



HOMELAND SECURITY EXERCISE AND EVALUATION PROGRAM (HSEEP)

“Flu at the Zoo” TTX



Exercise Date: 06/06/2012

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AGENDA

Wednesday, June 06, 2012

8:30am	Registration
9:00am	Welcome & Introductions
9:15am	Presentation (<i>Agency Responsibilities</i>)
9:30am	Module 1 – Response to AI in the Region
11:15am	Module 2 – Response to AI in Free-Living Birds near Your Facility
11:45am	Working Lunch Break
1:30pm	Module 3 – Response to AI within Your Collection & Personnel
3:30pm	Player Hot Wash
4:30pm	Closing Comments & Adjourn



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PREFACE

The "Flu at the Zoo" Tabletop Exercise (TTX) 2012 is sponsored by the University of Illinois, Department of Veterinary Clinical Medicine, College of Veterinary Medicine on behalf of the United States Department of Agriculture, APHIS, Animal Care (APHIS) (AC). This Situation Manual (SitMan) was produced with input, advice, and assistance from the "Flu at the Zoo" TTX 2012 Exercise Planning Team, which followed guidance set forth by the U.S. Department of Homeland Security (DHS) Homeland Security Exercise and Evaluation Program (HSEEP).

This Situation Manual (SitMan) provides exercise participants with all the necessary tools for their roles in the exercise. It is tangible evidence of USDA's commitment to ensure public health & safety through collaborative partnerships that will prepare it to respond to any zoo emergency.

The "Flu at the Zoo" TTX 2012 is an unclassified exercise. Control of exercise information is based on public sensitivity regarding the nature of the exercise rather than actual exercise content. Some exercise material is intended for the exclusive use of exercise planners, facilitators, and evaluators, but players may view other materials that are necessary to their performance. All exercise participants may view the SitMan.

All exercise participants should use appropriate guidelines to ensure proper control of information within their areas of expertise and protect this material in accordance with current jurisdictional directives. Public release of exercise materials to third parties is at the discretion of the DHS, USDA and/or "Flu at the Zoo" TTX 2012 Exercise Planning Team.



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HANDLING INSTRUCTIONS

1. The title of this document is the "*Flu at the Zoo*" (TTX) 2012 Situation Manual (SitMan).
2. Information gathered in this SitMan is designated as For Official Use Only and should be handled as sensitive information that is not to be disclosed. This document should be safeguarded, handled, transmitted, and stored in accordance with appropriate security directives. Reproduction of this document, in whole or in part, without prior approval from the "Flu at the Zoo" TTX 2012 Exercise Planning Team is prohibited.
3. At a minimum, the attached materials will be disseminated strictly on a need-to-know basis.
4. For more information, please consult the following points of contact (POCs):

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INTRODUCTION

Background

Since the identification of the zoonotic, highly pathogenic H5N1 avian influenza (AI) virus in Southeast Asia, the United States Department of Agriculture and the Association of Zoos and Aquariums (AZA) facilities have invested significant resources preparing the AZA community for potential incursion of this agent into various US animal compartments. To that end, USDA Animal Care has supported projects to conduct AI surveillance and develop training materials tailored to the unique community needs of zoos and aquariums.

While zoos and aquariums have their own plans with specific details for managing a potential disease threat within their respective facilities, a document has been developed by USDA and its collaborators, the Zoo Animal Health Network (ZAHN) headquartered at Lincoln Park Zoo, Chicago, entitled "*USDA APHIS AZA Management Guidelines for Avian Influenza: Zoological Parks & Exhibitors Outbreak Management Plan*". This document was approved by the Animal Health Committee of the Association of Zoos and Aquariums, and was introduced to State Veterinarians and USDA Area Veterinarians in Charge in September, 2010. This document was designed to provide the USDA-APHIS Emergency Management and regional and local emergency management staff with the framework to assist them with decision-making should a disease emergency impact a zoo or aquarium.

While AZA and USDA have invested time and resources in preparing for AI, the opportunities to evaluate training, preparedness and response for this community are limited. To address this gap in evaluation a multi-disciplinary team consisting of the University Of Illinois College Of Veterinary Medicine Center for One Health Illinois, The Illinois Department of Agriculture, and the Zoo Animal Health Network submitted an application to the USDA-APHIS AC Animal Emergency Management Exercise Program (Catalog of Federal Domestic Assistance Number 10.025) and received an award to fund the "Flu at the Zoo" TTX. This exercise is supported by Cooperative Agreement No. 11-6100-0066-CA from the USDA Animal and Plant Health Inspection Service (APHIS) – Animal Care.

Purpose

The purpose of the project is to enhance the preparedness and communication among zoological personnel in Illinois, Indiana, and Missouri to respond to an outbreak of avian influenza in a captive wildlife population. It will also fulfill an all-hazards approach to response to any



infectious disease outbreak involving humans and/or animals associated with a zoological facility.

Scope

This exercise will bring together academics, regulatory officials and zoological personnel from Illinois, Indiana and Missouri for a one-day table-top exercise that will emphasize their role in a response to an avian influenza outbreak. There are 16 zoos and aquariums located in the 3 participating states for this table top exercise. However the scope of the exercise extends beyond this region. Representatives from 7 additional states and Washington, DC will also be in attendance at Flu at the Zoo on June 6, 2012 (see Figure A.1). The exercise is designed to evaluate AZA institutional capacity to respond to an outbreak of avian influenza within a zoological facility. The materials developed will have the potential to enhance preparedness efforts of zoos and aquariums across the country.

Target Capabilities

The National Planning Scenarios and establishment of the National Preparedness Priorities have steered the focus of homeland security toward a capabilities-based planning approach. Capabilities-based planning focuses on planning under uncertainty because the next danger or disaster can never be forecast with complete accuracy. Therefore, capabilities-based planning takes an all-hazards approach to planning and preparation that builds capabilities that can be applied to a wide variety of incidents. States and urban areas use capabilities-based planning to identify a baseline assessment of their homeland security efforts by comparing their current capabilities against the Target Capabilities List (TCL) and the critical tasks of the Universal Task List (UTL). This approach identifies gaps in current capabilities and focuses efforts on identifying and developing priority capabilities and tasks for the jurisdiction. These priority capabilities are articulated in the jurisdiction's homeland security strategy and Multiyear Training and Exercise Plan, of which this exercise is a component.

The capabilities listed here have been selected by the "Flu at the Zoo" Exercise Planning Team. These capabilities provide the foundation for development of the exercise design objectives and scenario. The purpose of this exercise is to measure and validate performance of these capabilities and their associated critical tasks. The selected target capabilities are:

- Animal Disease Emergency Support
- Food and Agriculture Safety and Defense
- Epidemiological Surveillance & Investigation



Exercise Design Objectives

Exercise design objectives focus on improving understanding of a response concept, identifying opportunities or problems, and achieving a change in attitude. This exercise will focus on the following design objectives selected by the Exercise Planning Team:

1. Participants will discuss the ability of local, State, and Federal agencies to establish control of an AI outbreak in each institution as it moves toward to each zoo, until the virus affects collection specimens, and potentially employees. *(Note: While it is highly unlikely that this scenario would play out in every zoo simultaneously, for each individual institution this could be a highly likely scenario).*
2. - Participants will discuss the ability of local, State, and Federal agencies to establish control of zoo animals and animal products to restrict movement of people, animals, supplies and products, and equipment in and out of control areas including zoological parks.
3. - Participants will discuss the ability of local, State, and Federal agencies to establish and coordinate a cleaning and disinfection program targeting zoological parks in the affected areas including personnel, equipment, and supplies according to current USDA APHIS protocols.
4. - Participants will discuss applicable references to the *AZA Outbreak Management Plan*.

Participants

- **Players.** Players respond to the situation presented, based on expert knowledge of response procedures, current plans and procedures, and insights derived from training.
- **Observers.** Observers support the group in developing responses to the situation during the discussion; they are not participants in the moderated discussion period, however.
- **Facilitators.** Facilitators provide situation updates and moderate discussions. They also provide additional information or resolve questions as required. Key Exercise Planning Team members also may assist with facilitation as subject matter experts during the TTX.
- **Evaluators.** Evaluators are assigned to observe and evaluate certain objectives during the exercise. Their primary role is to document player discussions, including how and if those discussions conform to written and established procedures.



Exercise Structure

This tabletop exercise (TTX) will be a multimedia, facilitated exercise. Players will participate in the following three modules:

- Module 1: Response to AI in the Region
- Module 2: Response to AI in Free-Living Birds Near Your Facility
- Module 3: Response to AI Within Your Collection & Personnel

Each module begins with a multimedia update that summarizes key events occurring within that time period. After the updates, participants review the situation and engage in functional group discussions of appropriate response issues. For "Flu at the Zoo", participants will be as evenly divided as possible into three functional groups.

After these functional group discussions, participants will engage in a facilitated caucus discussion in which a spokesperson from each group will present a synopsis of the group's actions, based on the scenario.

Exercise Evaluation

Evaluation of the exercise is based on a set of objectives and Exercise Evaluation Guides (EEGs). Evaluators will be provided with EEGs for each of their assigned areas. Additionally, players will be asked to complete exercise evaluation forms. These documents, coupled with facilitator observations and notes, will be used to evaluate the exercise and compile the After Action Report (AAR).

Exercise Guidelines

- This TTX will be held in an open, low-stress, no-fault environment. Varying viewpoints, even disagreements, are expected.
- Respond on the basis of your knowledge of current plans and capabilities (i.e., you may use only existing assets) and insights derived from your prior experience and training.
- Decisions are not precedent setting and may not reflect your organization's final position on a given issue. This exercise is an opportunity to discuss and present multiple options and possible solutions.
- Issue identification is not as valuable as suggestions and recommended actions that could improve response and preparedness efforts. Problem-solving efforts should be the focus.



Assumptions and Artificialities

In any exercise, assumptions and artificialities may be necessary to complete play in the time allotted. During this exercise, the following apply:

- The scenario is plausible, and events occur as they are presented.
- There is no hidden agenda, and there are no trick questions.
- All players receive information at the same time.



MODULE 1: RESPONSE TO AI IN THE REGION



- You receive notification that the US Fish and Wildlife Service reports a Trumpeter Swan, (*Olor buccinator*) that was found dead at Crab Orchard National Wildlife Refuge in Marion, Illinois (see map image above) has been confirmed as positive for highly pathogenic H5N1 avian influenza. The viral strain that was isolated from the swan has been identified by the CDC as one that can also cause clinical illness in humans.
- See Appendix A Figures 1-4 for maps of the zoos in the region (A.1) and geographic distribution of commercial chicken (A.2), turkey (A.3) and waterfowl/game bird (A.4) facilities within the region.

QUESTIONS FOR DISCUSSION

These questions have been provided to participants and facilitators to stimulate discussion within the various breakout sessions of the exercise. It is highly unlikely that all these topics can be discussed within the allotted time for each discussion session, nor is it recommended. These questions can also be used by participants once they return to their own institutions to assist in exercises or planning.



MODULE 1: HPAI FOUND IN A WILD BIRD IN THE REGION

QUESTIONS FOR ALL STAKEHOLDERS

- Discuss roles and responsibilities of local, state, and federal agencies at this threat level.
- What are the first steps (plans, policies or procedures) that need to be taken at this threat level by your facility or agency? How do these steps affect zoos?
- What actions do you implement based on this threat level? What actions, if any, impact zoos?
- Briefly describe the type of disease surveillance that will be performed by your facility or agency at this threat level
- What interactions/coordination will occur between your various agencies and industry and zoos at this time?
- For each stakeholder, how is public information disseminated? Are adequate channels of communication already established across all stakeholder groups? What are the plans or procedures to disseminate public information? Do other stakeholders communicate with zoos as messages are crafted?
- What capabilities (personnel, subject matter expertise, resources, etc) does your agency have relevant to this part of the scenario, and what are the steps and how do zoos have access to them?
- Would this finding result in a Secretarial declaration? A Presidential declaration?

ADDITIONAL QUESTIONS FOR SPECIFIC STAKEHOLDER GROUPS

- What movements of animals should be considered in your zoo at this risk level? (zoos)
- What changes in biosecurity measures should be considered at this risk level? (zoos)
- What actions could be implemented by zoos to minimize wild bird and feral animal interactions with zoo animals at this time? (zoos)
- How do you plan to communicate with individual employees about the threat? How will staff be educated on H5N1 and symptoms of humans and animals? If employees have symptoms, to whom do they report? (zoos)
- How might season of the year affect movement of HPAI in a population of trumpeter swans, and does this affect the interaction that wildlife officials will have with zoos? (wildlife)



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- How would the above actions change if the H5N1 case was identified in a human with exposure to birds? (public health)
- Would you consider providing resource support to zoos if you didn't believe your industry were being impacted? (poultry)
- At this threat level, how is public information disseminated in your industry? Have pre-scripted messages been developed for this type of emergency? Are there any messages from the poultry industry that could be shared and be useful for the zoological community? (poultry)
- At this threat level, what movements of animals would be allowed within your industry? (poultry)



MODULE 2: RESPONSE TO AI IN FREE-LIVING WILD BIRDS NEAR YOUR FACILITY

Day Two – Day Five



- Over the next two days you receive reports of avian deaths among free-living wild birds found within your municipality. Mallard ducks and crows have been found dead.
- Subsequent testing reveals that the dead birds are confirmed as being positive for the same strain of highly pathogenic H5N1 avian influenza that was isolated from the Trumpeter Swan in southern Illinois.
- The news media have been intensely covering the story about the swan in southern Illinois, and press releases have just been issued about the diagnosis of H5N1 in your municipality. There is considerable public concern.

