OF YOU  
NORTH OF THAT, THOSE ARE OUR  
SOUTHWEST STATES THAT ACTUALLY  
IS A HAZARD THAT YOU SHOULD  
NOTE.

HOWEVER, THOSE OF YOU IN THE  
MIDWEST AND EASTERN PART OF THE  
U.S. THAT ARE LESS AT RISK OF  
ERUPTION, PLEASE, DON'T A BREATH  
OF RELIEF YET BECAUSE YOU MAY BE  
SPARED FROM ACTIVE VOLCANOS IN  
YOUR REGION BUT YOU NOT SPARED  
FROM THE RISK OF EARTHQUAKES.  
THIS EARTHQUAKE IN 2011 SHOOK  
1500 MILES ALONG THE EAST COAST.  
EXTENSIVE DAMAGE OCCURRED IN THE

MID ATLANTIC STATES AND EVEN 100 MILES FROM THE EP CENTER, STRUCTURAL DAMAGE HAPPENED TO THE SMITHSONIAN SUIT LAND STORAGE FACILITY, THE NATIONAL MUSEUM OF AMERICAN INDIAN AND THE ICONIC CASTLE ON THE NATIONAL MALL.

SO REGARDLESS OF WHERE YOU LIVE IN THE COUNTRY, YOUR PLAN NEEDS TO IDENTIFY YOUR RISK TO EARTHQUAKE AND THE EFFECTS THEY CAN HAVE ON YOUR COLLECTION. NOW THAT WE'RE ON A SHAKE RATTLE AND ROLL I'M NOT GOING TO STOOP HERE.

EARTHQUAKES ARE NOT THE ONLY GROUND-SHAKING GEOLOGICAL HAZARD FOR YOU TO CONSIDER.

COLLAPSABLE SOILS, LAND SLIDES AND SINKHOLES MAY CHALLENGE OF FOUNDATION OF YOUR BUILDING ON TOP OF YOUR COLLECTIONS IF NOT COVERING THEM WITH SLIMY MUD AND DEBRIS BE SURE TO EVALUATE YOUR RISK OF THIS HAZARD SO LANDSLIDES, THEY'RE CAUSED BY CLAY SOILS DEPOSITED IN LAKES AS GLACIERS MELTED AND ARE MUCH MORE COMMON THAN PEOPLE REALIZE. THEY HAPPEN IN EVERY STATE YET THEY ARE THE LEAST STUDIED OF THE NATURAL DISASTERS AND THEY ARE REALLY DIFFICULT TO ANTICIPATE.

WESTERN PENNSYLVANIA CURRENTLY HAS THE HIGHEST LANDSLIDE HAZARD RATING IN THE COUNTRY YET SLOW MOVING LAND SLIDES OF AN INCH OR SO A YEAR ARE NOT SO UNCOMMON, PARTICULARLY IN THE WEST, FOR INSTANCE NORTH SALT LAKE CITY AND UTAH HAS BEEN ON THE MOVE SINCE 1998.

COLLAPSABLE SOILS, THEY DIFFER FROM LAND SLIDES DUE TO THE COMPOSITION OF THE SOIL AND HOW

IT REACTS TO MOISTURE OR THE LACK OF MOISTURE THEY ARE MORE COMMON IN THE SOUTHWEST THEY OCCUR WITH THE ADDITION OF WATER TO THE NATURALLY DRY SOIL AND USUALLY ARE CAUSED BY A SEPTIC TANK, A LEAKY MUNICIPAL WATERLINE AND RUNOFF FROM ROADS. SO THOSE OF YOU IN NEW MEXICO AND ARIZONA, ASK YOUR FIRST RESPONDERS IF THEY HAVE SEEN THOSE INCIDENTS HAPPEN IN YOUR AREA OR IF YOU HAVE FACILITY MANAGERS, ASK THEM.

NOW, THE OTHER PART OF GEOLOGICAL HAZARDS HERE, COLLAPSABLE SOIL OR SINKHOLES AND THEY'RE LESS FREQUENT BUT EVEN MORE DEVASTATING WHEN THEY HAPPEN.

THEY HAPPEN IN AREAS WHERE THE ROCK BELOW THE LAND SURFACE IS LIMESTONE, CARBONATE ROCK, SALT BEDS OR ROCKS THAT CAN BE NATURALLY DISSOLVED BY GROUNDWATER CIRCULATING THROUGH THEM.

AS THE ROCK DISSOLVES, SPACES AND CAVERNS DEVELOP UNDERGROUND. SINKHOLES ARE REALLY DRAMATIC BECAUSE THE LAND USUALLY STAYS IN TACT FOR A WHILE UNTIL THE UNDERGROUND SPACE GETS TOO BIG AND THEN WHEN THERE'S NOT ENOUGH SUPPORT ABOVE THE SPACE A COLLAPSE OF LAND JUST OCCURS, BOOM.

SO THE MOST DAMAGE TENDS TO OCCUR IN FLORIDA, TEXAS ALABAMA, MISSOURI, KENTUCKY, TENNESSEE AND PENNSYLVANIA.

SO INFORMATION ON SINKHOLES IS PROVIDED BY THE WATER MANAGEMENT SCHOOL AT THE U.S. GEOLOGICAL SURVEY AND THERE'S INFORMATION ON A WEB SITE IN THE RESOURCE PACKAGE SO THOSE OF YOU WHO WANT

TO CAN LOOK THERE NOW THAT WE HAVE LOOKED AT A RANGE OF NATURAL AND MAN MADE HAZARDS, THE QUESTION RELEVANT TO THIS WEBINAR IS WHAT DO YOU DO NOW? THE ANSWER IS, YOU IDENTIFY AS MANY OF THESE HAZARDS TO WHICH YOUR SITE IS AT RISK AS YOU CAN. AND YOU RANK THEM BY PROBABILITY AND EFFECT.

SO REMEMBER THIS CHART FROM THE LAST CLASS AS PART OF YOUR HOMEWORK, TAKE EACH HAZARD, YOU HAVE IDENTIFIED AND PLACE IT IN THE APPROPRIATE QUADRANT OF THE CHART.

FOR INSTANCE IF THE LIKELIHOOD OF FLOODING IS HIGH, AND IT'S EFFECT ON YOUR BUILDING AND/OR ON THE COLLECTION IS ALSO HIGH, YOU WOULD PLACE IT IN THE UPPER LEVEL QUADRANT.

IF YOU'RE NOT IN A QUAKE PRONE ZONE THERE'S A LOW PROBABILITY OF EARTHQUAKE OCCURRING BUT IF ONE WERE TO OCCUR IT'S IMPACT MIGHT BE HIGH SO THAT WOULD BE PLACED IN THE UPPER RIGHT QUADRANT.

IF YOU LIVE INLAND AND THE CHANCE OF A TSUNAMI IS LOW, AS IS ITS IMPACT YOU WOULD PLACE THAT IN THE LOWER RIGHT QUADRANT.

ONCE YOU HAVE ASSIGNED EACH HAZARD TO A QUADRANT YOU WILL HAVE A BETTER UNDERSTANDING OF WHAT HAZARDS YOU NEED TO FOCUS ON.

