UCDAVIS

Department of Wildlife, Fish, and Conservation Biology

INJURY AND ILLNESS PREVENTION PROGRAM

UC DAVIS

Wildlife, Fish, and Conservation Biology

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X. APPENDICES

I. Authorities and Responsible Parties

The authority and responsibility for the implementation and maintenance of the Injury and Illness Prevention Program (IIPP) is in accordance with University Policy (UCD Policy & Procedure Manual Section 290-15: Safety Management Program) and California Code of Regulations (8 CCR, Section 3203) and is held by the following individuals:

Chief Administrative Officer: Christine Harlan

Professor and Department Chair: Nann A. Fangue

WFCB Safety Coordinator: Dennis Cocherell

Authority: Authority and responsibility for ensuring implementation of this IIPP

Signature: _____ **Date:** 7/20/2017

Signature: _____ **Date:** 7-21-17

Signature: _____ **Date:** 7-20-2017

Additionally, all Principal Investigators and supervisors are responsible for the implementation and enforcement of this IIPP in their areas of responsibility in accordance with University Policy (UCD Policy & Procedure Manual Section 290-15: Safety Management Program).

III. System for Assuring Employee Compliance with Safe Work Practices

Employees have been advised of adherence to safe work practices and the proper use of required personal protective equipment. Conformance will be reinforced by discipline for non-compliance in accordance with University policy (UCD Procedure 62 - Personnel Policies for Staff Members, Corrective Action).

The following methods are used to reinforce conformance with this program:

1. Distribution of Policies

2. Training Programs

3. Safety Performance Evaluations

   Performance evaluations at all levels must include an assessment of the individual's commitment to and performance of the accident prevention requirements of his/her position. The following are examples of factors considered when evaluating an employee's safety performance.

   - Adherence to defined safety practices.
   - Use of provided safety equipment.
   - Reporting unsafe acts, conditions, and equipment.
   - Offering suggestions for solutions to safety problems.
   - Planning work to include checking safety of equipment and procedures before starting.
   - Early reporting of illness or injury that may arise as a result of the job.
   - Providing support to safety programs.

4. Statement of non-compliance will be placed in performance evaluations if employee neglects to follow proper safety procedures, and documented records are on file that clearly indicate training was provided for the specific topic, and that the employee understood the training and potential hazards.

5. Corrective action for non-compliance will take place when documentation exists that proper training was provided, the employee understood the training, and the employee knowingly neglected to follow proper safety procedures. Corrective action includes, but is not limited to, the following: Letter of Warning, Suspension, or Dismissal.

3) Location: **TB1**
Frequency: **Annually**
Responsible Person: **Dennis Cocherell**
Records Location: **Rm 1381**

4) Location: **Aquatic Eco-Physiology Lab rm 1381 Academic Surge**
Frequency: **Quarterly by IACUC (EH&S)**
Responsible Person: **Nann Fangue**
Records Location: **rm 1381**

Template **Worksite Inspection Forms** are located in **Appendix** (general office) **and** (laboratory). Completed Worksite Inspection Forms are to be kept on file in the departmental **IIPP Addendum Binder.**

VI. Hazard Correction

Hazards discovered either as a result of a scheduled periodic inspection or during normal operations must be corrected by the supervisor in control of the work area, or by cooperation between the department in control of the work area and the supervisor of the employees working in that area. Supervisors of affected employees are expected to correct unsafe conditions as quickly as possible after discovery of a hazard, based on the severity of the hazard.

Specific procedures that can be used to correct hazards include, but are not limited to, the following:

- Tagging unsafe equipment "Do Not Use Until Repaired," and providing a list of alternatives for employees to use until the equipment is repaired.
- Stopping unsafe work practices and providing retraining on proper procedures before work resumes.
- Reinforcing and explaining the need for proper personal protective equipment and ensuring its availability.
- Barricading areas that have chemical spills or other hazards and reporting the hazardous conditions to appropriate parties.

Supervisors should use the **Hazard Correction Report (Appendix E)** to document corrective actions, including projected and actual completion dates.

