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Disaster Planning

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Broadcast Date: March 7, 2013. View recording at
http://grants.nih.gov/grants/olaw/2013-03-07%2013.02%20OLAW%20Online%20Seminar%20_Disaster%20Planning_.wmv (Windows Media Player - 59 mins).

Slide 1 (Disaster Planning Based on the 8th Edition on the 8th Edition of the *Guide*)
>> *Silk:* Hello, today is March 7th, 2013. Welcome to the OLAW Online Webinar, Disaster Planning Based on the 8th Edition of the *Guide* [*Guide for the Care and Use of Laboratory Animals: 8th Edition*]. I am very pleased to welcome our guest speaker, Stephen Durkee, who will present best practices in animal facility disaster planning from an operations perspective. Mr. Durkee has been involved in animal-based research for the last 15 years. He began his career as an animal husbandry technician, and soon became a facility manager at the University of Michigan, where he later directed research studies involving wild mice and the underlying principles of aging. He then spent five years as a research staff trainer and compliance specialist. During that time, he developed a plan and outline for disaster planning, which he presented and published. Subsequently, he moved to Oregon State University, where he served as an IACUC Administrator, assisting in organizing and modernizing IACUC functions. Those IACUC processes won accolades during the institution's first-ever AAALAC site visit.

Currently, Mr. Durkee serves as a West Coast Account Manager and Advisor for the firm Alternative Design. Alternative Design designs and builds custom runs, cages, or pens for large animals to meet specific facility need. They also provide ventilated rodent caging, with a focus on labor-saving engineering to maximize efficiencies while increasing housing densities. We invited Stephen to speak today because his operations experience in the academic and the private sector enable him to present best practices that are relevant to stakeholders in both arenas. OLAW does not require the use of best practices; however, it is required for PHS-Assured institutions

to have disaster plans as part of their overall programs of animal care and use.

Slide 2 (PHS Policy on *Guide* and AWAR)
Before Stephen speaks, I will review OLAW guidance and USDA regulations on disaster plans. On this slide, I have quoted the section [IV.A.1. Footnote 2] of the PHS Policy [Policy on Humane Care and Use of Laboratory Animals] that requires Assured institutions to have a disaster plan. The Policy says that Assured institutions are required to base their animal care and use programs on the *Guide* and to comply with applicable regulations issued by the USDA.

Slide 3 (OLAW Disaster Plan Guidance)
The requirement for PHS-Assured animal programs to have a disaster plan is not new. The 1996 *Guide*, in the section on Emergency, Weekend, and Holiday Care, said that a disaster plan "should be prepared as part of the overall safety plan for the animal facility." The 2011 *Guide* extended that guidance. It says, "Facilities must therefore have a disaster plan." OLAW FAQ G3 also comments on disaster plans, asking, "Do awardee institutions need animal facility disaster plans?" The short answer is, "yes". And if you go to the OLAW website, you can read our guidance.

Slide 4 (USDA Requirement AWA Contingency Regulation)
In December 2012, Animal Care of the Animal and Plant Health Inspection Service, usually referred to as APHIS, of the United States Department of Agriculture, published a Tech Note that explains the USDA requirement for facilities to have a contingency or disaster plan. The final rule was called Handling of Animals, Contingency Plans. APHIS published the final rule in the Federal Register on the last day of 2012. The rule requires entities that are regulated by the Animal Welfare Act -- that includes research facilities -- to take additional steps to be better prepared for potential disaster situations. They are required to develop a plan for how they are going to respond to and recover from the emergencies most likely to happen to their facility and to train their employees on the those plans. USDA has posted a landing page with links to their resources on the new rule. The URL for that page is included on this slide. [USDA APHIS AWA Contingency Plan Final Rule] See also the APHIS Animal Care Factsheet of January 2013

Please recall that the Policy requires Assured institutions to comply with applicable regulations issued by USDA. OLAW does consider the Contingency Rule to be an applicable regulation. On February 15th and 21st, APHIS offered their own webinar on contingency planning requirements. So we just learned today that a recording of that webinar has gone up on their website, copies of the related slide presentation, FAQs and a Tech Note and other guidance materials are available at the APHIS website. [USDA APHIS AWA Contingency Plan Final Rule]

Slide 5 (What is a Best Practice?)
What is a best practice? Earlier, I mentioned that Stephen will present best practices.

OLAW defines a best practice as a method that has been shown to achieve better results than other methods; in fact, to produce superior results. Therefore it is used as a benchmark to judge other standards. The guidance that we present in this webinar represents the best practices in use in the biomedical research community in 2013.

Slide 6 (Guidance Regarding Best Practice)
PHS Assured institutions are not required -- they are NOT required -- to follow best practices. Assured institutions ARE required to follow specific statutory or regulatory requirements. Here's an example to help you reconcile these two statements. The USDA rule says that facilities must train their employees on their contingency plan. That is a specific regulatory requirement and you must comply. Stephen will suggest effective methods for training. You are not required to use those training methods -- they are best practices offered to assist you in complying with the regulation. An Assured institution may satisfy the requirement to train employees using a best practice or they may choose to employ a suitable alternative. How can you decide if the alternative you are considering is suitable? Please base your decision on the outcome. The outcome you achieve must be in accordance with the expectation of the AWA Regs and the *Guide*. Here's an analogy for you. You can drive to your destination by a different route, but you must arrive at the same place. You do not have to consult with or report this decision to OLAW. However, if you are not sure if the approach satisfies the PHS requirement, you can contact OLAW with your questions by mail or by telephone. Our contact information is shown under the little cartoon. [olawdpe@od.nih.gov, 301-496-7163] And now, at last, I am pleased to present Stephen Durkee.