THESE ARE THE HAZARDS THAT YOU SHOULD PREPARE FOR FIRST, THE ONES THAT HAVE A HIGH PROBABILITY OF OCCURRING AND THAT CAN HAVE A HIGH EFFECT ON YOUR COLLECTION.

SO WE WILL EXPLORE MORE RISK MANAGEMENT TIPS IN OUR LAST

CLASS BUT THIS EXERCISE SHOULD HELP MAP OUT THE HAZARDS IN A REASONED WAY THAT HELPS CHART YOUR NEXT STEPS FOR PREPAREDNESS I WILL SHOW YOU WHERE TO IDENTIFY YOUR HAZARDS IN THE NEXT FEW SLIDES BUT FIRST I NEED TO BREAK FOR SOME WATER AND I WOULD BE GLAD TO TAKE SOME QUESTIONS.

>> THANK YOU.

ALEX.

SO WE'RE GOING TO DO A SIMILAR QUO TO WHAT WE DID THE FIRST TIME.

AND THIS TIME WE'RE FOCUSING ON THOSE NATURAL DISASTERS AND WE'RE CURIOUS.

WE OF COURSE HOPE THE ANSWER IS NO BUT HAS YOUR INSTITUTION BEEN AFFECTED BY NATURAL DISASTER? YOU CAN CHOOSE ALL THAT AAPPLY OR IMPACTED YOU AND I DO HAVE A FEW I THINK HERE.

>> I WOULD BE GLAD TO TAKE QUESTIONS.

>> SO ON OUR LAST POLL QUESTION, WE DID HAVE QUITE A FEW PEOPLE WHO SAID "OTHER" AND SOME OF THE RESPONSES WERE THINGS I WOULDN'T HAVE THOUGHT OF.

SOMEONE SAID A RECARPETING PROJECT CAUSED DUST.

ANOTHER PERSON SAID REMOVAL OF AN OUT OF COMMISSION NUCLEAR REACTOR MIGHT CAUSE VIBRATION COMPETENCE THEY'RE NOT SURE BUT THE MOST COMMON ONE WAS BURST PIPES AND LEAKS.

SO ALEX I HAVE A BE FOR YOU ABOUT HOW YOU MIGHT -- HOW CAN YOU PREVENT THAT FROM HAPPENING WELL YOU HAVE TO EK CHIHULY YOUR INSULATION.

ONE OF THE GOOD THINGS TO DO IS PUT IN BACKFLOW VALVES AND THAT'S A PLUMBING ISSUE.

WHAT HAPPENS THERE, IS WHEN A PIPE BURST BECAUSE THE WATER HAS FROZEN IN IT THE WATER WILL BEGIN TO FLOW BACK DOWN THE PIPE AND THERE'S A VALVE THERE THAT WILL STOP THAT FROM HAPPENING AND IT ALSO STOPS MORE WATER COMING IN FROM WHEREVER YOUR MAIN WATER SOURCE IS.

ANOTHER WAY TO STOP THIS FROM HAPPENING IF YOU KNOW YOU'RE GOING TO HAVE PROLONGED PERIODS OF COLD AND YOU'RE IN A SMALLER LOCATION OR A SMALLER HISTORIC SITE FOR INSTANCE, IF YOU KEEP YOUR WATER DRIPPING DURING THAT COLD PERIOD, IT WILL HELP THE WATER KEEP MOVING THROUGH THE PIPES SO IT WILL REALLY LESSEN YOUR IMPACT.

BUT GET TO KNOW WHERE YOUR LEAKY COLD AREAS OF YOUR BUILDING ARE, THAT'S THE BIG THING, AND MAKE SURE THAT YOU PUT AS MUCH INSULATION AS YOU CAN AND USE THOSE BACKFLOW PIPES.

YOU KNOW, GETTING THE GENERATOR SO YOU DON'T LOSE YOUR ELECTRICITY TOO.

>> THANK YOU, ALEX.

SO IT LOOKS LIKE ON THIS POLL QUESTION I'M HAPPY TO SEE THAT 90 PEOPLE SAID NO.

THAT'S FANTASTIC.

AND WE'RE ALL OVER THE MAP WITH THE OTHER DISASTERS, THUNDERSTORMS, FLOOD SEEMS TO BE THE MORE POPULAR ONE.

I HAVE A QUESTION BACK WHEN WE WERE DISCUSSING MAN MADE DISASTERS FROM AMY IN UTAH.

SHE'S CURIOUS.

IF THERE'S A DEMONSTRATION OUTSIDE OF YOUR INSTITUTION, ARE YOU RESPONSIBLE FOR LIFE SAFETY OF THE PRO -- OF THE PROTESTERS?

>> I ACTUALLY DON'T KNOW THAT

ANSWER.

I'M NOT AN INSURANCE PERSON.  
SO I WOULD SUGGEST THAT YOU ASK  
YOUR EXPERIENCE VENDOR OR YOUR  
RISK SAFETY STAFF PERSON.

IN THEORY, IF SOMEONE WALKS ON  
YOUR PROPERTY, YOU ARE  
RESPONSIBLE FOR THEM.

BUT I WOULD CHECK AND SEE.

>> WE HAD A PRETTY ACTIVE  
DISCUSSION HERE ABOUT THE  
SUPPRESSION SYSTEM.

AND A QUESTION ABOUT DO YOU  
RECOMMEND A WATER SYSTEM, A  
WATER SUPPRESSION SYSTEM IN  
EVERY ARCHIVE, A FEW PEOPLE SAID  
THAT THE CANADIAN INSTITUTE  
RECOMMENDS THAT AND THE FEW  
OTHER PEOPLE SAID THEY HAVE GAS  
SUPPRESSION SYSTEMS, ALEX, CAN  
YOU WEIGH-IN ON THAT.

>> IN GENERAL THE DRY PIPE  
SYSTEMS, THE HAZARD WITH THAT IS  
THAT THEY CAN CREATE LITTLE TINY  
LEAKS FROM CORROSION FROM THE  
RESIDUE IN THE PIPES AND THEY  
SPRING A LEAK AND YOU DON'T KNOW  
THEY SPRING A LEAK UNTIL YOU  
DON'T WANT IT TO HAPPEN.  
THE ONLY DRY PIPE SYSTEM PEOPLE  
ARE DIFFERENTIATING FOR ARE  
THOSE THAT WHEN YOU FEEL THE  
NEED TO HAVE A SYMPTOM IN AN  
AREA WHERE YOU HAVE NO HEAT  
CONTROL.

>> THAT UNDERSTAND YOURS YOUR  
QUESTION ABOUT ALTERNATIVES TO  
WATER SUPPRESSION AND THERE ARE  
ISSUES WITH THEM ALL, RIGHT?

>> YES, THERE ARE.

THERE ARE.

