
	SOP-113 (Ver. 4) Bloodborne Pathogens (BBP) Exposure Control Plan	
Standard Operating Procedure (SOP)	Effective: 1/25/2022 Supersedes: 11/02/2020	
Approved By: James D. Herberg General Manager 		

I. Purpose

- A. The Orange County Sanitation District (OC San) is committed to providing a healthy and safe work environment for its employees, contractors, and visitors. To this end, OC San has maintained this Exposure Control Plan to prevent and minimize occupational exposure to bloodborne pathogens using engineering controls, administrative controls, and personal protective equipment.
- B. The purpose of this Exposure Control Plan (ECP) is to protect the health and safety of those employees who have the potential to be exposed to blood or other potentially infectious materials as part of their job responsibilities.

II. Background

- A. OC San has developed this procedure in accordance with the state of California Occupational Safety and Health Administration (CALOSHA) regulations, including Bloodborne Pathogens (Title 8, California Code of Regulations (CCR), Section 5193) and Access to Employee Exposure and Medical Records (Title 8, CCR, Section 3204).
- B. The ECP is a key document to assist OC San in implementing and ensuring compliance with the standard, thereby protecting our employees. This ECP includes:
 - 1. Determination of employee exposure
 - 2. Implementation of exposure control methods
 - 3. Hepatitis B vaccination
 - 4. Post-exposure evaluation
 - 5. Communication and training
 - 6. Recordkeeping
 - 7. Evaluation
- C. The methods to implement these elements are discussed in the subsequent pages of this ECP.

III. Definitions

Antibody: a substance produced in the blood of an individual which can produce a specific immunity to a specific germ or virus.

Blood: human blood, its components, and products made from human blood.

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Bloodborne Pathogens: pathogenic (disease producing) microorganisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to, hepatitis B virus (HBV) and human immunodeficiency virus (HIV).

Contaminated: the presence or the reasonably anticipated presence of blood or other potentially infectious materials on an item or surface.

Contaminated Laundry: laundry which has been soiled with blood or other potentially infectious materials or may contain sharps.

Contaminated Sharp: any contaminated object that can penetrate the skin including, but not limited to needles, scalpels, broken glass, capillary tubes, and the exposed ends of dental wires.

Decontamination: the use of physical or chemical means to remove, inactivate, or destroy Bloodborne pathogens on a surface or item to the point where they are no longer capable of transmitting infectious particles and the surface or item is rendered safe for handling, use or disposal.

Engineering Controls: controls (i.e., sharps disposal containers, self-sheathing needles) that isolate or remove the bloodborne pathogens hazard from the workplace.

Exposure Control Plan: a written program developed and implemented by the employer which sets forth procedures, engineering controls, personal protective equipment, work practices and other methods that are capable of protecting employees from exposures to bloodborne pathogens, and meets the requirements spelled out by the OSHA bloodborne Pathogens Standard.

Exposure Determination: how and when occupational exposure occurs and which job classifications and/or individuals are at risk of exposure without regard to the use of personal protective equipment.

Exposure Incident: a specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact with blood or other potentially infectious materials that results from the performance of an employee's duties.

Hand Washing Facilities: a facility providing an adequate supply of running potable water, soap, and single use towels, medicated towelettes or hot air-drying machines.

HBV: means Hepatitis B Virus.

HCV: means Hepatitis C Virus.

HIV: means Human Immunodeficiency Virus.

Needle or Needle Device: a needle of any type, including, but not limited to, solid and hollow-bore needles.

Occupational Exposure: a reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials that may result from the performance of an employee's duties.

Other Potentially Infectious Material (OPIM): human body fluids: semen, vaginal menstrual blood, vomit, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any bodily fluid that is visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids; any unfixed tissue or organ (other than intact skin) from a human (living or dead); and (3) HIV-containing cell or tissue cultures, organ cultures, and HIV- or HBV-containing culture medium or other solutions; and blood, organs, or other tissues from experimental animals infected with HIV or HBV.

