This Annex suggests General Considerations and Best Practices for Maintaining Facility and Building Safety, Human Evacuation Procedures and Continuity of Services.

ARE YOU READY?

➢ *Do first responders and emergency teams have well-marked maps of the entire facility?*

➢ *What is your evacuation plan and are evacuation routes easy to find and follow?*

➢ *Who will shut down the different systems if there is an evacuation?*

➢ *Is emergency equipment maintained in good working condition?*

Basic Steps When Writing and Implementing a Facility Operations Plan

1. Conduct Preparation and Development
2. Draft the Facility Operations Section of the Contingency Plan
3. Develop Personnel Training for Emergency Situations
4. Schedule Trainings and Subsequent Evaluations

Facility: the entire suite of habitats, buildings, pens, other structures, grounds, and the supplies and equipment to maintain and operate a managed wildlife care entity.

Building: an individual habitat, building or other structure within a facility.

System: an operational function such as power or water to support the facility.

A facility has the responsibility of safeguarding the health, safety and general welfare of its personnel and the public while on grounds. Its operations team has the enormous responsibility of overseeing buildings, habitats, grounds, human evacuations, sheltering-in-place, and continuity during an emergency. By maintaining a state-of-readiness and functionality for safe day-to-day procedures in every season, with backup plans for emergency situations, the facility will be well-prepared to mitigate any emergency.

If a catastrophic disaster impacts the facility, planning and preparedness efforts plus alternative evacuation routes, will help reduce losses. Written contingency plans based on a risk assessment are critically important for the safety of both humans and the managed wildlife.

1.   **Conduct Preparation and Development**

Before drafting a contingency plan, the Facility Contingency Planners (FCPs) and/or stakeholders need to identify the current plans for system operations and human evacuation routes and continuity of operations procedures. Checklists on the following pages offer a variety of best practice options to consider for inclusion or revision while evaluating and developing the plan.

☐   Assemble the planning team and collaborators. See page 3.

☐   Identify the potential risks. See _Risk Assessment Annex_.

☐   Identify and evaluate current plan(s), practices and protocols relating to the facility, its operations, human evacuations and sheltering-in-place.

2.   **Draft the Facility Operations Section of the Contingency Plan**

After identifying and evaluating the current standard operating procedures and backup plans (1) draft or edit the current plans based on the risk assessment to include the necessary elements for preparedness and safety measures, (2) monitor the progress of writing and (3) develop a system to put the plan in place. Best practice information for the following seven topics is provided beginning page 3.

☐   _Building Codes, Safety Regulations and Facility Standards_
☐   _Best Practice Considerations – General Facility Operations_
☐   _Best Practice Considerations – Equipment, Supplies and Machinery_
☐   _Best Practice Considerations – Systems Operations_
☐   _Best Practice Considerations – Grounds Maintenance_
☐   _Safety Procedures for Human Evacuation_
☐   _Monitor the Drafting and Implementation of the Plan_

3.   **Train Personnel for Responses to Facility Operation Emergencies and Disasters**

☐   Develop the initial training to prepare facility operations personnel how to respond to an emergency.

☐   Train and cross-train personnel on procedures and their specific roles to maintain continuity of operations and minimize disruption during an emergency or an evacuation situation, such as shutting down various systems at the facility.   See page 13 for possible training scenarios.

4.   **Schedule Exercises, Maintenance and Subsequent Evaluations**

☐   Develop a list of necessary maintenance for all equipment, vehicles and systems, and schedule regular maintenance.

☐   Develop schedules for testing equipment capability by starting and running sedentary emergency equipment to ensure operability.

☐   How did the plan work? Conduct post-event evaluations; modify the plan, as needed.

☐   Revisit the plan as structural modifications are made or new systems are installed.

The following considerations are good business practices that may be helpful for developing a plan to maintain facility operations. Contingency plans will vary depending on the size of the facility, number of personnel and other physical factors. Not every consideration is appropriate for every managed wildlife facility.