EVEN WITH THE GAS ONES, THEY ARE  
NOT FREON ANYMORE BUT YOU NEED  
TO BE CAREFUL HOW YOU POSITION  
THEM BECAUSE QUITE OFTEN WHEN  
THEY ERUPT WITH SUCH A FORCE  
THAT THEY ACTUALLY CAN HAVE

CONDEMNATION WHEREVER THEY  
LAND.

SO IF IT'S IN AN AREA WITH METAL  
SHELVING, THEY WILL CONDENSE AND  
THEN YOU CAN ACTUALLY HAVE WARM  
FORMING THERE WHICH IS NOT WHAT  
YOU WANT.

SO MAKE SURE THAT THE NOODLES  
ARE POINTED AWAY FROM THEIR  
SHELVING.

>> WE HAD ANOTHER QUESTION FROM  
EVEN EVA NEW YORK.

SHE WANTS TO KNOW DO YOU HAVE  
ANY SUGGESTIONS FOR SMALLER  
INSTITUTIONS ON HOW TO ENGAGE IN  
EMERGENCY COMMUNICATION IN RURAL  
AREAS WHERE CELL PHONES DON'T  
ALWAYS WORK.

>> WHERE CELL PHONES DON'T  
ALWAYS WORK.

>> THE WORDS ON MY TONGUE.

WELL, IF YOU HAVE A LAND LINE,  
ONE OF THE REASONS MANY OF US  
HAD LAND LINES IS THAT OUR LAND  
LINES WILL WORK EVEN WHEN THE  
OLD FASHION LAND LINES WHERE YOU  
DON'T HAVE A CORDLESS PHONE BUT  
HAVE A PLUG IN PHONE BACK IN THE  
OLD DAYS SO THERE ARE NO  
BATTERIES IN THIS, THEY WILL  
ACTUALLY WORK.

WE USE THEM HERE WHEN ALL OF OUR  
CELL PHONES WENT DOWN SOP LOOK  
INTO USING AN OLD-FASHIONED  
PRINCESS PHONE AND HAVING A LAND  
LINE AS A BACKUP.

>> AND WOULD YOU RECOMMEND  
SOMEBODY COMMENTED ABOUT RADIOS,  
CB RADIO, WOULD YOU RECOMMEND  
THAT?

>> YES.

CB RADIOS ARE A WONDERFUL  
OPPORTUNITY TO DO THAT.

AND THEN RADIO PROFESSIONALS  
WILL, IN A SERIOUS DISASTER,  
WILL COMMUNICATE AND SEND  
MESSAGES OUT FOR YOU.

>> WHICH WE HAD ANOTHER QUESTION, WE WERE TALKING ABOUT WATER SUPPRESSION SYSTEMS AND PIPE LEAKS AND AN WAS CURIOUS IF YOU WOULD -- WITH PLASTIC SHEATHING IF THEY'RE UNDER CEILING PIPES OR SPRINKLER SYSTEM?

>> YES, I ABSOLUTELY DO. AND I HAVE AN EXAMPLE OF THAT I THINK INDEPENDENT NEXT SLIDE OR IN THE NEXT KNEW SLIDES OR THE NEXT.

I CAN'T REMEMBER BUT I HAVE IT --

>> COMING UP ABSOLUTELY. BECAUSE THOSE SPRINKLERS GO OFF WITH ENORMOUS FORCE AND IT'S AN ENORMOUS AMOUNT OF WATER THAT COMES OUT OF IT, EVEN IF IT'S ONLY ONE SPRINKLER COMING OFF.

>> I HAVE A QUESTION AND I'M NOT SURE IF THIS IS PUTTING YOU ON THE SPOT BUT WE WERE TALKING ABOUT WEATHER ALERT PROGRAMS IN THE UNITED STATES AND I WAS CURIOUS IF YOU KNEW OF ANY IN CANADA, AND WE CAN DO RESEARCH ON THAT AFTER THE WEBINAR AND POST IT TO THE COURSE PAGE. BUT OFF THE TOP OF YOUR HEAD DO YOU HAPPEN TO KNOW OF ANY.

>> I REGRET I DO NOT. I'M NOT FAMILIAR WITH THE CANADIAN RESPONSE PROTOCOLS. PROAT.

>> SINCE THAT'S ALL THE QUESTIONS I HAVE RIGHT NOW ALEX IF YOU WANT TO KEEP CRUISING ALONG.

>> ALL RIGHT. WE'RE CRUISING ALONG, BECAUSE I PROMISED I WOULD SHOW YOU WHERE TO FIND INITIATION ON NATURAL HAZARDS.

THIS LEGAL YOUR HOMEWORK. THIS IS THE SUMMARY OF AGENCIES

AND ORGANIZATIONS THAT HAVE INFORMATION ON WHAT NATURAL HAZARDS OCCUR IN YOUR AREA NOTICE THEY START WITH NATIONAL AGENCIES AND THEN WORK THEIR WAY DOWN TO LOCAL RESOURCES. MUCH OF THE GATHERING OF RAW DATA ON OUR CLIMATE IS THE RESPONSIBILITY OF GOVERNMENT AGENCIES SUCH AS THE U.S. GEOLOGICAL SURVEY AND THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION.

WE CALLED THEM NOAA.

OUR FIRST RESPONDERS AT NATIONAL REGIONAL AND LOCAL LEVELS USE THAT CORE INFORMATION TO CREATE THEIR OWN INFORMATION AND MANAGEMENT PROGRAMS FOR YOUR COMMUNITY.

THAT IS WHY YOUR LOCAL FIRST RESPONDERS ARE PRETTY GOOD RESOURCES TO CONNECT WITH. THEY HAVE DONE A LOT OF THE BASIC RESEARCH.

WHAT THEY DON'T KNOW ARE THE SPECIAL NEEDS THESE HAZARDS CAN HAVE ON A RESPONSE EFFORT AT YOUR SITE.

SO LET ME START WITH NOAH HERE. THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION IS THE SOURCE FOR ALL WEATHER RELATED INFORMATION.

NOAA'S NATIONAL CLIMACTIC DATA CENTER, NCDC MAINTAINS THE WORLD'S LARGEST ARCHIVE AND PRIVATES CANDLELIGHT AT SERVICES AND DATA TO EVERY SECTOR OF THE UNITED STATES ECONOMY AND USERS WORLDWIDE.

RECORDS IN THE ARCHIVE RANGE FROM PALEOCLIMACTIC DATA TO DATA LESS THAN AN HOUR OLD.

THE CENTER'S MISSION TO DO PRESERVE THIS DATA AND MAKE THEM AVAILABLE TO THE PUBLIC,

BUSINESS, INDUSTRY AND RESEARCHERS.

AND THE RAW DATA IS HARVESTED BY AGENCIES AND ORGANIZATIONS ACROSS THE COUNTRY.

INCLUDING YOUR TV WEATHERMAN AND THE INSURANCE COMMUNITY

COLLABORATION BETWEEN CLIMATE SCIENTISTS AND MANY DIFFERENT AGENCIES IS ESSENTIAL IN HELPING TO BUILD THE NECESSARY BRIDGES THAT WILL TRANSFORM THE CLIMATE DATA INTO INFORMATION THAT IS USEFUL, RELEVANT, AND CREDIBLE.