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Parenteral: piercing mucous membranes or the skin barrier through such events as needle sticks, human bites, cuts, and abrasions.

Pathogen: a bacteria or virus capable of causing infection or disease.

Personal Protective Equipment: specialized clothing or equipment worn for protection against a hazard. Personal protective equipment may include, but is not limited to, gloves, gowns, laboratory coats, face shields or masks and eye protection equipment, and mouthpieces, resuscitation bags, pocket masks, or other ventilation devices.

Regulated Waste: liquid or semi-liquid blood or OPIM in a liquid or semi-liquid state if compressed; items that are caked with dried blood or other potentially infectious materials and are capable of releasing these materials during handling; contaminated sharps; and pathological and microbiological wastes containing blood or other potentially infectious materials.

Sharp: any object used or encountered that can be reasonably anticipated to penetrate the skin or any other part of the body, and to result in an exposure incident, 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.

Sharps Injury: any injury caused by a sharp, including, but not limited to, cuts, abrasions, or needlesticks.

Sharps Injury Log: a written or electronic records satisfying the requirements of subsection (c)(2) of Title 8, CCR, Section 5193.

Source Individual: any individual, living, or dead, whose blood or other potentially infectious materials may be a source of occupational exposure to the employee.

Sterilize: the use of a physical or chemical procedure to destroy all microbial life including highly resistant bacterial endospores.

Synovial Fluid: the clear amber fluid usually present in small quantities in a joint of the body (i.e., knee, elbow).

Universal Precautions: an approach to infection control. According to the concept of Universal Precautions, all human blood and certain human body fluids are treated as if known to be infectious for HIV, HBV, and other bloodborne pathogens.

Work Practice Controls: controls that reduce the likelihood of exposure by altering the way the task is performed.

IV. Roles and Responsibilities

A. Risk Management

1. Communicate the exposure controls to OC San staff who job responsibilities may expose employees to blood or other potentially infectious materials.
2. Ensure that this plan is reviewed annual and revised, as necessary.
3. Ensure that a copy of this plan is accessible to employees in accordance with Title 8, CCR, Section 5193.
4. Responsible to maintain employee health and OSHA records.
5. Ensure that training and documentation of training is maintained.

B. Employees

1. Those employees who are determined to have occupational exposure to blood or other potentially infectious materials (OPIM) must comply with the procedures and work practices outlined in this ECP.

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2. Communicate health and safety concerns, issues, and questions to their supervisor or to Risk Management.
3. Immediately report all exposure incidents to the employee's supervisor or the Risk Management Division.

V. Exposure Determination

- A. CALOSHA requires employers to determine which employees may have work exposure to blood or other potentially infectious materials. The exposure determination is made without regard to the use of personal protective equipment.
- B. The following exposure determinations have been made according to job classification and tasks, and without regard to the use of personal protective equipment (PPE):
 1. Employees who voluntarily render first aid (Medical Response Team)
 2. All employees within the following job classification(s) have occupational exposure:
 - a. Electrical Tech (I & II)
 - b. Instrumentation Tech (I & II)
 - c. Lead Electrical Tech
 - d. Lead Instrumentation Tech
 - e. Lead Mechanic
 - f. Lead Source Control Inspector
 - g. Machinist
 - h. Maintenance Specialist
 - i. Maintenance Supervisor
 - j. Maintenance Worker
 - k. Mechanic
 - l. Reliability Maintenance Tech
 - m. Senior Mechanic
 - n. Source Control Inspector (I & II)
 - o. Source Control Supervisor
 - p. Welder-Fabricator
 3. Some employees within the following job classification(s) have occupational exposure:
 - a. Boat Captain
 - b. Environmental Specialist
 - c. Principal Environmental Specialist
 - d. Scientist
 - e. Senior Environmental Specialist
 - f. Senior Scientist
 4. The following list of tasks or groups of closely related tasks, in which exposure occurs, performed by employees in job classifications listed in Section V(A)(3).