Stakeholders and Experts to Consult on Facility Operations Matters

Stakeholders can assist in updating or drafting a robust facility operations plan. Meet with experts to discuss the best practices for maintaining a state-of-readiness for the facility, evacuation routes, and shelter-in-place criteria in the event of an emergency. Also collaborate with stakeholders to learn any necessary local, state, or federal requirements.

- ☐ Who are the potential consultants?
    - ☐ Management and owners
    - ☐ City, local and state building inspectors/contractors
    - ☐ Local emergency management
    - ☐ State and local emergency response departments
    - ☐ Local utilities management
    - ☐ Potential first responders
    - ☐ USDA inspectors
    - ☐ Engineers
    - ☐ Architects
    - ☐ Private contractors
    - ☐ American Disabilities (ADA) representative
    - ☐ Arborists and landscapers
    - ☐ Local/State Historical Preservation Office
    - ☐ State/local municipalities
    - ☐ Local fire departments
    - ☐ Wildlife Disaster Planning Professionals
    - ☐ Professional Associations (AZA, AAZV, NWRA, ASA, etc.)

Building Codes, Safety Regulations and Facility Safety Standards

Certain requirements in building codes and safety regulation standards may be relevant for the facility. It is paramount that local experts are consulted, as additional standards (wind, fire, roof strength rating and seismic resistance requirements) may exist. Identifying priority structures and mapping the entire facility will greatly assist personnel and first responders in the event of an emergency or disaster.

- ☐ Are all buildings and structures in condition to pass local, state, and/or federal building and safety codes, if applicable? Some considerations may include:
    - ☐ Are structures approved for fire, wind, roofing strength codes?
    - ☐ Do structures have fire retardants, if applicable?
    - ☐ Do structures have smoke detectors installed? Some jurisdictions may require sprinklers also.
    - ☐ Is the lighting sufficient in the buildings and throughout the facility so that maintenance can be performed safely and animals observed?
    - ☐ Is there adequate backup/emergency lighting particularly in areas where the public may need light to effectively evacuate during an emergency?

☐ Is the facility equipped to follow Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities and the Uniform Federal Accessibility Standards?

☐ Are safety and health standards followed as set and enforced by the U.S. Department of Labor Occupational Safety and Health Act of 1970 (OSHA)?

☐ Are first responders familiar with the facility, the emergency plans and any specific hazards such as storage areas for weapons and ammunition, chemicals, fuel and other hazards?

☐ Is each building equipped with safety graphics to assist the public and personnel in locating the following? In multiple languages or icons?

☐ Exits	☐ Laboratory (O_2 supply, natural gas)
☐ Fire alarms or other alarms	☐ Eyewash stations
☐ First aid equipment/defibrillators	☐ Other
☐ Danger zones or restricted zones	

☐ Are any buildings or animal containments assigned a priority status? Are first responders aware of this designation?

☐ Habitats with highly-valued or dangerous species	☐ IT server room(s)
☐ Animal hospital or nursery	☐ Hard copy record storage location(s)
☐ Staff housing	☐ Other
☐ Historic buildings	

☐ Do facility maps and documents include all relevant elements? (Visitor maps are discussed below.)

☐ Facility entrances and exits
☐ Perimeter and containment fencing
☐ Parking areas
☐ Entrances that will, or will not, accommodate emergency equipment
☐ Dangerous locations for emergency equipment such as over tunnels, if applicable
☐ Location of building(s) (include name/number of building and street name)
☐ Locations of priority species
☐ Locations of dangerous species with number of species present
☐ Locations of severe weather shelters and fallout shelters, if applicable
☐ Sheltering-in-place location(s) for Emergency Response Team
☐ Location of holding areas for personnel during a fire drill or emergency
☐ Entrances and emergency exits for all structures
☐ Rooftop access points
☐ Floor plans for all structures
☐ Stairways, elevators and escalators
☐ Weapons and ammunition storage area(s)
☐ Hazardous materials storage (including cleaning supplies and chemicals)
☐ X-ray equipment
☐ Radioactive isotopes used for research or pharmaceutical purposes
☐ Surveillance equipment and security cameras
☐ Alarms and public address system speakers throughout the facility

