UCDAVIS

Department of Wildlife, Fish, and Conservation Biology

INJURY AND ILLNESS PREVENTION PROGRAM

UC DAVIS

Wildlife, Fish, and Conservation Biology

INJURY AND ILLNESS PREVENTION PROGRAM

This Injury and Illness Prevention Program has been prepared by the University of California,

Wildlife, Fish, and Conservation Biology department in accordance with University Policy (UCD Policy

& Procedure Manual Section 290-15: Safety Management Program) and California Code of

Regulations Title 8, Section 3203 (8 CCR, Section 3203).

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Wildlife, Fish, and Conservation Biology

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Department Information

Department Name: **Wildlife, Fish, and Conservation Biology**

Department Director: **Nann A. Fangue (nafangue@ucdavis.edu)**

Telephone Number: **(530) 752-6586**
Address: **1088 Academic Surge**
University of California, Davis
One Shields Avenue
Davis, CA 95616

Buildings Occupied by Department

1. **Building:** **Academic Surge**
   Unit(s): **Front Office**

   Contact: **Nann Fangue**
   Phone: **530-754-0145 Chair Office**

2. **Building:** **TB1**
   Unit(s): **Shop, Office, Vivarium**

   SIC/TIC Contact: Dennis Cocherell
   Phone: **925-963-1621**

   PI for animals Contact: John Eadie
   Phone: **530-754-0145**

   Animal Technician Contact: Mitchell Hinton
   Phone: **530-309-9336**

3. **Building:** **Academic Surge rm 1391**
   Unit(s): **Aquatic Eco-Physiology Lab**

   Contact: **Nann Fangue**
   Phone: **(805) 680-2481**

   SIC/TIC Contact: Dennis Cocherell
   Phone: **925-963-1621**

4. **Building:** **Academic Surge rm 1394**
   Unit(s): Museum of Wildlife Biology

   Contact: **Andrew Engilis, Jr.**
   Phone: **(530) 754-8813**

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: Dennis Cocherell **Date:** 9/26/2019

Signature: Nann Fangue **Date:** 9-24-19

Signature: _____ **Date:** _____

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).

II. System of Communications

1. Effective communications with **Wildlife, fish, and Conservation Biology** employees have been established using the following methods:

☒ Standard Operating Procedures Manual (laboratory specific and available on SmartSite)
☒ Safety Data Sheets (available online at ucmsds.com)
☒ Regular departmental and lab group meetings (faculty and department safety meetings)
☒ Internal media (department SmartSite)
☒ EH&S Safety Nets
☒ Training videos (Through UC Learning Center or Learning Management System)
☒ Safety Newsletter (UC Safety Spotlight available at http://ucanr.edu/sites/ucehs/Safety_Spotlight/)
☒ Handouts
☒ Building Evacuation Plan (incorporated as part of the red Emergency Response Guide)
☒ E-mail (Stored on SmartSite)
☒ Posters and warning labels
☒ Job Safety Analysis – (Lab through the Lab Hazard Assessment Tool (LHAT))
☐ Other (list): _____

2. Employees are encouraged to report any potential health and safety hazard that may exist in the workplace. **Hazard Alert Forms (Appendix A)** are available to employees for this purpose. Forms are to be placed in the Safety Coordinator's departmental mail box. Employees have the option to remain anonymous when making a report.

3. 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).

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.

IV. Hazard Identification, Evaluation, and Inspection

Job Hazard Analyses and worksite inspections have been established to identify and evaluate occupational safety and health hazards.

1. Job Safety Analysis:

Job Safety Analysis (JSA) identifies and evaluates individual employee work functions, potential health or injury hazards, and specifies appropriate safe practices, personal protective equipment, and tools/equipment. JSA's have been completed for the following job categories:

A. **Academic Surge labs through the UC Lab Hazard Assessment Tool (LHAT)**
- General laboratory staff to include:
  Staff Research Associate, Lab Assistant, Post-Graduate Researcher, Post-Graduate Scholar, Faculty, Cooperative Extension Specialist, graduate student, undergraduate student, visiting personnel, and various summer program students.