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a. Ocean Monitoring

- C. Risk Management maintains the list of recognized personnel. The list of persons may change periodically.

VI. Methods of Compliance

A. Universal Precautions

1. Employees to observe universal precautions to prevent contact with blood or other potentially infectious materials.
2. When differentiation between body fluid types is difficult or impossible, all body fluids shall be considered potentially infectious materials.
3. Use gloves, masks, and gowns if blood or other infectious materials are anticipated.
4. Use engineering and work practice controls to limit exposure.

B. Standard Precautions

1. Employees shall implement the following standard precautions to reduce the risk of transmission of microorganisms from both recognized and unrecognized sources:

a. Hand and Body Washing

- 1) Washing facilities will be readily available. If this is not feasible, antiseptic hand cleanser, single use towels or antiseptic towelettes will be made available with hand washing to be done as soon as possible thereafter.
- 2) Employees shall wash hands after removal of personal protective gloves and whenever there is a likelihood of contamination. In addition, any contaminated skin area will be washed as soon as possible.
- 3) If blood or other potentially infectious material contacts mucous membranes, those areas shall be washed or flushed with water as appropriate as soon as possible.
 - a) All bins, pails, cans, and similar receptacles intended for reuse which have a reasonable likelihood for becoming contaminated with blood or OPIM shall be inspected and decontaminated on a regularly scheduled basis and cleaned and decontaminated immediately or as soon as feasible upon visible contamination.
 - b) Protective coverings, such as plastic wrap, aluminum foil, or imperviously backed absorbent paper used to cover equipment and environmental surfaces, shall be removed, and replaced as soon as feasible when they become overtly contaminated or at the end of the work shift if they may have become contaminated during the shift.
 - c) Area shall be cleaned at the end of the work shift if the surface may have become contaminated since the last cleaning.
- 4) Education of employees so that splashing, spraying, or spattering of blood or body fluids is minimized.

b. Other Work Practices

- 1) Eating, drinking, smoking, applying cosmetics or lip balm, and handling contact lenses are prohibited in work areas where there is a reasonable likelihood of occupational exposure.

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- 2) Food and drink must not be kept in refrigerators, freezers, shelves, and cabinets or on countertops or bench tops where blood or other potentially infectious materials are present.
- 3) Mouth pipetting/suctioning of blood or other potentially infectious materials is prohibited.

C. Personal Protective Equipment (PPE)

1. PPE will only be considered appropriate if it does not permit blood or other potentially infectious materials to pass through or reach clothes, undergarments, skin, eyes, mouth, or other mucous membranes under normal conditions of use.
2. PPE that is appropriate to the potential exposure will be made available, and where necessary, made of hypoallergenic material. If the employee declines to wear PPE, the circumstances will be investigated and documented.
3. Medical responders will remove PPE prior to leaving the incident area and place in appropriately designated container for decontamination or disposal. Defective, damaged, or questionable PPE will be repaired or replaced as needed.
4. Medical responder shall wear gloves when it is reasonably anticipated that the employee may have hand contact with blood or other potentially infectious materials, mucous membranes and/or non-intact skin. They will also be worn when handling or touching contaminated items or surfaces. Gloves must be disposable and will be exchanged for a new pair when contaminated, torn, or punctured. Single-use gloves shall not be washed or decontaminated for reuse and must be properly disposed.
5. Masks, eye protection and face shields are required whenever splashes, spray, spatter, or droplets may be generated and eye, nose, or mouth contamination can be reasonably anticipated.
6. Gowns, aprons, and other body clothing are required when splashing, splattering, or spraying of the body with blood or other potentially infectious materials is reasonable anticipated.