If an imminent hazard exists, work in the area must cease, and the appropriate supervisor must be contacted immediately. If the hazard cannot be immediately corrected without endangering employees or property, all personnel need to leave the area except those qualified and necessary to correct the condition. These qualified individuals will be equipped with necessary safeguards before addressing the situation.

WFCB Employee's working with or around hazards are required to take either the **UC Laboratory Safety Fundamentals** or the **Hazard Communication** E-learning course through http://safetyservices.ucdavis.edu

VIII. Recordkeeping and Documentation

Documents related to the IIPP are maintained in the **WFCB Administrative** main office:

Academic Surge main office.

The following documents will be maintained within the department's **IIPP Addendum Binder** for at least the length of time indicated below:

1. Hazard Alert Forms (Appendix A form).
   Retain for three (3) years.

2. Employee Job Safety Analysis forms (Appendix B form)
   Retain for the duration of each individual's employment.

3. Worksite Inspection Forms (Appendix C form).
   Retain for three (3) years.

4. Accident Investigation Forms (Appendix D form).
   Retain for three (3) years.

5. Hazard Correction Reports (Appendix E form).
   Retain for three (3) years.

The following documents will be maintained within the employee's primary work location for at least the length of time indicated below:

1. Employee Safety Training Attendance Records (Appendix F form).
   Retain for three (3) years.

X. Appendix

I. DEPARTMENT OF WILDLIFE, FISH, AND CONSERVATION BIOLOGY HAZARD EVALUATION GUIDELINES FOR LABORATORIES

These guidelines contain the most common potential hazards for the work area, but are not inclusive of all the potential hazards in the work area. The inspection and hazard evaluation of the work area should not be limited to only these hazards. These guidelines are intended to be used in conjunction with site-specific job safety analysis.

Potential Safety/Health Hazard	Preventive Safe Work Conditions, Safe Work Practices, or Personal Protective Equipment
Flammable Liquids & Solids: Fire/Explosions	Store in approved flammable storage cabinets. Segregate in storage from oxidizers and oxidizing acids. Keep containers closed whenever practical. Do not use around open flames or spark generating equipment. Use in fume hood. Purchase, store, and use in smallest volumes practicable.
Toxic (highly toxic, carcinogenic, reproductive hazards, neurotoxins, etc.)	Use gloves to avoid skin absorption. Use in fume hood and/or wear mask/respirator to avoid inhalation. Segregate in storage from incompatible chemicals. Wear eye protection. Use mechanical pipetting devices. Wash lab bench/scale thoroughly after use; rinse glassware thoroughly after use; wash hands thoroughly after use. Post appropriate signs/labels. Use in smallest quantities practicable.
Adverse Chemical Reactions	Maintain labeling of containers. Segregate incompatibles by distance and/or barrier.
Corrosive Chemicals: Skin or Eye Damage	Wear eye and face protection. Ensure that eye wash/shower is available and functioning. Wear rubber gloves and apron. Wear closed toed shoes.
Radioactive Materials	Be up-to-date on training. Post appropriate signs/labels. Use absorbent bench paper. Use proper disposal techniques.
Biohazards	Be up-to-date on training. Post appropriate signs/labels. Use proper disposal techniques.
Seismic Hazards	Ensure there are shelf lips or restraints to prevent chemical spillage.
Secure equipment, instruments,	Secure cylinders properly.