Slide 7 (Disaster Planning Based on the 8th Edition of the *Guide*)
>> *Durkee:* Hi everyone. Welcome to Disaster Planning Based on the 8th Edition of the *Guide for the Care and Use of Laboratory Animals*. Just like in an actual disaster, the biggest thing in preparing a plan, or in evaluating one, is not to panic. It's also equally important to not be overconfident and think you are prepared for everything. That is almost always when the things you didn't think about happen. Or the scenario you knew would challenge you happens. Seriously, if you read about various events occurring, it's always the thing people hope doesn't happen that does. So do your best to challenge yourself, think about things, practice them, and then practice them again. You'll get better. It's also worth noting that the details described are under the presumption that it is safe to enter the building and take an action. During an actual emergency, local authorities or even federal authorities may limit your access to areas. Without appropriate advance clearance, animal responders may not be allowed access. Even with advance clearance, the location may not be safe for people to enter. The hardest thing for people who care about animals to hear is - you need to wait. In these circumstances, people safety first, then the animals.

Slide 8 (What's a Disaster?)
So, what is a disaster? There are all kinds of different disasters we can define, but for keeping animals safe and alive, failure of critical systems and personnel not being available are the two main components of the bigger problem. How one gets to these points varies. This is when the big, dramatic events come to mind: tornadoes, hurricanes, tsunamis, meteors, ice storms, floods. Let's face it, these things happen and seem to be increasing. These don't happen everywhere, though, or really that often. What happens more frequently are power bumps that reset systems. Pipes breaking. Flu. Large numbers of staff at a professional meeting can trigger the strangest events to happen. These little events are more likely to happen. The good news is that these events will help you with your plan and implementation, so that when the big events happen, you will know what to do. The IACUC should receive reports of these small events, so that they can perform an ongoing evaluation of the adequacy of the plan and the response efforts. If the husbandry staff isn't reporting these events, it's a concern for the IACUC to address when identified.

Slide 9 (What to Include in a Required Disaster Plan?)
So what to include in a required disaster plan? As an IACUC reviewing, or a facility developing a plan, what are the key points to include? The most obvious one is the actions that need to be taken should be defined by preventing animal pain or distress. In extreme situations, the actions should prevent or minimize animal deaths. When ventilation, cooling, heating, and water are not available, what can be done to assist the animals? The solutions will vary depending on the facility you have. In intensive laboratory settings, as an example, ventilation in ABSL2 or 3 areas should already be set up to fail neutral or negative. Verification of this is a good inspection item at the room level for the IACUC and a way to tie semiannual inspections into the review of the disaster plan. Heating and cooling devices can be brought into areas to minimize temperature changes. Identifying and testing back-up power sources is a significant activity to undertake. The IACUC can inquire about this during semiannuals and identify the location of the devices. Examining room logs and records will highlight any areas that have daily inconsistencies. Potable water has been a troubling issue in the past, although it's known that water can be safely stored in 55-gallon drums or in water bags for three years or more. Ensuring a means to transport this water to areas in need is also important. Alarms and notifications for water flow on aquatic systems should be checked. Methods of preservation will vary and involve the research working with various animal strains and species.

Slide 10 (What's New in New *Guide*?)
So what's in the new *Guide*? The changes in the *Guide* for disaster planning include more arrangements with investigators to identify important strains of animals. If evacuation is possible and happening, there may need to be choices made about how many animals can be moved. Advance preparation and identification allows evacuation to occur quickly and research to resume as soon as possible. Let's face it;

there are major investments in creation of various strains or other research animals. In the search for understanding and cures, losing a strain can stop advances cold. If it is safe for people to enter, they can evaluate the situation and make efforts to mitigate the problem. If these can't happen, evacuation should occur. This means that local and regional "lifeboats" should be identified in advance as places animals can be taken. What I mean by a lifeboat is - it's an arrangement in advance through mutual aid agreements with other institutions. Unless an event is widespread, these nearby places could house some animals for periods of time while recovery actions occur. If evacuation is not possible, identifying maximum timeframes, in conjunction with the attending veterinarian, should occur. Once these limits are reached, animals should be humanely euthanized in accordance with requirements. Having a rotating stock of solutions for euthanasia is another evaluation point for IACUCs to make. The personnel who will respond, or the responders, should be identified and trained in these various processes. Advance preparation to identify these staff ensures that if access is limited, they will be able to enter buildings when it is safe to do so to implement the plan. Their training and practice, through drills or table-top exercises, will lead to successful response during and after events.

Slide 11 (Institutional Involvement)
Another new requirement is to be engaged with the institution's overall response efforts and planning. Let's face it, we are better as a team than individuals and connecting to overall resources creates more information flow and success. The IACUC should be able to evaluate the success of these engagements. A copy of the plan(s) should be given to the Institutional Official or the senior level administrators involved with incident command. For those of you not familiar, incident command is likely to include key decision makers at the institutional level and be in charge of actions taken during or post-event. In some cases, this leadership may be passed along to local or federal authorities, depending on the nature of the event. Their advance knowledge of the plan will assist in the institution understanding what efforts will take place. There may be aspects of the animal disaster plan that need to be revised, due to other institutional requirements or policies, so other approval beyond the IACUC is required. Networking further out, the institutional resources should connect and provide a copy of the animal disaster plans to local responders, such as the local municipal police and fire department. Arranging tours of sensitive areas, assist in creating understanding of what will be encountered is important for everyone's safety, people and animals. These responders should receive the same training as any other service personnel entering animal areas. The goal of biomedical research is to save life. We should remember this always, including during an emergency, and plan the appropriate training (PPE, risks) into the disaster plan.

Slide 12 (Institutional Involvement)
Other institutional involvement. The picture on this slide helps to better illustrate the outward nature of planning and preparation. Facility level planning, IACUC approval, institutional involvement and approval, and coordination from local area resources

and responders. It's not your imagination. This slide is similar to the previous slide for a reason. Many locations stop at the IACUC level for coordination, resulting in confusion during an event. Our expectations for outcomes do not always match others reality. In order to align these, we must communicate outside of ourselves to the large world. This connection will open more resources and solutions to respond successfully.

