CAL STATE LA
RISK MANAGEMENT / ENVIRONMENTAL, HEALTH & SAFETY

Biohazard Management Plan

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California State University, Los Angeles

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BIOHAZARDS AND BIOSAFETY

Materials that are hazardous to humans because of their biological or infectious properties (as opposed to chemical or physical) are called biohazardous materials or simply biohazards. The management of biological hazards through the proper application of engineered containment devices and administrative controls is usually referred to as biosafety or biohazard control. An effective biohazard management program should have the following objectives:

1. Preventing or minimizing the possibility of infection because of any activities involving biohazardous materials.

2. Assuring that all biohazardous material handling, storage, and waste management activities are performed in compliance with applicable local and state standards and regulations.

A comprehensive Biohazard Management Plan has been developed for California State University, Los Angeles (Cal State LA); 5151 State University Drive, Los Angeles. This plan provides guidance, describes requirements, and assigns responsibilities aimed at achieving the objectives listed above. Primary responsibility for proper biohazard management resides with all employees that may encounter biohazards including custodians, nurses, Public Safety officers, Principal Investigators (PI), Lab Supervisors, Resource Managers (RM), and Instructional Technicians (IT), although important functions are also assigned to Risk Management and Environmental Health and Safety (RMEHS) Department.

Areas on campus are the primary generators and satellite storage locations of regulated medical wastes:

- College of Natural Social and Sciences
- Student Health Center

Since there are many facets to this plan, and to facilitate implementation, the plan has been divided into three distinct parts:

- **Part I** describes the principles and criteria related to the general management of biological hazards in laboratory settings, including a classification scheme for biosafety levels.
- **Part II** describes the University's Procedure for controlling the spread of bloodborne pathogens.
- **Part III** is the University's Procedure for the management of infectious waste.

This delineation is also based on the different recommendations and regulations with which Cal State LA activities must comply. Part I implements the recommendations of the Center for Disease Control National Institutes of Health (CDC-NIH), as stated in their publication Biosafety in Microbiological and Biomedical Laboratories. Part II is based on the Occupational Health and Safety Administration (OSHA) Standards for Blood-borne Pathogens. Part III includes regulatory requirements promulgated by the California Department of Industrial Relations (Cal-OSHA), California Department of Health Services, and Los Angeles County Environmental Health Services.

PART I - BIOHAZARD MANAGEMENT IN THE LABORATORIES

A. PURPOSE

This Procedure provides guidance and requirements for the safe use of infectious materials in laboratory settings. This Procedure implements the recommendations of the Center for Disease Control and National Institutes of Health, as stated in Biosafety in Microbiological and Biomedical Laboratories (referred to hereafter as the CDC-NIH Handbook).

B. RESPONSIBILITIES

Principal Investigators (PIs), Supervisors, and Delegated Department Members (DDM) who perform or oversee activities that utilize or produce infectious materials are responsible for:

1. Assuring infectious materials are stored and handled under the criteria described below for the appropriate Biosafety Level and Universal Precautions.
2. Assuring that the containment equipment and facility requirements for activities performed under their direction meet the criteria for the appropriate Biosafety Level.
3. Providing documented training for employees under their supervision on the proper handling and storage of infectious materials and maintaining records of employee training.
4. Periodic inspections of facilities to ensure compliance with all regulations and guidelines and maintain updated records.
5. Ensuring that infectious wastes are managed per Part III of the Biohazard Management Plan- Biohazardous Waste Management.
6. Getting approval for work involving etiologic agents and potentially hazardous protocols from the Institutional Bio-Safety Committee before the commencement of work.

Risk Management and Environmental Health & Safety (RMEHS) is responsible for:

1. Developing campus requirements and guidelines for biohazard control, which are consistent with applicable Federal, State, and local regulations and guidelines. This Biohazard Management Plan is the guideline.
2. Coordinating the University's Biohazardous Waste Management Program as described in Part III of this procedure.
3. Performing random audits of specific biohazard material handling activities to assess compliance with this procedure.

The Institutional Biosafety Committee (IBC) is responsible for:

1. Reviewing and approving all proposed research activities which are potentially biohazardous.
2. Helping ensure that requirements and guidelines developed by RMEHS for application at Cal State LA are followed.
3. Ensure that all facets of a research protocol conform to applicable regulations and guidelines.

C. TERMINOLOGY AND PRINCIPLES OF BIOSAFETY

BIOSAFETY LEVELS

Four biological safety levels (BSL) are described in the CDC-NIH Handbook. These involve a combination of laboratory practices and techniques, safety equipment, and laboratory facilities appropriate for the operations performed and the hazard posed by the infectious agents in question. These levels are designated in ascending order, by the degree of protection provided to personnel, the environment, and the community (i.e., BSL 1-4). A description of BSL 1 and 2 with criteria and associated laboratory control measures is presented below. BSL 3 & 4 are not described, because Cal State LA currently cannot facilitate at these levels.

CONTAINMENT

The principles of biohazard control center on the concept of containment, which refers to safe methods for managing infectious agents in the laboratory environment where they are being handled or maintained. Primary containment involves the protection of personnel in the immediate laboratory environment from exposure to infectious agents and is provided by good microbiological techniques, the use of proper safety equipment, and appropriate vaccines. Secondary containment refers to the protection of the environment external to the laboratory from exposure to infectious materials and is provided by a combination of facility design and operational practices. The three major elements of containment are:

1. Laboratory practice and technique.

2. Use of enclosed containers such as Biological Safety Cabinets or other enclosures as primary barriers.
3. Proper design of laboratory facilities (basic, containment, and maximum containment) as secondary barriers.

BIOSAFETY CABINETS

Biological Safety Cabinets (also called Biosafety Cabinets) are among the most effective and widely used devices for providing primary containment. The three types of biosafety cabinets are Class I, Class II, and Class III. Each class has varying design and performance characteristics that help maintain contamination levels to a minimum. Class I biosafety cabinets, when used in conjunction with good microbiological techniques, provide an effective partial containment system for the safe manipulation of low to moderate-risk microorganisms (i.e., Biosafety Level 2 or BSL 2 agents). Class II cabinets are acceptable for work with moderate to high-risk agents (i.e., BSL 2 and 3).

All Class I and II biosafety cabinets must be tested and certified on-site when installation in the laboratory is complete, any time the biosafety cabinet is moved and must be recertified annually. Please note that additional schedules for frequent certification may be recommended by the manufacturer. All laboratory personnel must be trained in the proper use of these devices. (See Appendix A of the CDC-NIH Handbook for a description of the design and use of biosafety cabinets.)

D. LABORATORY BIOSAFETY LEVEL CRITERIA

Essential elements of the two biosafety levels applicable to Cal State LA for activities involving infectious microorganisms and laboratory animals are described below. A synopsis of requirements for the general use of infectious materials is presented in Table 1 of the CDC-NIH Handbook.

BIOSAFETY LEVEL 1 (BSL 1)

BSL 1 practices, safety equipment, and facilities are appropriate for most undergraduate training and teaching laboratories, and for other facilities in which work is done with defined and characterized strains of viable microorganisms not known to cause disease in healthy adult humans.

BSL 1 controls are suitable for work involving agents of no known or minimal potential hazard to laboratory workers and the environment. The laboratory is not separated from the general traffic patterns in the building.

Work is generally conducted on open benchtops. Special containment equipment is not required or generally used. Laboratory workers have specific training in the

procedures conducted in the laboratory and are supervised by a scientist with general training in microbiology or related science.

The following standard and special practices, safety equipment, and facilities apply to agents assigned to BSL 1:

BIOSAFETY LEVEL 2 (BSL 2)

BSL 2 is like BSL 1 and is suitable for work involving agents of moderate potential hazard to personnel and the environment. It differs in that

1. Laboratory workers need to have specific training in handling pathogenic agents and are directed by competent PI or DDM.
2. Access to the laboratory is limited when work is being conducted.
3. Certain procedures in which infectious aerosols may be created are conducted in biological safety cabinets (BSCs) or other physical containment equipment.

Examples of BSL 2 agents include:

STANDARD MICROBIOLOGICAL PRACTICES

- Access to the laboratory is limited or restricted at the discretion of the PI or the DDM when experiments are in progress.
- Work surfaces are decontaminated once a day and after any spill of viable material.
- All contaminated liquid or solid wastes are decontaminated or disposed of in accordance with Part III of this plan.
- Mechanical pipetting devices are used; pipetting by mouth is strictly prohibited.
- Eating, drinking, smoking, and applying cosmetics are not permitted in the work area. Food may be stored in cabinets or refrigerators designated and used for this purpose only. Food storage cabinets or refrigerators should be located outside of the work area.
- All lab workers must wash their hands after they handle viable materials and animals and before leaving the laboratory.
- All procedures are performed carefully to minimize the creation of aerosols.
- Laboratory coats, gowns, or uniforms should be worn to prevent contamination or soiling of street clothes.