B. **Academic Surge**
- General office staff to include:
  Chief Administrative Officer, Administrative Assistant, Advising Associate, Programmer/Analyst, Faculty, Cooperative Extension Specialist, students, post-doctoral scholars, and visiting scholars.

Example **Job Safety Analyses** (JSAs) are located in **Appendix B1** (general office) **and B2** (laboratory). Completed Job Safety Analyses should be kept on file in a departmental **IIPP Addendum Binder**.

2. Worksite Inspections

Worksite inspections are conducted to identify and evaluate potential hazards. Types of worksite inspections include both periodic scheduled worksite inspections as well as those required for accident investigations, injury and illness cases, and unusual occurrences. Inspections are conducted at the following worksites:

1) Location: **Academic Surge**
Frequency: **Annually**
Responsible Person: **Dennis Cocherell**
Records Location: **Rm 1088**

2) Location: **Museum of Wildlife Biology Academic Surge**
Frequency: **Annually**
Responsible Person: **Andrew Engilis, Jr.**
Records Location: **rm 1394**

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.**

V. Accident/Injury Reporting Investigation

University Policy requires that work-related injuries and illnesses be reported to Workers' Compensation within 24 hours of occurrence and state regulation requires all accidents be investigated.

Call 9-1-1 in case of a medical emergency.

Wildlife, fish, and Conservation Biology employees will immediately notify their supervisor when occupationally-related injuries and illnesses occur, or when employees first become aware of such problems.

1. **Supervisors** will investigate all accidents, injuries, occupational illnesses, and near-miss incidents to identify the causal factors or attendant hazards. Appropriate repairs or procedural changes will be implemented promptly to mitigate the hazards implicated in these events. Proper injury reporting procedures can be found at http://safetyservices.ucdavis.edu/workers-compensation.

   The **Accident Investigation Form (Appendix D)** shall be completed to record pertinent information and a copy retained to serve as documentation. It can be completed by either the supervisor or the Department Safety Coordinator.

3. **Note:** Serious occupational injuries, illnesses, or exposures must be reported to Cal/OSHA by an EH&S representative within eight hours after they have become known to the supervisor. These include injuries/illnesses/exposures that cause permanent disfigurement or require hospitalization for a period in excess of 24 hours. Please refer to EH&S SafetyNet #121 for OSHA notification instructions.

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

VII. Health and Safety Training

Health and safety training, covering both general work practices and job-specific hazard training is the responsibility of the **Department Chair and Principal Investigators** and employee's immediate Supervisor(s) as applicable to the following criteria:

1. Supervisors are provided with training to become familiar with the safety and health hazards to which employees under their immediate direction and control may be exposed.

2. All new employees receive training prior to engaging in responsibilities that pose potential hazard(s).

3. All employees given new job assignments receive training on the hazards of their new responsibilities prior to actually assuming those responsibilities.

4. Training is provided whenever new substances, processes, procedures or equipment (which represent a new hazard) are introduced to the workplace.

5. Whenever the employer is made aware of a new or previously unrecognized hazard, training is provided.

The **Safety Training Attendance Record** form is located in **Appendix F.**

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.

IX. Resources

1. Office of the President: University Policy on Environmental Health and Safety, 10/22/86

2. UC Davis Policy and Procedure Manual, Section 290-15, Safety Management Program

3. California Code of Regulations Title 8, Section 3203, (8CCR §3203), Injury and Illness Prevention Program

4. Personnel Policies for Staff Members, Corrective Action, UCD Procedure 62

5. University of California Policy on Management of Health, Safety and the Environment, http://www.ucop.edu/riskmgt/ehs/policy.html

6. UC Davis Environmental Health & Safety

   - EH&S Website
   - EH&S SafetyNets
   - Material Safety Data Sheets

7. **http://safetyservices.ucdavis.edu/**

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.