Slide 13 (Developing the Plan)
Developing the plan. Often, there are centralized services for husbandry care. Where there is only one care unit, there is likely to be one plan. If the institution is decentralized, coordinating everything becomes more complicated. There may be units who combine and utilize the central services during an event. They may develop their own plans. In this way, all plans should be location specific. The attending veterinarian or their designee should be the point person for all animal areas, since they have the responsibility for animal care on their shoulders. They can develop a plan to connect all the decentralized units, collect information, assist in decision making, and communicate this to the incident command for the institution. There should be identified individuals for response, clear lines of communication, and a plan to ensure contact information is up to date and people know what to do.

Slide 14 (Developing the Plan)
As we mentioned before, preparing for the little bumps helps us to be prepared for the big bumps. If you don't have power, you don't have power. It doesn't really matter what caused the loss of power. When the crunch is on, what matters is how the response to the lack of power occurs. If the loss cannot be mitigated, then defined time frames for when to take action are needed in advance. Evacuation would be the second choice, if mitigation efforts cannot occur or fail. Developing priority lists helps everyone know in advance what actions will be taken, which animals will be evacuated and in what order. Problem solving for evacuations includes determining how to get 150 mouse cages down, or up, 12 flights of stairs in the dark. How many people will be needed for this? These are all important considerations to make in advance. It's stressful enough during an event. Some people respond well to this pressure and some are freaked out. Knowing what to do removes some of this panic and helps responders be task oriented, rather than having to solve problems other than those created by the event itself. If mitigation fails and evacuation cannot occur, animals should be humanely euthanized. Stocking solutions or supplies for euthanasia should be considered in advance. It should be noted that the use of expired solutions for euthanasia may compromise their effectiveness. Rotating stocks of solutions ensures efficacy in the event they are needed.

Slide 15 (Working with Investigators to Protect Their Research Animals)
So working with investigators to protect their research animals. One of the more important or one of the more difficult conversations to have with investigators

involves animal ownership. The animals are resources owned, technically, by the university. Many investigators want to take action, remove animals, prevent euthanasia if it comes to that. Explaining ownership helps to create more understanding. This doesn't mean they will like it. Supporting the veterinary staff in their decisions for the animals is also important. In an on-going event, the veterinary staff may be required to euthanize animals if there is no other option. These conversations can be a gateway to further conversations on regular communication and information. Identification of the irreplaceable animals is key to efficient evacuation. Suggestions include color coding systems for top to lower priority animals. Systems and methods that fit the needs of your institution are encouraged. Once this has occurred, keeping everyone in the loop on what triage and evaluation actions will be taken will create understanding and shared expectations. This understanding allows communication out to be simple and will ease researcher's minds. Communication examples like, "everything went as planned" or "the top two priority animals were evacuated safely".

Slide 16 (How to Connect to Institutional Resources)
Connecting to your institutional resources. The planning process appears to be going well from the IACUC perspective. Everything is great. The next challenge is how to connect to your institutional resources. This is where the Institutional Official or other senior level administrators can be very helpful. They are likely already aware of and working with disaster planning resources on campus. Hopefully, your community has a person dedicated to this endeavor. If so, bear in mind that although they can provide connection, advice, etc., you will still be responsible for doing your part and the IACUC in evaluating it. Emergency management planning staff may be located in a variety of offices. Regardless of what office they are located in, the connection to campus police, facilities, and occupational health are needed to ensure communication and connection. These connections typically already exist as part of day-to-day business. If there are no campus planning personnel, this is a need for the institution. Working with the Institutional Official can help to identify this need and work to get an appropriate advisor in place. The campus planner at Oregon State University, Mathew Rodgers, developed an application that assists in organizing the entire response efforts of the institution. With this highly sophisticated level of organization, it is an easy step to meet the requirements and facilitate connection to local responders, provide copies of the plans (updated semiannually or as needed), and participate in local drills or table-top exercises.

Slide 17 (Prepare to Meet Responsibilities to the Institution, Post-incident)
Preparing to meet responsibilities in the institution post-incident. Not listed as a requirement, but it is also important to prepare with the news and communication team in advance. Developing scripts and talking points becomes really important for press releases during an event. This connection can be utilized to create publications of the discoveries and responsible work with animals as well. Publishing in advance helps the public see the efforts made daily and creates understanding of what work

is being done. This is important advance public relation work when an event is a civil disturbance, such as a protest. A risk office, which can be contacted through the general counsel's office, can advise on paperwork, insurance claims, these kinds of things. These steps are important to obtain funding vital for efficient recovery. Also, OLAW may need to be notified of disruptions to animal care or studies, consistent with the details of your institution's Assurance and reporting requirements.

Slide 18 (Connect with Local Emergency Responders)
Connecting with local emergency responders. As I mentioned before, connecting and touring with local responders has the potential to increase the safety of everyone involved in an emergency response. In relation to sharing your detailed plans, general counsels can develop memorandums of understanding for this sharing. This is sometimes a concern, but in the case of public records, these items may be available to the general public anyway. The detailed nature of the plans are designed to meet animal needs and protect them. The seriousness of this responsibility and the efforts taken would reassure the public we are worthy of this trust. I can't emphasize enough how important it is to tour and train all responding staff. Their safety is important.

Slide 19 (Training Staff)
In terms of training staff, managers and the attending veterinarian should take the time to ensure that staff have read and are very familiar with the plan. There should be a mechanism in place to review contact information with staff, at least prior to the semiannual inspections. Preferably the mechanism would have staff identify changes to after-hours contact information and the plan can be updated at that time. Practicing contacting responders after hours is as important a step as ensuring the lights actually go off in a room regularly. If there isn't time or resources for full drills of different scenarios, a table-top review of what actions people will take can still assist in creating comfort. Knowing how to find and utilize equipment is very important for responders. Like all items, a routine review of expiration dates should occur and make sure efficacy dates are valid.