SPECIAL PRACTICES

- Medical waste contaminated materials that are to be decontaminated at a site away from the laboratory must be placed in a red biohazard bag that is properly closed and labeled before being removed from the laboratory.
- Effective insect and rodent control precautions are in effect.

CONTAINMENT EQUIPMENT

- Special containment equipment is generally not required for manipulations of agents assigned to BSL 1.

LABORATORIES FACILITIES

- The laboratory is designed so that it can be easily cleaned.
- Bench tops are impervious to water and resistant to acids, alkalis, organic, solvents, and moderate heat.
- Laboratory furniture is sturdy. Spaces between benches, cabinets, and equipment are accessible for cleaning.
- Each laboratory contains a sink for hand washing.
- If the laboratory has windows that open, they must be fitted with fly screens.


Biological Agents
Human nematode, protozoal, trematode, and cestode parasites (e.g., *Strongylyoides* spp, hookworms, *Plasmodium* spp, *Toxoplasma* spp, *Schistosoma* spp, *Fasciola* spp, *Echinococcus granulosus*, and *Taenia solium*).
Certain Fungal Agents
Cryptococcus neoformans and *Sporothrix schenckii*
Certain Viral Agents
Hepatitis A, B, non-A, and non-B, Herpes viruses, Influenza, Poliov iruses, Poxviruses, and Rabies Virus (Exceptions: activities with high potential for producing aerosols of some of these agents, or concentrating virus in quantities greater than 1 liter may require BSL 3).

The following standard and special practices, safety equipment, and facilities apply to agents assigned to BSL 2:

STANDARD MICROBIOLOGICAL PRACTICES

- Access to the laboratory is limited or restricted by the PI or DDM when work with infectious agents is in progress.
- Work surfaces are decontaminated once a day and after any spill of viable material.
- All infectious liquid or solid wastes are decontaminated or disposed of in accordance with Part III of this Plan.
- Mechanical pipetting devices are used; pipetting by mouth is strictly prohibited.
- Eating, drinking, and applying cosmetics are not permitted in the work area. Food may be stored in cabinets or refrigerators designed and used for this purpose only. Food storage cabinets or refrigerators should be located outside of the work area.
- All lab workers must wash their hands after handling infectious materials and animals and when they leave the laboratory.
- All procedures are performed carefully to minimize the creation of aerosols.

SPECIAL PRACTICES

- Contaminated materials that are to be decontaminated at a site away from the laboratory are placed in a red biohazard bag before being removed from the laboratory.
- The PI or DDM limits access to the laboratory. In general, persons who are at increased risk of acquiring infection or for whom infection may be unusually hazardous are not allowed in the laboratory or animal rooms. The PI or DDM has the final responsibility for assessing each circumstance and determining who may enter or work in the laboratory.
- When the infectious agent(s) in use in the laboratory require special provisions for entry (e.g., vaccination) a hazard warning sign, incorporating the universal biohazard symbol, is posted on the access door to the laboratory work area. The hazard warning sign identifies the infectious agent, lists the name and telephone number of the laboratory director or other responsible person(s), and indicates the special requirement(s) for entering the laboratory. (See Figure 1).
- Effective insect and rodent control precautions are in effect.
- Laboratory coats, gowns, smocks, or uniforms are worn while in the laboratory. Before leaving the laboratory for any non-laboratory area (e.g., cafeteria, library, administrative offices), this protective clothing is removed and appropriately stored in the laboratory.
- Animals not involved in the work being performed are not permitted in the laboratory.
- Special care is taken to avoid skin contamination with infectious materials; gloves should be worn when handling infected animals and when skin contact with infectious materials is unavoidable.
- All materials from laboratories and animal rooms are appropriately decontaminated before disposal. Hypodermic needles and syringes are used only for parenteral injection and aspiration of fluids from laboratory animals and diaphragm bottles. Only needle-locking syringes or disposable syringe-needle units (i.e., needle is integral to the syringe) are used for the injection or aspiration of infectious fluids. Extreme caution should be used when handling needles and syringes to avoid auto inoculation and the generation of aerosols during use and disposal. Needles should not be bent, sheared, replaced in the sheath or guard, or removed from the syringe following use. The needle and syringe should be promptly placed in a puncture-resistant sharps container and disposed following the procedures on Part III of this Plan.
- Spills and accidents which result in overt exposures to infectious materials are immediately reported to the PI or Lab Supervisor. Medical evaluation, surveillance, and treatment are provided as appropriate and written records are maintained.
- When appropriate, considering the agent(s) handled, baseline serum samples for laboratory and other at-risk personnel are collected and stored. Additional serum specimens may be collected periodically, depending on the agents handled or the function of the lab. The PI is responsible for determining this need.
- A formal, written Biosafety Management Program is prepared or adopted. Personnel are trained and advised of special hazards and are required to read instructions on practices and procedures and to follow them. Failure to follow appropriate practices should result in disciplinary action.

CONTAINMENT EQUIPMENT

- Biological safety cabinets (BSCs) (Class I or II) or other appropriate personal protective or physical containment devices are used whenever:
  - Procedures with a high potential for creating infectious aerosols are conducted. These may include centrifuging, grinding, blending, vigorous shaking or mixing, sonic disruption, opening containers of infectious materials whose internal pressures may be different from ambient pressures, intranasal inoculation of animals, and harvesting infected tissues from animals or eggs.
  - High concentrations or large volumes of infectious agents are used. Such materials may be centrifuged in the open laboratory if sealed heads or centrifuge safety cups are used and if they are opened only in a biological safety cabinet.

LABORATORIES FACILITIES

- The laboratory is designed so that it can be easily cleaned.
- Bench tops are impervious to water and resistant to acids, alkalis, organic, solvents, and moderate heat.
- Laboratory furniture is sturdy. Spaces between benches, cabinets, and equipment are accessible for cleaning.
- Each laboratory contains a sink for hand washing.
- If the laboratory has windows that open, they must be fitted with fly screens.
- An autoclave for decontaminating infectious laboratory materials is available.

BIOSAFETY LEVEL 3 AND BIOSAFETY LEVEL 4

Currently, no facilities at Cal State LA meet the minimum requirements and criteria for BSL 3 or BSL 4.

E. ADDITIONAL REQUIREMENTS FOR LABORATORY ANIMALS

If experimental animals are used, the biosafety procedures must also address facility and operational requirements that will reasonably assure appropriate levels of environmental quality, safety, and care. Laboratory animal facilities should be considered extensions of the laboratory. In some cases, they are integral to and inseparable from laboratory operations. Regardless of the physical arrangement, laboratory animal facilities, operational practice, and quality of animal care should meet the standards prescribed in Guide for the Care and Use of Laboratory Animals, HHS Publication, 8th Edition, 2011, and Laboratory Animal Welfare Regulation - 9 CFR, Subchapter A, Parts 1, 2, and 3. Additional recommendations (which should be considered "requirements") for the various biosafety levels are presented in the CDC-NIH Handbook. The CDC-NIH requirements should be consulted for any activities involving infected vertebrate animals. Table 2 of the CDC-NIH Handbook presents a synopsis of these requirements.

F. BLOOD-BORNE PATHOGENS

Special requirements are in place to control the infection of workers by certain blood-borne pathogens such as HIV, Hepatitis-B, or Hepatitis C. The procedure to comply with these requirements is presented as Part II of the Biohazard Management Plan.

G. BIOHAZARDOUS WASTE MANAGEMENT

All laboratory operations must comply with the Cal State LA procedure for Biohazardous Management, which is presented as Part III of the Biohazard Management Plan unless equally protective alternative procedures are approved.

For Further Information

Additional information on safe handling practices and associated requirements can be obtained from RMEHS. Contact RMEHS (ext. 3-3531) for copies of applicable regulations or additional guidance.

PART II - EXPOSURE CONTROL PROGRAM FOR BLOOD-BORNE PATHOGENS

A. PURPOSE

To establish the requirements for preventing potential exposure to blood-borne pathogens and infectious waste in the workplace through education, training, and

compliance with guidelines from the Center for Disease Control (CDC), Federal Occupational Safety and Health Administration (OSHA), 29 CFR 1910.1030, (Appendix II-A) and the California OSHA, 8 CCR 5193.

B. DEFINITIONS

Blood-Borne Pathogens

- Certain pathogenic microorganisms found in the blood of infected individuals that can be transmitted from the infected individual through blood and other body fluids to cause blood-borne diseases; specifically, Hepatitis B Virus (HBV), Hepatitis C (HCV) and AIDS Human Immunodeficiency Virus (HIV).

Disinfect

- To inactivate virtually all recognized pathogenic microorganisms to reduce the probability of infection to an acceptable level.

Employee with Potential for Exposure

- Any Cal State LA employee whose work may involve direct contact with blood, blood products, other body fluids or tissues.

Exposure Incident

- Contact of a contagion with eye, mouth, or other mucous membrane, non-intact skin, or parenteral (needle) contact with blood or other potentially infectious materials that may occur in the performance of employee duties.

Exposure Control Program (ECP)

- Cal State LA's second part of the Biohazard Management Plan provides procedures used to minimize employees' exposure to blood-borne pathogens such as Hepatitis B Virus (HBV), Hepatitis C (HCV), and Human Immunodeficiency Virus (HIV).