D. Cleaning and Decontamination

1. Exposed persons shall clean and disinfect surfaces by use of an appropriate disinfectant as soon as possible after contact.
2. Contaminated waste and/or laundry such as bloodied bandages or clothing shall be placed in leak-proof container or bag and labeled, or color coded per Labeling and Signage section of this program.
3. Contaminated sharps shall be picked up via mechanical means (i.e., brush and dustpan) and discarded immediately in container that is puncture resistant, lead-proof and labeled or color coded per Labeling and Signage section of this program.
4. Contaminated waste will be managed by Risk Management and transported and disposed by a Risk Management approved vendor.

VII. Labeling and Signage

- A. Warning labels shall be affixed to containers of regulated waste, laundry and sharps, and other containers used to store, transport or ship blood or other potentially infectious materials.
- B. The warning labels with biohazard symbol in fluorescent orange or orange-red or predominately so, with lettering and symbols in contrasting color. Waste labels shall

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contain words BIOHAZARDOUS WASTE or SHARPS WASTE. Red bags or red containers may be substituted for labels except for sharp containers or regulated waste red bags.

VIII. Hepatitis B Vaccination

- A. Hepatitis B (HBV) vaccination series will be made available to all employees who fall under this program at no cost to the employee. The healthcare provider who examines the employee will document if HVC vaccination is indicated and if the employee received the vaccination. Vaccination is encouraged unless:
 - 1. Documentation exists that the employee has previously received the series.
 - 2. Antibody testing reveals that the employee is immune.
 - 3. Medical evaluation shows that vaccination is contraindicated.
- B. If an employee declines the vaccination, a declination form will be signed by the employee. A copy of the declination form will be kept in the employee's confidential medical record. However, if the employee later decides to have the vaccination and is still covered under this program, the vaccination will be made available at that time.
- C. Employees will be provided with information on HBV vaccinations addressing its safety, benefits, efficacy, methods of administration and availability.
- D. OC San will notify all employees who receive HBV vaccination of the location of the clinic providing the vaccine.
- E. Employees shall receive vaccine during normal working hours or be compensated during non-working hours.

IX. Post Exposure Evaluation and Follow-Up

- A. Post-Exposure Evaluation and Follow-up will be made available immediately following an exposure incident. OC San will provide the medical provider a description of the employee's duties as they relate to the exposure incident, the route and circumstances of exposure, and employee's medical records including HBV vaccination status if not already available to the medical provider.
- B. The medical provider will provide a written medical opinion to OC San which will contain only that the employee has been informed of the results of the evaluation and has been told about any medical conditions that require further evaluation or treatment. The employee should receive a more detailed confidential evaluation from the medical provider.
- C. Testing of the employees' blood will be done as soon as possible as recommended by the medical provider. If the employee decides to give consent for blood to be drawn but not tested, the employee will have 90 days in which to change their mind as the sample must be preserved for 90 days.
- D. The person (if known) whose blood or body fluid is the source of an exposure will be tested for HBV, HCV, and HIV infection as soon as feasible upon their consent.
 - 1. When the source is already known to be infected with HBV, HCV, or HIV then testing need not be repeated.
 - 2. Information from the medical record at the time of the exposure (e.g., laboratory test results, admitting diagnosis, or previous medical history) or the source person will be collected to help confirm or exclude bloodborne infection.

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3. HBV, HCV, and/or HIV testing shall be performed if the infection status of the source person is unknown.
4. Results of source testing shall be provided to the employee, and the employee shall be informed of all applicable laws and regulations concerning disclosure of the identity and infectious status of the source.
5. The health department will be consulted if consent for source testing cannot be obtained (Orange County Health Care Agency).