THIS YEAR NOAH HAS ALSO MADE A PARTNERSHIP WITH THE FEDERAL EMERGENCY MANAGEMENT AGENCY TO PROMOTE THE NATIONAL SEVERE WEATHER PREPAREDNESS WEEK, MARCH 3-9 THIS YEAR TO INFORM THE PUBLIC ABOUT SEVERE WEATHER HAZARDS AND PROVIDE KNOWLEDGE THAT CAN BE USED TO TAKE ACTION.

AS PART OF THE NATIONAL SWEAT PREPAREDNESS WEEK, THEY HAVE DEVELOPED A COOL KIT WILLIAM TEMPLATES DESIGNED TO AID AND INFORM THE PUBLIC ABOUT SEVERE WEATHER.

WITHIN THE TOOLKIT YOU CAN FIND PRESS RELEASES, BLOG POSTS, OPINION EDITORIALS AND TALKING POINTS AND SOCIAL MEDIA TOOLS SO YOU CAN CHECK OUT THE PROGRAM IN THE RESOURCE PACKET FOR THIS CLASS IF YOU WANT SO YOU CAN GET A CLUE OF THE NUMBER OF OTHER AGENCIES THAT TAKE THE DATA IF YOU JUST GOOGLE THE TYPE OF HAZARD OR THE WEATHER PHRASE YOU ARE INTERESTED IN AND YOUR STATE.

FOR INSTANCE, JUST GOOGLE LANDSLIDE HAZARDS IN NORTH CAROLINA, ALL OF YOU, TUNING IN FROM NORTH CAROLINA. UP WILL COME A LARGE LIST OF

RESOURCES THAT COULD PRESENT INTERESTING LEARNING OPPORTUNITIES.

HERE IS AN EXAMPLE OF GOOGLING SEVERE WEATHER INCIDENTS. THE WEB SITE IS IN YOUR RESOURCE PACKET.

THIS INFORMATIVE INTERACTIVE WEB SITE IS PRODUCED BY THE NATURAL RESOURCES DEFENSE COUNCIL, THE NONPROFIT AGENCY INTERACTIVE MAP SHOWING THE 2011 AND 2012 EXTREME WEATHER EVENTS ACROSS THE COUNTRY.

YOU CAN VIEW EVENTS AS THEY HAPPEN SIMULTANEOUSLY ACROSS THE COUNTRY BY DATE AND YOU CAN ALSO CLICK ON YOUR STATE TO FIND OUT WHAT SEVERE WEATHER EVENTS HAPPEN IN YOUR AREA.

TRY IT.

IT'S REALLY PRETTY FUN.

FOR INSTANCE, HERE IS WHAT MONTANA EXPERIENCED IN 2012. THEY EXPERIENCED A TOTAL OF 59 BROKEN HEAT RECORDS, 16 BROKEN SNOW RECORDS, 17 BROKEN PRECIPITATION RECORDS AND 128 LARGE WILDFIRES.

NOW NOAH ALSO HOSTS THE NATIONAL WEATHER CENTER.

THE WEATHER CENTER IS DIVIDED INTO SIX REGIONS COVERING THE CENTRAL, EASTERN, SOUTHERN, WESTERN, ALASKA AND PACIFIC REGIONS EACH REGION PROVIDES INFORMATION SPECIFIC TO ITS GEOGRAPHIC AREAS THEY ARE GOOD PLACES TO START WHEN YOU LOOK FOR INFORMATION ON TYPES OF NATURAL HAZARDS IN YOUR AREA.

THIS IS A SCREEN SHOT OF THE SOUTHWEST REGIONAL OFFICE. YOU WILL NOTICE ALONG THE HEADINGS AT THE TOP WHERE IT'S CYCLED, THERE'S A TAP FOR NATURAL HAZARDS SPECIFIC TO

NEW MEXICO.

IF YOU CLICK ON THIS TAP, IT WILL TAKE YOU TO A LIST OF HAZARDS IN NEW MEXICO TO EXPLORE BY SUBJECT.

OTHER REGIONS MAY INCLUDE OTHER INFORMATION SUCH AS ALASKA REGION WILL POST INFORMATION ON EARTHQUAKES AND TSUNAMIS IN ADDITION TO OTHER WEATHER RELATED HAZARDS ANOTHER CORE RESOURCE FOR DATA AND INFORMATION IS PROVIDED TO THE U.S. GEOLOGICAL SURVEY NATURAL HAZARDS WEBSITE THE U.S. GS SCIENCE CENTER HOSTS INFORMATION ON FOREIGN PROGRAMS.

ANYWAY ARE THE EARTHQUAKE HAZARDS PROGRAM, THE LAND SIDE HAZARD PROGRAM, THE JOE MAGNETISM PROGRAM AND THE GLOBAL SIZE MOW GRAPHIC NETWORK.

THEY ALL HAVE DATA FOR STATES.

SO CHECK IT OUT AND SEE WHAT YOU CAN FIND FOR YOUR STATE.

DRILLING DOWN THE LIST A LITTLE FURTHER TO STATE NATURAL RESOURCE AGENCIES YOU MAY FIND OTHER GOOD SOURCES FOR GEOLOGICAL HAZARD SPECIFIC TO YOUR STATE, FOR EXAMPLE HERE IS A SCREEN SHOT OF THE COLORADO GEOLOGICAL SURVEY FROM THE COLORADO DEPARTMENT OF NATURAL RESOURCES.

QUITE OFTEN THESE STATE SITES COMPARE AND TAYLOR INFORMATION YOU MAY HAVE SEEN IN OTHER NOAA OR U.S. GS SITES SO JUST LOOK AND SEE WHAT YOU CAN FIND ALSO ALONG THE SAME SORT OF WORKING DOWN STATE LEVEL YOU CAN GO TO YOUR STATE EMERGENCY MANAGEMENT AGENCY.

THEY ALSO HAVE VALUABLE RESOURCES FOR YOU TO EXPLORE

ONLINE.

245 IS AN EXAMPLE BECAUSE OHIO.  
BY CLICKING ON THE HAZARD ICON  
OF WHICHEVER ONE YOU'RE  
INTERESTED IN, YOU WILL FIND  
SPECIFIC INFORMATION ON THAT  
HAZARD AND ITS EFFECT AT LEAST  
IN THIS STATE FOR OHIO JENNY I  
NEED ANOTHER LITTLE BIT OF  
WATER.

I'M GLAD TO BREAK FOR QUESTIONS  
HERE TOO.

>> ARE THERE ANY QUESTIONS OR  
SHALL I JUST DRINK AND KEEP  
MOVING.

>> TAKE A DRINK.

I HAD A QUESTION EARLIER FROM  
ROBERT AND I MAY HAVE AN ANSWER.  
ROBERT WAS ASKING ABOUT WAR-TORN  
AREAS AND WHAT PEOPLE THERE WERE  
DOING ABOUT CIVIL UNREST.

AND ROBERT I CAN KIND OF SPEAK  
TO THAT A LITTLE BIT.