Infectious Waste

- Includes blood, blood products, contaminated sharps (needles, etc.), pathological waste, and microbiological waste.

Other Potentially Infectious Materials (OPIM)

- OPIM includes the following: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any other body fluid that is visibly contaminated with blood such as saliva or vomitus, and all body fluids in situation where it is difficult or impossible to differentiate between body fluids such as emergency response; any unfixed tissue or organ (other than intact skin) from a human (living or dead; and any of the following, if known or reasonably likely to contain or be infected with HIV, HBV, HCV: cell tissue, or organ cultures from humans or experimental animals; blood, organs, or other tissues from experimental animals; or culture medium or other solutions.

OSHA Categories for Exposure

- **Category 1:** Employees whose tasks involve exposure to blood or body fluids.
- **Category 2:** Employees whose tasks involve no exposure to blood or body fluids but whose employment may require unplanned Category 1 procedure.
- **Category 3:** Employees whose tasks involve no exposure to blood or body fluids.

Sterilants

- EPA registered chemical procedures to destroy microbial life.

Universal Precautions

- A method of infection control in which all human blood and other potentially infectious material are treated as hazardous and known to be infectious for Hepatitis B Virus (HBV), Hepatitis C (HCV), and Human Immunodeficiency Virus (HIV).

C. ROLES AND RESPONSIBILITIES

DEPARTMENT SUPERVISORS

Are responsible for the identification of affected students/employees, assuring education and training are provided, periodic self-inspections, medical requirements, and overall ECP compliance.

1. Departments shall identify body fluids that present a risk for employees.

2. Departments shall describe proper disposal of infectious waste and sharps (needles, etc.) based on "Part III Biohazardous Waste Management".
3. Assure education and training on PPE are provided to all affected employees.
4. Departments shall offer HBV vaccine to workers who are exposed to blood-borne pathogens.
5. Departments shall assure proper record keeping of employees accepting or waiving the HBV vaccine. Central records shall be stored at RMEHS.

RISK MANAGEMENT AND ENVIRONMENTAL HEALTH AND SAFETY (RMEHS)

Is responsible for developing Cal State LA's ECP, coordinating ECP implementation including hazards and controls identification assistance, and performing periodic audits for compliance.

D. GENERAL

Blood-borne pathogens may be present whenever blood or other potentially infectious materials are present. Three of the most significant blood-borne pathogens, Hepatitis B Virus (HBV), Hepatitis C (HCV), and Human Immunodeficiency Virus (HIV), have been recognized as pathogens capable of causing serious illness and even death. Because viruses are transmitted through blood and certain body fluids, employees who routinely handle these as part of their job have an increased risk of contracting blood-borne diseases.

The most efficient mode of transmitting bloodborne pathogens to workers is by direct inoculation such as might occur with a needle stick or injury from another sharp instrument. Moreover, infected employees may transmit the pathogens to others. It is known that exposure to extremely small amounts of HBV-positive blood may transmit infection. Blood and blood-derived body fluids contain the highest quantities of the virus and are likely vehicles for HBV transmission.

HIV has been isolated from human blood, semen, breast milk, vaginal secretions, tears, and urine. However, at present, epidemiological evidence implicates only blood, semen, breast milk, and vaginal secretions, in the transmission of the virus. It is not known whether HIV is transmitted by casual contact. Exposure to HIV-contaminated blood is the most likely mode of transmission.

The Biohazard Management Plan and Exposure Control Program (ECP) serve as a guide for preventing potential exposure to blood-borne pathogens and infectious waste in the workplace. The Plan and the Program address the issue of preventing exposure to blood-borne pathogens through education and training. Cal State LA's enforcement of the ECP will provide a safe and healthy environment for all its employees.

E. EXPOSURE-RESPONSE, PREVENTION, AND CONTROL

1. EXPOSURE CONTROL PLAN (ECP)

Cal State LA shall establish, implement, and maintain an effective exposure control plan that is designed to eliminate or minimize employee exposure and that is consistent with The Blood Borne Pathogen Standard, Title 8 CCR 5193.

a. Employees can access ECP from the RMEHS website.
b. Exposure control plan shall be in writing and will contain:
    - Exposure Determination.
    - Schedule and Method of implementation of Plan.
    - Method of Compliance.
    - Hepatitis B Vaccination and Post-Exposure Evaluation and Follow-up.
    - Communication of Hazard to Employees.
    - Record keeping.
    - Procedure for the evaluation of circumstances surrounding exposure incidences.
    - An effective procedure for gathering information required by a sharp injury log.
    - Effective procedure for periodic determination of the frequency of use of the type and brand of sharpness involved in the incidents documented on the Sharp Injury Log.
    - An effective procedure for identifying currently available engineering controls and selecting such controls where appropriate.
    - An effective procedure for documenting patient safety determinations.
c. The plan will comply with the Bloodborne Pathogens Standard. This plan is divided into the following sections:
    - Exposure Determination
    - Sharps Injury Log
    - Personal Protective Equipment
    - Cardiopulmonary Resuscitation (CPR) Equipment and Care
    - Disinfection Process
    - Disposal of Infectious Waste
    - HBV and Post-Exposure Evaluation and Follow-up
    - Communication of Hazards to Employee
    - Training
    - Record keeping

2. EXPOSURE DETERMINATION

a. Occupational exposure to blood or other potentially infectious materials (OPIM): Employee classification shall be determined by representatives from Human Resources, Health Center, and RMEHS.

b. The following lists the job title and the exposure category related to that employee. Please refer to the legend for definitions of labels assigned to the table below.

CAL STATE LA JOB CLASSIFICATIONS AND ASSIGNED EXPOSURE CATEGORIES	
1 - Athletic Coach / Trainer (AA, PE)	**2** - Infant Toddler Center Teacher (SA, ITC)
2 - Animal Handler (AA, CNS)	**1** - Physician (SA, HC)
1 - Biohazard Waste Technician (AA, CNS)	**2** - Plumber (AF, FS)
2 - Building Service Engineer (AF, FS)	**2** - Police Officer (AF, UP)
2 - Children's Center Teacher (SA, CC)	**2** - Principal Investigator (AA, CNS)
1 - Clinical Aid / Laboratory Technician (SA, HC)	**1** - Nurse (SA, HC)
2 - Community Service Specialist (AF, PS)	**1** - Nursing Faculty (AA, CNS)
1 - Custodian (AF, FS)	**1** - Rec Sports Maintenance Custodian/Specialist (HHS, SA, RS)
1 - RMEHS Officer / Specialist (AF, RMEHS)	**2** – Rec Sports Other Employees (HHS, SA, RS)
1 – Kinesiology Research Faculty (AA, HHS)	**3** – All other job classifications
LEGEND	
Colleges and Division	**Departments**
AA – Academic Affairs Division	CC – Children's Center
AF – Administration & Finance Division	FS – Facilities Services
SA – Student Affairs Division	HC – Health Center
CAL – College of Arts & Letters	ITC – Infant Toddler Center
CNS – College of Natural Sciences	PE – Physical Education
HHS –Human and Health Sciences	PS – Parking Services
	RMEHS – Risk Management and Environmental Health & Safety
	UP – University Police
OSHA CATEGORIES FOR EXPOSURE	
1 – Employees whose tasks involve exposure to blood or body fluids.	
2 – Employees whose tasks involve no exposure to blood or body fluids but whose employment may require unplanned Category 1 procedures.	
3 – Employees whose tasks involve no exposure to blood or body fluids.	

c. When the potential for contact with infectious materials exists, universal precautions will be observed to prevent contact with blood or OPIM. All blood and OPIM will be considered infectious regardless of the perceived status of the source individual.

3. SHARPS INJURY LOG

a. Sharps Injury Log is a record of each exposure incident involving a sharp. (See Appendix B for Sharp injury Log). The information recorded shall include the following information if known or reasonably available.
   1. Date and time of the exposure incident occurred.
   2. The procedure that the exposed employee was performing at the time of the incident.
   3. A description of the exposure incident.
      - Job classification of the exposed employee.
      - Department or work area where the exposure incident occurred.
      - The procedure that the exposed employee was performing at the time of the incident.
      - How the incident occurred.
      - The body part involved in the exposure incident.
      - If the sharp had engineered sharps injury protection, whether the protective mechanism was activated, during the activation of the mechanism, or after activation of the mechanism, if applicable.
      - If the sharp has no engineered sharps injury protection, the injured employee's opinion as to whether and how such a mechanism could have prevented the injury.
      - The employee's opinion about whether any engineering, administrative or work practice control could have prevented the injury.
   4. Each exposure incident shall be recorded on the Sharps Injury log within 14 working days of the date the incident is reported to the employer.
      - Departments shall establish and maintain records of the Sharps Injury Log for a period of 5 years from the date the exposure incident occurred. A copy shall be included with the Supervisor Injury Investigation Report.
   5. The information in the Sharps Injury Log shall be recorded and maintained in such a manner as to protect the confidentiality of the injured employee.
   6. The data for the frequency of use types and brands of sharps involved in exposure incidents documented should be reviewed annually to determine if

there are types involved in injuries at a higher frequency. Consideration should be given to the replacement of sharps with higher frequency injuries.

