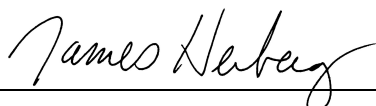
	SOP-102 (Ver. 6) Personal Protective Equipment (PPE)
Standard Operating Procedure (SOP)	Effective: 11/03/2022 Supersedes: 01/28/2022
Approved By: James D. Herberg General Manager 	

I. Purpose

The purpose of the Personal Protective Equipment (PPE) Program is to protect, shield or isolate Orange County Sanitation District (Sanitation District) staff and contractors from the risk of injury or illness. The selection of PPE as a control measure should be chosen in conjunction with more effective control measures such as elimination, substitution, engineering controls and administrative controls. PPE hazard assessments will be completed to identify, assess, and control hazards for each similar exposure group, work area or job task.

PPE will be supplied to the Sanitation District staff working in an environment where engineering and administrative controls are not feasible or effective at controlling the hazards. The Sanitation District will train and supply a variety of PPE in accordance with established memorandum of understandings (MOU). The Sanitation District will not perform PPE hazard assessments or supply PPE for Contractors.

This procedure does not address all potential PPE that may be required at the Sanitation District.

II. Background

The Sanitation District has developed this procedure in accordance with the state of California Occupational Safety and Health Administration (CALOSHA) regulations, including *Personal Safety Devices and* (Title 8, California Code of Regulations (CCR), Section 3380) and *Personal Protective Devices* (Title 8, CCR, Section 1514).

This procedure complies with the American National Standards Institute (ANSI) and National Fire Protection Association (NFPA) consensus standards, and National Institute for Occupational Safety and Health (NIOSH) guidance documents.

III. Applicability

This program applies to all work performed by Sanitation District staff and contractors at the Sanitation District treatment plants, pump stations and collection system.

Refer to the non-PPE Locations map under the Maps & Apps section on the San Box for a detailed image of designated PPE free zones.

Subject: Personal Protective Equipment (PPE)

IV. Definitions

Administrative Controls – Changes in work procedures such as written safety policies, rules, supervision, schedules, and training with the goal of reducing the duration, frequency, and severity of exposure to hazardous chemicals or situations.

ANSI – American National Standards Institute is a private non-profit organization that oversees the development of voluntary consensus standards for products, services, processes, systems, and personnel in the United States.

Arc Flash - An arc flash (also called a flashover), which is distinctly different from the arc blast, is part of an arc fault, a type of electrical explosion or discharge that results from a low-impedance connection through air to ground or another voltage phase in an electrical system.

ASTM – American Society for Testing and Materials is an international standards organization that develops and publishes voluntary consensus technical standards for a wide range of materials, products, systems, and services.

Bloodborne Pathogen – Infectious microorganism in human blood that can cause disease in humans, which may include hepatitis B (HBV), hepatitis C (HCV) and human immunodeficiency virus (HIV).

Contractor – Organization or individual that provides goods and services to the Sanitation District under terms specified in a contract. The term contractor applies to contractors, subcontractors, consultants, and service representatives. Includes job walk attendees.

dBA – Decibels is a unit used to measure noise on the A scale.

Doff – To take off protective equipment.

Don – To put on protective equipment.

Engineering Controls – Controls that are designed into a structure that helps mitigate associated hazards. For example, using a fan or fume hood to dissipate vapors; installing sound dampening materials around a loud piece of equipment; storing flammable solvents in a special cabinet.

Eye/Face Protection – Equipment designed to provide eye or face protection when exposed to hazards from flying particles, molten metal, liquid chemicals, acids or caustic liquids, chemical gases or vapors, or potentially injurious light radiation.

Foot Protection – Footwear designed to provide foot and toe protection when working in areas where there is a danger of foot injuries due to falling or rolling objects, or objects piercing the sole, and/or where an employee's feet are exposed to electrical hazards.

Hand and Body Protection – Equipment designed to provide protection to the hands and body during exposures to potential hazards such as skin absorption of harmful substances, sharp objects, abrasive surfaces, punctures, temperature extremes and chemical contact.

Hazard Assessment – The process utilized to identify hazards in the workplace and to select the appropriate PPE to guard people against potential hazards.

Subject: Personal Protective Equipment (PPE)

Head Protection – Equipment designed to provide protection to the head during exposure to potential hazards such as falling objects, striking against objects or electrical hazards.

Hearing Protection – Equipment designed to provide protection to an individual's hearing during exposure to excessive noise levels above an employee's time-weighted action level.

IDLH – Immediately dangerous to life or health, is an exposure to airborne contaminants that is likely to cause death or immediate or delayed permanent adverse health effects or prevent escape from such an environment.