Day Six – Day Ten

- There are no confirmed influenza cases in staff at this time, however, some are concerned for their health and fear bringing disease home to their children. You are experiencing an unusual increase in absenteeism in your personnel; several that work in close contact with birds. Some do seem to be experiencing an influenza-like illness.



MODULE 2: HPAI FOUND IN YOUR MUNICIPALITY

QUESTIONS FOR ALL STAKEHOLDERS

- Are emergency activities coordinated from a pre-determined location?
- At this threat level, what coordination should occur between zoos, allied industries, and response agencies? What planning has been undertaken in this regard?
- Briefly describe the type of disease surveillance that will be performed by your facility or agency at this threat level
- What actions is your facility or agency taking (inter-agency, intra-agency, and public) in regard to communication, coordination and response activities? Are there adequate communication channels already established with zoos to enable rapid effective response?
- Who will manage illness and death among free-living wildlife in the affected communities? How will dead non-zoo collection animals be disposed of?
- What challenges may be encountered related with the need to obtain Federal and state permits necessary to salvage or manage (i.e. pick up and dispose dead migratory birds, transfer sick migratory birds to rehab, etc) protected bird or mammal species at zoos during their H5N1 response actions?
- What capabilities (personnel, subject matter expertise, resources, etc) does your agency have relevant to this part of the scenario, and what are the steps and how do zoos have access to them?
- At this increased threat level, what change in policy or action by your facility or agency take place for increased biosecurity measures (PPE, cleaning and disinfection procedures, quarantine and isolation policies and facilities, movement restrictions of personnel, vehicles, and equipment) to prevent further animal or human transmission?
- Which agencies monitor clean-up (disposal) to ensure public safety and protection of the environment?
- At this threat level, would zoos be allowed to move animals out of their facility?

ADDITIONAL QUESTIONS FOR SPECIFIC STAKEHOLDER GROUPS

- Would you consider providing resource support to other zoos if you didn't believe you were being impacted? (zoos)
- What plans are in place to ensure adequate personnel for animal care and/or outbreak response in the event of high rates of absenteeism/illness among the staff? (zoos)
- What education will be provided to zoo visitors? (zoos)
- Will zoo visitors be restricted from having access to any exhibits or the entire facility?



- Would any regulatory actions directed at the zoological community change if the H5N1 case was identified in a commercial chicken flock in the same region, rather than in wild birds? (regulatory)

MODULE 3: RESPONSE TO AI WITHIN YOUR COLLECTION AND PERSONNEL

Day Eleven – Day Fifteen



- Over the next three days your veterinary staff /contract veterinarian attends to sick collection specimens. Despite care, 5 avian deaths among birds in your zoo's collection. Some of the species affected are very rare.
- Four of the dead birds are confirmed as being positive for the same strain of highly pathogenic H5N1 avian influenza that was isolated from the previous cases.



Day Eighteen



- One of the caretakers responsible for care of the waterfowl in your collection has tested positive for H5N1 avian influenza. It is the same strain affecting the birds at your facility.

MODULE 3: HPAI FOUND IN YOUR ZOO OR AQUARIUM

QUESTIONS FOR ALL STAKEHOLDERS

- What capabilities (personnel, subject matter expertise, resources, etc) does your agency have relevant to this part of the scenario, and what are the steps and how do zoos have access to them?
- What mechanisms exist at the local or state level to quickly notify all zoos, animal sanctuaries, animal rehabilitation facilities, and allied industries that may be affected by these events at this zoo?
- Briefly describe the type of disease surveillance that will be performed by your facility or agency at this threat level
- Which agencies monitor clean-up to ensure public safety and protection of the environment?



- What animal and personnel movement tracing activities are taking place to determine source, destination, and disposition of potentially infected birds or equipment that may have moved to or from the affected facility?
- At this highest threat level, what changes in policy or actions for increased bio-containment measures (PPE, cleaning and disinfection procedures, quarantine and isolation policies and facilities, movement restrictions of personnel, vehicles, and equipment) to prevent further transmission to personnel and to unaffected areas of the affected zoo(s)?
- What is the recommended protocol for disposal of dead animals (wildlife and collections) in this circumstance?
- In the absence of a statewide 'stop movement order' Will the zoo be allowed to transfer any animals out of the facility? What protocols will be followed? What conditions must be met?
- What additional PPE and procedures will be implemented to protect zoo personnel? For zoo visitors?
- What clean-up/decontamination activities are taking place and which agencies/organizations would be involved?
- Are there current standard cleaning and disinfection protocol for contaminated cages, habitats, equipment etc.? What is known about the suitability of these protocols for zoological species and exhibits?

ADDITIONAL QUESTIONS FOR SPECIFIC STAKEHOLDER GROUPS

- How is the disposal of potentially contaminated equipment and supplies being handled? (zoos)
- What is the occupational health response for zoo personnel? Who do personnel report to or go to if they have symptoms? (zoos)
- What biosecurity measures, taken by zoos would be needed to protect commercial poultry? Are there best practices from your industry that are applicable to zoos? (poultry)
- How would the above actions change if the H5N1 case was identified in a human with exposure to commercial poultry? (poultry)
- What mechanisms exist to quickly notify poultry producers that may be impacted by these events? Do you envision zoos in poultry producing areas directly communicating with industry representatives at this threat level? (poultry)



RECOVERY CONSIDERATIONS

While the exercise is not specifically designed to address the recovery phase for a zoo or aquarium, additional questions are provided to prompt continuing discussion across stakeholder groups, and within institutions as planning for avian influenza or any other foreign animal disease continues.

QUESTIONS FOR ALL STAKEHOLDERS

- When does response shift to recovery?
- What messages are appropriate from your agency or facility to the public at this point in recovery?
- Which agencies monitor clean-up to ensure public safety and protection of the environment?
- If surveillance has been ongoing in your facility or industry, when will it cease and how will it be stepped down to a non-outbreak level of monitoring? Which agencies are involved in these decisions?
- If personnel and resources have been allocated to the response, how and when are they returned to normal duties?

ADDITIONAL QUESTIONS FOR SPECIFIC STAKEHOLDER GROUPS

- Is there any verification program/plan needed to determine if it is safe to visit the zoo? (zoos)
- Is there any verification program/plan needed to determine if it is safe to resume animal movement between zoos? (zoos)
- Is there any verification program/plan needed to determine if it is safe to resume receipt of chicken products for collection animal diets? (zoos)
- What actions are taking place regarding the potential impact on the zoo industry and on your facility in particular? (zoos)
- Will there be any post-outbreak follow-up, monitoring, or verification for regulated entities and for how long? (regulatory)
- Will there be any post-outbreak follow-up, monitoring, or verification for wildlife and for how long? (wildlife)



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- Will there be any post-outbreak follow-up, monitoring, or verification for zoo personnel and for how long? (public health)
- What recovery plans exist in your industry that could be shared with zoos to help with recovery of their industry? (poultry)
- How do you address issues related to consumer confidence of your products? Are there best practices that could be shared with the zoological community? (poultry)



APPENDIX A: AREA MAPS

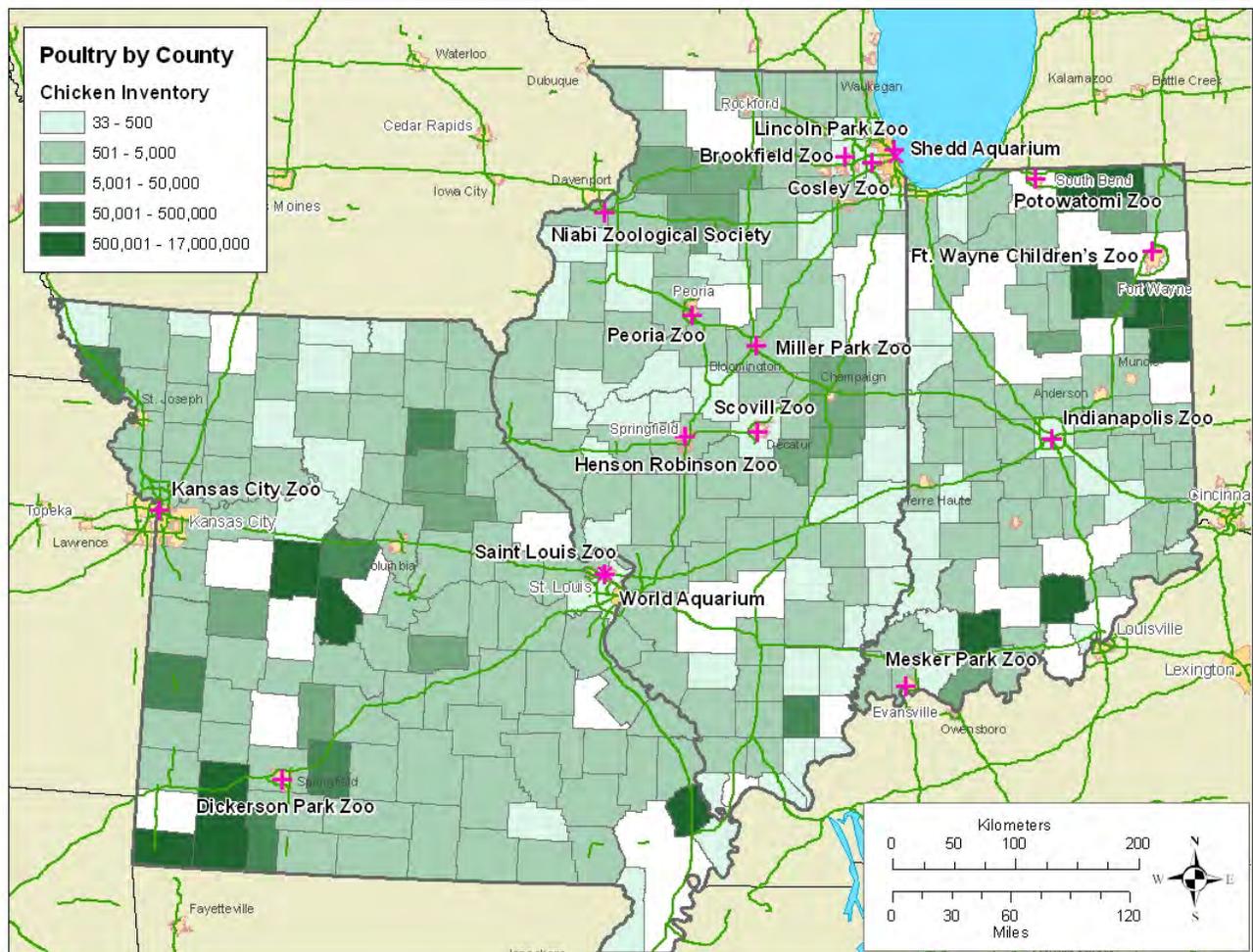
Figure A.1. Geographic Scope of "Flu at the Zoo"