shelf units, and cabinets.	Leave protective caps on during storage or transport.
Compressed Gasses: Physical or Health Injury, Fire	Use cylinder hand truck to move cylinders. Use proper regulator for type of gas. Visually inspect for dents, leaks, corrosion, pitting, bulges, and physical distortions.
Electrical Shock, Electrocution	Do not overload outlet circuits. Replace worn or frayed cords. Use three pronged (grounded) plugs. Do not use extension cords. Do not force a plug into a non-matching receptacle. Use GFIs with appliances in wet or potentially wet locations. Keep area in front of circuit panels clear.
Equipment/Instrument Use	Follow manufacturer's operating and safety instructions. Inspect equipment regularly for broken parts and/or frayed electrical cords. Train new employees/students in safe and proper use.
Fume Hoods, Biosafety Hoods	Have fume hood/biosafety hood inspections and evaluations performed. Do not use any hood tagged as being inoperative or substandard. Ensure that visual indicator is present to show hood is operating. Maintain sashes in place.
High Noise: Hearing Damage	Post equipment requiring use of ear protectors. Provide and use ear protectors.
Obstructed Egress	Keep all exit ways and exits clear. Maintain exit signs.
Skin/Eye Injury due to Cryogenic Liquids	Ensure that eye and skin protection is provided and used.
Clean Areas	Currently, post food storage refrigerators/freezers with "Food only" or other appropriate designation. And store and consume food/drink in Clean Areas only (but this needs to change to No Food In The Lab, as per UCD policy and CalOSHA). But Clean Areas Still Critical for Non-Chemical Work: Do not use ANY laboratory chemicals in Clean Areas. Wash hands, remove gloves before entering Clean Area. Do not answer telephone when wearing gloves. Acquaint all lab personnel with P&PM 290-65 (4/5/00).
Emergency Evacuation	Post evacuation routes and departmental meeting place.
Other	

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.

OFF-CAMPUS FIELD RESEARCH SAFETY TRAINING INFORMATION AND DOCUMENTATION FORM

This information is for those who travel to off campus sites, non-University property or remote areas. There are responsibilities for both the person going to do field research and the supervisor of the person doing the field research. With each trip the following information must be supplied:

1. Date of leaving and returning.
2. Trip itinerary (as accurate as possible, given the nature of the field work).
3. Emergency contact information must be available to the person going to the field by their supervisor. The following three numbers must be provided: (1) the nearest hospital or medical facility, (2) the nearest sheriff or police station, and (3) the county health department. See below, the CCR Title 8, Section 3400. "Shall" and "must" items are requirements of the law.
4. SOP for work being done in the field and include all potential work related hazards beyond what is listed below.
5. Supply of clean water for drinking and, if necessary, for portable eye wash/shower (or you can purchase small eye wash kits for the field from most catalogs with a "safety" section).
6. First aid kit.
7. Person(s) going to the field as an employee and /or student of the University must carry an ID (preferably a driver's license and their University ID card).

CCR Title 8, Section 3400:

a. The employer shall ensure the ready availability of medical personnel for advice and consultation for matters of industrial health or injury.
b. In the absence of an infirmary, clinic, or hospital in near proximity to the workplace, which is used for treatment of all injured employees, a person or persons shall be adequately trained to render first aid. Training shall be equal to that of the American Red Cross or the Mining Enforcement and Safety Administration. (Note: Proximity could mean within 4-5 minutes.)
c. There shall be adequate first aid materials, approved by the consulting physician, readily available for workmen on every job. Such materials shall be kept in a sanitary and usable condition. A frequent inspection shall be made of all first-aid materials, which shall be replenished as necessary.
d. Where the eyes or body of any person may be exposed to injurious corrosive materials, suitable facilities for quick drenching or flushing of the eyes and body shall be provided within the work area for immediate emergency use.
e. Stretchers and blankets, or other adequate warm covering may be required by the Division, unless ambulance service is available within 30 minutes under normal conditions.
f. At isolated locations, provisions must be made in advance for prompt medical attention in case of serious injuries. This may be accomplished by on-the-site facilities or proper equipment for prompt transportation of the injured person to a physician or a telephone communication system for contacting a doctor or combinations of these that will avoid unnecessary delay in treatment.