Slide 20 (Training Staff: Evacuation Drills)
Evacuation drills. So great plan, right? Everything looks good on paper. What will actually happen when it is implemented? Will people be available when contacted? Will they know where to go and what to do? Running through aspects of the plan, particularly for evacuations, is important. Just like fire drills in elementary school, rehearsing what will happen is a good idea. Actual animals do not have to be moved, but empty cages can provide a substitute. How long will it take, how many cages can staff move, all can be tested. If things don't work, they can be changed. In the middle of the event, with people and animal lives on the line, is not the time to realize you should have practiced more.

Slide 21 (Practice, Practice, Practice)
Practice, practice, practice. It's worth repeating. The time spent practicing will provide benefits down the road. Staff comfort, revisions to the plan, and everyone knowing what to do. This practice is as important as writing the plan down.

Slide 22 (Refinement)
Refinement. When you make changes to the plan, these must be communicated to everyone that is affected. Update everyone. Let the IACUC know changes were made. All this simply demonstrates a commitment to communication and excellence. It keeps everyone in the loop and establishes a culture committed to being prepared. Practice and communication are the keys to making almost anything work. Preparing for a disaster is no different.

Slide 23 (IACUC Oversight)
IACUC oversight. The IACUC's assessment should focus on whether or not there is a clear written plan and evaluate its ability to be effective. Will the efforts result in mitigation and prevention of injury? Have priority lists been created? Have staff practiced evacuating animals? Are staff identified as responders prepared? Do they know the plan? Are there supplies on hand in case euthanasia is needed? How are these supplies reviewed? Are expiration dates honored? Is the institution involved? Have copies of plans been provided to the institution and local responders? What arrangements have been made with local law enforcement? How do communications, changes and updates occur? These are all important questions for IACUCs to ask during their review of plans.

Slide 24 (Veterinary Responsibilities)
Veterinarian responsibilities. The attending veterinarian should be involved in assisting the units in their planning. They retain ultimate responsibility for the care and well-being of the animals and should provide input and be kept informed of changes. The attending veterinarian should also work with or assist in communicating with the PIs to identify important or irreplaceable animals. A method of keeping this information up to date serves everyone's best interest and minimizes disruption to research from an event. The AV will likely be expected to serve as a subject matter expert, communicating to incident command and obtaining resources, clearance for responders and animal needs in advance of an event.

Slide 25 (Veterinary Responsibilities)
During an event, the attending veterinarian will likely be the point of contact to incident command, PIs, and staff. They may need to contact the Institutional Official to work with media and communication to prepare press releases or communicate to the IACUC in the case of an extended event. Their decisions will impact whether animal evacuations occur, to where, and, if necessary, if euthanasia is needed. It is important that the IACUC evaluate their preparedness of the attending veterinarian to perform these tasks.

Slide 26 (Responder Responsibilities)
Responder responsibilities. For staff who are responding, they need to be responsible for preparing themselves. Reading the plan, communicating to their supervisors when contact information changes, speaking up when they don't know where or how equipment works, providing their input on actual implementation. As the staff who will actually perform the written plan, they can provide valuable insight into the success of an idea. They can also assist in communicating with the Principal Investigators and their staff on critical animals and keeping information at the room level up to date for evacuations. It takes a team effort to be successful and doing small things every day keeps everyone ready for something we hope never happens.

Slide 27 (Response)
During an actual event, evaluation, feedback, action, and response cascades should be well rehearsed patterns. The communication practice will pay dividends in responding to whatever activity has occurred.

Slide 28 (Resolution)
Resolution. It's equally important to debrief and determine what worked, what needs to change, and to simply applaud the efforts of everyone who responded. A reminder to report to OLAW once the dust has settled as you see here. Insurance paperwork can be submitted and progress can be made to normal business.

Slide 29 (Resources)
Resources. I've got a resource list here that will assist you in your preparation work. I'm available for assistance or more questions. For now let's see what questions we can get to in the remaining time.

Slide 30 (Questions 1 and 2)
>> *Silk:* Thanks, Stephen. Stephen and I will now get to work answering questions. If you have questions about disaster planning for us, please type those into the Question Box on your screen. We have received some questions in advance. We'll start with those.

[Question 1] **The *Guide* says "Such plans should be approved by the institution..." Who exactly in the institution should approve the plans?**
>> *Durkee:* Well, that's a great question, Susan. It's -- the way that I've always thought about it is the IACUC is a representative of the institution, as defined in the Assurance. So the IACUC approval and evaluation of the plan provides one level of institutional approval. Other institutions, again, will have other resources or individuals in charge of disaster planning. And they may want to have a look at those plans and make suggestions or review them. Typically, there's not a lot of change between the plans developed at the facility level and approved by the IACUC as it relates to other institutional resources.

>> *Silk:* [Question 2] **The *Guide* also mentions that the animal facility plan should be part of the "overall institutional plan." What if the institution doesn't have a plan?**

>> *Durkee*: This one is a trickier question. And I think a lot of institutions in preparing for pandemics have some sort of business continuity plan. Certainly, campus police has a variety of plans in place should civil disturbances occur or power outages occur. The same thing happens at facility services or through occupational health, based on different actions or activities occurring. So there are invariably some resources devoted to advanced planning. And if they are not connected at an institution, working to connect them is a conversation that the IACUC can have with other partners that they have in the animal program.

>> *Silk:* So, Stephen, **it sounds like that's something that the IACUC should maybe bring up with their Institutional Official?**

>> *Durkee:* That's correct. The Institutional Official is an excellent resource to assist in that. It's very unlikely that institutions wouldn't have some sort of a plan in place. But the level of communication and organization at an institution may need improvement.