NFPA – National Fire Protection Association is a United States trade association that creates and maintains private, copyrighted standards and codes for usage and adoption by local governments.

OPIM – Other potentially infectious materials are a type of bloodborne pathogen, which includes human bodily fluids, any unfixed tissue or organ, and HIV-containing cell or tissue cultures, organ cultures, and HIV- or HBV-containing culture medium.

OSHA – Occupational Safety and Health Administration is an agency of the United States Department of Labor, with a mission to assure safe and healthful working conditions by setting and enforcing standards and by providing training, outreach, education, and assistance.

Personal Protective Equipment (PPE) – Equipment designed to provide protection to the wearer from potential hazards to the eyes, face, hands, head, feet, ears, extremities, and respiratory system.

PFD – Personal floatation device is a piece of equipment designed to assist a wearer to keep afloat in water.

Respiratory Protection – Equipment designed to provide protection to the wearer from potential inhalation hazards such as vapors, mists, particulates, and gases.

Work Zone – An area delineated by Supervision or Contractors for protecting employees from vehicular traffic or operating heavy equipment, intervention from non-authorized persons or personnel and adjacent construction work. The work zone shall be defined as the area within 25 feet of the actual construction work in progress.

V. Responsibilities

A. Program Administrator

Risk Management will serve as the Program Administrator to ensure program development and maintenance, including but not limited to:

- Ensuring the hierarchy of controls are followed when determining the method to manage hazards and risks. PPE shall be considered the last line of defense for controlling and mitigating hazards.
- Ensuring that PPE hazard assessments are completed to determine required PPE.
- Providing training and technical assistance on the proper use, inspections, storage, care, and cleaning of approved PPE.
- Provide re-training as needed and as required by certain programs.
- Maintaining records of PPE training and hazard assessments.

Subject: Personal Protective Equipment (PPE)

- Reviewing and updating the program for overall effectiveness on an annual basis.
- Communicating PPE requirements to Sanitation District staff and contractors through written memos, SAFE bulletins, tailgate meetings, training, and posting of this program.
- Maintain a list of approved PPE.

Risk Management approves PPE used by Sanitation District employees. PPE may be issued by the Warehouse or special ordered through vendors. Sanitation District employees can submit PPE requests to Risk Management. The PPE requests must include the type and manufacturer of the requested equipment. Contractors, vendors, and consultants are responsible for providing their own employees with the required PPE.

B. Supervision

Supervisors or designee have the primary responsibility for implementation and enforcement of the PPE program, which includes:

- Ensuring that PPE program elements are followed and that employees properly use and care for PPE.
- Ensuring that all their employees are equipped with the necessary PPE.
- Seeking technical assistance from Risk Management regarding selection, use and care of PPE.
- Notifying Risk Management when new hazards are introduced or when processes are added or changed.
- Ensuring defective or damaged equipment is immediately replaced.
- Ensuring that employees are trained on how to wear, store, and clean PPE.

C. Employees

Sanitation District staff shall wear PPE in accordance with the written PPE hazard assessments maintained by Risk Management.

Personnel who wear PPE must:

- Use, maintain, inspect, clean, and store their PPE per manufacturer recommendations and their training.
- Inform their Supervisor of PPE needs or the need to repair or replace defective PPE.
- Attend required training sessions.
- Adhere to specific PPE requirements for established work zones, even if the requirements are more stringent than the Sanitation District policy and/or OSHA regulations.
- Employees may not loan PPE to Contractors.

D. Contractors

Contractors must have a written PPE program meeting at least the requirements of this program and any applicable governmental regulations not covered by this program.

Contractors are responsible for conducting their own PPE assessments based on the work they are performing. Contractors are responsible for providing PPE to their own employees

Subject: Personal Protective Equipment (PPE)

Contractors may not wear a level of protection less than PPE required by this program or PPE assessment for the specific work area(s).

Contractors are responsible for establishing and maintaining work zones. The work zones shall be clearly marked with required PPE for safe entry.

Contractors are responsible for selection, inspection, care, storage, and maintenance of their PPE. The PPE must be approved/rated and used per manufacturer instructions.

VI. Procedure

Employee exposure to workplace hazards shall be minimized by employing engineering and/or administrative controls, where feasible. When hazards cannot be effectively controlled, PPE must be used to provide employees protection from workplace hazards.