WE WERE FORTUNATE ENOUGH TO BE  
INVITED TO AN IRAQ MUSEUM  
PROFESSIONALS PROGRAM THAT WAS  
HOSTED HERE AT THE GEORGE WASH  
UNIVERSITY AND OBVIOUSLY A VERY  
SMALL SECTOR OF PROFESSIONALS,  
AND THEY HAVE SOME PLANS IN  
PLACE AND ONE OF THE BIGGEST  
THINGS THAT THEY DO WHEN THEY  
KNOW SOMETHING IS GOING TO  
HAPPEN, THEY GRAB ALL OBJECTS  
AND RUN IT DOWN TO THE BASEMENT  
SO LESS OF A PLAN, MORE OF A  
REACTION, BUT I HOPE THAT  
ANSWERS YOUR QUESTION A LITTLE  
BIT.

AND ALEX IF YOU WANT TO COMMENT,  
IT'S A LITTLE OUT OF THE REALM  
OF WHAT WE'RE TALKING ABOUT HERE  
BUT --

>> SOME COUNTRIES ARE BETTER  
PREPARED THAN OTHERS.

THE FIELD OF CONSERVATION WAS  
STARTED BY U.S. SERVICEMEN WHO

WENT OVER TO EUROPE AND HELPED  
EMPTY AND RELOCATE COLLECTIONS  
IN THE LOUVRE, IN THE BRITISH  
MUSEUM AND IN MANY EUROPEAN  
COLLECTIONS AND THEY PACKED THEM  
UP AND PUT THEM WAY DOWN DEEP IN  
THE SALT MINES IN DIFFERENT  
AREAS.

BUT IN A LOT OF AREAS WHERE THEY  
HAVE FEWER RESOURCES AND FEWER  
OTHER COUNTRIES THAT ARE  
PARTICIPATING, THEY ARE ON THEIR  
OWN.

CERTAINLY YOU HAVE HEARD OF  
STORIES IN THE MIDDLE EAST,  
CERTAINLY WE HAVE HAD PROBLEMS  
IN EGYPT, SO OCCUR CHEURL  
RESOURCES ARE NOT AS TIGHTLY  
PROTECTED AS WE ARE LUCKY TO BE  
HERE IN THE UNITED STATES.  
DEFINITELY AN INTERESTING  
SUBJECT THOUGH.

>> YES.

ABSOLUTELY.

>> ALL RIGHT.

SHALL I KEEP MOVING ON?

>> DEFINITELY.

>> ALL RIGHT.

SO WE WILL GO INTO SOME TOIPS TO  
WORKING WITH YOUR FIRST  
RESPONDERS.

BECAUSE A LITTLE CLOSER TO HOME,  
YOU CAN FIND YOUR AREA  
INFORMATION ON LOCAL HAZARDS,  
BOTH AT A UFNT SAFETY OFFICE IF  
ANY OF YOU ARE NEAR UNDERSTAND  
AND YOUR LOCAL EMERGENCY  
MANAGERS.

FOR YOU AND YOUR RURAL AREAS YOU  
MAY NEED TO EXPLORE A BIT  
FURTHER AFIELD AND TRY AT YOUR  
COUNTY LEVEL TO MAKE CONTACT  
WITH THE PERSON RESPONSIBLE FOR  
EMERGENCY MANAGEMENT IN YOUR  
AREA.

BECAUSE ALL FIRST RESPONDERS  
REALLY, THEIR JOBS ARE TO

PROTECT THE CAMPUS STUDENTS OR THE COMMUNITY AT LARGE AND THEY WILL ALREADY BE AWARE OF THE NATURAL AND MAN MADE HAZARDS IN YOUR AREA SO THEY CAN REALLY SHARE THAT INFORMATION WITH YOU: AND BECAUSE THEY'RE DEDICATED TO SERVING THEIR COMMUNITY THEY WILL BE INTERESTED IN THE CONTRIBUTIONS YOUR INSTITUTION MAKES THAT COMMUNITY AND THEY REALLY WANT TO WORK WITH YOU. IT'S PART OF YOUR JOB DESCRIPTION.

THAT MEANS PART OF YOUR CRAFTING YOUR OWN PLAN MEANS REACHING OUT AND CONNECTING WITH YOUR FIRST RESPONDERS.

BECAUSE REALLY IF THEY MAY NOT KNOW YOU EXIST.

AND AS OUR RHODE ISLAND EMERGENCY MANAGEMENT DIRECTOR TOLD ME, WAITING UNTIL A DISASTER HAPPENS IS NO TIME TO EXCHANGE YOUR BUSINESS CARDS. NOW IF YOU AREN'T SURE HOW TO BEGIN OR HOW TO FURTHER STRENGTHEN THE RELATIONSHIP, HERE ARE SOME TIPS FOR WORKING WITH YOUR FIRST RESPONDERS.

YOU CAN MAKE YOUR FINGERS DO THE WALKING WITH A PHONE CALL TO INTRODUCE YOURSELF AND YOUR INSTITUTION.

A VISIT TO THEIR OFFICE FOR A BIT OF EYE TO EYE CONTACT AND A SHAND SHAKE AND ANOTHER GOOD WAY TO BEGIN, AND USUALLY, SORT OF CEMENTS THE DEAL A LITTLE BETTER BUT REALLY WHAT IS THAT PHRASE, THE ARMY TRAVELS ON ITS STOMACH? FULL THE NEED TO SMOOTH AWAY, IT CAN BE AS EASY AS TAKING SOME COOKIES OR LUNCH TO THE FIRE STATION OR POLICE OR SHERIFF'S DEPARTMENT, WITH YOUR MARKETING INFORMATION.

AND REMEMBER, TOO, THERE MAY BE MULTIPLE SHIFTS TO MEET SO PLAN ACCORDINGLY.

YOU CAN BUILD ON THAT INITIAL CONTACT AND INVITE THE FIRST RESPONDERS TO YOUR INSTITUTION, AN EVENT PROVIDES AN EMERGENCYING AND LOW-KEY OPPORTUNITY TO INTRODUCE YOUR SITE TO THEM AND RAISE YOUR VISIBILITY.

OFFERING THEM PASSES FOR FAMILIES OR EVEN A FAMILY MEMBERSHIP IS ANOTHER WAY TO SUSTAIN A RELATIONSHIP AND SHOWN HOW YOU VALUE THEIR SERVICES. AND IT'S LOW KEY SO YOU DON'T HAVE TO TALK SHOP TO DO SPEAK RIGHT AWAY.

YOU CAN OFFER IT TO PERSONALIZE THE VISIT IF YOU WANT AND GIVE THEM A BEHIND-THE-SCENES TOUR, YOU CAN TELL THEM ABOUT YOUR SITE AND HOW YOU WERE RESPONSIBLE FOR THE COMPARE OF MANY IRREPLACEABLE CULTURAL RESOURCES AND THE COLLABORATIVE HISTORY PERHAPS THAT YOU'RE TAKING CARE OF FOR THE COMMUNITY.