4. PERSONAL PROTECTIVE EQUIPMENT REQUIREMENTS

Personal Protective Equipment (PPE) is specialized clothing or equipment worn by an employee for protection against hazards. This can include lab coats gowns, gloves, face shields/masks, eye protection, etc.

a. Appropriate protective clothing such as, but not limited to, gowns, aprons, lab coats, clinic jackets, or similar outer garments shall be worn in occupational exposure situations. The type and characteristics will depend upon the task and degree of exposure anticipated.
b. Cal State LA will provide and require the use of gloves as a protective barrier in all laboratories, first aid, and emergencies in which body fluids are handled. The use of gloves as a personal protective measure is important in the following situations:
    - If an employee has cuts, abraded skin, chapped hands, or dermatitis.
    - When examining abraded or non-intact skin, or the patient has active bleeding.
    - During cleaning of bodily fluids and decontaminating procedures.

    Gloves shall also be worn when it can be reasonably anticipated that the employee may have contact with blood and OPIM (e.g., custodian, plumber, etc.). Only gloves that are of an appropriate quality for the procedure and the appropriate size for workers shall be used. Wash hands with antimicrobial soap after removing gloves.
c. Masks, Eye Protection, and Face Shields. Masks in combination with eye protection devices, such as goggles or glasses with solid side shields, or chin-length face shields, shall be worn whenever splashes, spray, spatter, or droplets of blood or other potentially infectious materials may be generated and eye, nose, or mouth contamination can be reasonably anticipated.
d. Personal Protective Equipment, where necessary, shall be provided by the department at no cost to the employee. Supervisors shall ensure accessibility and proper usage of PPE. Employees failing to utilize any safety equipment deemed necessary by the supervisor shall be subject to discipline.
e. Dispose of gloves or contaminated PPE in the infectious waste container (see Part III "Biohazardous Waste Management" for information on disposal of infectious waste).

5. COMMUNICATION OF HAZARDS TO EMPLOYEES

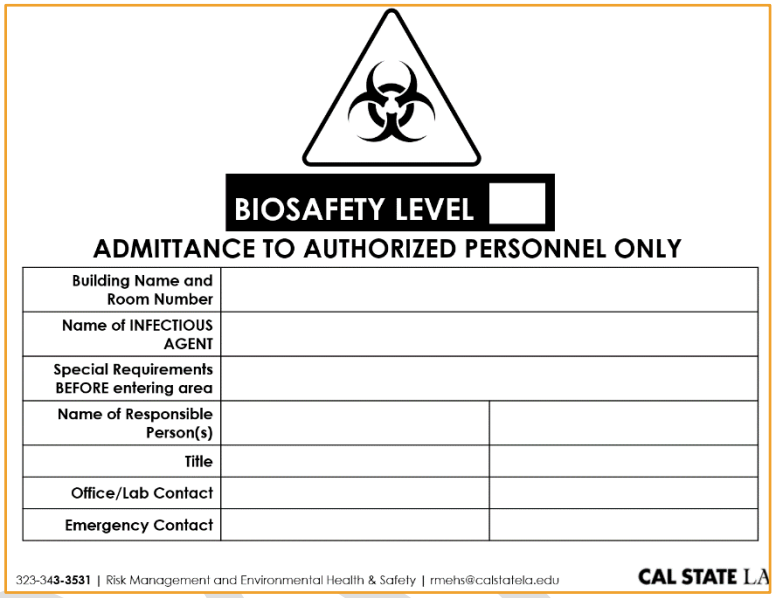
Hazards are communicated to the employee through signs, labels, and training.

1. Labels and Signs
    1. Labels
        - Warning labels shall be affixed to containers of regulated waste, refrigerators, and freezers containing blood or OPIM; and other containers used to store, transport, or ship blood or OPIM.
        - Labels required shall include either the following legend:

Or in the case of regulated waste the legend: BIOHAZARDOUS WASTE or SHARP WASTE.

- These labels shall be fluorescent orange or orange-red or predominantly so, with lettering and symbols in a contrasting color.
- Labels required shall either be an integral part of the container or shall be affixed as close as feasible to the container by string, wire, adhesive, or other methods that prevent their loss or unintentional removal.
- Red bags or red containers may be substituted for labels except for sharps containers or regulated waste red bags. Bags used to contain regulated waste shall be color-coded red. Labels on red bags or red containers do not need to be color-coded.
- Containers of blood, blood components, or blood products that are labeled as to their contents and have been released from transfusion or other clinical use are exempt from the labeling requirements.
- Individual containers of blood or OPIM that are placed in a labeled container during storage, transport, shipment, or disposal are exempt from labeling requirements.
- Labels required for contaminated equipment shall be following this subsection and shall also state which portions of equipment remain contaminated.
- Regulated waste that has been decontaminated need not be labeled or color-coded.

2. Signs
   The employer shall post signs at the entrance to work areas specifying to use or disposal of biohazardous materials and/or waste, which will bear the following legend.

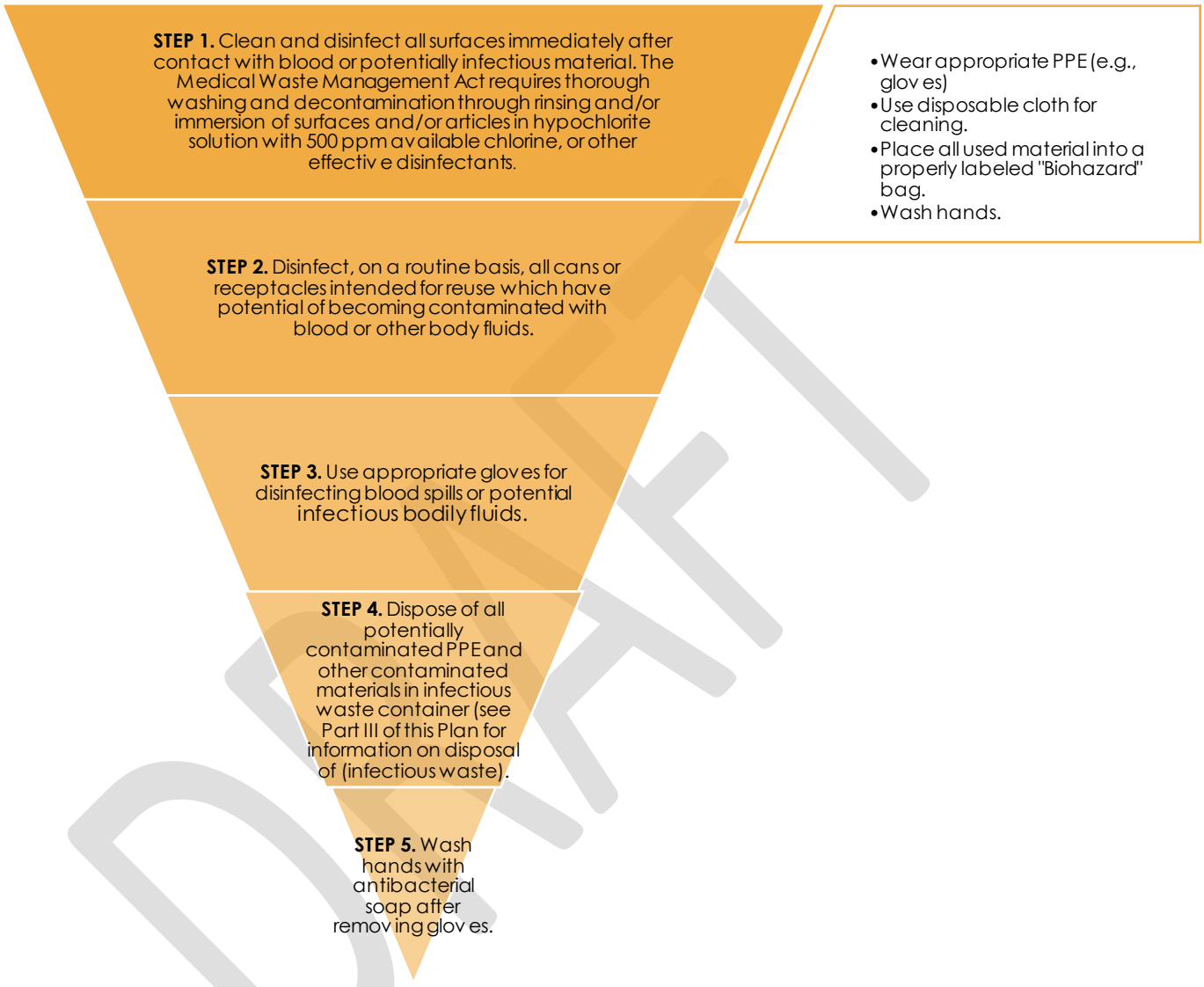


   These signs shall be fluorescent orange-red or predominately so, with lettering and symbols in a contrasting color, and meet the requirements of Title 8 CCR section 3340 of the code.