A. PPE Hazard Assessment

Hazard assessments shall be performed to determine the need for and proper selection of PPE. PPE hazard assessments will be completed for tasks completed by each similar exposure group. Hazard assessments will not be completed for administrative offices. The hazard assessment is a written certification that identifies:

- The work area and/or job classification being assessed,
- The person certifying that the evaluation has been performed,
- Date of the hazard assessment,
- Work activities performed and related exposure from anticipated hazards, and
- PPE required to prevent exposure to the anticipated hazards, whether hazards can be eliminated without the use of PPE.

The hazard assessment will be completed through the following process:

1. Survey – A walk-through survey of the workplace will be performed to identify foot, head, eye, face, full body, and hand hazards, including workplace layout, operations performed, and existing engineering and administrative controls, as well as existing PPE. Supervisors and employees from each work area that are being assessed will be notified and involved in the assessment process.
2. Analyze Data – Following the walk-through survey, the data will be organized and an estimate of the potential for injuries made. Risk Management will also review historic near miss and injury reports. The data analysis will consider level of risk by determining the frequency, severity, and probability of injury. Engineering and administrative controls will be implemented if feasible to reduce the risk of injury. If chemicals are involved, Safety Data Sheets (SDS) will be reviewed to determine adequate level of protection.
3. Select PPE – After considering other controls, PPE shall be selected that provides a minimum level of protection to protect employees from the observed hazards. Consideration will be given to limitations of the PPE, work environment (i.e., cold, hot, outdoors), comfort and fit. Limitations may include restricted movement due to weight, restricted vision to visual field, difficulty communication, psychological stress, heat stress, facial hair, or body shape.

Subject: Personal Protective Equipment (PPE)

4. Written Certification – Once completed, signed, and dated, the written certification (hazard assessment) will be reviewed by Risk Management with the exposure groups and maintained electronically and/or as a hardcopy for employee access and periodic review.
5. Reassessment – The PPE hazard assessment will be reviewed whenever there are changes in the workplace (e.g., new processes or different process materials) or changes in the work practices, to determine suitability of previously selected PPE. The PPE hazard assessment will also be updated if near miss or injury investigations have determined that the PPE was inadequate or created a greater hazard.

Completed PPE hazard assessments are managed electronically at the San Box website. For task-based assessments, PPE will be dictated in Job Safety Analyses (JSAs).

Contractors must develop and review PPE hazard assessments with their employees for the work they are performing. The contractor may include the PPE hazard assessments as part of their Injury and Illness Prevention Program (IIPP) or Site-Specific Safety Program (SSSP) as a standalone PPE program or in part of their JSAs.

B. Inspection, Maintenance and Disposal

1. Inspection and Maintenance

All PPE and work wear must be inspected prior to each use for defects such as missing or defective parts, imperfect seams, soil, tears, scratches, stiffness, distortion, discoloration, cracks, pinholes, etc. Inspections shall be performed in accordance with the manufacturer instructions and training.

PPE that does not pass inspection shall be immediately repaired (where appropriate) or discarded and replaced. Defective PPE shall be reported immediately to supervision.

PPE shall be replaced when it has been involved in an incident or when the manufacturer established life expectancy is reached. Life expectancy or “end of life” is a limiting date of use or maximum service time.

PPE should not be painted or modified in any way. Marking of PPE with a pen or permanent marker is only permitted on manufacturer approved and provided tags.

Non-disposable PPE shall be regularly cleaned with soap and water, compatible equipment cleaning solution, or wipes. Avoid using harsh chemicals which can cause deterioration, cracking, or weakening of the PPE. Reusable ear plugs, earmuffs and respirators should be cleaned after each use. Refer to the manufacturer instructions for cleaning.

2. Storage

PPE must be stored to protect against dust, sunlight, extreme heat or cold, excessive moisture and damaging chemicals. PPE should be stored in a dry and clean place, where it can be easily accessed and is not exposed to potentially damaging conditions. The PPE must be stored in accordance with the manufacturer’s instructions.

The Warehouse will manage bulk storage and distribution of new PPE. New (unused) PPE shall be kept in its sealed package (where applicable) until use.

Subject: Personal Protective Equipment (PPE)

3. Disposal and Decontamination

PPE must be disposed in approved containers. Disposable PPE shall be removed and discarded as soon as the work task is complete and never reused. Disposable PPE used for removal of regulated wastes (i.e., asbestos, lead) shall be disposed in accordance with state and federal requirements for the specific hazardous waste operation.

Non-disposable PPE must be decontaminated and sanitized before being reused. Contaminated PPE which cannot be properly decontaminated by normal procedures must be disposed of accordingly. PPE that may contain residual contamination shall not to be worn in offices, control rooms, lunchrooms, clean change rooms, etc., where the contamination can spread, exposing non-protected personnel. This PPE must be decontaminated prior to entry into such areas. Decontamination of PPE will be performed using soap and water, unless if manufacturer instructions specify differently.