YOU MAY BE IF YOU'RE A HISTORIC SITE YOU CAN REITERATE THAT WHAT YOU ARE IMPORTANT ICONS FOR THE COMMUNITY IDENTITY AND SAVING THEM IN THE FACE OF A DISASTER IS AN IMPORTANT MORALE BOOSTER. AND THIS WAS A LESSON LEARNED BY FEMA AFTER KATRINA.

BECAUSE FEMA WAS -- CULTURAL RESOURCES WERE NOT ON THEIR RADAR AT THOUGHT POINT.

LET THEM BE AWARE, TOO, THAT CULTURAL INSTITUTIONS CAN BE CENTRAL TO THE RECOVERY PHASE OF AN AREA-WIDE DISASTER.

LIBRARIES AND LARGER BUILDINGS CAN BE USED AS GATHERING PLACES,

INFORMATION CENTERS, AND  
EDUCATION RESOURCES.

FOR A NUMBER OF PLACES IN MY  
AREA OF THE COUNTRY, THEY OFFER  
THEIR SPACES, PUBLIC SPACES FOR  
PEOPLE TO RECHARGE YOUR CELL  
PHONES AND THEIR LAPTOPS.  
AND AN EFFECTIVE WAY TO KEEP  
GROWING YOUR RELATIONSHIP IS TO  
INVITE FIRST RESPONDERS TO  
PARTICIPATE IN A TRAINING DRILL  
WITH YOU.

IT COULD BE AS SIMPLE AS  
PARTICIPATING IN ONE SIMPLE  
ACTIVITY, TO HONOR, SAY, MAY  
DAY, A NATIONAL CAMPAIGN THAT  
PROMOTES EMERGENCY PREPAREDNESS  
IN A CULTURAL INSTITUTION.  
IN SUPPORT OF THIS INITIATIVE,  
YOU COULD ASK FIRST RESPONDERS  
TO REFRESH EVERYONE ON HOW AND  
WHEN TO USE THE DIFFERENT TYPES  
OF FIRE EXTINGUISHERS, OR YOU  
COULD CONDUCT FACILITY TOURS FOR  
THEM, TO TELL THEM ABOUT AND  
SHOW THEM WHAT YOUR PRIORITY  
COLLECTIONS ARE.

AND IF YOU HAVE AN ESTABLISHED  
RELATIONSHIP OF SOME SORT AND  
YOU WANT TO STEP UP TO THE NEXT  
LEVEL OF COLLABORATION WITH  
FIRST RESPONDERS, HERE IS AN  
INTERESTING INTERACTIVE WAY TO  
SHOW YOU WERE TAKING YOUR  
PLANNING AND PREPAREDNESS  
SERIOUSLY.

EXPLORE THE GREAT SHAKEOUTS WEB  
SITE.

PARTICIPATING IN THE GREAT  
SHAKEOUT PROGRAM, THAT'S AN  
EARTHQUAKE PREPAREDNESS DRILL,  
SHOWS THAT YOUR INSTITUTION  
WANTS TO DO THE UTMOST TO  
PROTECT YOUR CULTURAL  
RESOURCES AND THAT YOU WERE  
TAKING RISKS FROM NATURAL  
HAZARDS REALLY SERIOUSLY.

YET HERE SENIOR ANOTHER WAY TO BUILD THOSE RELATIONSHIPS.

AS CULTURAL STEWARDS, YOU KNOW A LOT ABOUT YOUR COLLECTIONS AND HOW TO MANAGE THEM.

BUT HOW MUCH DO YOU REALLY KNOW ABOUT WHAT MAKES YOUR BUILDING SAFE AND WHAT THE NUTS AND BOLTS OF FIRE CODES ENHAIL?

RAISE YOUR OWN AWARENESS AND FOR HELP WITH A WALK THROUGH, JUST TO LEARN ABOUT THE PROTECTIVE MEASURES IN PLACE.

FIRST RESPONDERS ARE TRAINED IN THIS AND THEY'RE A HELPFUL RESOURCE FOR EXPLAINING FIRE CODE INFORMATION.

FOR EXAMPLE, DO YOU KNOW HOW DO A LOAD-BARING TEST ON YOUR EXIT LIGHTS TO ENSURE THEY WILL LAST 90 MINUTES IN CASE AN ELECTRICAL OUTAGE?

OR WHAT ABOUT ALL OF THOSE RED AND BLACK PANELS THROUGHOUT THE BUILDING?

FIRST RESPONDERS AND EXPLAIN THE ALARM PANEL SYSTEM TO YOU AND INFORM YOU ABOUT SMOKE EVAC WHAITION WITH YOUR HEATING AND AIR CONDITIONING SYSTEM AND THEY CAN EXPLAIN THE DIFFERENT DOORS THAT YOU HAVE AND THE FIRE RATINGS FOR EACH DOOR AND AS WELL AS GIVE YOU SUGGESTIONS FOR WHAT TO DO, LIKE, CLOSE THEM ON THE WAY OUT, OR IF YOU HAVE AUTOMATIC CLOSURES WHEN THE ALARM GOES OFF.

ANOTHER THING IS DO YOU KNOW IF YOUR FIRE HYDRANTS ARE PROPERLY SIZED FOR THEIR EQUIPMENT AND IF THERE'S ANOTHER WATER PRESSURE IN YOUR AREA FOR A RESPONSE? YOUR FIRE CHIEF AND HELP YOU IDENTIFY FIRE STOPS IN YOUR BUILDING, TOO, ESPECIALLY IF YOU HAVE AN HISTORIC BUILDING THAT

HAS GONE THROUGH ANY UPGRADE OR REHAB.

THAT WOULD BE REALLY IMPORTANT FOR HIM TO KNOW AS WELL AS FOR YOU.

AND THEY CAN EVEN HELP YOU BETTER UNDERSTAND THE RANGE AND FORCE OF WATER WHEN THE SPRINKLERS GO OFF.

THIS HARKS BACK TO A QUESTION WE JUST HAD, IN THE LOWER RIGHT-HAND CORNER, THE IMAGE THERE IS FROM AN INSTITUTION THAT THEY THOUGHT WERE WELL PREPARED FOR A FIRE WITH A SPRINKLER SYSTEM IN THE TEXTILE STORAGE ROOM.

BUT WHEN THEY LEARNED FROM THE FIRE RESPONDERS HOW MUCH WATER COMES OUT OF THE SPRINKLER HEAD AND UNDER WHAT PRESSURE, THEY REALIZE THE IMPORTANCE OF ADDING PLASTIC COVERS AND TYING THEM DOWN OVER THE SHELVING.

AS WE SPOKE OF BEFORE, WE SAID THAT AN ELEMENT OF A DISASTER PLAN IS COMMUNICATION.

I ASK THAT YOU THINK ABOUT TAKE THE INITIATIVE TO ASK YOUR LOCAL FIRE AND POLICE RESPONDERS HOW THEY WOULD WORK IN RESPONSE TO AN ALARM AT YOUR SITE, AND HOW YOU CAN HELP THEM IF IT SHOULD HAPPEN AT YOUR SITE, REGARDLESS OF WHAT YOUR STAFF RESPONSIBILITY IS HERE.