APPENDIX A: AREA MAPS

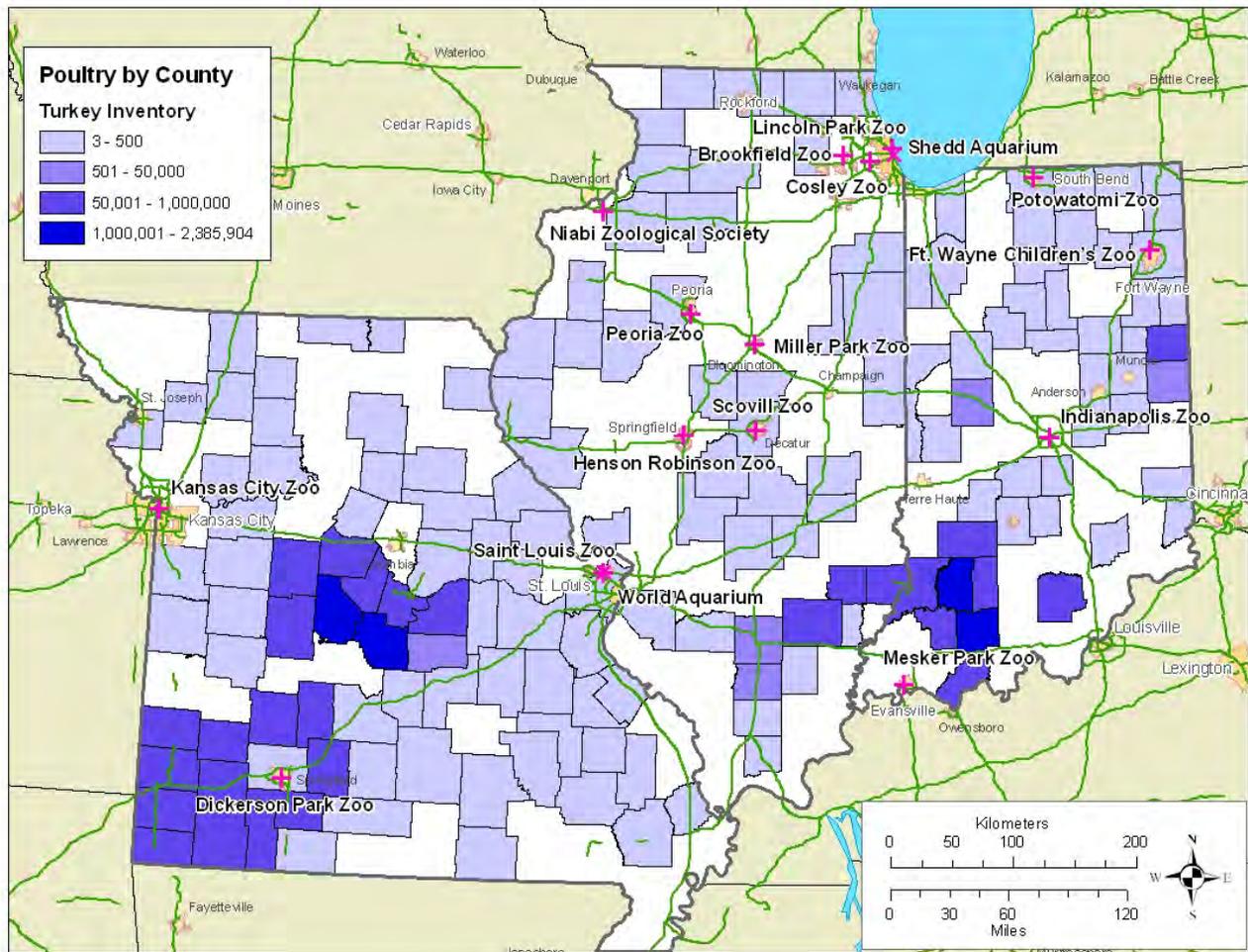
Figure A.2. Distribution of Commercial Chicken Production and Zoos in Illinois, Indiana, and Missouri





APPENDIX A: AREA MAPS

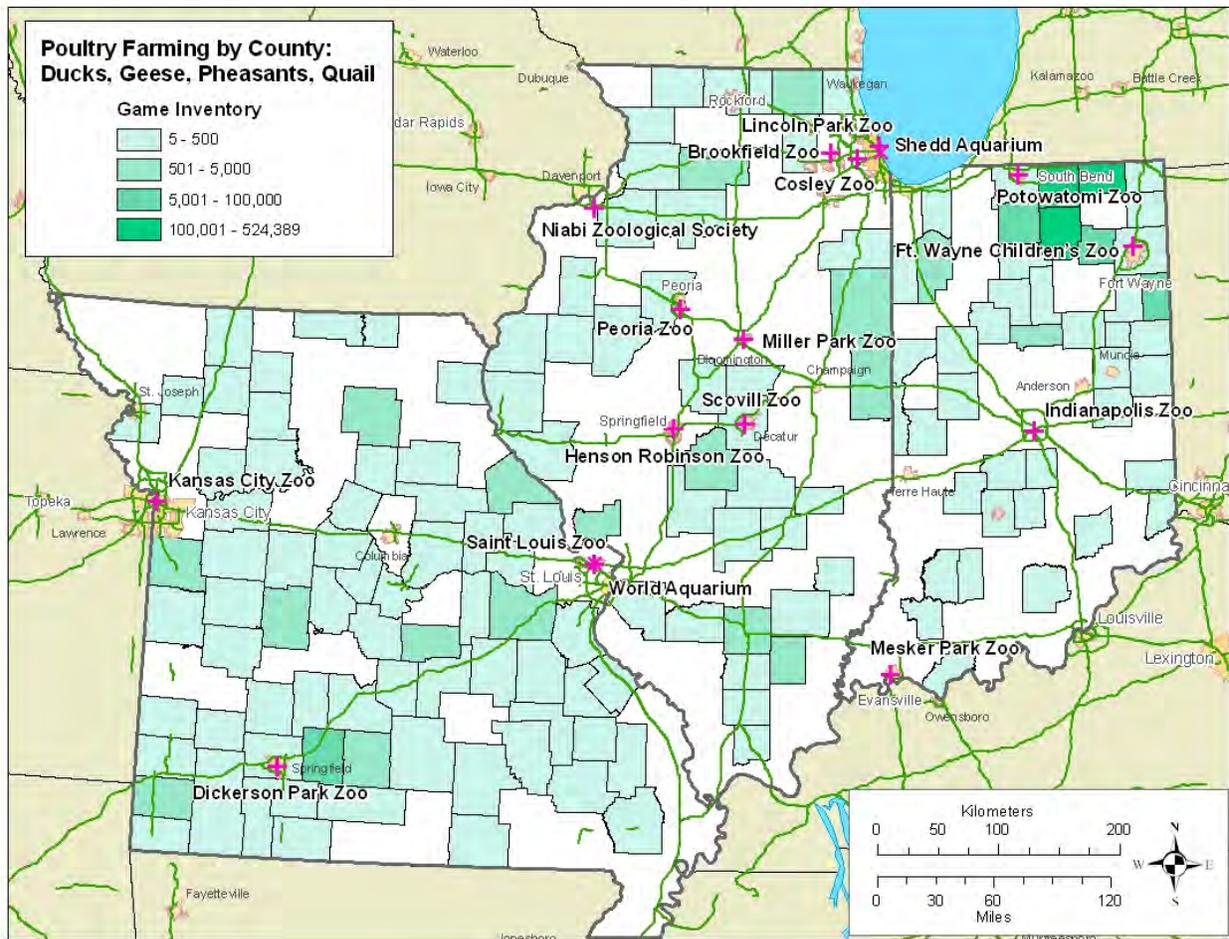
Figure A.3. Distribution of Commercial Turkey Production and Zoos in Illinois, Indiana, and Missouri





APPENDIX A: AREA MAPS

Figure A.4. Distribution of Commercial Waterfowl and Game Bird Facilities and Zoos in Illinois, Indiana, and Missouri





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APPENDIX B: ACRONYMS

Acronym	Term
AC	Animal Care
AI	Avian Influenza
AAR	After Action Report
APHIS	Animal and Plant Health Inspection Service
AZA	Association of Zoos and Aquariums
DHS	U.S. Department of Homeland Security
EAD	Emergency Animal Disease
EEG	Exercise Evaluation Guide
EMA	Emergency Management Agency
FAD	Foreign Animal Disease
FADD	Foreign Animal Disease Diagnostician
FEMA	Federal Emergency Management Agency
FMD	Foot-and-Mouth Disease
HSEEP	Homeland Security Exercise and Evaluation Program
IDOA	Illinois Department of Agriculture
POC	Point of Contact
RESP	Regional Exercise Support Program
SEOC	State Emergency Operations Center
SitMan	Situation Manual
TTX	Tabletop Exercise
USDA	U.S. Department of Agriculture
VS	Veterinary Services
WS	Wildlife Services



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APPENDIX C: ZOO DESCRIPTIONS

Zoo Information

AKRON ZOO 500 Edgewood Ave. Akron, OH 44309			
Phone	330-375-2550	Fax	330-374-7659
Director	Patricia Simmons, President/CEO (330-375-2550)	Veterinarian	Dr. Kimberly Cook (330-375-2550 x 7221)
Developed acreage	25	Total zoo acreage	52
Annual Attendance	315,000	Metro Population	703,200 (Akron itself is 199,110)
BROOKFIELD ZOO 3300 Golf Rd. Brookfield, IL 60513			
Phone	708-688-8400	Fax	708-688-6320
Director	Dr. Stuart Strahl (708-688-8300)	Veterinarian	Dr. Thomas Meehan (708-688-8501)
Developed acreage	190	Total zoo acreage	220
Annual Attendance	2,100,000	Metro Population	9,580,567
COSLEY ZOO 1356 N. Gary Ave. Wheaton, IL 60187			
Phone	630-665-5534	Fax	630-260-6408
Director	Susan Wahlgren (630-510-5035)	Veterinarian	Dr. Tawnia Zollinger (630-668-3700)
Developed acreage	5.13	Total zoo acreage	7.97
Annual Attendance	125,000	Metro Population	7,998,257
DICKERSON PARK ZOO 3043 N. Fort Ave. Springfield, MO 65803			
Phone	417-833-4138	Fax	417-833-4002
Director	Michael Crocker (417-833-1570)	Veterinarian	Dr. Erica Wilson Lipanovich
Developed acreage	58	Total zoo acreage	72
Annual Attendance	215,000	Metro Population	426,000
FT. WAYNE'S CHILDREN'S ZOO 3411 Sherman Blvd. Fort Wayne, IN 46808			
Phone	260-427-6800	Fax	260-427-6820
Director	Jim Anderson (260-427-6805)	Veterinarian	Dr. Joe Smith (260-427-6815)

Developed acreage	38	Total zoo acreage	42
Annual Attendance	498,376	Metro Population	414,315

HENSON ROBINSON ZOO 1100 East Lake Dr. Springfield, IL 62712

Phone	217-585-1821	Fax	217-529-8748
Director	Talon Thornton	Veterinarian	Dr. Greg Hurst
Developed acreage	15	Total zoo acreage	15
Annual Attendance	83,000	Metro Population	118,033

INDIANAPOLIS ZOO 1200 W. Washington St. Indianapolis, IN 46222

Phone	317-630-2001	Fax	317-630-5153
Director	Mike Crowther (317-630-2701)	Veterinarian	Dr. Jeff Proudfoot (317.630.2057)
Developed acreage	64	Total zoo acreage	64
Annual Attendance	1,100,000	Metro Population	1,700,000

KANSAS CITY ZOO 6800 Zoo Dr. Kansas City, MO 64132

Phone	816-513-5800	Fax	816-513-5850
Director	Randy Wisthoff, Executive Director/CEO (816-513-5702)	Veterinarian	Wm. Kirk Suedmeyer, DVM, (816-513-4669)
Developed acreage	202	Total zoo acreage	202
Annual Attendance	710,000	Metro Population	2,067,585

LINCOLN PARK ZOO 2001 N. Clark Chicago, IL 60614

Phone	312-742-2020	Fax	312-742-2137
Director	Kevin Bell, President/CEO (312-742-2029)	Veterinarian	Dr. Kathryn Gamble (312-742-7722)
Developed acreage	35	Total zoo acreage	42
Annual Attendance	3,000,000	Metro Population	9,580,567

MESKER PARK ZOO & BOTANIC GARDENS 1545 Mesker Park Dr. Evansville, IN 47720

Phone	812-435-6143	Fax	812-435-6140
Director	Amos Morris (812-435-6140, Ext. 401)	Veterinarian	Dr. Maria Spriggs (812-435-6143, Ext. 419)

Developed acreage	50	Total zoo acreage	90
Annual Attendance	195,000	Metro Population	351,030

MILLER PARK ZOO 1020 South Morris Ave. Bloomington, IL 61701

Phone	309-434-2250	Fax	309-434-2823
Director	Jay Tetzloff, Zoo Superintendent	Veterinarian	Dr. Matt Allender (217-265-0320)
Developed acreage	6	Total zoo acreage	6
Annual Attendance	110,000	Metro Population	167,000

NIABI ZOO 12908 Niabi Zoo Rd. Coal Valley, IL 61240

Phone	309-799-3482	Fax	309-799-5761
Director	Marc Heinzman	Veterinarian	Dr. Kathy VanBuer (563-529-3750)
Developed acreage	50	Total zoo acreage	200
Annual Attendance	230,000	Metro Population	379,066

PEORIA ZOO 2118 N. Prospect Peoria, IL 61603

Phone	309-686-3365	Fax	309-685-6240
Director	Yvonne Strode (309-681-3509)	Veterinarian	Dr. Peter Nichols (309-745-9331)
Developed acreage	15.5	Total zoo acreage	15.5
Annual Attendance	129,161	Metro Population	379,186

POTOWATOMI ZOO 500 S. Greenlawn Ave. South Bend, IN 46615

Phone	574-235-9800	Fax	574-235-9080
Director	Interim Director, Laura Arriaga	Veterinarian	Dr. Brian Stockinger
Developed acreage	23	Total zoo acreage	23
Annual Attendance	184,518	Metro Population	316,663