Potential Safety/Health Hazard	Preventive Safe Work Conditions, Safe Work Practices, or Personal Protective Equipment
Animals	Provide proper training. Provide adequate fencing/containment. Post warning signs on enclosures/areas holding dangerous animals. Provide proper safety equipment (i.e. canes for use around hogs). Wear closed toed shoes or boots.
Machine/Equipment Operation	Provide proper training. Follow manufacturers' operating and safety instructions. Ensure guards and safety shields are in place during operations. Provide and use face, hearing, dust protection. Maintain adequate illumination. Keep aisles and floor areas free of debris, spilled oil or feeds, manure, chemicals, and water to prevent tripping and slipping hazards. Do not allow food/drink in machine/equipment areas.
Cleaning/Servicing Machinery/Equipment	Ensure machines/equipment turned off and disconnected from power source before cleaning/servicing.
Hazardous Chemicals	Inventory hazardous materials and ensure that MSDSs are available in work area. Provide proper training. No chemicals in clean areas. No food/drink in chemical storage areas. Establish and maintain necessary health checks.
Dust	Dust/particle masks will be made available. Eye wash stations or portable saline bottles should be available.
Hay Stacks and Bales	Stay off hay stacks unless performing a specified duty. Bales used for feeding must be removed from the stacks prior to removing binding twine. Bales will be removed from the stack in a manner which creates a step effect up the face. Bales should be removed in a manner that does not cause the stack to become unstable. Hay hooks will not be left on hay bales, but hooked on trash barrels. Knives used for cutting binding twine will not be left in the barns. All bale twine and other trash will be placed completely in trash barrels
Wet and Slippery Surfaces, Vivarium	No running or sudden motions/twisting. These actions in such areas pose risk of slipping, tripping, or falling.

II. General Safety Instructions and Potential Hazards When Working in California Field Conditions (site-specific hazards should be added to this list)

1. **8-Hour Injury Reporting**; The following injuries must be reported to EH&S (530) 752-1493 as soon as practically possible but no longer than 8 hours after the employer knows or with diligent inquiry would have known of the death or serious injury or illness. Any injury or illness occurring in the place of employment or in connection with any employment requiring inpatient hospitalization in excess of 24 hours for other than medical observation. Or when an employee suffers any loss of any member of the body or suffers any serious degree of permanent disfigurement, eye injury or death. This reporting to EH&S is in addition to reporting to the Department's Workers Compensation representative.

2. **Heat Stress, Cramps, Exhaustion and First Aid** – The following symptoms of heat stress and exhaustion are fatigue, headache, nausea, chills, dizziness, fainting and loss of coordination. Heat cramps are muscle spasms in the legs, arms or stomach caused by loss of salts from sweating. To avoid these wear cool clothing, drink plenty of water, have a "sports" drink that contains salts available, rest more often in the shade as the temperature rises. For first aid, move to a shaded area, give cool water to person if conscious, use "sports" drink for heat cramps to replenish salts and also give cool water. Seek medical help if necessary or if the person is unconscious.

3. **Hanta Virus** – Hanta virus disease comes from breathing the aerosolized virus from contaminated droppings, dried urine and saliva of the deer mouse (new research has shown that other strains of the virus are carried by other rodent species). The CDC web site is a source for more information. Infections may also occur through broken skin contamination with the above mouse items. The symptoms appear 2-3 weeks after contact and are flu-like. Hanta virus disease may result in death. The disease exposure can be controlled by controlling deer mice populations. Mouse dropping should be cleaned up using a bleach water solution and wetting the area thoroughly before wiping or cleaning. Inhalation protection and other personal safety equipment must be worn when cleaning up mouse contamination. Call EH&S for specific information.

4. **Lyme Disease** – Lyme disease is spread through the bite of deer ticks (nymph stages are the size of a pin head). Symptoms include headache, fever, chills, fatigue, joint pain, and a characteristic skin rash at the site of the bite which looks like a red "bulls-eye" patch. May-July is the time of high tick activity. Protection against Lyme disease includes avoiding tick infested areas, contact with overgrown grass and shrubs, wearing light colored clothing (helps spot ticks), wearing long pants, long sleeve shirt, tucking pant legs into socks, or taping pant legs around ankles; use of insect repellent containing 25-30% DEET on exposed skin (except the face) and on pant legs, shoes, and socks. Check yourself for ticks at the end of the work day. Remove embedded ticks with a fine tip tweezers and cleanse the area with an antiseptic.

protection before contact with poison oak. Washing the skin immediately after contact with the plant using an outdoor skin cleanser is also helpful." (This information taken from IvyStat!)