THEY -- THAT MEANS YOUR FIRST RESPONDERS -- THEY RESPOND TO AN EMERGENCY FOLLOWING A VERY WELL-OILED AND DEFINED MANAGEMENT AND COMMAND STRUCTURE.

YOU MAY NOT BE AWARE OF THIS BUT WHEN AN INCIDENT REQUIRES THEM TO COME ON-SITE, THEY WILL BE IN CONTROL OF YOUR FACILITY UNTIL THEY TURN IT BACK OVER TO YOU.

YOU AND ALL STAFF WILL BE  
REQUIRED TO STAY ON THE OUTSIDE  
OF THE CAUTION TAPE.

UNDERSTANDING THE PROCESS WILL  
SHOW THEM YOUR INTEREST IN  
WORKING WITH THEM AND PREPARE  
YOU TO KNOW THE KINDS OF  
INFORMATION THEY WILL NEED FROM  
YOU IN ORDER FOR THEM TO MAKE  
THE MOST TIMELY RESPONSE.

SO UNDERSTANDING THIS CHAIN OF  
COMMAND AND REPORTING STRUCTURE  
CAN BE CONFUSING, ESPECIALLY IF  
YOU WERE A SEPARATE ORGANIZATION  
WITHIN ANOTHER GOVERNING  
AUTHORITY, LIKE A LIBRARY WITHIN  
A UNIT U. UNIVERSITY, OR A  
MUSEUM WITHIN A GOVERNMENT  
AGENCY, UNIVERSITIES OFTEN HAVE  
THEIR OWN LAYER OF SAFETY IN  
THEIR -- AND RESPONSE.

SO WHEN FOR INSTANCE THEY  
USUALLY HAVE THEIR OWN POLICE  
DEPARTMENT AND MAYBE A SAFETY  
OFFICER BUT THEY COMMONLY RELY  
OPEN THE TOWN FIRE DEPARTMENT  
FOR FIRES.

SO THE PEOPLE AT THE UNIVERSITY  
WILL HAND IT OVER TO YOU THAT  
YOU WOULD TALK TO AND THEY WOULD  
SAY, OK, YOU CAN GO BACK IN THE  
BUILDING.

THEY HAVE TO TO WAIT FOR THE  
RELIEF FROM THE FIRE DEPARTMENT.  
SO KNOWING FROM WHOM YOU TAKE  
INSTRUCTION AND HOW YOU  
COMMUNICATE INFORMATION IS  
IMPORTANT IN THESE REALLY MORE  
COMPLEX SCENARIOS.

SO FIND OUT HOW THAT WORKS IN  
YOUR PARTICULAR INCIDENT.  
ASK YOUR FIRST RESPONDERS, TOO  
WHAT THEY NEED TO KNOW ABOUT YOU  
FROM YOUR STAFF, YOUR FACILITY,  
AND YOUR ORGANIZATION.

THE MORE INFORMATION YOU HAVE  
PREPARED IN ADVANCE, THE EASIER

IT WILL BE TO SALAGE YOUR COLLECTIONS AND MAINTAIN A GOOD RELATIONSHIP WITH EMERGENCY RESPONDERS.

FOR INSTANCE, FOR A RESPONSE DURING PUBLIC HOURS, LET THEM NOTE YOU WERE EVACUATION MEETING UP SPOT.

THIS ALLOWS FOR A REALLY TIMELY EXCHANGE OF INFORMATION AS THE INCIDENT EVOLVES.

THE EMERGENCY RESPONDERS MAY NEED INFLATION ON SAY, VISITORS OR STAFF WITH SPECIAL NEEDS THAT THEY MAY HAVE TO GO INTERPRET THE BUILDING TO HELP EVACUATE THEM OR, IF YOU ANTICIPATE ANY PROGRAM GROUPS ARRIVING FOR A SCHEDULE ED EVENT, THEY WOULD NEED TO KNOW THAT SO THEY CAN MEET THEM AND GREET THEM.

AT THIS LOCATION YOU CAN ALSO HAND OVER INFORMATION THEY MAY IMMEDIATE SUCH AS FLOOR PLANS, DETAILED BUILDING LAYOUTS, COULD HAVE YOUR IDENTIFICATION OF HAZARDOUS AND PRIORITY COLLECTION LOCATION, MASTER KEYS, THE UTILITY LOCATIONS AND EVEN BUILDING NAMES, IF YOU ARE IN ONE OF SEVERAL BUILDINGS.

SO THERE ARE LOTS OF IDEAS AS TO WHAT YOU MIGHT BE ABLE TO DO TO BUILD THAT RELATIONSHIP.

AND AS A REFRESHER ON WAYS TO APPROACH YOUR FIRST RESPONDER OR WHAT SORTS OF QUESTIONS TO ASK EITHER BEFORE AN EMERGENCY, DURING AN EMERGENCY OR AFTER AN EMERGENCY, THIS POSTER IS A HANDY RESOURCE FOR YOUR PLANNING TEAM.

IT IS A FREE DOWNLOAD FROM HERITAGE PRESERVATION.

THE WEB SITE IS HERE AND ALSO IN YOUR RESOURCE PACKET.

IT IDENTIFIES TOPICS TO DISCUSS

AND THE KIND OF QUESTIONS THAT FIRST RESPONDERS MIGHT HAVE FROM YOU.

AND HOOT INSIDER TIP I HAVE IS, CONSIDER ASKING ONE OF YOUR FIRST RESPONDERS AS A PRIVATE CITIZEN TO JOIN YOUR PLANNING TEAM.

HAVING HIM OR HER COME OUT OF UNIFORM CAN BE LESS INTIMIDATING TO EVERYBODY, AND THIS IS ESPECIALLY HELPFUL IF YOU'RE IN A RURAL AREA, AND YOU'RE A LITTLE HESITANT TO THERE HAVE THEM COME INTO YOUR BUILDING BECAUSE, IN MANY CASES IN RURAL AREAS MANY OF OUR SMALLER CULTURAL RESOURCES ARE A LITTLE LIKE FUN HOUSES IN THAT THEY'RE A LITTLE OVERCROWDED AND A LITTLE BIT DIFFERENT TO ACCESS AND THEY ALSO KNOW THEY HAVE FIRE HAZARDS HERE SO IF YOU ASK YOUR FIRST RESPONDERS, FIND ONE WHO IS FRIENDLY TO COME OUT OF UNIFORM, HE CAN SHARE HIS EXPERIENCE WITHOUT HAVING TO OFFICIALLY MAKE RECOMMENDATIONS. SO I UNDERSTAND THIS WEBINAR HAS PROBABLY BEEN PRETTY DENSELY PACKED WITH INFORMATION.

DO REFER TO THE RESOURCE PACKET TO FIND THE RESOURCES THAT I HAVE HIGHLIGHTED HERE.

BUT IN ORDER TO GIVE YOU 134 TYPE, WE ARE AT THE END OF THE WEBINAR.