SCOVILL ZOO 71 S. Country Club Dr. Decatur, IL 62521

Phone	217-421-7436	Fax	217-422-7330
Director	Dave Webster (217-421-7436)	Veterinarian	Dr. Ken Welle (217-333-5300)

Developed acreage	15	Total zoo acreage	15
Annual Attendance	100,000	Metro Population	109,605

SHEDD AQUARIUM 1200 S. Lake Shore Dr. Chicago, IL 60605

Phone	312-692-3231	Fax	312-939-8634
Director	Ted Beattie (312-692-3113)	Veterinarian	Dr. Caryn P. Poll (312-692-3225)
Developed acreage	N/A	Total zoo acreage	N/A
Annual Attendance	2,100,000	Metro Population	9,461,105

ST. LOUIS ZOO One Government Drive St. Louis, MO 63110

Phone	314 781 0900	Fax	314-647-7969
Director	Jeffrey Bonner, Dana Brown President & CEO	Veterinarian	Drs. Martha Weber and Luis Padilla
Developed acreage	93	Total zoo acreage	93
Annual Attendance	3,000,000	Metro Population	2,800,000

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APPENDIX D: ZOO PARTICIPANT BIOGRAPHIES

Participant Biographies Flu at the Zoo, June 06, 2012

LAURA ARRIAGA

A 1991 graduate of Purdue University, Laura Arriaga began her zoo career in 1995 as the Registered Veterinary Technician. Prior to working at the zoo, she worked in both a Small Animal Clinic and a Mixed Practice Clinic and also completed an internship at Busch Gardens, Tampa, FL. In 2006, she was promoted to the Zoo's General Curator position overseeing the animal collection and zoo keeping staff. Most recently, she has been acting as the Zoo's Interim Director. She has been elected and served on Management Committees such as the Guenon Species Survival Plan (SSP) Steering Committee, Snow Leopard SSP Steering Committee and is the current secretary for the Amur Leopard SSP through the Association of Zoos and Aquariums. As an RVT volunteer for the Indiana Board of Animal Health's Animal Surveillance and Emergency Response Team (ASERT), she has participated in a National Level Earthquake Exercise to establish and operate a mobile animal shelter. In addition to her work at the zoo, she has also taught veterinary technology as an Adjunct Professor for Brown Mackie College, South Bend Campus.

Connie Austin is the state public health veterinarian and an infectious disease epidemiologist who works at the Illinois Department of Public Health. She has worked there for 15 years. She works on infectious disease surveillance issues, outbreaks and zoonotic disease issues in people. She completed the CDC's Epidemic Intelligence Service (EIS) program at the Illinois Department of Public Health. She has advanced degrees in epidemiology.

CONNIE AUSTIN

Connie Austin is the state public health veterinarian and an infectious disease epidemiologist who works at the Illinois Department of Public Health. She has worked there for 15 years. She works on infectious disease surveillance issues, outbreaks and zoonotic disease issues in people. She completed the CDC's Epidemic Intelligence Service (EIS) program at the Illinois Department of Public Health. She has advanced degrees in epidemiology.

NANCY BARR

Dr. Nancy Barr is the Aquaculture, Poultry and Swine Programs Manager at the Michigan Department of Agriculture and Rural Development. Prior to this role, she specialized in emergency management programs for MDARD. In that capacity, she co-authored the *Spartan County Animal Emergency Response Plan*, a template tool for local-level disaster planning. The *Spartan Plan* was recognized with a Special Community Award from the Michigan Association of Emergency Managers. Dr. Barr also led the effort to put the NPIP Avian Influenza Surveillance program into action in Michigan's commercial poultry operations—a program she now administers. She has extensive experience in emergency planning for Michigan's poultry and aquaculture industries, and is currently Vice-President for the Michigan State Animal Response Team (MI-SART). Dr. Barr holds a BS ('92) and a DVM ('97) from Michigan State University. Prior to joining state services in 1999, she practiced small animal medicine in Spring Lake, Michigan.

DAVE BERNIER

Dave Bernier is the General Curator of the Lincoln Park Zoo in Chicago, IL. He has worked at the zoo since 1989, serving as an animal keeper, lead animal keeper for small mammals and reptiles and great apes, zoological manager of the bird department and curator of large mammals, carnivores, hoofstock and the farm-in-the-zoo. He is the co-chair of the Lincoln Park Zoo's Safety Committee and is responsible for conducting zoo-wide safety drills. Dave is one of the staff members at the zoo that can assume the roles of emergency coordinator or information officer during any emergencies at the zoo. These positions are responsible for the execution of the emergency plan, overseeing the safe resolution of the emergency and liaison functions with police and fire scene commanders. He is a certified rifle instructor and head of the zoo's firearm team. He is the coordinator for two North American Species Survival Plan programs through the Association of Zoos and Aquariums: southern three-banded armadillo and Sichuan takin. Dave has a bachelor's degree in biology from North Park College and a master's in business with an emphasis on nonprofit management from North Park University.

NANCY BOEDEKER

Nancy Boedeker joined the staff at Smithsonian's National Zoo in September 2005 as a veterinarian providing care to the animals in the collection. She received her veterinary degree from the University of Tennessee. She then completed an internship in small animal medicine and surgery in San Diego followed by an internship in zoo, wildlife, and exotic animal medicine at Kansas State University. She received further specialized training by completing a Zoological Medicine residency through UC Davis and the Zoological Society of San Diego. She currently oversees the preventive medicine and quarantine programs at the National Zoo. She lead the development of the zoo's avian influenza preparedness plan. As a federal veterinarian, she has participated in the development of plans to address both workplace safety and projected shortages in the veterinary profession. Boedeker has a particular interest in the one health approach, especially in the risks of infectious disease transmission between wildlife and domestic or captive animals both in a zoo setting and in the wild. She has experience in capacity building and addressing the veterinary aspects of the reintroduction of endangered non-domestic species to the wild from *in situ* projects involving Przewalski's horses in China and saiga antelope in Russia.

PAUL BRENNAN

Paul Brennan received a BS in Animal Sciences from Purdue University in 1976 and a BA in Business Administration from the University of Saint Francis in 1977. Upon graduation, he joined Indiana Farm Bureau Cooperative Association (later Countrymark Coop) in Indianapolis, IN, focusing on grain purchasing and brokering. Later, Mr. Brennan was asked to join the organization's poultry and livestock production subsidiary, FarBest, Inc., eventually managing the company's live production of 2 million turkeys annually. In 1992, Mr. Brennan was selected to become the Executive Vice President of the Indiana State Poultry Association (ISPA). The ISPA is the Official State Agency for the USDA's National Poultry Improvement Plan (NPIP) poultry disease control program. Since 2000, GPS coordinates have been collected and updated for Indiana commercial poultry operations. This confidential data is available to BOAH and USDA in an emergency poultry disease outbreak, and is owned by the ISPA. In 2002, Mr. Brennan led the effort to protect poultry producers by proposing and leading a team to develop the NPIP Commercial Low Pathogenic Avian Influenza Program. The rule was published in the Federal Register on September 26, 2006.

JELEEN BRISCOE

Dr. Jeleen Briscoe graduated from the University Of Pennsylvania School Of Veterinary medicine in 2002. After finishing her special species residency at UPenn, she became an American Board of Veterinary Practitioners (ABVP)—Avian diplomate. From 2006 to 2009, Dr. Briscoe served on the UPenn faculty where her research interests focused on feather damaging behavior and the influence of exposure to humans on the dermatological flora of parrots and rabbits. In her current position as the avian specialist for the US Department of Agriculture Animal Plant Health Inspection Service's Animal Care Program, Dr. Briscoe is working on regulations to implement the change in the Animal Welfare Act's definition of animal to include rats, mice, and birds, not bred for use in research. As a member of the Zoo Animal Health Network's Zoo Best Practices Working Group, she provides input on guidance to zoos and aquariums for the creation of contingency plans for man-made and natural disasters. She also serves as a subject matter expert on agricultural issues to FEMA and the Interagency Board on Equipment Standardization and Interoperability, a group of first responders partnering with federal agencies to evaluate equipment used during a wide range of emergency response.

WILLIAM BROWN

William Brown is a GIS Analyst at the University of Illinois Geographic Information Systems and Spatial Analysis Laboratory in the College of Vet Med. He has a B.S. degree in Biology and has worked with environmental, educational, and health applications of Geographic Information Science since the early 90s. Bill is involved with projects such as disease surveillance of chronic wasting disease in white-tailed deer and vector-borne diseases such as West Nile virus, and the evaluation and improvement of trap-neuter-release programs for feral cats. He creates spatial databases and develops data for habitat prediction and risk analysis, makes maps and uses web map programming interfaces to support research and help make geographic data more useful.

KATHLEEN BURDA

Dr. Kathleen Burda attended the Michigan State University College of Veterinary Medicine. She worked for 3 years in private practice (mixed animal, small animal, feline exclusive) and was then hired at USDA APHIS VS and has been with the agency for over 25 years. She worked the Chicago O'Hare port office for 3 years and then was a field veterinarian in northern Illinois for 12 years during the peak of the PRV eradication program. In 2002 she transferred to Austin Texas as assistant AVIC for import/export activities and supervised the Texas/Mexican ports for about 4 years; she transferred to Kentucky as AVIC for about 2 years and now has been back in Illinois as AVIC for over 4 years. She is currently an Operation Section Chief (OSC) on one of the 4 VS IMTs. She worked as OSC during END in California in 2002-3, the California TB task force in 2008 and the IDNR multi-country response to Asian Carp task force in 2009. She was co-incident commander on the BSE response in Texas in 2005 and deputy incident commander on the IDNR task force on Asian Carp in 2010. As AVIC, she is responsible for VS programs and export work in the state of Illinois.

ELISE CIRIBASSI

Dr. Elise S. Ciribassi started as a summer intern at the Brookfield Zoo in 1979 working in the Hoofstock area. She earned her degree in biochemistry from the University of Illinois, Champaign-Urbana, 1977-1980 and graduated from the University of Illinois College of Veterinary Medicine in 1984. She practiced in Troy/Canton, Pennsylvania at the Troy Veterinary clinic, a mixed animal practice, from 1984-1988, where she concentrated on small animal, large animal surgery, and some dairy goat medicine. She is married to Dr. John Ciribassi, veterinarian from the class of 1984 and they have two daughters, Danielle, 25, and Rebekah, 21. She opened Gary at North Veterinary Center in Carol Stream, Illinois, a small animal practice with some exotic animal/pocket pet exposure. She currently owns and manages the Carol Stream Animal Hospital where surgical, dental, preventative, and medical services for small animal and exotic/pocket pet/avian species are provided. She has shared vet responsibilities at the Cosley Zoo in Wheaton, Illinois since the early 1990's. Dr. Ciribassi hold memberships in AVMA, ISVMA, CVMA, AAV, and AARV and is currently involved with Carol Stream Chamber of Commerce, Rotary club of Carol Stream, religious committees, PADS shelter, and numerous community service projects/educational teaching engagements.

KIM COOK

Kimberly Cook, DVM has been the veterinarian at Akron Zoological Park in Akron, Ohio since 2009. She earned her DVM from Michigan State University in 2005 and holds a BS in Biology from Wayne State University. She completed her Avian Internship and Residency at North Coast Bird and Exotic Specialties from 2005-2008. She is the white-winged wood duck SSP Veterinary Advisor, the unofficial (pending) Waterfowl TAG Veterinary Advisor, and a member of the AZA Animal Health Committee. Her main research interest is avian mycobacteriosis.

SHARON DEEM

Dr. Sharon Deem is a wildlife veterinarian with a D.V.M. from the Virginia-Maryland Regional College of Veterinary Medicine and a Ph.D. in Veterinary Sciences (Epidemiology) from the University of Florida. She also completed a residency in zoological and wildlife medicine at the University of Florida. Dr. Deem has conducted conservation and health projects in the Americas, Africa and Asia. Her professional interests focus on infectious diseases shared by domestic animals, wildlife and people and the health impact of environmental changes and human contact on wild species. During her veterinary career she has been fortunate to work as a zoo clinician, epidemiologist and wildlife veterinarian. Dr. Deem has worked for the University of Florida, Wildlife Conservation Society, Smithsonian National Zoo, and the Saint Louis Zoo WildCare Institute. In 2011, Dr. Deem became the director of the newly launched Saint Louis Zoo Institute for Conservation Medicine (<http://www.stlzoo.org/conservationmedicine>). She is the author of over 100 book chapters, scientific and popular articles. Dr. Deem is the secretary of the American College of Zoological Medicine and an associate editor for the Journal of Zoo and Wildlife Medicine.