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.

The disease takes about 36 hours to be transmitted after a bite, so prompt removal a tick is important.

5. **Valley Fever** – Valley fever is caused by inhaling spores from *Coccidioides immitis*, a fungus found in the soil in warm and dry areas of low rain fall, high summer temperatures and low altitude. High risk groups are African-Americans, Asians, pregnant women during the third trimester, and immuno-compromised persons. The symptoms are generally flu like. Some patients fail to recover and develop chronic pulmonary infection or widespread infection affecting meninges, soft tissues, joints and bones. Severe pulmonary disease may develop in HIV-infected persons. Use inhalation protection (dust mask) in dusty and windy areas.

6. **West Nile Virus** – West Nile virus is spread by mosquitoes that feed on infected birds and then infect humans or animals like horses. Only certain species of mosquitoes carry the virus. The virus is most prevalent when mosquitoes are most abundant from May to October. The majority of people and animals infected with the virus do not experience any symptoms. Others may experience a mild to moderate illness which include fever, headache, tiredness, and body aches. Occasionally a skin rash on the trunk of the body may occur and swollen lymph glands. In rare cases, the virus can cause more serious conditions of encephalitis (inflammation of the brain) or West Nile poliomyelitis. These symptoms include headache, high fever, neck stiffness, stupor, disorientation, coma, tremors, convulsions, muscle weakness and paralysis. Wear long sleeves, socks and pants to prevent exposure to mosquito bites. Use insect repellant containing 25-30% DEET when working in mosquito areas. If possible, avoid dawn and dusk times when mosquitoes are most active.

7. **Poison Oak** – "Poison oak (*Toxicodendron diversilobum)* is common along the west coast and in the south and southeastern portions of the country." The plants are found in fencerows, forests, pastures, shady areas and stream banks as woody shrubs from 1 to 6 feet tall or as climbing vines wrapped around trees or shrubs. All parts of the plant including the roots contain the poisonous oily substance *urushiol* which can produce the painful irritation and blistering of the skin. The poisonous substance is active all year around. Touching any of the plant parts or objects (including pets) that have contacted the plant can transfer the toxin to people. Burning of the plant is extremely dangerous sending the oily toxin into the air as droplets that may be inhaled. "Poison oak can usually be identified by its leaves. In the spring, the leaves of young plants are shiny red, turning to shiny green as they mature. In the fall, poison oak foliage changes from green to orange and red. Poison oak is a deciduous, woody plant that loses its leaves in the winter. The leaves of these plants usually grow in groups of three on a shared stalk. Poison oak leaflets are rounded at the tips and alternate on the stem. The leaf surface can be glossy or a bit hairy, usually 1 to 4 inches in length with lobed or toothed edges. In the spring, poison oak yields small clusters of greenish-white flowers. The fruits are formed in the summer, and are white and green resembling berries. Poison oak oils cause allergic skin reactions in nearly 85% of people exposed to the plant. Symptoms can begin within a few hours after contact and can arise between 2-5 days later. The rash of poison oak typically occurs between 24 to 48 hours after contact. The most frequent symptoms of poison oak are rash in the form of blisters (sometimes in a line), blisters can eventually break open, ooze, and then dry or crust over, swelling in the area of contact, red blotches that can be raised or flat and intense itching. More intense symptoms include fever, stomach cramps, nausea and overall body swelling. These intense symptoms should be reported to a physician immediately." Prevention- Learn to identify and stay away from poison oak. Wear long sleeve shirt, long pants and boots. Wash all clothing and tools after exposure. Wash pets after exposure. "Barrier skin lotions containing *bentoquatum* offer some

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.