6. CARDIOPULMONARY RESUSCITATION (CPR) EQUIPMENT AND CARE

a. Maintain a supply of cardiopulmonary resuscitation (CPR) mouthpiece devices in the Health Center.
b. In addition, pocket masks, resuscitation bags, or other ventilation devices should be provided in strategic locations.
c. Provide cardiopulmonary resuscitation (CPR) mouthpiece devices for use in resuscitation to employees certified in CPR.
d. Sterilize non-disposable ventilation bag/mask.
   - Disassemble bags.
   - Soak in disinfecting solution of chlorine for 30 minutes.
   - Rinse, and allow to air dry.

7. DISINFECTION PROCESS



8. DISPOSAL OF INFECTIOUS WASTE

Follow procedures in Part III Biohazardous Waste Management for proper disposal of Infectious Waste.

9. HEPATITIS B VACCINE

Cal State LA will make available free of charge the Hepatitis B vaccine and vaccination series to all employees who have reasonable potential for occupational exposure, and post-exposure follow-up to employees who have had an exposure

incident. If a routine booster dose of the Hepatitis B vaccine is recommended by the U.S. Public Health Service (USPHS) at a future date, such booster doses shall be made available at no cost.

All employees who decline the Hepatitis B vaccine offered shall sign the Cal-OSHA required waiver indicating their refusal. If the employee initially declines the Hepatitis B vaccination but at a later date while still covered under the standard decides to accept the vaccination, the vaccination shall then be made available at no cost.

All medical evaluations and procedures including the Hepatitis B vaccine and vaccination series and post-exposure follow-up are:

- Made available at no cost to the employee.
- Made available to the employee at a reasonable time and place.
- Performed by or under the supervision of a licensed physician.
- Provided according to the recommendations of the U.S. Public Health Service (USPHS).
- All laboratory tests shall be conducted by an accredited laboratory at no cost to the employee.

10. POST-EXPOSURE EVALUATION AND FOLLOW UP

Exposure incident means a specific eye, mouth, or other mucous membranes, non-intact skin, or parenteral contact with blood or OPIM that resulted from the performance of duties. +All exposure incidents shall be reported, investigated, and documented. When the employee incurs an exposure incident, it shall be reported to the:

- Supervisor
- Risk Management and Environmental Health & Safety (RMEHS)
- Workers Compensation Medical Provider

Following a report of an exposure incident, the exposed employee shall immediately receive a confidential medical evaluation and follow-up, including at least the following elements:

Documentation of the route of exposure, and the circumstances under which the exposure incident occurred.

- Identification and documentation of the source individual, unless it can be established that identification is infeasible or prohibited by law.

- The source individual's blood shall be tested as soon as feasible and after consent is obtained to determine HBV and HIV infectivity.
- Post-exposure prophylaxes, as recommended by USPHS.
- Counseling.
- Evaluation of reported illnesses.
- Departments shall establish and maintain records of each employee exposed to bloodborne pathogens to include the following:
  a. Name and Coyote ID Number of employees
  b. Copy of employee's HBV or waiver of vaccination
  c. Record of any exposure incident
  d. Copy of physical findings and follow-up procedure as it relates to the incident.

11.TRAINING

Departments shall determine exposure risk from job classifications into appropriate categories (See List 1-b). Initial and annual refresher training is required for employees who have the potential to be exposed to bloodborne pathogens. The following topics are included in the bloodborne pathogen training:

- Copy and Explanation of Standard.
- Epidemiology and Symptoms.
- Modes of Transmission.
- Employer's Exposure Control Plan.
- Risk Identification.
- Methods of Compliance.
- Decontamination and Disposal.
- Personal Protective Equipment.
- Hepatitis B Vaccination.
- Emergency.
- Exposure Incident.
- Post-Exposure Evaluation and Follow-up.
- Signs and Labels.
- Interactive Questions and Answers.

Departments shall assure an Education and Training Program on possible exposure to bloodborne pathogens is provided. Please contact RMEHS, ext. 3-3531, for assistance. Training records should include the following:

- Dates of training.
- Summary of the training session.
- Name of person conducting training and those in attendance.
- Maintain records for three years.
- Provide RMEHS Office with copies for central file.

Required Safety Training

The following is required as a minimum laboratory safety training standard at Cal State LA. More information on the different types of training that may be required based on the hazards in the lab, please refer to RMEHS' Campus Safety Training Webpage

Students	Employees
Course: Laboratory Safety Course Code: ehs_hsf_c02_sh_enus Access: Learning Bridge Frequency: Complete before starting the lab, annually.	**Course: Globally Harmonized System** Course Code: CALSTATELA-CURRI-GHS Access: CSU Learn Frequency: Annually **Course: Safety Data Sheets** Course Code: SKLFST_ehs_hsf_d45_sh_enus-1073000000 Access: CSU Learn Frequency: Every 2 Years **Course: CSU Hazard Communications** Course Code: CSU-SCORM-HAZCOMM Access: CSU Learn Frequency: Every two years **Course: CSU Injury Illness Prevention Program** Course Code: CALSTATELA-CURRIC-IIPP Access: CSU Learn Frequency: Once

	Course: CSU Laboratory Safety Fundamentals Course Code: CALSTATELA-CURRIC-LABSFTY Access: CSU Learn Frequency: Annually

Additional Training Required When Working with Biological Materials

Students	Employees	When is Training Needed?
Course: Bloodborne Pathogen Awareness Course Code: ehs_hsf_c92_sh_enus Frequency: Annually	**Course: Bloodborne Pathogens** Course Code: CALSTATELA-CURRIC-BBPA Frequency: Annually	Working is blood.
Course: Fundamentals of Biosafety Course code: _scorm12_spcentralsta_biosafetyfund Frequency: Annually	**Course: Fundamentals of Biosafety** Course Code: CALSTATELA-CURRIC-BIOSAFETYFUND Frequency: Annually	Working with biohazardous materials.
Course: Safe Use of Biosafety Cabinet Course Code: _scorm12_spcentralsta_biosafetycabinets Frequency: Annually	**Course: Safe Use of Biosafety Cabinet** Course Code: _scorm12_spcentralsta_biosafetycabinets Frequency: Annually	Working with biologicals and/or pathogenic materials.
Course: Biosafety Hazardous Waste Handling and Disposal Course Code: ehs_hsf_d88_sh_enus Frequency: Annually	**Course: Biosafety Hazardous Waste Handling and Disposal** Course Code: CALSTATELA-CURRIC-BHWHD Frequency: Annually	Working with biological materials.
Course: Autoclave Safety Training Please contact the college technician for training dates and times.		Working with biological waste.

12. RECORDKEEPING

Cal State LA maintains confidential records for employees with occupational exposure to blood, OPIM, or ATP-L. The types of records include employee training records, incident and investigation reports, and sharps injury records. Cal State LA will maintain these records for the following periods:

- Employee Training Records – 3 years from the date of training
- Incident and Investigation Reports – while employed
- Sharps Injury Log Records – 5 years from the date of the exposure incident

Records are kept confidential and not disclosed or reported without the employee's express written consent to any person within or outside the workplace, except as required by law. Medical records are maintained for at least the duration of employment plus 30 years.

F. DEPARTMENT / AREA SPECIFIC PROCEDURES

These procedures are designed to be specific for the area listed, but by no means are all-encompassing. Although some situations may not have been covered and additional supplemental procedures for each department may be added to ensure safety procedures for the space are being followed. If there are any questions, contact RMEHS.

1. UNIVERSITY POLICE

During a medical emergency that may expose the responding Officer to human body fluids, the following pre-response precautions must be taken:

All police units shall be equipped with, at a minimum, the following Personal Protective Equipment (PPE), contained in a portable kit:

- Gloves
- Large Zip Lock Bags for storage of used PPE
- Red Infectious Waste/Biohazard Disposal Bags
- Non-contact Ventilators/Pocket Respirators
- Eye/Face Protection
- General First Aid Equipment (Band-Aids, gauze, tape, etc.)
- Sanitary Wipes

a. Officers shall inspect their vehicles for the presence of PPE before the beginning of their shift.
b. In the event of a medical emergency that requires the administration of first aid by the Officer, the PPE kit shall be carried to the first aid location and appropriate PPE donned before administering first aid.
c. Goggles must be donned when the likelihood of exposure due to the splashing or splattering of body fluids is present.
d. After the response is completed, the used contaminated materials shall be stored in a red biohazard bag and disposed of as infectious waste at the Student Health Center Infectious Waste Storage Area.

e. Any Officer that receives exposure during the administration of first aid shall be included in the Post Exposure Evaluation and Follow-Up identified in Section E-10 of this Plan.
f. Clothing that becomes soiled with human body fluids shall be handled with gloves and placed in a **red biohazard bag for disposal or decontamination**. Advise supervisor and/or RMEHS.