KRISTI DELASKI

After graduating from the Cummings School of Veterinary Medicine at Tufts University, Kristi Delaski earned the position of associate veterinarian at the Anne Arundel Veterinary Hospital in Baltimore, meanwhile serving as a volunteer veterinarian at the Maryland Zoo. After a year of working primarily with small animals and exotic pets, she took on a veterinary internship at the Cincinnati Zoo and Botanical Garden, where she remained for two years. In July 2010, she joined the veterinary team at Lincoln Park Zoo, serving as Associate Veterinarian.

PAM DENNIS

Pam Dennis is the veterinary epidemiologist for the Cleveland Metroparks Zoo in a partnership with Ohio State University. She is an assistant clinical professor in the Department of Veterinary Preventive Medicine at Ohio State. She received her DVM from North Carolina State University College of Veterinary Medicine and her PhD from Ohio State University. Prior to earning her PhD she completed her residency training in Zoo and Wildlife Medicine at the University of Florida. She is a Diplomate of the American College of Zoological Medicine. Pam serves as the Veterinary Advisor to the Ape Taxon Advisory Group for the Association of Zoos and Aquariums, on the veterinary advisory team of the gorilla Species Survival Plan, and is chair of the Animal Health Committee of AZA. She served as the eastern regional coordinator for the USDA-AZA avian influenza surveillance program.

DENISE DERRER

After growing up on a Southern Indiana hog and tobacco farm, Denise Derrer went on to attend Purdue University's School of Agriculture, where she graduated with degrees in Agricultural Sales and Marketing and Agricultural Communications. Since 1997, she's served as the public information director for the Indiana State Board of Animal Health, where she's worked to develop outreach, education and training programs for producers, veterinarians, consumers and others with a stake in the health of Indiana's animal population. Denise is also part of the multi-agency team that staffs Indiana's Joint Information Center during disaster activations, most recently during the March 2012 tornadoes. Before joining BOAH, Denise worked for an advertising agency, as well as national and regional farming publications. Denise resides in Hendricks County, Indiana with her husband and two daughters.

SUSAN DIXON

Ms. Susan Dixon works with the Multi-State Partnership for Security in Agriculture and other Food and Agriculture Security programs at Iowa Homeland Security and Emergency Management. This involves collaboration with many public and private partners in the preparedness, response, mitigation and recovery aspects involving the food and agriculture sector. Her past Emergency Management experience include: Hazardous Materials Spills Technical Assistance, Hazard Mitigation Planning, Disaster Operations and Liaison roles and a two year loan to the Rebuild Iowa Office as the Director of Long-Term Community Recovery in response to the flooding and severe storms of 2008. Prior to entering the Emergency Management field Susan had an extensive career with the Iowa Department of Natural Resources. Her work included: surface water quality standards, Contaminated Sites/Brownfield, Landfills, Leaking Underground Tanks and Emergency Response/Hazmat programs. Her experiences are rounded out with local government work in public works, water and wastewater operations at Huxley, Iowa and private consulting as a Senior Project Manager for Apex Environmental, Inc. Susan obtained a B.S. from Iowa State University in Animal Ecology with an emphasis on Environmental Science and Water Resources and a Master of Public Administration from Drake University. She is currently pursuing a Masters of Homeland Security at the Naval Postgraduate School's Center for Homeland Defense and Security.

ANGIE DOSCH

Angie Dosch graduated in 1997 from Aurora University with a B.S. in Biology with an emphasis in Environmental Science. She has been employed at Cosley Zoo for 16 years, 7 as a zookeeper and 9 as the Animal Collection Supervisor. As part of her job, Angie oversees the zoo's operant conditioning and environmental enrichment programs as well as the animal health program. She is also instrumental in the implementation of the Blanding's Turtle Recovery Project.

MARTY DWYER

Mr. Dwyer is the Exercise Training Officer for the Illinois Emergency Management Agency. Mr. Dwyer has been with the agency since September 5, 2006, where he manages the agency's disaster exercise program, which assists state agencies, counties and local communities in exercising their emergency operation plans. In addition to planning for and evaluating disaster exercises, he is the lead instructor for Homeland Security Exercise and Evaluation Program, which is currently in use for the State of Illinois exercises. Marty is a former member of the Illinois Air National Guard. He was the Non-Commissioned Officer in charge of training for the 183rd Security Forces Squadron. Marty was deployed to Operation Southern Watch in Saudi Arabia enforcing the "No Fly Zone" in Iraq. Prior to that Marty taught secondary education and is a graduate of St. Mary's Seminary and University in Baltimore Maryland.

CHERYL EIA

Dr. Cheryl Eia is the Coordinator of Emergency Preparedness and Response for the American Veterinary Medical Association. Working with the AVMA's Committee on Disaster and Emergency Issues, she is responsible for coordination of information and people to advance AVMA's all species/all hazards emergency preparedness and response, including oversight of the AVMA Veterinary Medical Assistance Team program. Previously, Dr. Eia worked as a Veterinary Specialist with the Center for Food Security and Public Health at Iowa State University where she worked with national organizations on animal emergency response issues and developed educational and training materials related to animal emergency management and response. She received her DVM from Iowa State University College of Veterinary Medicine and MPH from the University of Minnesota. Prior to attending veterinary school, Dr. Eia earned a JD from St. Louis University School of Law and practiced law for a number of years.

MARK ERNST

Dr. Mark Ernst completed undergraduate course work at the University of Illinois Urbana/Champaign (UIUC) and earned a D.V.M. from the UIUC College of Veterinary Medicine in 1984. From 1984 to 1989 he was in private mixed animal clinical practice in central Illinois. In July of 1989, Dr. Ernst accepted a position with the Illinois Department of Agriculture Bureau of Animal Health as a field veterinarian in northern and central Illinois. As a field veterinarian, he was responsible for all regulatory animal health activities in his assigned area. This included herd testing, performing epidemiologic investigations, formulating herd clean-up plans, and providing information to producers on diseases such as Bovine Brucellosis, Tuberculosis, Pseudorabies, and Equine Infectious Anemia. While employed as a field veterinarian, he was further trained as a Foreign Animal Disease Diagnostician, (FADD), at the Plum Island Animal Disease Center in New York. As a FADD, Dr. Ernst performed foreign animal disease investigations when suspicious cases were reported to the department. In 2003, he was temporarily assigned to the office as the Acting Assistant Bureau Chief for Animal Health. He held that position until January of 2005 when he was appointed State Veterinarian and Bureau Chief for the Bureau of Animal Health and Welfare.

GENE FIELD

Gene Field has worked in the field of emergency management and homeland security for the past thirty years. Mr. Field is a retiree from the Illinois Emergency Management Agency where he spent several years as a regional coordinator and then as the lead emergency planner for the State. During his time at IEMA, he responded to many major disasters, including the Great Mississippi River Flood of 1993. His principal areas of expertise include agroterrorism, food safety/security, emergency plan development, exercise design, and training for natural and man-made hazards and their consequences. He is also a field instructor with the Illinois Fire Service Institute. He is also a licensed radiographic and nuclear medicine technologist. Gene maintains a small farming operation with his family near Girard in Macoupin County IL. Mr. Field is a graduate of the University of Saint Francis in Joliet IL.

ROSE FOSTER

Rose Foster currently serves as the Poultry Health Program Coordinator for the Missouri Department of Agriculture and is the official contact representative for the National Poultry Improvement Plan in the state of Missouri. She co-chairs the regional Poultry Health Advisory Committee for the states of Missouri, Oklahoma and Arkansas. As part of her program responsibilities, Rose has developed and implemented state wide avian influenza surveillance programs for all poultry segments under USDA cooperative agreements beginning in 2005. Under these cooperative agreements 3 regional poultry disease and 2 communications table top exercises were developed and held. Rose co-chaired the Zoonotic Influenza Subcommittee of the Missouri Homeland Security Council Statewide Pandemic Preparedness committee. She was a team member of the Department of Health and Senior Services CDC funded Rapid Response training project for the State of Missouri assisting with 6 regional workshops. Rose authored the USDA approved Initial State Response and avian influenza containment Plan for the state of Missouri and coordinates ongoing Avian Response Unit training for staff to maintain preparedness for disease incidents. Rose Foster is a graduate of Missouri State University in Springfield, Missouri.

KEITH GEHRAND

Keith Gehrand, currently the Safety and Emergency Services Analyst for Heartland Community College, is a retired police captain with an extensive background in emergency planning and response. Mr. Gehrand teaches all levels of the Incident Command System for the Illinois Fire Service Institute including Command and General Staff Positions for Incident Management Teams. He serves as a consultant and trainer for the Campus Security Task Force and the School and Campus Security Training Program. In addition to a multitude of courses on the Incident Command System for the state of Illinois, Mr. Gehrand teaches Incident Response to Terrorist Bombings, All Hazard Planning for schools and institutions of higher education, National Response Framework and the National Incident Management System. He has been a private consultant to schools and colleges in Illinois and has worked with them to develop their plans and response capabilities. Mr. Gehrand has authored a number of articles on various law enforcement topics in both the United States and Canada, and is a frequent speaker for local, regional, state and national groups. He has been, and remains a member of the Domestic Preparedness Committee of the International Association of Campus Law Enforcement Administrators; and co-chaired a Department of Homeland Security funded initiative to develop nationwide model for Campus Emergency Operations Planning and a comprehensive website for terrorism related research.

KATIE GILLESPIE

Katie L. Gillespie graduated from the University of Wisconsin-Stevens with a B.S. in Natural Resource Management in 2005. After college she spent several years working at Lincoln Park Zoo in the Conservation & Science department before heading to graduate at Oregon State University. She earned her M.S. in 2010 and came back to Lincoln Park Zoo as the Conservation Programs Manager. In this role she works primarily with the Vice President of Animal Care and manages special projects. Katie is responsible for the zoo's Association of Zoos and Aquariums-accreditation process and managing the Research Committee. She is a member of the Zoo Best Practices Working Group and Lincoln Park Zoo's Safety Committee.

SCOTT GREGORY

Born and raised in England, Scott Gregory moved to Miami, Florida when he was 14. After graduating high school he was offered a scholarship to join the bowling team at Vincennes University, Indiana while majoring in business management. After a few injuries he was unable to pursue a bowling career and had to switch avenues which took him back to Florida to attend the Santa Fe Teaching Zoo, Zoo Animal Technology program in Gainesville, Florida. This is where he met his wife Carin (Car-in), who is also in the zoo field. From there he has worked as Curator for Wild Adventures in Valdosta, GA, Director for the Calusa Nature Center, and now as Director for the Great Bend Zoo in Central Kansas. Apart from the Zoo the facility boasts a state of the art Raptor Rehabilitation program, which sees around 100 injured birds per year. Scott now has 2 children, Noel who is 5 and Wade who is 2 and is privileged to be able to live on Cheyenne Bottoms, a 41,000 acre wetland, where he can watch migrations of birds throughout the year.

AMANDA HALL

Amanda Hall is the lead keeper at Scovill Zoo. She has been at Scovill for almost 11 years and works with a diverse collection of mammals and birds. She is on the professional development committee for AAZK, Inc. and is the studbook keeper for the 9-banded armadillo (Red program) and the Population Manager and studbook keeper for the Chilean Flamingo (Green SSP).

TARA HARRISON

Dr. Tara Harrison has been the Potter Park Zoo Veterinarian and Animal Curator since May 2003. Dr. Harrison also serves as an adjunct professor at Michigan State University's College of Veterinary Medicine. Dr. Harrison earned her Bachelors and Doctorate of Veterinary Medicine at Michigan State University. After graduating, Dr. Harrison continued to expand her knowledge through post graduate training which included a one-year internship at the Toledo Zoological Gardens, a Masters of Preventive Medicine from the University of California-Davis, and a postgraduate fellowship with Dr. Linda Munson. Following her masters she did an internship at the Wildlife Safari in Winston, Oregon. Dr. Harrison has fulfilled the credentials for and passed the qualifying and certifying examinations enabling her to become a Diplomate of the American College of Zoological Medicine. Dr. Harrison has written numerous scientific papers. Her current research focuses on feline calicivirus in exotic felids and diagnosis and treatment of neoplasia in exotic animals. Dr. Harrison is an active member of numerous professional organizations, including the Association of Zoos and Aquariums, American Veterinary Medical Association, Wildlife Disease Association Michigan Veterinary Medical Association, Mid-State Michigan Veterinary Medical Association, Michigan START team, and the Michigan Emergency Vet Corps.

JONI HARTMAN

Joni Hartman graduated from Iowa State University with a Bachelor of Science in Animal Science. After graduation, she worked as a keeper/assistant supervisor at Omaha's Henry Doorly Zoo for a year and a half. She then left the zoo to join the Peace Corps in Honduras where she specialized in Animal Production, working with a dairy goat project and starting 4-H clubs. After 2 years in the Peace Corps, Joni eventually relocated to Kansas City, MO where she joined the staff at the Kansas City Zoo. She started as a Zoo Trainee supervising the pony ride area and worked her way through the ranks until she reached her current position of Animal Curator. During her 22 years at Kansas City, she has worked with a wide variety of species and is currently the curator over the zoo's Australasia, Elephants/Sea lion, Ruwenzori (chimps, baboons, hippos, etc.) and Savannah (hoofstock and lions) teams. Joni is currently the head of the zoo's Safety Committee. She is also the AZA Program Coordinator and the Regional Studbook keeper for the Parma wallaby.