Slide 31 (Question 3)

>> *Silk:* Okay. [Question 3] **The *Guide* also says "Law enforcement and emergency personnel should be provided with a copy…"Can you be more specific — I assume you don't mean the police department for my city, Boston? Or maybe you do?**

>> *Durkee*: Well, that's always one of the ones that shocks people when you take information that you've always prized and tried to keep to yourself and you are tasked with turning it outside of your institution or your location. And indeed the *Guide* does mean local law enforcement, police, fire, people who would be responding in the event that you need aid from them. And so talking to those people in advance, as I mentioned in the discussion, helps them to be prepared for what they may face. And also assists you in knowing what kind of expectation you have in responding individuals. So as a suggestion, before you try to contact the entire city of Boston and their police and fire department, think about the sub-departments for the fire and police that are in your area. Who would actually respond? Who are the closest folks? And work with them. Because they're the most likely ones to respond in an event. From there they can make whatever connections are needed to the larger police and fire departments, if you're in a big city like Boston, as an example.

Slide 32 (Question 4)

>> *Silk:* [Question 4] **What gives NIH the authority to require that our institution have a disaster plan?**

>> *Durkee:* Well, that's an easy one. The PHS Policy requires that Assured institutions base their programs of animal care and use on the *Guide*. And the *Guide* says that an institution must have a disaster plan.

Slide 33 (Questions 5, 6, and 7)

>> *Silk:* [Question 5] **Does the IACUC need to include the disaster plan as part of its program review at least every 6 months?**

>> *Durkee:* Yes. The disaster plan is part of the animal care and use program. And, of course, PHS Assured institutions are required to review, at least once every 6 months, the institution's program for the human care and use of animals and the *Guide* is the basis for that evaluation.

>> *Silk:* Oh, good. Stephen's correct answer was directly from the PHS Policy, Section IV.B.1.

>> *Silk:* [Question 6] **What level of detail must the program review of the disaster plan entail?** I'll take this one. OLAW does not specify the level of detail at which the disaster plan should be reviewed. That is something that an individual IACUC may determine. **Stephen, how would you recommend that the IACUC review the plan?**

>> *Durkee:* Well, the IACUC should consider whether the disaster plan will provide for the safety of personnel and the animals in the event of a disaster.

>> *Silk:* [Question 7] **Are we required to include satellite locations in the disaster plan?**

>> *Durkee:* Satellite locations should be included in the disaster plan.

>> *Silk:* In fact, OLAW has accepted several noncompliance reports of satellite facilities being omitted from disaster plans. The Policy in Sections IV.B.1 and 2 specifies semiannual review of the animal care and use program and facilities inspection. In fact, IV.B.2. specifically mentions satellite facilities as a part of the program.

Slide 34 (Questions 8, 9, 10, and 11)

>> *Silk:* [Question 8] Here are several questions for OLAW, so I will answer them. **What timeline is acceptable to OLAW for having a disaster plan in place?** We've accepted plan and schedules with timelines of 6 months or less. Plans and schedules that proposed addressing the disaster plan in 2014 and 2015 have been sent back for revision.

[Question 9] **Does OLAW want a copy of our disaster plan?** No. And remember that if you send us a copy of your disaster plan, it will be FOIAable. [A disaster plan is not a required component of the Animal Welfare Assurance and therefore would not be retained by OLAW in your Assurance file.]

[Question 10] **Must our disaster plan be approved by OLAW?** No.

[Question 11] **Will OLAW review our disaster plan during a site visit?** Yes, of course we will. We review your entire animal care and use program during an

educational [Assurance] or a compliance site visit. The disaster plan is a part of your program. [The intent of an Assurance site visit is to ensure the adequacy and accuracy of an animal care and use program as compared with the program described in the institution's Assurance document and to ensure their compliance with the provisions of *the Guide*. Expanded from the PHS Policy V.C.]

Slide 35 (Questions 12, 13, and 14)

[Question 12] **Is the IACUC required to develop the disaster plan itself?** The answer is no. Development and approval of the disaster plan is the responsibility of the institution. Many IACUCs do not have the knowledge or the resources within the committee to undertake that responsibility. The *Guide* stresses the cooperative nature of program oversight among the IACUC, the IO and the AV. The IACUC has a responsibility to review the plan to ensure that animal well-being is appropriately addressed. The best disaster plan will be the result of communication and teamwork by qualified individuals and responsible offices throughout the institution.

[Question 13] **Could you give some specifics about the need to test systems?** The first example we can give is backup electrical power. Especially with the use of individually ventilated cages, air flow is a significant concern. It is not enough to know that there's a generator available. What can the generator power? If it only provides emergency lighting, there is a problem. Assuming that it can provide adequate power, how often is it tested? By whom? And how is that documented? Will the IACUC receive relevant reports? But more must be considered. What is the source of fuel for the generator? How much is readily available? Have steps been taken to ensure adequate access to additional supplies if the event is long-lasting? Stephen mentioned the issue of air flow. What about security systems? If access to an area is controlled electronically, what happens to access in the event of a power failure? Can no one get in? Or can anyone get in? Both are undesirable situations. A plan may describe an expected outcome, but has anyone actually tested it? Of course, the test and the test results should be documented.

Stephen, I'm going to turn this one back to you. [Question 14] **Our facility is large and we have thousands of cages of mice. Use of injectables for euthanasia in an emergency may not be feasible. What do you recommend?**
>> *Durkee*: Well, I've heard that some facilities have modified individually ventilated racks so that they may be used for CO_2 euthanasia of large numbers of animals at one time, so that's an option people can explore and look into it. This could be considered a useful technology for daily use. It doesn't require the removal of animals from their home cage and it reduces the potential for added distress.