- ☐ Fire extinguishers and fire suppression systems such as sprinklers
- ☐ Water main valves and water lines and building shutoffs
- ☐ Storm drains, sewer lines and access points
- ☐ Gas main valves and gas lines and building shutoffs
- ☐ Electrical cutoffs and substations
- ☐ Fuel tanks, both above and below ground
- ☐ Communications equipment and lines
- ☐ Water hydrants
- ☐ Location of water storage tanks, if applicable
- ☐ U.S. Geological Survey (USGS) topographical information for entire facility and surrounding watershed
- ☐ Other critical features that could be important to the facility

☐ Are facility maps, building plans, and other useful documents readily accessible to facility operations personnel, local jurisdiction(s) and first responders? Is a second set kept off-site as backup?

☐ Are the facility maps and documents reviewed regularly for changes and updated?

☐ Are all rooftops marked by name or building number to match the facility maps?

☐ For visitor maps, do building and habitat signage correspond with the map? Are exits clearly marked? Are exit routes clearly illustrated?

In the event of an emergency or disaster, buildings within the facility may need to become shelters for visitors, personnel or Emergency Response (ERT) Teams for a short duration or during a prolonged catastrophic event. Listed below are some best practice considerations for selecting buildings as potential temporary shelters.

☐ Are locations identified where humans can shelter-in-place? (Local emergency management professionals and first responders can help determine good sheltering options.)
  - ☐ Are alternative basic accommodations available or easily installed in the emergency shelter (water, toilet, etc.)?
  - ☐ Are any buildings equipped with re-circulating HVAC systems to protect from smoke, volcanic ash, chlorine gas, etc.?

☐ Is any location(s) designated and labeled as a severe weather shelter(s) based on the type of emergency/disaster?
  - ☐ For flood events consider the following criteria:
    - ☐ Is any building located within a floodplain or watershed?
    - ☐ Are the highest elevation structures designated as flood shelters?
    - ☐ To what depth of water can each building function and/or animal habitats remain safe?
    - ☐ Is the height of the lowest electrical outlet or system component above the local water table/sea level?
    - ☐ Is the minimum height of heating, ventilation, and air conditioning (HVAC) system above water table/sea level of each structure?
    - ☐ Is the minimum height of aquatic filtration/circulation systems above the water table/sea level of each structure?

- ☐ Are flood shelters also structurally sufficient for wind emergencies and/or air/environmental contamination?
- ☐ For wind events consider the following criteria:
  - ☐ Are structures designed to withstand high wind speeds typical of the region according to the American Society of Civil Engineers Standard ASCE/SEI 7?
  - ☐ Are light fixtures and other items secured so they could not fall or shake loose?
  - ☐ Are heavy or breakable objects located on lower shelves?
  - ☐ Are any tall cabinets adequately secured?
  - ☐ Is perforated strapping tape or strap iron used to secure any plumbing in the building?
- ☐ For snow events consider the following criteria, if applicable.
  - ☐ Is the snow load rating identified for each roof?
- ☐ For fire events consider the following criteria: (a fire department inspection will assist a facility in determining which buildings may be the safest in a fire/ wildfire situation.)
  - ☐ Fire-resistant construction details including:
    - ☐ Non-combustible (Class-A) ignition-resistant roof such as tile, slate, cement, asphalt, or metal
    - ☐ Non-combustible exterior walls, gutters and downspouts
    - ☐ Boxed-in or heavy timber eaves
  - ☐ Dual pane (one being tempered) glass windows
  - ☐ Screens on all exterior vents or ember-resistant vents
  - ☐ Chimneys with spark arrestors and screens
  - ☐ Well maintained, fire district approved landscape and vegetation management plan
  - ☐ Adequate water supply and water flow for firefighting efforts
  - ☐ Vegetation modification zones surrounding the facility
  - ☐ Life-safety fire sprinklers