MARC HEINZMAN

Marc Heinzman is the Interim Zoo Director at Niabi Zoo in Coal Valley, IL. Marc has worked at Niabi Zoo since 2008, first as a zookeeper, then as the Assistant Zoo Director, and as the Interim Zoo Director since January 2012. Marc graduated from St. Ambrose University in Davenport, IA, in 2007 with a Bachelor of Science degree in Biology. Marc has previously worked as an Animal Keeper at the Kansas City Zoo in Kansas City, MO.

JACK HERRMANN

Dr. Jack Herrmann, DVM, MPH, received a BA in biology from Illinois Wesleyan University in 1974 and graduated from the University of Illinois, College of Veterinary Medicine in 1978. Upon graduation, he joined a private practice in Freeport, IL, focusing on dairy herd health, small animal medicine and wildlife rehabilitation. In 1989, he passed clinical specialty Board examinations and became a diplomate of the American College of Theriogenologists, specializing in cattle and canine reproduction. In 2003, he completed his Masters in Public Health from the University of Illinois at Chicago, School of Public Health. Through 2004, he continued in private practice and did contract work for the Stephenson County Health Department, primarily in community health assessment. From 2003-2004, he served as a Science and Technology Policy Fellow in the United States Senate in the offices of Sen. Richard Durbin (D-IL) and worked primarily on public health policy legislation. Dr. Herrmann joined the faculty of the College of Veterinary Medicine in 2004 to further develop and direct the joint degree DVM/MPH program and serves as the Director of that program and the Center for One Health Illinois. In 2010, Dr. Herrmann was promoted to Clinical Associate Professor at UIUC. Since 2003 he also has served as an adjunct professor at the College of Medicine, University of Illinois at Rockford.

MARISA HICKEY

Marisa Hickey received her Doctorate of Veterinary Medicine from the University of Illinois, College of Veterinary Medicine in Urbana, IL, her Master of Public Health from the Epidemiology and Biostatistics division at the University of Illinois, Chicago, and her Bachelors of Science in Zoology and Anthropology from the University of Wisconsin, Madison. Marisa is currently a post-doctoral fellow in the National Biosafety and Biocontainment Training Program at the National Institutes of Health (NIH) in Bethesda, MD. This two year fellowship focuses specifically to develop skills necessary to meet the needs of the biomedical, emerging infectious disease and civilian biodefense research communities. Marisa has experience in Animal Biosafety Level 3 practices and procedures that deal with high-consequence pathogens, as well as experience in engineering and administrative controls to manage biosecurity and biocontainment operations. She also has training in challenges unique to agricultural biocontainment. Prior to the fellowship at NIH, Marisa assisted the Veterinary Epidemiologist at the Lincoln Park Zoo, collaborating with the Zoo Best Practices Working Group to develop contingency plans for managed wildlife communities.

YVETTE JOHNSON-WALKER

Dr. Yvette Johnson-Walker received Bachelor's Degrees in Animal and Veterinary Sciences from the University of Illinois, Urbana-Champaign in 1987. She received her DVM in 1989 and a Master's in Veterinary Clinical Medicine in 1993 both also from the University of Illinois, Urbana-Champaign. In 1998, she completed a PhD in Analytical Epidemiology from Michigan State University in Lansing, Michigan. She is currently a Clinical Epidemiologist at the University of Illinois, College of Veterinary Medicine in the Center for One Health Illinois. Her research interests include food and water safety and security, and risk factors for interspecies transmission of zoonotic pathogens. Yvette has conducted several training and response exercises for public health professionals in association with the Illinois Department of Public Health, the Champaign-Urbana Public Health District and the Center for One Health Illinois. She serves as the primary cooperator for the USDA funded project entitled: Flu at the Zoo - A Tabletop Exercise of Avian Influenza Outbreak Response in Zoos and Aquariums, and is a member of the University of Illinois-Urbana Infectious Disease Working Group that is charged with development and coordination of the UIUC campus response to an infectious disease outbreak.

SUSAN KINGSTON

Susan Kingston was born and raised in Illinois and never seemed to be able to escape the pull of corn and soybean fields. After graduating vet school from the University of Illinois, she was in a small animal practice for several years. Feeling that there had to be something more to life, she went back to vet school and taught there for several more years while finishing a degree in toxicology. After that, Susan took a position as the head of Biological Safety for the university. While perusing the AVMA journal one day, she saw a position advertised for Animal Care. As a member of the IACUC, she knew all about the AC inspections, and was intrigued. Luckily for her, she made the cut and was hired on to AC. The rest is history! On the personal side, she is married to a mixed animal practitioner (even though she swore she would never marry a vet). While assisting her husband on a recent 4 AM C-section, the clients asked her why she decided to leave practice; the answer was simple, "I didn't want to get up at 4AM anymore!" Their happy home consists of 2 dogs (St. Bernard and Yorkie), 4 cats, and 2 horses. Susan loves to participate in 3 day eventing (crazy horse people), gardening and reading.

KEN KOELKEBECK

Dr. Ken W. Koelkebeck received a B.S. degree in general agriculture from the University of Missouri in 1976, an M.S. degree in Poultry Science in 1980 from the same institution, and a Ph.D. in Poultry Science in 1984 from Texas A&M University. In 1987, he joined the faculty of the Department of Animal Sciences at the University of Illinois as Poultry Extension Specialist. His appointment is currently 60% extension, 25% research, and 15% teaching. His research focuses on conducting practical-type studies on management, environmental management, and nutrition of laying hens and broilers.

DARLENE KONKLE

Dr. Darlene Konkle is the Veterinary Emergency Program Manager at the Wisconsin Department of Agriculture, Trade and Consumer Protection. She received her veterinary degree from the University of Wisconsin-Madison in 1993. After a year of mixed animal practice in Montana, she returned to the University of Wisconsin to complete a masters and residency in large animal internal medicine in 1997. Dr. Konkle worked as a clinical instructor in large animal medicine at the Western College of Veterinary Medicine in Saskatoon, Saskatchewan. She then joined an equine practice in Lexington, Kentucky, where she lived for four years. She was also in equine practice in Wisconsin before coming to the Wisconsin Department of Agriculture, Trade and Consumer Protection in 2005. As veterinary emergency program manager, Dr. Konkle coordinates emergency response planning for foreign and emerging diseases of livestock and poultry. She works with other agencies as well as industry groups to conduct exercises and provide education. She also works with state and local agencies to help develop plans for pets and livestock affected by disasters.

MICHAEL KOPP

Dr. Michael Kopp is currently serving as the Director of Avian and Poultry Health Division for the Indiana State Board of Animal Health (BOAH). He is a graduate of Purdue University where he received his BS in Agriculture in 1979 and his DVM in 1982. Upon graduation from Purdue University School of Veterinary Medicine, he completed an internship in Avian Medicine and Poultry Health at North Carolina State University in 1983. After his internship, Dr. Kopp came to work for BOAH where he has held the prior positions of Director of Special Diseases Division and Director of Other Species and Information Systems Division.

JIM KUNKLE

Jim Kunkle graduated from the University of Illinois with a Bachelor's degree in Animal Science. He managed a large swine production facility for 13 years. He has been employed with the Illinois Department of Agriculture for 19 years working with several state/federal livestock disease programs. He is currently the manager of Emergency Programs and the Animal Identification Administrator in the Division of Food Safety and Animal Protection.

JEANIE LIN

Before joining USDA-APHIS-AC as National Emergency Programs Manager, Dr. Jeanie Lin led a Veterinary Services department at an animal research facility. Prior to this, she was a Fellow for a joint program at the American Veterinary Medical Association and the American Association for the Advancement of Science. She was assigned to the US Department of Homeland Security and served as Executive Secretary on a White House subcommittee on animal disease threats. Dr. Lin worked previously in information technology, and landscape architecture. She is currently the Regional Emergency Programs Manager for Animal Care in APHIS' Eastern Region.

TYLER McALPIN

Dr. Tyler McAlpin graduated from the Mississippi State University College of Veterinary Medicine in 2005. Following graduation, he earned a Master's in Veterinary Medicine while performing internships in both private practice and with the USDA. After completing the internships, he took a position with USDA-FSIS Office of Food Defense and Emergency Management. During his career at FSIS, he worked on emergency response planning and exercise development. He joined APHIS, Veterinary Services in 2008 as the Veterinary Services Emergency Support Function 11 liaison. In this position, he represents Veterinary Services in emergency animal response planning to the Department of Agriculture and other Federal agencies.

TOM MEEHAN

Dr. Tom Meehan began his zoo career working at the St. Louis Zoo in 1970. As a keeper in the Children's Zoo, he became interested in a career working with zoo animals even before his entry into Veterinary School. He received a BS in Agriculture in 1975 and a DVM in 1977 from the University of Missouri. Following a residency in Zoological Medicine at the St. Louis Zoo he became the Director of Veterinary Services at the Lincoln Park Zoo. Dr. Meehan moved to the Chicago Zoological Society's Brookfield Zoo in 1993 where he is currently the VP of Veterinary Services. He is responsible for a program of preventive medicine and clinical care for the zoo's collection and management of the Veterinary Services staff. His research interests include emerging infectious diseases, diseases of gorillas and Vitamin D in primates. Dr. Meehan serves as the head of the veterinary advisory group to the Gorilla SSP. He is a past president of the American Association of Zoo Veterinarians and member of the AZA's Accreditation Commission. Dr. Meehan is an Adjunct Assistant Professor in Veterinary Clinical Medicine at the University Of Illinois College Of Veterinary Medicine.

GAY MILLER

Since 1994, Dr. Gay Miller has been a Professor in the Department of Pathobiology, at the College of Veterinary Medicine, University of Illinois. She is also an Adjunct Professor in the Department of Agricultural and Consumer Economics, University of Illinois, and in the Department of Veterinary Population Medicine, University of Minnesota. Prior to 1994, Dr. Miller was on the faculty in the Department of Veterinary Preventive Medicine, The Ohio State University. Dr. Miller brings a critical economic perspective to problem solving. Her primary research focus is on the economic implications of disease outbreaks in food-producing animals, and how different prevention and response strategies can influence both the epidemiological and economic outcomes. In 2006, Dr. Miller was the recipient of an American Association for the Advancement of Science (AAAS) Science and Technology Policy Fellowship, and spent a year in Riverdale, MD working at the United States Department of Agriculture (USDA), providing input into the organization's plans for handling foreign animal diseases, such as avian influenza, that could potentially be introduced into the nation's livestock. Dr. Miller has had many cooperative agreements with the USDA since that time focused on foreign animal disease preparedness and response.

SAN MYINT

San Myint graduated from the Institute of Animal Husbandry and Veterinary Science in Burma, in 1988. He practiced small animal medicine in Burma before joining the residency program at the Nippon Veterinary and Animal Science University in Tokyo, Japan. Later, he received a Master of Preventive Medicine degree from the University of California, Davis. He completed his residency training program in Applied Epidemiology and received his PhD from the University of Maryland, 2004. During his training at the UMD, he participated in the extension program for the state of Maryland. He was involved in the surveillance of health status of backyard flocks, outbreak investigations of infectious laryngotrachitis (ILT), and low path avian influenza (LPAI) with the Maryland Department of Agriculture. He has also collaborated with federal and state agencies including: FDA-Center for Veterinary Medicine, Joint Institute of Food Safety and Applied Nutrition for animal feed safety, and presented on Foot and Mouth disease and BSE with Maryland Agricultural Experimental Station. He later joined on as a post-doc research fellow at the University of Illinois, College of Veterinary Medicine. He has been involved in disease outbreak investigation training, participated to develop educational materials for the general public, given a presentation on Avian Flu to the local kennel club, and consulted in study design for graduate students, clinicians, and other researchers at the UIUC as an independent consultant.

YVONNE NADLER

Dr. Yvonne Nadler is the veterinary epidemiologist who leads the Zoo Animal Health Network (ZAHN) based in Lincoln Park Zoo, Chicago, Illinois. (www.zooanimalhealthnetwork.org) ZAHN is a multi-disciplinary team that works on projects and conducts research of interest to the Association of Zoos and Aquariums (AZA), United States Department of Agriculture and other partners, with an emphasis on issues affecting health and welfare of animals, staff and zoo patrons. Her projects have included conducting a pilot for avian influenza surveillance in zoos, developing novel influenza training materials, and coordinating the Zoo Best Practices Working Group for Disaster Preparedness and Contingency Planning. A self-described ‘generalist’, she received her DVM from University of Illinois College Of Veterinary Medicine in 1985, and her Masters of Public Health in Epidemiology and Biostatistics from University of Illinois Chicago in 2006. She has an interest in using the fundamentals of Risk Analysis for informed decision-making for animal management issues. She has served on AZA Animal Health Committee, is a founding member of the AZA Safety Committee and is the veterinary epidemiologist for AZA Old World Monkey Taxon Advisory Group.