I'M GLAD TO TAKE QUESTIONS OR IF YOU WANT TO E-MAIL ME THINGS AS YOU CAN GO ALONG I'M GLAD TO HELP YOU.

JENNY, I'M GOING TO TURN THIS OVER TO YOU?

>> JENNY: AS ALEX MENTIONED THERE IS A HANDOUT.

SHE HAS BEEN KIND ENOUGH TO COMPILE ALL OF THESE RESOURCES

FOR YOU AND THAT IS ON OUR  
COURSE WEBPAGE.

I'M GOING TO QUICKLY PULL OVER  
THE HOMEWORK ASSIGNMENT SO THIS  
IS FOR TODAY'S WEBINAR AND AGAIN  
THAT'S ALSO LINKED TO ON THE  
COURSE HOME PAGE BUT THERE IT IS  
FOR YOU RIGHT NOW.

I'M GOING TO PULL OVER OUR GROUP  
LOG IN.

THIS IS ONLY FOR PEOPLE WHO DID  
NOT ENTER THEIR FIRST, LAST NAME  
AND LOCATION WHEN ENTERING THIS  
ROOM.

THIS IS FOR ALL OF OUR PEOPLE  
WHO ARE WATCHING IN GROUPS.

SO ONE OF YOU PROBABLY LOGGED IN  
AND IF THAT GROUP LEADER COULD  
GO AHEAD AND TYPE IN HERE WHO  
YOU'RE WATCHING WITH, AND IF  
YOU'RE WATCHING BY YOURSELF, NO  
NEED WORRY.

YOU DON'T NEED TO TELL US.

WE HAVE YOU MARKED DOWN AS  
ATTENDED.

WE HAVE ABOUT FIVE MORE MINUTES.  
SO ALEX I HAVE TWO REALLY GREAT  
QUESTIONS.

WOULD YOU KNOW IS FROM SUSAN.  
SHE IS CURIOUS ABOUT AS THEY  
START TO PLAN THEIR DISASTER  
PLAN, SHE SAYS, IT LOOKS LIKE WE  
SHOULD PROBABLY INVOLVE OUR  
BUILDING MANAGER.

SHE SAYS THEY RENT SPACE IN A  
LARGE OFFICE BUILDING.

WOULD YOU RECOMMEND THAT AS THEY  
START WORKING OWN THEIR  
EMERGENCY PLAN?

>> THAT WOULD BE A WONDERFUL  
SUGGESTION.

BECAUSE HE WILL KNOW THE  
FACILITY, BE ABLE TO GIVE PLANS,  
HE WILL BE ABLE TO TELL YOU WHAT  
THE SECURITY ISSUES ARE.

QUITE OFTEN, THEY ALSO WILL BE  
ABLE TO HELP YOU KNOW WITH THAT

WALK THROUGH IN TERMS OF IDENTIFYING YOU KNOW DO WE HAVE FIRE DOORS AND IS THIS A TWO HOUR RATING OR ONE HOUR RATING AND DO THEY CLOSE AUTOMATIC LIT AND HOW OFTEN ARE FIRE WORK EXTINGUISHERS CHECKED.

SO, YES, THAT WOULD BE A FABULOUS ADDITION TO YOU WERE PLANNING SNREEM ALL RIGHT.

ANOTHER QUESTION FROM MICHAEL, HE IS CURIOUS WHAT YOU THINK ABOUT TAKING ICS TRAINING COURSES.

IF I'M CORRECT, INCIDENT COMMAND SYSTEM?

>> THAT IS THE INCIDENT COMMAND SYSTEM.

YOU CAN THEY THE NOTARIZATION 100 AND HUNDRED LEVEL COURSE ONLINE FOR FREE THROUGH FEDERAL EMERGENCY MANAGEMENT AGENCY.

SO JUST GOOGLE IN ICS100 OR HUNDRED AND IT WILL DOM UP WITH THE WEB SITE.

THEY AT A A CUSTOM OF HOURS TO DO AND IT WILL GIVE YOU THE BASIC UNDERSTANDING FOR IT AND THEN AT LEAST YOU WILL KNOW THE SAME LANGUAGE AS YOUR FIRST RESPONDERS AND BE UNDERSTANDING HOW THEY ARE ORGANIZING THEIR RESPONSE AND THEN YOU CAN ALSO TRAIN YOUR OWN STAFF.

SOMETIMES THE FIRST RESPONDERS ALSO HAVE COMMUNITY COURSES WHICH MAKE IT A LITTLE USER FRIENDLY AND FENDING ON YOUR AREA OF THE COUNTRY, IF YOU HAVE ANY DISASTER TRAINING WORKSHOPS THROUGH CONSERVATIVES OR THREE ANY SORT OF CULTURAL RESOURCES.

SOME OF THESE DISOF DISASTERSHOPS ALSO ALERT YOU TO THAT TERMINOLOGY AND ASK YOU TO FRAME YOUR RESPONSE TEAM WOLLING THE SAME KIND OF DEMAND

STRUCTURE.

>> AND TRACY ASKED IF WE COULD  
POST LINKS TO THE TRAINING  
COURSES AND WE MR. DEFINITELY DO  
THAT TRACY.

THAT'S ALL THE QUESTIONS THAT I  
HAVE.

>> THAT'S.

WE ONLY HAVE A COUPLE MINUTES  
LEFT.

>> WE'RE SET.

PERFECT TIMING!

CAN I JUST ENCOURAGE EVERYBODY  
TO TUNE IN FOR THE NEXT ONE?  
WE HAVE SOME -- IT'S REALLY  
INTERESTING.

EVEN IF YOU ARE JUST FOCUSED ON  
ONE MATERIAL.

I ENCOURAGE YOU TO COME TO THIS  
REALLY INTERESTING WEBINAR ON  
HAZARDS IN YOUR COLLECTION.  
YOU CAN HELP YOUR COLLEAGUES AND  
YOUR SISTER INSTITUTIONS BE A  
GOOD BUDDY.

>> AND LORI FOLEY WITH HERITAGE  
PRESERVATION HAS POINTED OUT  
THAT A GREAT BOOK IS  
"IMPLEMENTING THE INCIDENT  
COMMAND SYSTEM AS THE  
INSTITUTIONAL LEVEL: A LAND  
BOOK FOR LIBRARIES CAN OTHER  
CULTURAL INSTITUTIONS AND WE  
WILL PUT A LINK OF THAT OUT.  
SO AGAIN, A LINK TO THE HOMEWORK  
ASSIGNMENT CAN BE FOUND HERE BUT  
IT'S ALSO ON THE COURSE PAGE AND  
I JUST WANT TO SAY WE HAVE OVER  
150 HOMEWORK ASSIGNMENTS ALREADY  
TURNED IN SO GREAT JOB GUYS.  
AND THANK YOU VERY MUCH FOR  
JOINING US.

WE WILL SEE YOU AGAIN ON  
TUESDAY, NEXT TUESDAY, THE 12TH  
AT 2:00 P.M. EASTERN.

SAME PLACE.

HAVE A FANTASTIC AFTERNOON!