- ☐ Is any location(s) designated and labeled as a fallout shelter(s) that provide maximum protection from ionizing radiation? Examples include basements, lowest level of a multi-story building and concrete structures. Consider the following criteria.
  - ☐ Does the fallout shelter have appropriate nuclear radiation mitigation safety equipment (ex: dust proof hooded overalls such as Tyvek, N-95 dust masks, shoe covers, gloves, etc.)?
  - ☐ Can air control systems be closed to outside air for extended periods?
  - ☐ Which structures are capable of air recirculation in an air quality emergency/disaster?
  - ☐ Are high-efficiency particulate air (HEPA) filters used that will filter out most biological agents, especially particulate nuclear fallout?

- ☐ Are supplies stored for potential shelter-in-place events? Where are they located? Some suggested supplies may be:
  - ☐ Cots, blankets and clothing
  - ☐ Showers and chemical toilets
  - ☐ Sufficient water reserve for human consumption (Calculate the daily water intake for at least three days, and preferably seven[1])
  - ☐ Non-perishable food, including ready-to-eat meals
  - ☐ Cooking accessories
  - ☐ First aid equipment
  - ☐ Disposable dishes and cutlery

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[1] FEMA offers recommendations at <http://www.fema.gov/plan/prepare/water.shtm>.

- ☐ Sufficient supply of personal protective equipment (PPE)
- ☐ Medicines–generic and personal medications for the ERT
- ☐ Generators–how much fuel for how many days is normally held in supply?

☐ Are perishable products/supplies safely stored to avoid spoilage in an emergency?
- ☐ Do frozen/cold storage items have a dedicated generator system(s)?
- ☐ Is extruded dry food located on the highest ground to avoid moisture?

☐ Have agreements been made for partnering with the city or community as a possible place of shelter? See _Administration Annex_ and the _MOU/MAA Annex_.

☐ Has the facility offered reciprocal support for other managed wildlife operations? Does it maintain preparations? See _Administration Annex_ and the _MOU/MAA Annex_.

The following are best practices or regulations for the design of an animal habitat or exhibit and its adjacent surroundings. Some elements may influence how an emergency situation is approached so should be considered when developing the contingency plan (e.g., location of power lines, nearby public streets, nearby catchments).

☐ Are double containment habitats the standard for holding injurious species?[2]

☐ Are appropriate barriers established between dangerous animals and visitors such as moats, fencing, glass, and guardrails to block all contact?

☐ Are habitats with dangerous animals equipped with safety graphics or warnings?

☐ Are the depths of any moats sufficient for containment purposes?

☐ Are the depths of any moats sufficient to confine animals should the water table/tide surge exceed the minimum and possibly allow escape?

☐ Are animal containments or moats free from overhead power lines?

☐ Is there any drainage for outdoor/open air habitats? Some areas require sanitary sewer drainage rather than storm sewer to insure proper disposal of bacteria. USDA and local jurisdictions may have specific regulations regarding standing water.

☐ Are aquatic habitats adapted to meet the minimum animal environmental survival parameters? This will vary by species.
- ☐ Do aquatic filtration systems utilize open circulation systems with ocean water?
- ☐ Can aquatic filtration systems be switched to closed filtration systems?
- ☐ What alternative or augmented closed circuit filtration capabilities exist for each aquatic system?

☐ Are aquatic containments free from seepage?

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[2] U.S. Fish and Wildlife Service requires that facilities holding "injurious wildlife," maintain double escape-proof containment (i.e., two separate containment systems to ensure against escape).