PETER NICHOLS

Peter Nichols is a graduate of Kansas State University with a BS, DVM and Executive Business Management Certificate from University of Illinois, College of Veterinary Medicine. He has been the contract veterinarian at Peoria Zoo since 1998. In addition to his work at the zoo he is the Hospital Administrator for the AAHA accredited Germantown Hills Animal Hospital and the Washington Veterinary Medical Clinic.

MIKKI NIENHUESER

Mikki Nienhueser is a 2008 graduate of the University of Nebraska-Lincoln (B.S. Animal Science) and graduated with her master’s degree in Animal Science – Reproductive Physiology from Kansas State University in 2010. In her current position as the Animal Emergency Coordinator for the Nebraska Department of Agriculture, she works to further develop state and local response plans and preparedness capabilities for agricultural and animal health incidents, including providing exercise and training opportunities for local communities and the Nebraska Livestock Emergency Disease Response System (LEDRS) Veterinary Corps. Mikki also acts as a liaison for the department with various local, state, regional, and federal agencies and associations, including the Nebraska Emergency Management Agency and the Multi-State Partnership for Security in Agriculture.

SANDI NORMAN

Dr. Sandi Norman received her BS in Agriculture Science (1977) and DVM from the Purdue School of Veterinary Medicine in 1980. She practiced small animal and equine medicine in the Indianapolis area for 15 years before joining the Board of Animal Health in 1995 as Director of Companion Animal/Equine. Dr. Norman has been the Pet Expert on Channel 13-WTHR (NBC) for over 15 years at noon on Monday. She has held all of the executive offices in the Indiana Veterinary Medical Association, Public Relations/Animal Welfare chairmanship and participated in many pet related activities in her community. The IVMA named Dr. Norman Veterinarian of the Year in 2006. Dr. Norman has raised four Leader Dogs for the Blind and is a passionate advocate for service and therapy animals. She is a member of National Veterinary Response Team 5, responded to Hurricane Katrina, and works in animal disaster response for the state of Indiana. She is married to her very patient husband Fred and has three grown daughters and two grandsons.

MARILYN O’HARA RUIZ

Marilyn O’Hara Ruiz is a Clinical Associate Professor, in the Division of Epidemiology at the College of Veterinary Medicine, University of Illinois, Urbana. Marilyn's research identifies factors related to disease transmission in particular places and times, including conditions and characteristics of places that are associated with illness or health. Dr. Ruiz teaches courses on Spatial Epidemiology and Geographic Information Systems (GIS) for Health Applications, and presents workshops on GIS to public health personnel. Her goal is to make significant contributions to improving public health through better understanding of disease ecology and the effective use of spatial data and tools as applied to health.

STEVE OLSON

Steve Olson received his B.S. and M.S. in Wildlife and Natural Resources Management from Colorado State University. In 1985, Mr. Olson began working for the Texas A&M Sea Grant College Program as a research specialist working on marine mammal and protected marine area management issues. In 1987, Mr. Olson was selected as a John Knauss Sea Grant Fellow for the U.S. House of Representatives' Merchant Marine and Fisheries Committee. Since then, he has worked for the National Association of State Universities and Land-Grant Colleges as the Director of Federal Relations; the National Oceanic and Atmospheric Administration's Sanctuaries and Reserves Division as the Project Manager for the Hawaiian Islands Humpback Whale National Marine Sanctuary; and the National Coastal Resources Institute as Executive Director. He came to AZA as Director of Governmental Affairs in March 2000. In addition to his AZA Government Affairs responsibilities, Mr. Olson also sits on the steering committees of the State Wildlife Grants Coalition, the Multinational Species Conservation Fund Coalition, the Endangered Species Coalition, the Joint Ocean Commissions Initiative Coalition, International Air Transport Association Live Animals Advisory Board, the Global Tiger Initiative, the USDA Contingency Plan Task Force, the Zoo Animal Health Network, Wildlife Alliance and the Federal Museum Working Group.

JACQUELINE PEELER

Jacqueline Peeler is currently the Assistant Director/ General Curator at the Henson Robinson Zoo in Springfield Illinois. She has held this position since 1999. She studied General Biology at the University of New York at Binghamton many years ago. She has worked at several different zoos throughout the US doing a variety of different jobs including: security, gift shop worker, concessions, Zoo Keeper, Education, Vet Tech, Senior Keeper and Management. She volunteers in the community as both a Master Gardener and Master Naturalist through the extension office. Along with her volunteer work she is an avid hiker and when not working somewhere can be found on a trail with her dog.

CARYN POLL

Dr. Caryn Poll is the Section Chief for Medicine at the John G. Shedd Aquarium in Chicago. Her primary role is preventive, urgent and emergent care for the more than 1,500 species and 32500+ individual animals at Shedd Aquarium including invertebrates, teleost and elasmobranch fish, birds, and marine mammals. Dr. Poll has an avid interest and active role in risk assessment, response and preparedness as a founding member and advisor of the Shedd's Safety Committee and Enterprise Risk Management group. She is a member of the aquarium's Research Committee that reviews and advises in site and ex situ research projects. She enjoys overseeing the aquarium's robust Veterinary Preceptorship program and is also involved in the training of veterinary residents as part of the Illinois Zoological and Aquatic Animal Residency, a joint clinical training program between Shedd, Brookfield Zoo and University of IL where she is an adjunct faculty member. A native of New York, Dr. Poll received her Bachelor of Science degree in Biology at Cornell University where she also completed her DVM degree and postdoctoral internship in Small Animal Surgery and Medicine. She also completed a second postdoctoral internship in Aquatic Animal Medicine at the National Aquarium in Baltimore.

CHERYL PIROPATO

As a member of the Fort Wayne Children's Zoo's education and communications teams since 1985, Cheryl Piropato has broad experience connecting with and building audiences for zoo messages. A passion for conservation and education led Cheryl to the zoo field after obtaining a B.S. degree in biology from Baldwin-Wallace College in Berea, Ohio and serving in the United States Peace Corps in Liberia, West Africa. Cheryl developed all interpretive graphics, educational materials, and publicity for the zoo's new 22-acre, \$9.6 million African Journey exhibit, the award-winning Indonesian Rain Forest exhibit, and every exhibit with the Fort Wayne Children's Zoo, which was recently named one of the nation's "Top Ten Zoos for Kids" by Parents magazine. A new focus on social media, leveraging the power of compelling stories and images, and expanding the zoo's audience are among Cheryl's current projects.

JEFF PROUDFOOT

Dr. Jeff Proudfoot is the Vice President of Veterinary Services for the Indianapolis Zoo. Dr. Proudfoot started at the Indianapolis Zoo as a veterinary volunteer in 1992, was hired as the Associate Veterinarian in 1993 and served as the Senior Veterinarian from 1998 to July 2011. He is a member of the AVMA, AAZV and WDA. From 1976 – 1982 he was employed as a zookeeper at the Blank Park Zoo in Des Moines, Iowa. He graduated from Drake University in 1982 with a B.S. in biology, and earned his DVM degree from Iowa State University College of Veterinary Medicine in 1988. Dr. Proudfoot is originally from Des Moines, Iowa and was a private practitioner in the Chicago area for 5 ½ years prior to coming to Indianapolis.

JONATHAN REDING

Jonathan Reding, Zoo Curator, arrived at Miller Park Zoo in November 2011 when the position was created. He is responsible for animal care operations. Before the Miller Park Zoo, Jonathan worked at the Oklahoma City Zoo as the Supervisor of Cat Forest. He also worked at the Fort Worth Zoo. Jonathan earned a bachelor's degree in General Studies with a minor in Business Administration from the University of Central Oklahoma.

JENNIFER REID

Jennifer Reid works for the Illinois Department of Public Health, Office of Preparedness and Planning, Division of Disaster Planning and Readiness. Jennifer is new to the Public Health field, starting with IDPH in September 2011. Jennifer functions as the Training and Exercise Evaluation and Quality Improvement Coordinator. In her role, she provides evaluation, guidance and direction, which strives to improve the ability for public health and medical entities to demonstrate all capabilities. Prior to September 2011, Jennifer worked for the Illinois Department of Human Services at the Jacksonville Developmental Center (JDC) for 25 years. The JDC is a state operated residential center for adults with intellectual disabilities. Jennifer held various positions while at the JDC, most of which involved assurance of the JDC meeting state and federal standards in regards to the provision of services. Jennifer is a graduate of Southern Illinois University and holds a degree in Psychology.

LISA RODIN

Lisa Rodin grew up in California and received a B.S. in Biology from Whitworth University in Spokane, WA. In May 2012 she graduated from the Purdue University College of Veterinary Medicine. Lisa recently took a position as the Poultry Health Specialist with the Indiana State Poultry Association. She is eager to get involved in and learn more about the poultry industry. Her other interests include public health and laboratory animal medicine. Lisa enjoys international travel and has done veterinary work in Honduras and Haiti. She has also traveled to Belize, Costa Rica, Mexico and Scotland.

ADRIANA ROMAN-MUNIZ

Adriana Roman-Muniz is a Veterinary Medical Officer with USDA-APHIS-VS in Springfield, IL. In her current position she works with international imports and exports of animals and animal products, and animal disease surveillance and prevention. She is a trained Foreign Animal Disease Diagnostician (FADD). Prior to joining Veterinary Services, she spent four years as a Supervisory Public Health Veterinarian with the Food Safety and Inspection Service (FSIS). Adriana holds a DVM (2004) from Michigan State University.

ANNA RUMAN

Anna Ruman graduated from the University Of Illinois College Of Veterinary Medicine in 1988. She practiced equine medicine in Delaware before taking a position with USDA-Food Safety Inspection Service. During her career with FSIS she was located in Illinois, Indiana, Pennsylvania, and Missouri. She participated in the pilot project relating pathology to antibiotic residue testing while stationed at a large cull cow kill in Pennsylvania. She continued in the meat inspection field with the Illinois Department of Agriculture as their Assistant Bureau Chief for seven years. She joined APHIS, Veterinary Services in 2008 as the Area Emergency Coordinator for Illinois and Indiana and currently also covers Wisconsin and Minnesota. In this position, she assists state agencies in emergency animal response planning and is active at the University Of Illinois Vet School to educate veterinary students in emergency response and foreign animal disease. She received training at Plum Island, NY as a Foreign Animal Disease Diagnostician and was the Incident Commander for Illinois in the outbreak of Contagious Equine Metritis. She lives on a 120 acre farm in Mackinaw, Illinois with her husband Mike Tromp where they raise bison and standardbred racehorses.

KIM SCOTT

Kim Scott graduated from Southern Illinois University Carbondale with a BS and MS in Zoology. She has been in the Conservation/Zoo industry since 1994 when she started as a seasonal animal keeper at the Henson Robinson Zoo in Springfield IL. Since then Kim has primarily specialized in carnivore conservation and reintroduction having been Director of Animal Care at the Endangered Wolf Center in St. Louis Missouri working with large canids and White Oak Conservation Center in Yulee Florida working with large felids. Kim currently is the Curator of Animals at the Peoria Zoo now working with a broader range of species. She has been at the Zoo since 2010. The Peoria Zoo is home to over 245 animals representing 86 species in 8 taxa.

ROB SHUMAKER

Dr. Rob Shumaker is an evolutionary biologist who specializes in the study of behavior and cognition. He has worked in the AZA community for nearly 30 years. Born and raised in the Washington D. C. metropolitan area, he started his career at the Smithsonian National Zoo as a volunteer animal keeper. During his 20 year tenure, Dr. Shumaker worked as an animal keeper, curator, biologist, exhibit designer, and scientist. He spent several years at the Great Ape Trust in Des Moines, Iowa as the senior scientist supervising all research with orangutans. Since 2010, he has been the VP of Life Sciences at the Indianapolis Zoo. Dr. Shumaker has been a faculty member at George Mason University and Drake University, and an affiliate faculty member at Iowa State University. Currently, he is an external research associate at the Krasnow Institute, and an adjunct professor at Indiana University.

JOE SMITH

Joe Smith has worked as a veterinarian for the Fort Wayne Children's Zoo since 2003. In addition to providing clinical and surgical care for the collection of over 1,000 animals, Joe also directs the zoo's nutrition, commissary operations, research, conservation, enrichment, and training programs. Joe is a native of Baton Rouge, LA and a graduate of Louisiana State University's Veterinary School. Joe serves as the Orangutan SSP Veterinary Advisor, the Monotreme and Marsupial TAG Veterinary Advisor, and the Passerine (PACCT) TAG Veterinary Advisor.