Slide 36 (Question 15)
>> *Silk:* I'm going to take this one. [Question 15] **Could you provide more information about what's required with respect to notifying OLAW when there is a disaster?** OLAW has guidance on disaster reporting on our website. It's in Lab

Animal [Volume 31, Edition 8, on pages 27 to 30](#). That was published in 2002. This guidance emphasizes that when a disaster strikes an animal facility, the highest priority must be saving human and animal lives. Only after you have attended to these critical needs, only then, should you report to OLAW. You are always required to report serious noncompliance and departures from the *Guide* to OLAW. That is specified in the [PHS Policy section IV.F.3](#). During an accident or natural disaster, it is likely that you will have program or facility deficiencies, which cause injury, death, or severe distress to animals.

Examples of serious facility deficiencies that are likely to occur during disasters include:
- failures in heating, ventilating, and air conditioning systems and their associated electrical systems;
- inoperative watering systems; and
- general power failures of sufficient duration to affect critical areas such as isolators, barriers, surgical suites, and intensive care units.

When you report will vary depending on the circumstances. OLAW would like to hear from institutions as soon as possible after the acute crisis ends, and before the inquiries about your animals start coming in. We get inquiries from the NIH Director, from Congress and from the media, from animal rights activists, and from the public. It is important for us to be able to reassure interested parties that we know what is happening and that everything possible is being done to take care of the animals. Another reason to call is because we might be able to provide assistance. We may have access to resources or contacts that can help your institution deal with the problems. Lastly we'd like to hear from you because we are concerned for you. We are not picky about how you report. Do whatever you can to get a message to us. Telephone, email, letter, text to one of our cell phones. We know that you have your hands full, so do whatever is easiest for you. Note, also, that institutions that receive support from the NIH must also report to OPERA [[Office of Policy for Extramural Research Administration](#)].

And now we'll go to the live questions. Let's see, Stephen, we'll start with you and then maybe I can add something to this. [Question 16] **We have multiple labs where non-USDA regulated animals are housed for less than 24 hours and USDA regulated animals are housed for less than 12 hours. Should our disaster plan include these areas as well?**
>> Durkee: That's always a difficult question. Because it's not an animal housing area. But if there are animals there and you know that animals are there, it's worth having a discussion with the laboratory personnel in those locations to discuss access in the event of an emergency and developing a communication system, so that husbandry staff would know there are animals there in the event of an emergency so they could include those animals in their plan. In all likelihood, the simplest solution for animals in those areas would be to simply return them to the animal housing

facility. But having those conversations in advance, especially when you know that that's a routine event, helps to get everybody on the same page with expectations.
>> *Silk:* And OLAW would expect, yes, that a disaster plan to evacuate animals housed in procedure rooms or other temporary locations, where they are housed for less than 24 hours, that should be in place and it should be developed in cooperation with the investigators.

Now someone inquires, [Question 17] **Mr. Durkee, do you have personal anecdotes from big disasters that you can share?**
>> *Durkee:* I was fortunate to be part of a blackout that occurred on a large part of the East Coast back in 2003. And at that point in time, the work in developing disaster plans, written plans, was still fairly in its infancy. But many people in facilities that experienced power outages or bumps or different events that occurred, just nothing on that scale. My impression from that was that by being prepared on a daily basis for these things, and understanding what to do for these little, simple items that happen, power outages, bumps, water pipes bursting, when a big event occurs, it's certainly dramatic, but people generally know what to do. The processes, the new requirements in the *Guide*, all help people to be more organized and prepared in advance to ensure that everyone is calm when an event happens. And that's the biggest thing. No matter what you do to prepare, there are going to be things that happen in an event that nobody can prepare for. And all you can hope is that you've got systems in place to communicate, to get resources, and to be able to handle everything safely for the people and for the animals involved.

>> *Silk:* The next questioner says: [Question 18] **Stephen, have you established a mechanism to ensure that local authorities will permit key personnel to access local roads when authorities have placed limited access restrictions on roadways?**
>> *Durkee:* I don't have anything specifically established. My understanding from other talks and from folks that I've worked with is that there are several different ways that emergency responders can be identified. They may be specific ID cards, there may be lists that are kept. There are a variety of mechanisms to say, "Hey, this person is an authorized responder and they need to get in." Certainly having those things in advance is helpful. The way chains of command work is if a federal group comes in and takes over in the event of an emergency, information that the local groups have will funnel up. So providing all of your plans, your information, keeping your contact lists up to date is one step that you can do. And certainly working with your institution to seek other methods to identify individuals who will be responders gives you the best possibility of being able to get through. Remember, during an event, we don't have control over all of the scenarios or the situations and all we can do is hope to set up, in advance, the best opportunities and circumstances for people to be able to access areas.
>> *Silk:* That seems like the kind of thing you should talk over with the local police department.

>> *Durkee:* Exactly. And even prepared as you may be, there still may be circumstances where nobody is getting through, no matter what. And so that's worth noting, too. And, again, all you can do to prepare in advance is to talk to the right people, to have folks identified, and keep in communication.

>> *Silk:* Okay. The next question says: [Question 19] **I am having difficulty comprehending the value of asking investigators to provide lists of animals by priority to save for what is probably an every 50 year event, the actual evacuation of a facility...** I don't know, ask the people at NYU what they think about that **...when they are likely to identify everything as invaluable and when the list most likely won't be kept current without a lot of effort and prodding. Are there other answers?** What do you think, Stephen?