8. **Plague** – Plague is caused by the bacterium *Yersinia pestis* from the bite of infected fleas of rodents (especially rock squirrels, ground squirrels, chipmunks, prairie dogs, wood rats and other burrowing rodents.) Deer mice and voles are also thought to maintain the disease in the wild, but are less important sources of infection to humans. Symptom of plague is a "very painful, usually swollen, and often hot-to-touch lymph node, called a bubo. This finding, accompanied with fever, extreme exhaustion, and a history of possible exposure to rodents, rodent fleas, wild rabbits, or sick or dead carnivores should lead to a suspicion of plague. Onset of symptoms is usually 2 to 6 days after a person is exposed." Local county health department should be notified. Without antibiotic treatment the disease spreads rapidly in the body going into septicemic plague and pneumonic plague. Wear socks, shoes and long pants to prevent bites. Stay away from rodents holes as much as possible and avoid handling dead rodents. If disease symptoms appear, get medical attention immediately. (This information taken from CDC.)

9. **Animal bite Procedures and First Aid** – Employee Health Services has a hand out on animal bites and this material is also located in the Departmental IIPP. Report all non-rodent mammal bites to the County Health Dept. where the bite occurred. Bites from certain animals require the animal be quarantined. First aid-stop bleeding and cleanse the wound. Seek medical attention if necessary.

10. **Tularemia** – "Tularemia, also known as 'rabbit fever,' is a disease caused by the bacterium *Francisella tularensis* . Tularemia is typically found in animals, especially rodents, rabbits, and hares." People may be infected with the bacteria though the bite of ticks or deerflies or by handling infected or dead animals, by eating or drinking contaminated food or water, or by inhaling airborne bacteria. Symptoms may appear 3 to 5 days after exposure but can range 1 to14 days. "The signs and symptoms people develop depend on how they are exposed to tularemia. Possible symptoms include skin ulcers, swollen and painful lymph glands, inflamed eyes, sore throat, mouth sores, diarrhea or pneumonia. If the bacteria are inhaled, symptoms can include abrupt onset of fever, chills, headache, muscle aches, joint pain, dry cough, and progressive weakness. Tularemia can be fatal if the person is not treated with appropriate antibiotics." Protection is offered against insect bites by wearing long sleeve shirt and pants with socks and shoes, avoid handling dead animals, using insect repellant and not drinking from contaminated water sources. (This information taken from CDC.)

11. **Rocky Mountain Spotted Fever** – Rocky Mountain spotted fever is caused by a species of bacteria called *Riskettsia ricettsii*. The disease is spread by the bite of ixodid (hard) ticks or exposure to crushed tick tissues, fluids or tick feces. "Ricettsiae are transmitted to a vertebrate host through saliva while a tick is feeding. It usually takes several hours of attachment and feeding before the rickettsiae are transmitted to the host." The two major vector sources of the disease are the American dog tick and the Rocky Mountain wood tick. Rocky Mountain spotted fever is very difficult to diagnose in its early stages and initial symptoms may include fever, nausea, vomiting, severe headache, muscle pain and lack of appetite. Later symptoms are rash (not all people develop this), abdominal pain, joint pain, and diarrhea. The rash may appear 2-5 days after the onset of fever. The disease may be more severe in those of "advanced age, male sex, African-American race, chronic alcohol abuse, and glucose-6-phosphate dehydrogenase (G6PD) deficiency" leading to death within 5 days of illness onset.

toiletries up a bear pole or tree. They must be at least 12 feet (4 meters) to be secure. Then place your camp a safe distance away." (Quotes are from arcticwebsite.com)

15. **Mountain Lion** – Although encounters with mountain lions are slim, it is still a possibility. "Mountain lions are plentiful in areas where there is a large deer population. As long as the food source is there, the lions do not bother humans generally but in leaner times, the lions have been known to stalk and also attack humans on the trail." Try to avoid being alone in mountain lion territory. Make noise as you walk. "The noise you make will generally scare the lion away and halt any confrontation." Always give plenty of space between you and the lion so that the lion can escape and get away. "Mountain lions usually do not like confrontation, so always, if you do happen to have contact, leave a wide berth between you and the lion for its escape." "Never run away from a mountain lion. Running stimulates a mountain lion's natural instinct to chase." Be sure if you make contact with the lion to stand up as tall as possible. "By making yourself look larger it intimidates the lion and often makes them turn and run." If you have a jacket on, open it and flap it about, yell, throw stones "but make sure you react so that the cat knows that you are the one in control, not him." Never turn your back on a lion, squat down or bend over. "Research has shown that when a human bends over that person looks like a four legged prey to a large cat of any type. Avoid stooping, leaning over, squatting, or bending at the waist..." "If you are attacked, fight back. Never succumb or roll into a ball. Hit as hard as possible especially to the head area. If you can retrieve a stick or large rock, use it as a weapon. If face to face with the cat, go for the eyes by clawing or throwing sand in the face of the cat. Mountain lions will usually strike the back of the head and especially the neck so be vigilant to protect these areas and if at all possible remain standing or face to face with the animal once it is attacking. If attacked from behind, try to reposition yourself to meet the cat face to face. The cat may weigh between 100-150 lbs. Report mountain lion attacks to Fish and Game or a Ranger as soon as possible. Get medical attention. (Quotes taken from *PageWise*)