Best Practice Considerations – General Facility Operations

A facility that manages wildlife may be a small exhibitor with one or two buildings, or a huge park with infrastructures the size of small cities. Best practices that promote safety and preparedness are applicable to any size facility. These considerations include:

☐ Are routine operations procedures for structures and containments written, updated regularly and stored for easy accessibility by personnel and first responders?

☐ Is a written chain-of-command with job positions/descriptions for day-to-day operations distributed to relevant personnel?

☐ Are locking mechanisms for every structure and containment kept in good working order?

☐ Are backup keys to buildings, structures, locks, vehicles and enclosures clearly marked and stored in a single location for easy access? See *Administration Annex.*

☐ Are keys and passcodes to all structures and containments assigned and recorded?

☐ Are doors to mechanical rooms kept locked?

☐ Is access to building rooftops blocked from the public?

☐ Are temporary structures, such as fuel tanks and awnings, checked regularly and anchored appropriately?

☐ Are in-ground liquid fuel storage containers located in areas not prone to flooding, or are they capable of being sealed? Check local regulations for fuel storage standards.

☐ Is indoor air quality checked for safe standards periodically or electronically monitored?

☐ Is mechanical equipment, such as an outdoor air intake vent, protected from public accessibility, and closeable to prevent introduction of airborne sources or hazards such as chemical, biological, or radiological concerns?

☐ Are air ducts/damper seals/return air grills in the buildings/habitats inspected, secured and cleaned or changed regularly?

Best Practice Considerations – Equipment, Supplies and Machinery

☐ Are equipment and machinery maintained in good working order and serviced regularly (e.g., grounds-keeping equipment, tractors, forklifts, vehicles)?

☐ Are accurate VIN numbers kept for all vehicles owned by the facility? See *Administration* and *Business Recovery and Reimbursement Annexes.*

☐ Are spare parts for equipment and machinery readily available?

☐ If a facility has transport-type vehicles, are they equipped with evacuation route maps? See *Animal Transportation / Evacuation Annex.*

☐ Is each transport-type vehicle kept with adequate fuel to reach a pre-determined evacuation site? See *Animal Transportation / Evacuation Annex*.

☐ Is animal-capture/restraint equipment maintained in good working order and readily accessible (e.g., catch poles, slings, nets, tongs, grabbers, carrying cases, harnesses)? See *Animal Incident Annex.*

☐ Are supplies and emergency equipment maintained on premises, in good working order and serviced regularly?

- ☐ Flashlights and batteries
- ☐ Chlorine bleach or iodine or microfilters for purifying water
- ☐ Generators
- ☐ Fire extinguishers
- ☐ Chainsaws
- ☐ Chains
- ☐ Tools
- ☐ Hoses
- ☐ Ropes
- ☐ Winches/pulleys
- ☐ Propane heaters
- ☐ Battery-operated radios
- ☐ Other

☐ Is adequate fuel or power for emergency equipment stored in a safe location?

☐ Are oxygen tanks and chemicals marked accordingly, secured and isolated for safety, if applicable?

☐ Are Material Safety Data Sheets (MSDS) sheets used and readily available?

☐ Are toxic, flammable and reactive supplies stored in approved safety containers with instructions for safe handling?

- ☐ Cleaning agents
- ☐ Laboratory reagents
- ☐ Paints and primers
- ☐ Batteries
- ☐ Acids
- ☐ Gasoline and diesel fuel
- ☐ Kerosene
- ☐ Fertilizers
- ☐ Insecticides and fungicides
- ☐ Poisons
- ☐ Drugs
- ☐ Anesthetics
- ☐ Potentially inter-reactive compounds stored in common locations (e.g., chlorine and ammonia; fertilizer and diesel; strong acids and bases)
- ☐ Other

Best Practice Considerations – Systems Operations

☐ Are the various facility systems, including life-support, kept in good working condition and serviced regularly?