Prevent tick bites by wearing light colored clothes to see ticks, tuck pants legs into your socks to prevent ticks from crawling up legs, apply repellants and check yourself and your clothing. Remove ticks from your body. (This information taken from CDC)

12. **Tick Removal** – To remove attached ticks, use the following procedures:
    a. "Use fine-tipped tweezers or shield your fingers with a tissue, paper towel, or rubber gloves. When possible, person should avoid removing ticks with bare hands.
    b. Grasp the tick as close to the skin surface as possible and pull upward with steady, even pressure. Do not twist or jerk the tick; this may cause the mouthparts to break off and remain in the skin. (If this happens, remove mouthparts with tweezers.)
    c. Do not squeeze, crush, or puncture the body of the tick because its fluids (saliva, body fluids, gut contents) may contain infectious organisms.
    d. After removing the tick, thoroughly disinfect the bite site and wash your hands with soap and water.
    e. Save the tick for identification in case you become ill. This may help your doctor make an accurate diagnosis. Place the tick in a plastic bag and put it in your freezer. Write the date of the bite on a piece of paper with a pencil and place it in the bag." (This information taken from the CDC.)

13. **Rattlesnakes** – Many species of rattlesnakes occur in the West. Rattlesnakes are diurnal. The snakes feed at night. Rattlesnakes occur from sea level to 11,000 feet. The snakes make a rattling sound to warn off invaders. The snakes are normally solitary except in the colder climates where the snakes over winter in dens together. The snakes travel from the den when warmer weather comes. The snakes are good swimmers. The snakes have scales that vary in color from yellow to brown to black and have dark V or diamond shaped markings on their backs. Rattlesnakes usually, but not always, warn the invader of their space by rattling their tail. (Santa Catalina Island rattlesnake does not have a rattle as a warning). Wear boots or other high top shoes and long pants when in an area known to have rattlesnakes. Be on the lookout and watch where you sit on rocks or walk through grassy areas. The rattle is a warning to get out of the way. If you spot a snake give it <u>at least</u> 6 feet of clearance. "First aid for snake bites, wash the bite with soap and water, immobilize the bitten area and keep it lower than the heart, and get medical help within 30 minutes." <u>DO NOT use ice or any other type of cooling on the bite area. No tourniquets, electric shock or incisions in the wound should be made.</u> "Basic signs like pain, swelling and bleeding, along with more complicated reactions such as ecchymosis (purple discoloration), necrosis (tissue dies and turns black), low blood pressure, and tingling of lips and tongue give medical professionals clues to the seriousness of bites and what treatment route they should take." (Quotes are from the FDA *Consumer* revised in Nov. 2002)

14. **Bears** – Bears will attack if they are surprised, feel they are in danger, wish to protect their territory or if they have cubs. "The best way to avoid danger is to avoid the bear. But if you cannot avoid them, make sure they see you first. As you walk or travel through bear territory, and if you cannot see more than 50 to 100 feet in front of you, call out every few minutes until you enter a clear area. Some people call out, others sing, some wear bear-bells". The point is to make a lot of noise. "In most cases the bear will move off the trail and watch you pass. They rarely look for a confrontation. If you see a bear, talk to the bear." Make sure it sees you. Hold your arms high above your head. This will make you look like a much bigger animal to the bear. "Continue to talk and slowly back away." A female bear with cubs is very dangerous and very protective. She may attack even though you are a distance away from her. "If you are in a camp, before anything else, put your food, trash, cooking gear, fuel, soaps and

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*)

16. Lighting for field research – Its recommended to NOT conduct any field related activities if lighting is in the forecast and especially in an active lighting event. Please see ;
    https://www.weather.gov/safety/lightning
    There is no safe place outside when thunderstorms are in the area. If you hear thunder, you are likely within striking distance of the storm. Just remember, ***When Thunder Roars, Go Indoors.*** Too many people wait far too long to get to a safe place when thunderstorms approach. Unfortunately, these delayed actions lead to many of the lightning deaths and injuries in the United States. Please refer to the above website for handout for field workers.
17.
18.
19.

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

III. ANIMAL BITE INJURIES

The following appendices cover the training and documentation that is required of all students and employees that handle animals and thus are exposed to potential animal bites. Available at the following website: (http://safetyservices.ucdavis.edu/ps/occh/acuohp/pem/anb/animalBites)

FOR MEDICAL EMERGENCY, CALL 911 IMMEDIATELY

1. **CONTROL BLEEDING:** Apply continuous pressure for 5-10 minutes. If bleeding is not controlled, seek medical assistance immediately (see #4 below).