JUSTIN SMITH

Dr. Justin Smith graduated from Kansas State University with a B.S. in Agriculture and a D.V.M. from Kansas State School of Veterinary Medicine. He spent the first fifteen years out of school practicing large animal medicine in mixed animal clinics. He was able to concentrate on beef cattle and equine production medicine. Then he spent 2 years in Kansas Extension and Research as a livestock production agent before moving to a large cattle ranch as an operational manager. Currently, he is employed with the Kansas Dept. of Agriculture, Animal Health Division as a state field veterinarian. His duties include responding to reportable disease cases as well as technical help in emergency management situations.

TIM SNYDER

Tim Snyder spent the first two years of his career in the professional animal care field at the San Antonio Zoo in the Bird Department, then two years learning captive waterfowl husbandry at Sylvan Heights Waterfowl in North Carolina. He worked at the Saint Louis Zoo in the Bird Department as the Zoological Manager for eight years. After that he worked for eight years at the Birmingham Zoo as Curator of Birds and Reptiles helping build their avian program. He has been at the Chicago Zoological Society/Brookfield Zoo for the past four years as the position of Curator of Birds and Reptiles. He has participated in projects to re-introduce white-naped and red-crowned cranes to Russia, transported viable eggs of several species for hatching both in country and internationally, co-authored papers on hand-rearing and captive husbandry of flamingos as well as the reproductive intricacies of tawny frogmouths, piping guans, and various species of waterfowl. He currently manages the AZA Species Survival Plans for the Blue-bellied Roller, Red-capped Cardinal, and Superb Starling. He served for three years as the Chair for the AZA Avian Scientific Advisory Group Steering Committee and currently serves as the committee's Treasurer. He also currently serves on the AZA Ethics Board.

MARIA SPRIGGS

Dr. Maria Spriggs has been the staff veterinarian at Mesker Park Zoo and Botanic Garden since 2009. She is a graduate of the Ohio State University and a member of the American Association of Zoo Veterinarians, Wildlife Disease Association, Association of Avian Veterinarians, and American Veterinary Medical Association. With the zoo's support, Maria provides veterinary services for research projects working with spectacled eiders and harlequin ducks in Alaska.

BRIAN STOCKINGER

Originally from the east coast, Dr. Brian Stockinger was born and raised in northern New Jersey. From a young age he had a strong desire to become a zoo veterinarian. The pursuit of this career really began to take flight after high school when he attended the University of Delaware for his undergraduate studies. During his time at Delaware he earned a Bachelor of Science in Animal Science and a minor in Wildlife Conservation. He then went on to Cornell University for veterinary school where he earned his DVM degree. While at Cornell he was heavily involved in zoological medicine elective courses and activities. After vet school he completed a one year rotating internship at the Regional Veterinary Referral Center in Springfield, VA which is a 24/7, year-round emergency and specialty small animal hospital. From there his pursuits led him to Omaha's Henry Doorly Zoo where he spent two years as their Veterinary Intern, specializing in zoological medicine. Toward the end of his second year at the Henry Doorly Zoo he began his first job search which led to his current position as Staff Veterinarian at the Potawatomi Zoo in South Bend, IN as of June 2011.

DARREL STYLES

Dr. Darrel K. Styles holds a BS in Chemistry from Appalachian, a DVM from North Carolina State University College of Veterinary Medicine, a MS in Medicinal Chemistry from the University of Texas, and a PhD in Veterinary Microbiology from Texas A&M. He joined USDA APHIS in 2006. Housed in Veterinary Services, he is currently a Senior Staff Veterinarian in the National Center for Animal Health Emergency Management – Emergency Management and Diagnostics, Preparedness and Incident Coordination Staff. His duties include technical oversight for infectious disease issues; disease countermeasure development including: vaccine acquisition and strategies for administration, 3-D (depopulation, disposal, and disinfection) technology development, continuity of business strategies, and permitted animal movement control.

JAY TETZLOFF

Jay Tetzloff, Zoo Superintendent, arrived at Miller Park Zoo in August 2009 and is responsible for overall Zoo operation. Jay has also extended his expertise to the international level by serving on several breeding program and professional development committees. He serves as the Snow Leopard Species Survival Plan (SSP) Coordinator as well as the SSP Coordinator and Studbook Keeper for the Tammar Wallaby. While he worked at the various AZA zoos, Jay obtained a BS in Biology from the University of Nebraska at Omaha, and a MS in Administrative Studies with a specialization in Organizational Leadership from the University of South Dakota.

ANNE TIEBER

Anne Tieber has been working at the Saint Louis Zoo for 22 years now, and in the bird department the last 20 of these years. She graduated with a Bachelor of Science degree in Wildlife Conservation and Management from Southwest Missouri State University (now called Missouri State University). She has always been passionate about birds and bats and enjoys every aspect of her job at the zoo. Her job requires her to manage 15 full time staff and a collection of about 800 individual birds of about 200 different species, from flamingos to penguins and everything in between. She was at the zoo when the West Nile virus came thru in 2002 and is thrilled to be a part of this workshop as she hopes it will be a very valuable tool for the future.

MANDY TURNBULL

Mandy Turnbull is currently the Head Zookeeper and Elephant Manager at Niabi Zoo in Coal Valley, IL. Mandy has worked at Niabi Zoo since 2002, beginning as an entry-level zookeeper and working her way up to her current position. Mandy has a Bachelor of Arts degree in Biology from Augustana College in Rock Island, IL, and graduated in 2002.

CHET UTTERBACK

Chet Utterback was born and raised on a corn and soybean farm in central Illinois. His grandmother raised chickens which he helped with since he was old enough to walk. At the age of 15, he started to work at a commercial egg laying operation. He worked there until Sept. 15, 1986 when he started at the U of I poultry farm. He graduated from Clinton Comm. High his junior year at the age of 16 and attended Richland Community College, graduating in 1982 with his Associates Degree in Agricultural Products, Processing, and Farm Management.

SUE WAHLGREN

Earning a B.S. degree in animal science, Sue Wahlgren began her career working with sheep, horses and cattle. Once she made the leap into the zoo world in 1984, there was no looking back. A 28-year veteran of Cosley Zoo, Sue spent her first 18 years at the zoo as the Assistant Zoo Director before accepting her current position as Director. Concurrent with her time at the zoo, Sue taught an animal care class for the College of Dupage for 19 years. While she considers each work day a learning experience, Sue also enjoys continuing her education through such opportunities as the AZA professional development courses. Proud of her small zoo and its accomplishments, Sue is passionate about the impactful experiences that the zoo provides its' visitors and the excellence in animal care that it demonstrates. Sue was instrumental in acquiring AZA accreditation for the first time in 2000 and embarking on a conservation partnership with the Forest Preserve District of Dupage County to aide the state endangered Blanding's Turtle. Maintaining her roots, Sue lives in the country where she continues her passion for horses by having five of her own as well as several dogs, cats and birds.

ROBERT WATERS

Dr. Robert J. Waters was born and raised in West Central Illinois near the Quincy area in the small town of Liberty. He graduated from Liberty High School in 1970. He worked at Gardner Denver in Quincy and began attending John Wood Community College, and later, Quincy College while working at Gardner Denver. He graduated from Quincy College in 1983 with degrees in Biology and Chemistry and went to veterinary school at the University of Illinois graduating in 1987. He worked in a mixed animal practice in Quincy for 2-1/2 years before taking a job with the Illinois Department of Agriculture Bureau of Animal Health as a field veterinarian. He was hired during the Pseudorabies eradication program in swine. Duties included developing herd plans and testing swine until a herd was free of the disease, testing cattle herds for Brucellosis, as well as sale barn and swine buying station inspections. He was in charge of the BRT program monitoring the State's dairy herds for Brucellosis via bulk tank milk samples until discontinued. He is currently administrating the NPIP program and Poultry tester training in Illinois. He attended training programs at the National Veterinary Services Laboratory in Ames, IA for Brucellosis and Tuberculosis, Foreign Animal Diseases in Madison, WI, the Foreign Animal Disease Diagnostician training at Plum Island, NY in 1999; and most recently, a Foreign Animal Disease Investigation Refresher course at the National Centers for Animal Health in Ames, IA.

DAVE WEBSTER

Dave Webster graduated from Western Illinois University with B.S. and M.S. degrees in biology. He worked in the Education Department of the Baltimore Zoo from 1984-87. He has been the director of Scovill Zoo for 3 years, having previously served as the assistant director for 20 years. He has a special interest in birds.

TIMOTHY WHITE

Timothy White is a Wildlife Disease Biologist with the USDA APHIS Wildlife Services' National Wildlife Disease Program. Tim was raised hunting, fishing, and trapping on a small dairy farm in Rural Wisconsin. Tim graduated from the University of Wisconsin Stevens point with a Bachelor of Science degree in Wildlife Management, and Biology. Tim has worked with several wildlife management and research organizations including the Society of Tympanuchus Cupido Pinnatus, US Fish and Wildlife Service, and USDA APHIS Wildlife Services in Maryland and Illinois. As a Wildlife Disease Biologist, Tim coordinates the National Wildlife Disease Program's wildlife disease surveillance programs in Illinois and serves as a liaison to non-governmental research organizations, Universities, and Federal and State wildlife management agencies.

MICHELLE WILLETTE

Michelle M. Willette, DVM, is staff veterinarian at The Raptor Center, College of Veterinary Medicine, University of Minnesota, St. Paul, MN, and an adjunct instructor at Argosy University, Eagan, MN. She has extensive experience in zoological medicine and is co-founder of the Association of Reptilian and Amphibian Veterinarians. Dr. Willette is currently enrolled in a Master of Public Health program at the University of Minnesota and is interested in the use of raptors and other wildlife as biosentinels of emerging infectious disease and environmental change. She has been instrumental in the development of the Clinical Wildlife Health Initiative, an initiative to facilitate the use of wildlife presented to professionally staffed wildlife rehabilitation centers to monitor the health of free-ranging wildlife.

FRANK WILSON

Frank Wilson is a 1982 graduate of Michigan State University, College of Veterinary Medicine. In 1999 he completed a Master's of Science Program from the University of Illinois, dealing with Food Safety, Economics, and Epidemiology. Dr. Wilson has been a High School Instructor, Soccer Coach, Private Veterinary Practitioner, Regulatory Veterinarian working with program diseases such as Pseudorabies, Tuberculosis, Brucellosis, Johne's, Chronic Wasting Disease in deer, Bovine Spongiform Encephalopathy in cattle, and he currently is the Area Veterinarian in Charge Indiana. As part of his duties with the United States Department of Agriculture he has helped oversee the euthanasia and disposal of large numbers of farm production animals. During an outbreak of Food and Mouth Disease Dr. Wilson was assigned to surveillance, valuation, euthanasia and disposal duties in Cardiff, Wales Great Britain. Other details where he has participated include Puerto Rico for surveillance of Classical Swine Fever (Hog Cholera), California for Tuberculosis and Exotic New Castle Disease surveillance and eradication, and Utah tracking Vesicular Stomatitis Virus spread. Finally from the animal health monitoring perspective Dr. Wilson has overseen animal import at the Atlanta, GA equine station and worked export of domestic livestock at Chicago O'Hare Airport as well as the Indianapolis Airport.

ERICA WILSON-LIPANOVICH

Erica Wilson Lipanovich graduated from Mississippi State University College of Veterinary Medicine in 2004 with her doctorate. Dr. Lipanovich worked in exotic animal private practice for two years before going on to the Denver Zoo to complete a two year residency program. She became the staff veterinarian at Dickerson Park in 2008 and is currently working towards her board certification in Zoological Medicine.

DAVID ZABER

David Zaber is currently the Emergency Management Coordinator for Wisconsin's Dept. of Agriculture, Trade, and Consumer Protection (DATCP) based in Madison, WI. His educational background includes degrees in Agriculture Science (B.S.) and Veterinary Biomedical Sciences (M.S.) from the University of Illinois – Urbana and in Resource Ecology & Management from the University of Michigan – Ann Arbor (Ph.D.). His master's work focused on neurobehavioral methods for assessing exposure to chemical weapons and other anti-cholinergic compounds in human and non-human primates. His doctoral research examined spatial and statistical relationships among indicators of ecological status in temperate freshwater streams in Michigan's Lower Peninsula. He served as Wildlife Toxicologist for the National Wildlife Federation's Great Lakes office and as Director of Science at Defenders of Wildlife in Washington, D.C. From 2001 to 2006, he was Database Administrator and Research Associate at the University of Wisconsin Arboretum – Madison. He also teaches occasional courses in conservation biology, aquatic ecology, and other related subjects at the college and university level and have served as expert witness for legal actions at the local, state, and federal levels. He is the father of two teenagers and a native of Illinois.

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