- ☐ Heating
- ☐ Cooling
- ☐ Electrical
- ☐ Boilers
- ☐ Filtration/pumping
- ☐ Plumbing (intake and discharge)
- ☐ Storm water
- ☐ Lighting
- ☐ Aeration
- ☐ Other

☐ Are the life-support systems equipped with warning mechanisms, automatic shutoffs, flooding or overflow detections and emergency backup systems?

☐ Is information posted about when and how to shut off utilities and operational systems?

☐ Are specific personnel assigned to shut down critical systems during an evacuation or other emergency?

☐ Are high-priority systems identified to bring back on-line first if multiple systems are compromised simultaneously?

☐ Do building-ventilation fans have alarm controls to notify personnel if a system fails?

☐ Are the water systems kept independent from electrical systems?

☐ Are the electrical services in all wet environments, aquatic exhibits and associated service areas equipped with ground fault circuit interrupters (GFI)? Are they located above flood prone areas?

☐ Are closed circuit surveillance systems for animal monitoring or facility security supervised? Is there a backup if the system fails?

☐ Are protection devices and systems in appropriate locations in each building? Are they maintained in good working order and routinely inspected?
- ☐ Alarms
- ☐ Fire sprinklers
- ☐ Security to discourage criminal activity
- ☐ 24-hour surveillance
- ☐ Lighting
- ☐ Electric 'hot' wire
- ☐ Panic and other safety alerts
- ☐ Other

☐ Are intercom and public address systems kept in good working order? Is there a backup for this system? See _Communications Annex._

☐ Are all support systems blocked from public access?

☐ Is trash/disposable material appropriately secured and handled under local codes until hauled away to prevent public access or potential disease transmission incidents?
- ☐ Dead animals and carcasses
- ☐ Construction debris
- ☐ Sharps or medical hazardous waste
- ☐ Other

☐ Is there a plan for waste disposal in lieu of public/private removal services?

**Best Practice Considerations – Grounds Maintenance**

☐ Are roads leading to and through the facility clearly marked?

☐ Are the roads wide enough to allow emergency vehicles?

☐ Are fences, barriers and containment walls inspected regularly for condition, safety issues or debris and kept in excellent condition?

☐ Are all walkways kept in safe condition?

☐ Is the lighting in public areas sufficient for safe movement?

☐ Are there any rocks, hills or trees within a containment that might serve as jumping points for escape?

☐ Is outdoor landscape maintained for overgrowth, disease, and dead or dying limbs, as appropriate?

☐ Are trees removed if they are of sufficient size to breach a moat or both the primary and secondary barriers, or collapse a building?

☐ Are tree branches clear from any power lines?

☐ Are building walls kept free of vines?

☐ Are rain gutters kept clean and free of leaves, dead limbs, needles, cones and debris?

☐ Are plants and trees classified as fire-resistant and non-toxic to humans and animals?[3]

☐ Is grass maintained at a safe height?

☐ Are controlled fires conducted periodically, if applicable to remove unwanted vegetation?

☐ Are gas grills and propane tanks located a safe distance from any structure?

☐ Is service accessibility into habitats adequate for large equipment, if necessary for repairs or replacement of overgrown trees or bushes?

☐ Are grounds monitored for rodent/pest problems and control programs implemented?

☐ Are control plans established should unwanted wild/feral/escaped animals enter the facility (e.g., if floods aggregate and condense animals to the highest ground inside the facility or surrounding wildfires drive wildlife into the safety of the facility)?

Safety Procedures for Human Evacuation

☐ Is the decision to call for an evacuation or closure assigned to senior management? See *Administration Annex.*

☐ Is there collaboration with local authorities to determine the best exit routes from buildings and the facility in an emergency?

☐ Are human evacuation routes from buildings and the facility clearly marked? Animal evacuation is discussed in the *Animal Transportation and Evacuation Annex.*

☐ Are exit doors equipped with push bars for fast and easy escape?

☐ Are evacuation check points for all personnel assigned for each building and area?