2. CRIMINAL INVESTIGATION - EVIDENCE HANDLING

Evidence that presents an infectious exposure hazard (i.e., Human Body Fluids) shall be handled as follows:

Evidence shall be handled per Department of Justice (DOJ) guidelines.

a. Where possible, potentially infectious evidence shall be handled with a tool (tweezers, tongs, etc.)
b. The investigator handling the evidence shall wear protective gloves (surgical).
c. Other PPE (masks, face shields, lab coats, goggles, etc.) shall be worn when the collection of evidence may result in the splashing, splattering, or spraying of human body fluids, or if the investigator otherwise feels that such protections are warranted.
d. Evidence shall be placed in resealable containers such as zip lock bags, ampule bottles, etc.
e. Evidence containers shall be marked "Infectious Evidence."
f. Evidence shall be handled by trained personnel only.
g. Evidence shall be stored in a laboratory-type refrigerator which has a warning on the door that states "Infectious Materials Inside".
h. Disregarded infectious evidence shall be disposed of through the Health Center. All handling etc. shall be following Part III "Biohazardous Waste Management Plan".
i. See Part III D (5) of this Plan for Trauma Scene Management Guidelines.

3. ATHLETIC TRAINERS

Injuries often occur during athletic events. In instances where the injury results in evulsions, cuts, compound fractures, etc. (where human body fluid other than sweat is present), special first aid precautions must be taken.

a. A portable first aid kit containing the equipment listed in Section 1 should be available at all athletic events.

b. Personal Protective Equipment, when appropriate, must be used when providing first aid.

4. MEDICAL PERSONNEL

a. All medical personnel should wear lab coats or medical-specific clothing when working with patients.
b. Gloves must be donned when examining sores, wounds, sutures, or other body cavities where body fluids may be transferred to the examining medical professional.
c. Goggles and masks must be donned when the likelihood of exposure due to the splashing, spraying, or splattering of body fluid is present.

5. PHLEBOTOMY

a. Protective gloves shall be worn.
b. Other protective equipment shall be available for the worker's use (goggles, apron, etc.)
c. Needles and lancets shall not be recapped or broken.
d. Place used sharp needles and lancets in the puncture-proof "sharps container" provided in the work area.

PART III - BIOHAZARDOUS (INFECTIOUS) WASTE MANAGEMENT PLAN

1. PURPOSE

The purpose of this procedure is to provide guidance and describe requirements for the proper management of potentially infectious materials and waste products. Requirements for generators of infectious waste are prescribed in the California Code of Regulations (CCR), Title 22, Division 4, Chapter 21, Articles 1-4, and the California Health and Safety Code. Implementation of this Program will ensure that all infectious wastes generated by Cal State LA's facilities and activities are managed in consonance with good health and safety practices and in compliance with applicable regulations.

FACILITY INFORMATION

The following information applies Cal State LA and the persons listed for contact are representatives on behalf of Cal State LA, under the Department of Risk Management and Environmental Health & Safety (RMEHS). Additionally, information provided gives a general outline of the types of biohazardous materials that are in use on campus.

FACILITY NAME AND ADDRESS

California State University, Los Angeles
5151 State University Drive
Los Angeles, CA 90032
323-343-0000
Type of Facility: Academic and Research Institution

CONTACT NAME(S) AND CAMPUS LOCATION:

Office of RMEHS, Corporate Yard 244
323-343-3531

- Nida Niravanh, Director of RMEHS
- Rominna Valentine Ico, Chemical Hygiene and Biosafety Officer

MEDICAL WASTE INFORMATION

Types of medical waste generated:

1. Biohazardous waste
    a. Pathology Waste
2. Sharps waste

3. Pharmaceutical Waste
    a. Pharmaceutical/Sharps Waste
    b. Controlled Substances (Research Specific)
    c. RCRA Hazardous Pharmaceutical (Health Center Specific)

Types of medical waste **not** generated:

1. Trace Chemotherapy Waste

MATERIAL OF TRADE EXEMPTION

The facility staff does not generate medical waste offsite. However, should the facility staff generate any offsite, it shall transport medical waste in limited quantities up to 35.2 pounds back to the facility for proper disposal of that medical waste. A form/log is kept at the facility where the facility staff shall complete each trip medical waste is brought back to the facility. The form/log shall be kept for a period of two years. The form/log shall contain all the following information:

1. The name of the person transporting the medical waste.
2. The number of containers of medical waste transported.
3. The date the medical waste was transported

2. DEFINITIONS

Word	*Definition*
Biohazard Bag	• A biohazard bag is a disposable film bag used to contain medical waste. Notwithstanding subdivision (b) of Section 117605, the film bags that are used to line the United States Department of Transportation (USDOT)-approved shipping containers for transport from the generator's facility onto roadways and into commerce to a treatment and disposal facility shall be marked and certified by the manufacturer as having passed the tests prescribed for tear resistance in the American Society for Testing Materials (ASTM) D1922, "Standard Test Method for Propagation Tear Resistance of Plastic Film and Thin Sheeting by Pendulum Method" and for impact resistance in ASTM D1709, "Standard Test Methods for Impact Resistance of Plastic Film by the Free-Falling Dart Method," as those documents were published on January 1, 2014.
Biohazardous Waste	• Biohazardous waste is also called Infectious Waste as defined by the California Health and Safety Code, and San Bernardino County Ordinance means any of the following: o Laboratory wastes, including but not limited to, specimen cultures from medical and pathological laboratories, cultures, or stocks of infectious agents from research laboratories, and other etiologic agents that pose a substantial threat to health due to their volume and virulence.

Word	Definition
	○ Waste from the production of bacteria, viruses, or the use of spores discarded live, attenuated vaccines, and culture dishes and devices used to transfer, inoculate, or mix cultures. ○ Surgical or pathologic specimens, including human and animal parts and tissues removed surgically or at autopsy contain etiologic agents and attendant disposable fomites. ○ Equipment, instruments, utensils, and other disposable materials that are likely to transmit etiologic agents from the rooms or the enclosures of animals, which have been isolated because of suspected or diagnosed communicable disease. ○ Carcasses, tissues, or fluids or fluid blood of animals or humans infected with etiologic agents which may pose a substantial hazard to public health if improperly managed. ○ Any other material which, in the determination of the EH&S Officer or responsible individual presents a significant danger of infection because it is contaminated with, or may be reasonably expected to be contaminated with, etiologic agents.
Biohazardous Waste Container	• Biohazardous waste container is a rigid container which may be disposable, reusable, or recyclable. • Containers shall be leak-resistant, have tight-fitting covers, and kept clean and in good repair. • Containers may be of any color and shall be labeled with the words "Biohazardous Waste" or with the international biohazard symbol and the word "BIOHAZARD" on the lid and on the sides to be visible from any lateral direction.
Empty	• "Empty means a condition achieved when tubing, a container, or inner liner removed from a container that previously contained liquid or solid material, including, but not limited to a chemotherapeutic agent, is considered empty. • The tubing, container, or inner liner removed from the container shall be considered empty if it has been emptied so that the following conditions are met.
Medical Waste	• Infectious biohazardous waste or sharps waste. • Waste that is produced or generated because of the diagnosis, treatment, or immunization of human beings or animals, in research pertaining thereto, or in the production or testing of biological agents.
Mixed Waste	• "Mixed waste" means mixtures of medical and non-medical waste. Mixed waste is medical waste, except for all the following: ○ Medical waste and hazardous waste is hazardous waste and is subject to regulation as specified in the statutes and regulations applicable to hazardous waste.

Word	Definition
	○ Medical waste and radioactive waste is radioactive waste and is subject to regulation as specified in the statutes and regulations applicable to radioactive waste. ○ Medical waste, hazardous waste, and radioactive waste is radioactive mixed waste and is subject to regulation as specified in the statutes and regulations applicable to hazardous waste and radioactive waste.
Pharmaceutical	• "Pharmaceutical" means a prescription or over-the-counter human or veterinary drug, including, but not limited to, a drug as defined in Section 109925 of the Federal Food, Drug, and Cosmetic Act, as amended, (21 U.S.C.A. Sec. 321(g)(1)). For purposes of this part, "pharmaceutical" does not include any pharmaceutical that is regulated according to either of the following: ○ The federal Resource Conservation and Recovery Act of 1976, as amended (42 U.S.C.A. Sec. 6901 et seq.). This waste stream shall be handled as hazardous waste under the authority of Chapter 6.5 (commencing with Section 25100) of Division 20 and the Radiation Control Law (Chapter 8 [commencing with Section 114960] of Part 9).
Pharmaceutical Waste Container	• Pharmaceutical shall be segregated for storage, and, when placed in a container, it shall be compliant with USDOT and the US DEA when prepared for shipment offsite for treatment. • It shall be labeled with the words "HIGH HEAT" or "INCINERATION ONLY" on the lid and sides, to be visible from any lateral direction.
Pathological Waste	• Pathological waste includes both of the following: ○ Human body parts, except for teeth, removed at surgery and surgery specimens or tissues removed at surgery or autopsy that are suspected by the health care professional of being contaminated with infectious agents known to be contagious to humans or having been fixed in formaldehyde or another fixative. ○ Animal parts, tissues, fluids, or carcasses suspected by the attending veterinarian of being contaminated with infectious agents known to be contagious to humans.
Pathological Waste Container	• Pathological waste shall be segregated for storage and, when placed in a secondary container, that container shall be labeled with the words "Pathology Waste" or "PATH" on the lid and sides, to be visible from any lateral direction.
Sharps	• "Sharps waste" means a device that has acute rigid corners, edges, or protuberances capable of cutting or piercing, including, but not limited to, hypodermic needles, hypodermic needles with syringes, blades,

Word	Definition
	needles with attached tubing, acupuncture needles, root canal files, broken glass items used in health care such as Pasteur pipettes and blood vials contaminated with biohazardous waste, and any item capable of cutting or piercing from trauma scene waste.
Sharps Container	• A sharps container is a rigid puncture-resistant container used in patient care or research activities meeting the standards of, and receiving approval from, the United States Food and Drug Administration as a medical device used for the collection of discarded medical needles or other sharps.