>> *Durkee:* I think it's one of the more difficult tasks that we have to face. But as you mentioned Susan, the folks at New York University [affected by Hurricane Sandy] are a prime example and there are lots of other examples around the country, too. Yeah, it may not be likely to happen, but if it does, do you want a strain that's been 10 years in the making to be wiped out and lost because you didn't know which was the important breeding pair to remove or evacuate? You can only take two cages, which two cages are the most important ones to take? So it's a valuable question to ask the investigators. And putting it to them as simply as that. I can only take three cages of yours out of here, which three are the most important? You could have -- as an example, just off the top of my head, a cage card system or a sticker that can move from cage to cage because maybe that important breeding pair changes. Give the responsibility to the investigator. Again, it's a team process. Let them know what your limitations are. We may only be able to take this number of cages out. Because we only have so many people who can carry them out. This will be the time frame we're operating in. Letting them know your limitations helps them to understand what your expectations are and they can see the real caring that you are trying to provide. We care about your research and your research animals. But if we can only take three cages, which three cages are those? And if we can only take six, which six cages are those? And having them understand that importance and change that identification around on their own helps to make it a cooperative thing. The research techs, husbandry techs in the room, are also a helpful resource to be able to utilize in that identification process.

>> *Silk:* The next question asks: [Question 20] **Are there example plans available?** I will take that one. The NIH Intramural Research Program has a disaster response website that includes templates for a variety of plans. You can find those on the OACU, Office of Animal Care and Use, of the NIH's website. And we'll put that URL up in our transcript for you. [Disaster Response, OACU, NIH]

[Question 21] **Are details of disaster plans subject to state or federal FOIA?** Disaster plans would not be subject to federal FOIA unless the plans were in the

records of a federal agency. That is why OLAW does not request or keep disaster plans from institutions. Disaster plans may be subject to release [by your institution] under state Freedom of Information or Sunshine Laws, depending on the laws.

>> *Durkee:* Just to add on to that, Susan, I would say for institutions that are public, having a discussion with the public records office at your institution would help to clarify what sort of things would be released. So that institutions with Sunshine Laws, public records laws, can get some more guidance from their local counsel.

>> *Silk:* [Question 22] **Who should be trained in disaster planning? Husbandry staff, vets, PIs, techs, students?** What do you think, Stephen?

>> *Durkee:* I think that all of those people have the potential need to be trained. And it really depends on who from those groups are going to be responding and be responders. It's also a worthwhile effort to have general information, say in the institutional training, about what happens during a disaster and that there is a plan in place, so that folks will know what to do. And examples that you can see in facilities are evacuation routes and things like that, that are posted to help folks who may not be responders understand where they should go in the event of an emergency.

>> *Silk:* Now, here's another one that's a good one for you, Stephen. [Question 23] **Do you recommend using or developing a hazard analysis vulnerability tool to prioritize the risk and potential harm of a disaster event?**

>> *Durkee:* Yeah. That's certainly a valuable tool to look at when you are trying to figure out what could happen to your institution. The guidance obviously is to think about events that are going to occur at your facility. So it doesn't have to be an overly complex analysis to realize whether, you know, there have been a lot of floods or ice storms in your local area, so that you can prepare for what may actually happen.

>> *Silk:* Okay. [Question 24] **My CRO is in the middle of nowhere. Who should I work with in my community to ensure integration of planning?** What do you think?

>> *Durkee:* Sounds like there's a limited community in that location.

>> *Silk:* [answer] Whomever you would call if the place was on fire.

>> *Durkee:* Exactly, you've got it.

>> *Silk:* Or if someone was breaking in.

>> *Durkee:* Yeah.

>> *Silk:* [Question 25] **This group has a facility that is underground in the basement of a building and is relatively safe from most natural disasters. It is also not likely whatsoever to flood.** They are tempting fate. **Where do you start with disaster planning when it seems like the safest thing to do is stay put?**

>> *Durkee*: If you have an impervious fortress from all potential natural disasters,

environmental disasters, you have an infinite supply of backup energy and power and water, then staying put sounds pretty good and I'll be happy to come on over there.

>> *Silk:* We'll all be over if there's a disaster.

>> *Durkee:* There's always, you know, the other aspect of disasters that can occur is people. So what if people aren't there already and they are not able to get in, then what happens? Or you are prepared for all of the needs of the animals, but have you prepared for the needs of the people who are going to be hanging out there? Is there food? Maybe you need barbecue equipment to hang out, out back, to feed people because there's not enough backup power for kitchen operations or things like that. So there's always some aspects of planning that you can look at. Just writing down how the systems function and work is a way to create a plan to put things together there. And seriously, that sounds like a great place to hang out in case there's a big problem.

>> *Silk:* [Question 26] **Is NIMS [National Incident Management System] or FEMA [Federal Emergency Management Agency] command training recommended for the AV or animal program leadership?**

>> *Durkee:* That's certainly a consideration to make and I would advise talking to the local institutional leadership, if there's an emergency planner there. They may already have a program in place to train folks. Certainly training that people want to pursue on their own helps them to be more prepared and that's one way to go. But I would talk with your local folks and find out what's reasonable and what's not reasonable for the attending veterinarian or facility leadership.

>> *Silk:* We only have a couple more minutes and we'll try to squeeze in as many [questions] as we can. Here's a very nice comment that we're pleased to receive. This person suggests that we add to our list of references FEMA's Incident Command System training programs and the courses for senior institution management. So we will do that and you'll find that up on our website as soon as we're able to get it up there. [See also FEMA Training]

[Question 27] **How many days, Stephen, should an emergency plan account for?**

>> *Durkee:* Well, that's also a tough question because it's going to vary. In the one example that we were just talking about with the previous question, there's not an issue with how much power you can supply, there's no fuel needs or anything like that, then you may be able to carry on as long as your food and water resources hold out. So that's also going to vary from institution to institution. For some species, particularly aquatics, you may have a limit for how long you can oxygenate water without electricity. So knowing what the limits are of your ability to provide care for the animals is ultimately the end of the time frame you can provide relief or mitigation efforts for the animals at your facility. And those are very frank discussions to have and the attending veterinarian should be involved in those.