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[3] U.S. Forest Service offers the Treesearch website that provides research and development publications such as fire-resistant trees by area. http://www.treesearch.fs.fed.us/

☐ Is a procedure in place to account for all personnel? Is a third party/outside location for tertiary communications established? See *Communications Annex.*

☐ Is a warning system in place that signifies to personnel and visitors whether to exit buildings, the facility or to shelter-in-place?[4]

☐ Is a warning system in place that signifies to those who are sight or hearing impaired to exit buildings?

☐ Is there a specific plan for people with disabilities who may need assistance exiting buildings, and the facility, in an emergency?

Monitor the Drafting and Implementation of the Plan

FCPs should monitor the progress of writing the facility operations portion of the Contingency Plan and developing a system for application of the plan.

☐ Assign specific tasks, such as collaborating with federal, state, and local jurisdictions.

☐ Procure or upgrade any equipment, signage, supplies or machinery, as needed.

☐ Determine alternative vendors, services and managed wildlife facilities, which could be crucial during an emergency event, and if MOUs or MAAs would be useful.

☐ Discuss with administration the need for MOUs and MAAs; assist with and monitor the implementation.

☐ For effective follow up of drafting the plan, establish a timetable chart or checklist to complete the various elements of the plan, and the responsible person(s) or group.

☐ Make the plan available to all personnel, as appropriate.

☐ Determine who will lead regular safety audits to assess vulnerabilities of the facility, and a monitoring process to mitigate a potential liability.

Training Considerations for Facility Operations

Training and practice drills increase the likelihood of successful and safe outcomes and will reduce potential risks. Training is an ongoing process. Train personnel on facility operation procedures and also their specific roles and tasks to maintain continuity of operations and minimize disruption. Cross-training personnel to perform multiple functions will ensure that enough people are trained. The following considerations relate specifically to facility operations. See the *Training Annex* for general training guidance.

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[4] Sheltering in-place is used when evacuating the public would cause greater risk than staying where they are, or when an evacuation cannot be performed. For more information see:
http://www.fema.gov/pdf/areyouready/areyouready_full.pdf.

Best practice training considerations for **facility operations personnel**.

☐ Train and cross-train appropriate personnel to operate vehicles and equipment safely.
  ☐ Maintain up-to-date copies of all appropriate licenses and insurance coverage. See *Administration Annex* and *Business Recovery and Reimbursement Annex*.

☐ Train and cross-train appropriate personnel to perform all shut-down procedures during an emergency or evacuation.

☐ Train and cross-train appropriate personnel on all aspects of maintenance and emergency operations for any life support systems.

☐ Train and cross-train appropriate personnel to shift to and operate contingency systems (e.g., generators for freezers and refrigeration including necropsy, sump pumps, chemical toilets).

☐ Train and cross-train appropriate personnel to recognize when additional assistance is required from first responders, municipalities or other professionals. Some instances to consider:
  ☐ If there is a structural fire or multiple fires on grounds
  ☐ If communication or power lines go down
  ☐ If aquatic life supports becomes contaminated
  ☐ If gas or water mains rupture
  ☐ If an explosion occurs within the facility
  ☐ If a main potable water supply is contaminated
  ☐ If a building or habitat becomes structurally compromised
  ☐ If a building or habitat collapses
  ☐ If personnel or visitors become trapped in one or more locations
  ☐ If one or more enclosures are compromised
  ☐ If water or chemical contamination occurs
  ☐ If hazardous byproducts or combustibles are released

☐ Train appropriate personnel for grounds maintenance that will mitigate emergency/disaster situations (e.g., recognition of potentially flammable vegetation, conducting managed burns, trimming vegetation away from structures).

☐ Provide training, and a written policy, for those persons responsible for handling toxic/hazardous materials, and those materials that would be used only in emergency/disaster situations.

☐ Consider special education and training opportunities for key emergency and safety response personnel.

☐ Identify available training opportunities, such as community college courses in building and grounds maintenance and safety. See *Training Annex* for additional programs.