X. Training

- A. All employees who are trained in First Aid/CPR and have potential occupational exposure to bloodborne pathogens will receive training at the time of initial assignment and at least annually thereafter. Training will include:
 1. Information on the epidemiology, symptoms, and transmission of bloodborne pathogen diseases.
 2. A copy and explanation of the standard.
 3. An explanation of OC San's exposure control plan and how to obtain a copy.
 4. An explanation of methods to recognize tasks and other activities that may involve exposure to blood and OPIM, including what constitutes an exposure incident.
 5. An explanation of the use and limitations of engineering controls, work practices, and PPE.
 6. An explanation of the types, uses, location, removal, handling, decontamination, and disposal of PPE.
 7. An explanation of the basis for PPE selection.
 8. Information on the hepatitis B vaccine, including information on its efficacy, safety, method of administration, the benefits of being vaccinated, and that the vaccine will be offered free of charge.
 9. Information on the appropriate actions to take and persons to contact in an emergency involving blood or OPIM.
 10. An explanation of the procedure to follow if an exposure incident occurs, including the method of reporting the incident and the medical follow-up that will be made available.
 11. Information on the post-exposure evaluation and follow-up that the employer is required to provide for the employee following an exposure incident.
 12. An explanation of the signs and labels and/or color coding required by the standard and used at OC San.
 13. An opportunity for interactive questions and answers with the person conducting the training session.
- B. Training records will be completed for each employee upon completion of training. These documents will be kept with the employee's records and will include:
 - a. Dates of the training sessions.
 - b. Contents or a summary of the training sessions.
 - c. Names and qualifications of persons conducting the training sessions.
 - d. Names and job titles of all persons attending the training sessions.

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- C. Training records will be maintained for a minimum of three (3) years from the date on which the training occurred.
 - 1. Employee training records will be provided upon request to the employee or the employee's authorized representative within 15 working days.

XI. Medical Records

- A. The Risk Management Division is responsible for maintenance of the required medical records.
- B. Medical records are maintained for each employee with occupational exposure in compliance with 8 CCR 3204 and will include:
 - 1. The name and social security number of the employee.
 - 2. A copy of the employee's hepatitis B vaccinations and any medical records relative to the employee's ability to receive vaccination.
 - 3. A copy of all results of examinations, medical testing, and follow-up procedures as required by the bloodborne pathogens standard.
 - 4. A copy of all health care professional's written opinion(s) as required by the bloodborne pathogens standard.
- C. All employee medical records will be kept confidential and will not be disclosed or reported without the employee's express written consent to any person within or outside the workplace except as required by the standard or other legal provisions.
- D. Employee medical records shall be maintained for at least the duration of employment plus 30 years.
- E. Employee medical records will be provided upon request of the employee or to anyone having written consent of the employee within 15 working days.

XII. Recordkeeping

All records created or generated in the course of this procedure shall be legible and stored in a way that they are readily retrievable in facilities or electronic document/content management systems that provide a suitable environment to prevent damage, deterioration, or loss. Records may be in the form of any type of media, such as hard copy or electronic media. The OC San Records Retention Schedule is the official procedure governing the retention, retirement, and destruction of District records. Document owners should use these schedules to determine the item and series that best fit their records. Document owners are responsible for ensuring that documents are properly marked, indexed, and filed for their projects or area of responsibility.

Sharps injuries may occur as part of the work tasks conducted at OC San. A sharps injury log is maintained and retained for five years from the date the exposure incident occurred.

The annual review for this procedure will also include the following:

- 1. New or modified tasks and procedures which affect occupational exposure
- 2. Changes in technology that eliminate or reduce exposure to bloodborne pathogens
- 3. New or revised employee positions with occupational exposure
- 4. Review and evaluate the exposure incidents which occurred since the previous update, and
- 5. Review and respond to information indicating that the ECP is deficient in any area

XIII. References

Title 8, California Code of Regulations, Section 3204, Access to Medical and Exposure Records

Title 8, California Code of Regulations, Section 5193, Bloodborne Pathogens

XIV. Revision History

Version	Date	By	Reason
1	01/15/2002	Matte, James	New
2	10/11/2011	Bauer, Wesley	Program Update
3	07/09/2019	Frattali, John	Periodic Update – Refer to Program Change Log
4	12/07/2021	Ventanilla, Sheri	Annual Program Review – Refer to Program Review Findings change log