>> *Silk:* I'm going to just take one more. [Question 28] **If an institution submits its disaster plan, you said this isn't required, but would be subject to FOIA, would OLAW shred or return the plan, thus avoid having it on file?** We do not ask for your plans, so we would not have them. There would be no reason for you to submit one for us, so the situation should not come up.

We've run out of time and we have a lot more good questions. And so we will type those up and Stephen and I will work on the answers. We'll amend them to the end of the transcript and place them on the website. We'll get that up as soon as we're able to. I would like to thank Stephen for all of his work. He did a lot of work on this webinar and it was a volunteer effort that he's contributing to our community. I'm moved, always, by the generosity of our colleagues. And we thank you. And we thank all of you for participating in our OLAW online webinar. We look forward to meeting with you again in June when Sara Munro from Boston Children's will talk to us about training. Goodbye, everyone.

Additional Submitted Questions Not Addressed During the Webinar

[Question 29] **How have these updated recommendations been received by AAALAC and will they be stepping up disaster planning scrutiny?**

[Stephen Durkee] I was part of a site visit by AAALAC with the new *Guide* as a basis. They looked for items that are represented in this best practice webinar during the review of disaster planning.

[From AAALAC International] Evaluation of a Program's disaster plan has been a longstanding part of the AAALAC International accreditation site visit process. The 8th Edition of the *Guide for the Care and Use of Laboratory Animals* (NRC - 2011, *Guide*), has revised language concerning disaster planning and the requirement for institutions to maintain a disaster plan as part of their overall program of emergency preparedness. AAALAC International reviews disaster plans to ensure the needs of the animals are appropriately considered in the event of an emergency. Disaster plans should provide practical contingencies which maintain humane animal care and welfare. Although the 8th Edition of the *Guide* provides additional information about disaster planning and the USDA has recently addressed the issue, the AAALAC International accreditation process will continue its evaluation of disaster preparedness in a manner consistent with its longstanding expectations for accreditation.

[Question 30] **Are there examples of how well such planning has worked at particular institutions, similar to after action reports in the military?**

[Stephen Durkee] The plan really just prepares you by thinking about important issues. It is important to remember that during an event, unique problems no one planned for will arise. What should be evident is that it is important that communication, response, and mitigation occur. After an event, the institution would examine the results and make any needed changes. I have seen many examples of events happening, where the cascade of events unfolded following the response outline. Always, after the event, improvements and changes are made, enabling the institution to be even better prepared the next time.

[Question 31] **Any thoughts on those areas that are PI managed, wrapping them in to the overall plan?**

[Stephen Durkee] For PI managed areas, my suggestion would be to involve them in the planning process. With some exceptions, most PIs and their staff would be grateful to have their animals included in the overall animal response plan. The laboratory's resources are usually more limited, from a personnel perspective, and this would improve the results for their animals. Many PI managed areas have a plan that involves bringing their animals to the main facility and going home. This has been accepted by IACUC's in my past experience as a sufficient plan.

[Question 32a] **What if there is a natural disaster and animals have to be euthanized, waste companies are not able to pick up carcasses because the streets closed and we are unable to use freezers because we do not have power? What suggestions do you have for the carcasses?**
[Question 32b] **Stephen, we have a very large NHP facility. We have in place plans to euthanize all our animals as an absolute last resort but we are unsure of how to "store" or "dispose" of these large numbers of animals (to avoid the potential spread of disease, etc.) Thoughts?**

[Stephen Durkee] I would suggest working with the local unit that handles this pick up for the best solutions. In my experience, the carcasses may be placed in drums or other containers until such time they can be removed. While this isn't ideal, we are dealing with an emergency and we might have to make do with a less than ideal situation. If mass euthanasia is needed, the situation is already less than ideal. Question 32b describes the same problem. The solution is best developed with advice from your local area experts. Their preparations may involve having extra storage containers on hand for these circumstances.

[Question 33a] **What is OPERA?**
[Question 33b] **You mentioned that NIH funded institutions need to promptly report disasters to OLAW and another agency - OPERA? Could you elaborate on this other agency and their jurisdiction regarding animal research?**

[From OLAW] OPERA is the NIH Office of Extramural Research Office of Policy for Extramural Research Administration (NIH/OER/OPERA). OPERA provides leadership and oversight in grants management policy and compliance, intellectual property, and OMB clearances [the federal Office of Management and Budget] to the extramural research community and NIH extramural staff through policy development, expert guidance, analysis, outreach, and related information dissemination in order to promote effective stewardship of NIH extramural research funds in support of health research. Question 33b addresses the same topic. OPERA is involved in the effective stewardship of all NIH extramural funds and has a responsibility for all grant and contract funds that are distributed, not just those involved in animal activities. NIH has a dedicated web page for the biomedical research community on its response to natural disasters and other emergencies developed by OPERA.

[Question 34] **Should field work done outside of the animal facilities be included as part of the disaster plan?**
[From Stephen Durkee] Field work involving animal housing should have some sort of plan to handle the animals. In these instances, this likely will be as simple as releasing any animals being held or that are in traps. The IACUC review of field studies does involve a description of how long animals will remain in traps and most events will not prevent this release from occurring. If releasing and closing traps is not possible, it would have to be reported to and resolved in a standard IACUC format, including any reporting requirements.

[From OLAW] Your institution's disaster plan, should account for any situations that you are likely to encounter if a disaster occurs. If you routinely have personnel in the field, your plan should include communication, evacuation and other strategies to account for their safety. And as Stephen correctly mentioned, the plan should include appropriate arrangements for animals, as indicated.

[Question 35] **Do you think investigators should cryopreserve valuable rodent strains?**

[From OLAW] Yes, absolutely. In addition to ensuring a faster recovery of a research program impacted by a disaster, cryopreservation can also protect the investigator against risks from pathogens and genetic drift of the strain. Cryopreservation may also enable investigators to reduce the number of live animals held in the animal facility and to conserve personnel time, facility space and research resources.