☐ Provide regular safety training as set and enforced by the U.S. Department of Labor Occupational Safety and Health Act of 1970 (OSHA) for all personnel. See *Training Annex*.

☐   Conduct additional training as new equipment, materials or processes are introduced.

Best practice training considerations for **ERT members**.

☐   Train the appropriate ERT members how to *sustain* emergency operations for buildings, equipment, grounds maintenance or systems in the event of a disaster requiring prolonged facility closure or evacuation.

Sample Table-top Scenarios

Responses to emergency scenarios during a table-top exercise may vary depending upon the location of the 'incident,' time of day or night and the animals that might be involved. Develop and personalize multiple scenarios for discussions that reflect the facility and its environment, based on the Facility Risk Assessment. These could then be modified for drills and exercises. The following are sample facility operations scenarios. See *Disaster Training Annex* for more information.

❖   Damage: A group of school children from a nearby town is expected in the afternoon for an educational tour and lunch. A severe wind and thunderstorm passed over the facility during the night. Limbs and debris are strewn everywhere, seating in an outdoor area is overturned and a tree has fallen into a dangerous animal habitat. Several windows are knocked out of the main building, power is out and phones will not function.
   - ☐   What are the priorities and responsibilities of facility operations including grounds personnel?
   - ☐   What additional priorities and responsibilities come into play for such areas as management, security detail, information officer, animal care personnel, IT personnel, office personnel and volunteers?

❖   Biological agents: An explosion occurs at a chemical plant two miles from the facility during the day. Local news media are reporting that an undetermined number of the chemical company's employees have been injured or killed, and officials are trying to determine to what extent deadly toxins have been released into the air. No one is sure what caused the blast.
   - •   Visitors that remain begin complaining of breathing difficulties. Meanwhile, news outlets are encouraging people all over the city to 'shelter-in-place' as a precaution. The facility currently is downwind of the explosion. The facility needs to decide what to tell personnel and visitors to do.
   - •   It is determined that people should move indoors to avoid the airborne agent.   Visitors need to take shelter in the buildings.
      - ☐   What are the priorities and responsibilities at each segment for: facility operations including grounds personnel?
      - ☐   What additional priorities and responsibilities come into play for such areas as management, security detail, information officer, animal care personnel, office personnel and volunteers?

❖   Approaching Flood: The facility is located within walking distance of a major river. Due to exceptionally heavy winter snows and a quick warm up in the spring, the river is rising well above flood stage and is expected to impact the facility in three to four days. Army Corps of Engineers expects that the facility may flood with 2-feet or more of river water. They also

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expect that the water will remain above flood stage for two weeks. For details on using this example as an exercise, see the *Disaster Training Annex.*

- The decision is made to prepare the facility for flooding. What are the first steps to be taken? Which animals could be relocated within the facility and to other facilities off site? What other preparations are necessary?
  - ☐ What are the priorities and responsibilities at each segment for: facility operations including grounds personnel?
  - ☐ What additional priorities and responsibilities come into play for such areas as management, security detail, information officer, animal care personnel, office personnel and volunteers?

Schedule Training, Maintenance and Subsequent Evaluations for the Plan

☐ After the plan is written, develop training materials for all facility operations personnel.

☐ Adapt the new-hire orientation program to include the elements of the Facility Operations Plan, including human evacuation procedures.

☐ Inventory all equipment, vehicles and systems, and schedule regular preventative maintenance. Equipment maintenance software can streamline this task.

☐ Determine the frequency and schedule a long-term training program. Include table-top drills and single exercises on various elements of the emergency procedures and full-scale exercises.

☐ Schedule regular safety audits to assess any vulnerability of the facility, and a monitoring process to mitigate the vulnerabilities.

☐ After training exercises, or an actual incident, meet with personnel to evaluate the contingency plan's effectiveness; modify the Facility Operations Plan and training, as necessary.

References

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