It is the PI's responsibility to add additional items for training such as use of chain saws, boating, bee stings, lightning strikes, scorpions or other animal or hazardous conditions that are specific to their field research area as part of safety training. <u>This safety training must have written documentation.</u> PI's must provide required personal safety protection equipment if necessary. The CDC web site is a source for updated information on diseases at http://www.cdc.gov

Laboratory Rodent Bites: Do not usually cause infection unless very deep bite or unusual pathogen is present.

Animals with Unexplained Neurological Symptoms: Check with supervisor and co-workers regarding rabies status of animal; observation period for animal may be necessary if rabies status is unknown. Do not kill animal

Medical Care of Bites Helpful Information

All animal bites should be immediately cleaned with soap and running water for a minimum of 5 minutes, and 10 minutes if extensive or very dirty. Primate bites have additional cleansing requirements; see Primate Center procedures.

If bleeding is not controlled after applying continuous pressure for 5-10 minutes, seek medical assistance immediately.

Dog and Cat Bites:
- Animal quarantine is required.
- Must be reported to Public Health Department.
- High frequency of wound infection with Pasteurella and other oral pathogens.
- Medical care is needed; antibiotics may be required.

Reptile and Bird Bites:
- Possible exposure to bacterial pathogens.
- Medical care is needed; deep wounds may require antibiotic treatment.

Laboratory Rodent Bites:
- Do not usually cause infection unless it is a very deep bite.
- People with allergies to lab animals may require medical care.
- Only need to seek medical care if an unusual pathogen is present or bleeding is not controlled by applying continuous pressure for 5-10 minutes.

Large Animal Bites (Cows, Horses, etc.):
- Animal quarantine is required.
- Must be reported to County Health Department.
- Medical care is needed.

Primate Center Bites & Exposures:
- Animal quarantine is required.
- Medical care is needed; bites or scratches require evaluation due to possible exposure to simian herpes (B virus) or to special pathogens, depending on experimental protocol; see Primate Center bite procedures.

Bites from Animals with Unexplained Neurological Symptoms (suspected rabies):
- Animal quarantine is required
- Must be reported to County Health Department

Medical care is needed.

Procedures for Reporting Animal Bites and Scratches

Effective Date: April 1, 2004

I. Purpose

Yolo County is located in a rabies endemic area. Rabies is a viral infection of the central nervous system that causes a fatal inflammation of the brain and in some cases the spinal cord. All mammals could become infected with rabies. Bite wounds are the primary method of entry into both human and animals, however, the virus can enter through an animal scratch. Animal bites and scratches to humans are investigated by the Yolo County Environmental Health Department because of the serious implications of the disease.

II. General Policy

This procedure is to assure that all animal bites and scratches are reported to the Yolo County Environmental Health Department. Mice and rats obtained from qualified laboratories are exempt from this policy.

III. Procedures for completing the Reporting Form

A. Supervisors must ensure that employees receive care and complete this form within 24 hours of the bite/scratch.

B. The employee must complete section I and II of the Animal Bite or Scratch Reporting Form.

C. The medical provider must complete Section III of the form and immediately fax a copy of the report to the Yolo County Environmental Health Department.

D. The animal must be retained, alive if possible, until it has been determined by the Yolo County Environmental Health Department that it is no longer needed for their investigation.