3. RESPONSIBILITIES

SUPERVISORS

Supervisors who manage activities that generate biohazardous wastes (e.g., Principal Investigators, Lab Supervisors, etc.) are responsible for:

a. Assuring infectious wastes are stored, handled, and disposed of according to this procedure.
b. Training employees under their supervision on the proper handling and storage of infectious materials.
c. Periodic inspection of inspections and facilities to ensure regulatory compliance.
d. Maintaining records of employee training.
e. Maintaining up-to-date documentation of standard operating procedures, including annual thermometer calibrations and monthly application of Bacillus stearothermophilus (a biological indicator), for each autoclave or other approved sterilization device.

RISK MANAGEMENT AND ENVIRONMENTAL HEALTH & SAFETY (RMEHS)

RMEHS is responsible for:

a. Developing campus requirements and guidelines for infectious waste which are consistent with applicable Federal, State, and local regulations and guidelines.
b. Preparing, documenting, and facilitating the implementation of the University's Biohazardous Waste Program, following the California Health and Safety Code.
c. Approving specific on-site treatment and procedures (e.g., autoclaving, or other approved sterilization techniques) used to decontaminate infectious equipment.
d. Performing audits of specific waste-generating facilities or activities to assess compliance with this procedure.

e. Promoting guidance to area supervisors as the proper compliance procedures.
f. Arranging for appropriate disposal of medical waste.

4. REQUIREMENTS

CONTAINMENT AND STORAGE

a. Potentially infectious material must be securely contained within Biohazardous Waste Bags ("Red Bags") according to the following:
   1. Biohazardous waste must be segregated from other types of waste at the point of origin.
   2. Biohazardous waste should be "double-bagged" if it contains partially saturated solid waste or liquids.
   3. Bags containing biohazardous waste must be red in color, and be labeled either as "Biohazardous Waste," or with the international symbol and the word "Biohazard."
   4. Bags must be certified by the manufacturer to meet the minimum strength requirements of California Health and Safety Code 117630, ASTM Standard D 1709, and ASTM Standard D 1922.
   5. Bags must be securely sealed to prevent leakage or expulsion of the contents during handling, transportation, or storage.
   6. Bags should be labeled with the name of the originating department.
   7. Any spill or leak of medical/infectious waste must be decontaminated by appropriate procedures, (See Part II of this Plan).
   8. Pathological Waste Labeled containers will not be used for any waste other than pathological waste.
b. Sharps, which are used needles, syringes, or other objects having acute rigid corners or protuberances capable of cutting or piercing, shall be placed in containers that meet the following requirements:
   1. Containers must be leakproof, rigid, puncture resistant, and tightly lidded to prevent loss of contents, prevent tampering, and be secure for disposal.
   2. Container, once sealed, cannot be reopened without great difficulty.
   3. Sharps containers must be labeled in the same way as infectious waste bags or placed in infectious waste bags.
   4. Needle and syringe tips are not to be clipped before disposal.
   5. Needles and syringes shall not be recapped. The entire unit shall be immediately placed in an approved sharps container after use.
c. Use of Secondary Containers

1. All disposable infectious waste bags and sharps containers must be placed in secondary containers such as pails, cartons, drums, dumpsters, or bins for storage.
2. Secondary containers must be leakproof, have tight-fitting covers, and be kept clean and in good repair.
3. Secondary containers must be labeled on the lid and sides with the words, "Biohazardous Waste," or with the international biohazard symbol and the word, "Biohazard."
4. Reusable secondary containers must be easily cleanable and must be washed and decontaminated each time they are emptied unless they have been completely protected from contamination. The cleaning method should be approved by RMEHS for compliance with applicable State and local regulations.

WASH AND DECONTAMINATE CONTAINERS

Wash and decontaminate containers internally use biohazardous waste containers: A person shall thoroughly wash and decontaminate reusable rigid containers for medical waste by a method approved by the enforcement agency each time they are emptied, unless the surfaces of the containers have been completely protected from contamination by disposable liners, bags, or other devices removed with the waste. These containers shall be maintained in a clean and sanitary manner. Approved methods of decontamination include, but are not limited to, agitation to remove visible soil combined with one of the following procedures:

1. Exposure to hot water of at least 82 degrees centigrade (180 degrees Fahrenheit) for a minimum of 15 seconds.
2. Exposure to chemical sanitizer by rinsing with, or immersion in, one of the following for a minimum of three minutes:
    1. Hypochlorite solution (500 ppm available chlorine).
    2. Phenolic solution (500 ppm active agent).
    3. Iodoform solution (100 ppm available iodine).
    4. Quaternary ammonium solution (400 ppm active agent).

DESIGNATED ACCUMULATION AREA(S)

A designated accumulation area (medical waste storage area) used for the storage of medical waste containers prior to transportation or treatment shall be secured to deny access to unauthorized persons and shall be marked with warning signs on, or adjacent to, the exterior of entry doors, gates, or lids. The storage area may be secured by use of locks on entry doors, gates, or receptacle lids. Biohazardous waste should not be stored

in Cal State LA facilities for more than seven days at temperatures above 0 degrees C (32 degrees F).

Storage enclosures for bagged infectious waste must be secured to deny access to unauthorized personnel and exterior doors must be posted in both English and Spanish as follows:

CAUTION - INFECTIOUS WASTE STORAGE AREA - UNAUTHORIZED PERSONS KEEP OUT.

CUIDAD - ZONA DE RESIDUOS INFECTADOS - PROHIBIDA LA ENTRADA A PERSONAS NO AUTORIZADAS.

DISPOSAL OF BIOHAZARDOUS WASTE

a. Biohazardous waste generated by the University must be disposed of by being transferred off-campus with a registered hauler for disposal at a State-approved waste disposal facility.
b. Biohazardous wastes shall not be incinerated on campus.
c. Recognizable tissue must be disposed of by off-campus incineration at authorized facilities.

BIOHAZRADOUS WASTE DISPOSAL VENDOR

Veolia is currently under contract to dispose of all Cal State LA's biohazardous waste at their permitted facility. The contractor will collect the medical waste once a week from our main accumulation storage satellite at the Health Center. The contractor shall ensure that all sharps' containers and all double-bagged infectious waste will be autoclaved, all animal carcasses will be incinerated, and all services are performed in strict accordance with applicable Federal, State, and local regulations. RMEHS will manage this contract and should be contacted at Ext. 3-3531 for any problems or modifications to this service.

Veolia
241 W. Laurel Street
Colton, CA 92324
Please contact RMEHS at (323)-343-3531 for proper disposal help.
Treatment Methods Available: Incinerate and Autoclave

AUTOCLAVING

Sterilization by heating in a steam sterilizer (autoclave), to render equipment noninfectious, is a method used at Cal State LA to treat contaminated equipment before reuse. Infectious waste rendered noninfectious may be disposed of as biomedical solid waste if it does not contain any other hazardous properties. Operation of steam sterilizers, for equipment that does not contain any other hazardous properties, shall be per the following:

a. A written standard operating procedure (SOP) for each steam sterilizer should be prepared and followed. SOP should include time, temperature, pressure, type of waste, type of container(s), closure on the container(s), the pattern of loading, water content, and maximum load quantity.
b. Check of recording and/or indicating thermometers during each complete cycle to ensure the attainment of a temperature of 121 degrees C (250 degrees F) for one-half hour or longer, depending on quantity and compaction of the load, to achieve sterilization of the entire load. Thermometers shall be checked for calibration at least annually.
c. Use of heat-sensitive tape or other devices for each container that is processed to indicate the attainment of adequate sterilization conditions.
d. Use of the biological indicator Bacillus stearothermophilus placed at the center of a load processed under standard operating conditions at least monthly to confirm the attainment of adequate sterilization conditions.

Maintenance of records of procedures specified in (a), (b), and (d) above for a period of not less than three years.