2. **CLEANSE WOUND:** Wash all wounds immediately with soap or detergent solution and a high volume of water for at least 5 minutes, 10 minutes if extensive or extremely dirty. Scrub wound enough to make it re-bleed a little to help clean the wound. Primate bites require special care. Scrub with a solution such as chlorhexidine for 15 minutes under high volume of running water. Follow Primate protocols on care and reporting of bites and scratches.

3. **REPORT BITE:** Report bite to your supervisor or department personnel office.

4. **SEEK MEDICAL FOLLOW-UP:**

- Employees (including student employees) go to:
  Occupational Health Services, Cowell Hall; (530) 752-6051
  Hours: 8am-5pm (M,T,Th,F); 9am-5pm (W)

- Students go to:
  Student Health and Wellness Center, Corner of La Rue and Orchard Drive; 752-2300
  Hours: 8am-7:30pm (M,T,Th,F); 9am-7:30pm (W); 9:30am-1:00pm (weekends)
  Hours Summer: 8am-5pm (M,T,Th,F); 9am-5pm (W)

  - Non-UCD employees and After Hours Care go to:
    Sutter Davis Hospital, Urgent Care & Emergency Medical Services, 750-5800

5. **NOTIFY COUNTY:** All bites must be reported to the supervisors. All bites must be reported to the County Health Department except for small rodent bites from rodents purchased from approved animal vendors. Required forms are completed at the treating medical facility.

Other Information

Dog and Cat Bites: High frequency of wound infection with Pasteurella and other oral pathogens; likely to require antibiotic treatment.

Reptiles and Birds: Possible exposure to bacterial pathogens that sometimes requires antibiotic treatment for deep wounds.

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.

ANIMAL BITE or SCRATCH REPORTING FORM

(Must be completed for ALL animals bites or scratches)

Refer to Bottom of Page for Faxing Instructions

I. Person Bitten (completed by the person bitten/scratched by animal):				**PRINT**
Last Name:	First Name:		DOB: University ID#:	
UC Dept and Supervisor's Name:				
Home Address:				
City:	State:		Zip:	
Phone:	Fax:		Date bitten:	
UC Status: (Circle once)	UC Employee	UC Student	Vet Student	No Affiliation
Did the animal appear ill? Describe:		Describe the Bite/Scratch, include location on body:		
Date reported to Supervisor:				
In the space below, explain the circumstances under which the bite/scratch occurred (include physical location):				
City:	State:		Zip:	

II. The Animal (completed by the person bitten/scratched:				
Species:	Breed/Type:		Name or ID# of Animal:	
Sex:	Color:		Age:	
Vaccinated for Rabies?	o Yes	o No	Date vaccinated:	
License #:			License jurisdiction:	
o Pet?	o Research?		o Wild?	o Feral?
Health Status:			Current Location:	

III. Reported By (completed by medical personnel helping patient):			
Last name: (MD)		First name:	
Last name: (RN/Medical)		First name:	
Address: Occupational Health Services, 501 Oak Avenue			First date of care:
City: Davis	State: California		Zip: 95616
Phone: (530) 757-3200		Fax: (530) 752-5277	
Date:		Signature:	
Date:		Signature:	

Instructions: Supervisors must ensure that employees receive care and complete this report within **24 hours** of the bite/scratch. Bitten individuals who are UCD employees must report to Occupational Health Services (530-757-3200) for treatment and evaluation; UCD students report to Cowell Student Health Center (530-752-2300).

Completed form must be faxed to:

1. Yolo County Health Department (530-669-1448) MAMMAL BITES ONLY

2. Attending Veterinarian's Office (530-754-4350)
3. Occupational Health Services (530-752-5277)

Do not kill the animal. If the animal is dead, do not discard the body. For further information, contact the Attending Veterinarian's Office at 530-752-7244

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.