EMERGENCY ACTION PLAN (EAP)

Medical Waste

Medical waste is stored only in secured labeled areas. Waste is then transported, treated, and disposed of by our medical waste management company. If our primary medical waste management company (Veolia) is incapable of transporting medical waste promptly, our secondary medical waste management company (Clean Harbors Environmental Services) will provide these services.

Clean Harbors Environmental Services
24-hour emergency telephone number (800) 645-8265
(In the event of a spill, contact University Police (911) and RMEHS at (323)-34**3-3531**).
Treatment Methods Available: Incinerate and Autoclave

Trauma Scene

"Trauma scene" means a location soiled by, or contaminated with, human blood, human body fluids, or other residues from the scene of a serious human injury, illness, or death.

Trauma Scene Waste Management Practitioner: "Trauma scene waste management practitioner" means a person who undertakes a commercial activity for the removal of human blood, human body fluids, and other associated residues from the scene of a serious human injury, illness, or death, and who is registered with the California Department of Health Services.

Trauma Scene Waste Management
Andersen Integrated Services, INC
Reg #: 6978
10020 National Blvd
Los Angeles, CA 90034
310-854-5453

Biohazardous Spill Event

In the event of a spill of bio-hazardous materials, the campus has a variety of capabilities and plans to mitigate any adverse effects. The Campus has a round-the-clock police department and an on-call hazardous materials emergency response team. The campus also maintains both a general emergency response plan/emergency operations center and a hazardous materials emergency response plan. Members of these teams participate in both training and drills. Furthermore, as a backup, our hazardous waste disposal contractor has emergency response capability and can respond to hazardous materials emergencies.

Clean-Up Procedures: In the case of a spill of medical waste, cleanup may be done by rinsing or immersion for three minutes using one of the following chemical sanitizers. The concentrations listed below are minimum concentrations; stronger solutions are, of course, more effective.

- *Chlorine:* Commercially available bleach contains about 5% (five percent) hypochlorite. A dilution of one part of the commercial product to 49 (forty-nine) parts water produces a solution of approximately 1000 (one thousand) parts per million (equivalent to 0.1% active ingredient)
- *Dry calcium hypochlorite tablets for pools*: (Pulsar Plus Briquettes) will contain approximately 65% (sixty-five percent) available chlorine. A mixture of 1.5 pounds of Pulsar Plus Briquettes to 1 gallon of water will produce a solution of approximately 1000 (one thousand) parts per million available chlorine.
- *Ammonia:* Commercially available ammonia solutions each contain about 5% (five percent) quaternary ammonia. A dilution of one part of the commercial product to 49 (forty-nine) parts water produces a solution of approximately 1000 (one thousand) parts per million (equivalent to 0.1% active ingredient)

Note: Chlorine (bleach) and ammonia should never be mixed. Phenolic solutions of 500 parts per million (0.05%) of the active agent. Iodoform solutions of 100 parts per million (0.01%) of the active agent.

The information provided is complete and accurate at the time of the most recent revision.

5. REFERENCES

- California Health & Safety Code, Section 117600 to 118360, aka "The California Medical Waste Management Act"
- California Code of Regulations Title 22, Div. 4, Ch. 21, Art. 1-4, "Minimum Standards for Permitting Medical Waste Facilities"
- Center for Disease Control (CDC) NIH Handbook-Biosafety in Microbiological and Biomedical Laboratories (BMBL) 6th edition.
- Title 29 Code of Federal Regulations 1910.1030, Bloodborne Pathogens Standard
  Title 8 California Code of Regulations 5193, Bloodborne Pathogens Standard

FOR FURTHER INFORMATION

Additional information on safe handling practices and associated requirements can be obtained from RMEHS. Contact the RMEHS Office (ext. 3-3531) for copies of applicable regulations or further
information.

APPENDIX A: BIOSAFETY LEVEL

BIOSAFETY LEVEL ☐

ADMITTANCE TO AUTHORIZED PERSONNEL ONLY

Building Name and Room Number		
Name of INFECTIOUS AGENT		
Special Requirements BEFORE entering area		
Name of Responsible Person(s)		
Title		
Office/Lab Contact		
Emergency Contact		

323-343-3531 | Risk Management and Environmental Health & Safety | rmehs@calstatela.edu

CAL STATE LA

APPENDIX B: SHARPS INJURY REPORTING PROCEDURE AND LOG

RISK MANAGEMENT AND ENVIRONMENTAL HEALTH & SAFETY DEPARTMENT (RMEHS)

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SHARPS INJURY REPORTING PROCEDURE

The definition of "sharp" means any object that can be reasonably anticipated to penetrate the skin and to result in an exposure incident (contact with blood or other potentially infectious materials), including but not limited to needle devices, scalpels, lancets, broken glass, broken capillary tubes, exposed ends of dental wires and dental knives, drills, and burs.

A Sharps Injury Log is to be maintained to record sharps injuries. The log must include the date and time of the exposure incident, type, and brand of sharp involved in the incident details of the circumstances of the incident, employee job classification, the procedure performed at the time of the incident, how the incident occurred, body part involved, if the engineered sharps injury protection was effective (if applicable) or whether such a mechanism could have prevented the injury (in the opinion of the employee).

Should an injury involving sharps occur, please complete the following:

1. Cal State LA's Supervisor's Injury Illness Report
2. Sharps Injury Log
    a. Maintain 5 years from the date of an exposure incident
3. Needle Stick Checklist if applicable

The original Sharps Injury Log and Needle Stick Checklist should be kept for your department files for regulatory agency inspection purposes. Please attach copies to an original Supervisor's Injury Prevention Report and forward them to the RMEHS and Human Resources Departments for further investigation.

THIS IS A LIVE DOCUMENT, TO SEE THE FULL DOCUMENT PLEASE SELECT THE IMAGE BELOW.

SHARPS INJURY LOG

Please complete a log for each employee exposure incident involving a sharp.

Institution		**Department**	
Address		**City**	
State		**Zip Code**	
Date filled out		**Name of the person who filled out the form**	
Phone number		**Cal State LA ID**	
Date of Injury		**Time of Injury**	
Sex (Optional)	☐Male ☐Female	**Age**	
Name of the person who was injured/exposed:			

Description of the exposure incident:
Job Classification: ☐MD ☐Nurse ☐Medical Assistant ☐Phlebotomist/Lab Tech ☐Housekeeper/Laundry ☐Student ☐Other:
Department/Location: ☐Patient Room ☐Clinical Laboratory ☐Medical Clinic ☐Service/Utility Area ☐Restroom ☐Other:
Body Part(s) (check all that apply)**:** ☐Finger ☐Face/Head ☐Hand ☐Torso ☐Arm ☐Leg ☐Other:
Procedure: ☐Drawing Blood ☐Cutting ☐Injection, through skin ☐Suturing ☐Start IV/Set up Heparin Lock ☐Other:
Identify Sharp Involved Type (e.g., 18g needle, ABC Medical, "No Stick" Syringe, etc.): Brand: Model:
Did the device used have engineered sharps injury protection? ☐Yes ☐No ☐I do not know
Was the protection mechanism activated? ☐ Yes, fully ☐ Yes, partially ☐ No
When did the exposure incident occur?

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NEEDLE STICK INVESTIGATION CHECKLIST

Identify the sharp involved: Type (e.g., 18g needle, ABC Medical, "No Stick" Syringe, etc.): Brand: Model:
Were you properly vaccinated at the time of the incident? ☐Yes ☐ No ☐ N/A
Was the patient cooperative? ☐Yes ☐ No ☐ N/A
Was the patient responsible for this incident in any way? ☐Yes ☐ No ☐ N/A If yes, please explain:
Did your work habit contribute to this incident? ☐Yes ☐ No ☐ N/A If yes, please explain:
Do you have access to ESIP* needles? ☐Yes ☐ No ☐ N/A If not, why?
Do you have market availability of ESIP* needles? ☐Yes ☐ No ☐ N/A
Was disposal responsible for this incident? ☐Yes ☐ No ☐ N/A
Was this injury recorded in your Sharps Injury Log? ☐Yes ☐ No
What other actions were taken after this incident?

**ESIP = Engineered Sharps Injury Protection*

PLEASE COMPLETE THE FORM IN ITS ENTIRETY. KEEP ORIGINAL FOR DEPARTMENT FILES. ATTACH COPY TO INCIDENT/ACCIDENT REPORT AND SEND TO RMEHS DEPARTMENT.
THANK YOU.

APPENDIX C: PROPER CLOSURE OF RED BIOHAZARD BAGS

Proper Red Biohazard Bag Closure

The "Goose" or "Swan" Neck Method

Only use **ASTM-D-1709** gram dart impact and **ASTM-D-1922** tear resistance tested bags.

1. When the bag is two-thirds full twist the excess at the top of the bag

2. Twist firmly then double over.

3. Hold the twist firmly together.

4. Secure by either tying a knot or using a zip-tie. The knot or zip-tie **MUST BE** loosened if autoclaving the bag.

5. Ensure both sides of the neck are secured firmly **AFTER** autoclaving.

DO NOT "rabbit-ear" biohazard bags as they **ARE NOT SECURE** for transfer.

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