Protective clothing such as work uniforms and laboratory coats shall be laundered through an approved Sanitation District vendor to prevent cross-contamination. Employees issued uniforms must wear only Sanitation District issued protective clothing in industrial areas (treatment plant, pump stations, collections, electrical rooms, etc.).

C. Donning and Doffing

Depending on the level of PPE required, donning (putting on) and doffing (taking off) procedures will vary. Manufacturer instructions for specific PPE must always be followed to ensure proper fit and wear. PPE shall only be worn as designed. PPE that does not fit properly or is improperly worn may not provide adequate protection or could cause a greater hazard. PPE shall always be removed in a manner that does not cause contamination. Sanitation District employee may wear Level D, modified Level D or Level C PPE. Below are donning and doffing procedure for Level C. Adjust for modified Level D.

1. Donning Level C PPE (Tyvek and Respirator)

- a. Put on chemical resistant boots.
- b. Put on chemical resistant coveralls over boots.
- c. Tape over coveralls (where coveralls meet the boots).
- d. Put on inner gloves.
- e. Put on respirator.
- f. Pull coveralls over inner gloves.
- g. Put on outer gloves.
- h. Tape over coveralls (where coveralls meet the outer glove).

2. Doffing Level C PPE (Tyvek and Respirator)

- a. Remove all tape.
- b. Remove outer gloves.
- c. Remove suit, being careful not to touch any potentially contaminated surfaces.
- d. Remove respirator without loosening straps.
- e. When removing respirator, pull respirator out and away from face.

Subject: Personal Protective Equipment (PPE)

- f. Remove boots.
- g. Remove inner gloves.

3. Procedure for Removing Gloves

- a. Grasp outside of glove with opposite hand; peel off.
- b. Hold removed glove in gloved hand.
- c. Slide fingers of ungloved hand under remaining glove at wrist.
- d. Peel glove off over first glove.
- e. Discard gloves in waste container.

D. Training

Each employee who is required by this program to use PPE shall be trained to know the following:

- When PPE is necessary.
- What PPE is necessary.
- How to properly don, doff, adjust, and wear PPE.
- The limitations of the PPE.
- How to maintain, clean, and properly store the equipment when not in use.

Proper fitting instructions for specialty PPE, (i.e., fall protection harness, respirator) shall include a hands-on demonstration and practice in a normal atmosphere before being required to work in the work area with hazards present.

Employees shall demonstrate an understanding of the training and ability to use PPE properly. Risk Management and/or supervision may determine that an employee may require retraining if they do not have the understanding and skills required to wear PPE.

Retraining is required for, but not limited to the following situations:

- Changes in workplace render previous training obsolete.
- Changes in type of PPE to be used render previous training obsolete.
- When employee demonstrates lack of use, improper use, or insufficient skill or understanding of assigned PPE.

The level of training provided will vary with the level of risk involved and the complexity and performance of the equipment. Employees who use hearing protection devices, fall protection equipment, respirators and arc flash PPE will require a more comprehensive degree of training with regular refresher courses, whereas the training for protective gloves for dealing with hazardous substances may require demonstration only. The frequency of the refresher courses required in the case of PPE for high-risk situations will depend on the nature of the equipment, how frequently it is used and the needs of the employees using it.

E. Voluntary Use of PPE

If personnel choose to use PPE for a task that does not require its use, the employee must be fully trained on the proper use and limitations of the respective PPE.

Subject: Personal Protective Equipment (PPE)

For voluntary use of respiratory protection, the employee will be provided a copy of Appendix D of OSHA's Respiratory Protection Standard (Title 8, California Code of Regulations, Section 5144). If it is determined by Risk Management that the respirator creates a greater hazard to the user, the employee will not be permitted to use that respirator. The user must be medically cleared to use the respirator and be fit tested.

VII. Types of PPE

A. Eye/Face Protection

Employees working in or adjacent to locations with risk of receiving eye injuries, such as but not limited to flying objects and hazardous chemicals shall wear appropriate eye and/or face protection. Eye and face protection must be designed, constructed, and tested in accordance with ANSI Z87.1-2020.

1. Safety Glasses

Safety glasses with side shields are required for impact protection, such as flying fragments, objects, large chips, particles, sand, and dirt. Safety glasses shall bear the marking of ANSI Z87.1 Sunglasses are not permitted unless approved by ANSI.

Safety glasses shall be worn in all areas designated or posted as a PPE required area. When working indoors, clear, or amber safety glasses shall be worn. Additionally, safety glasses are required when working or walking through:

- Treatment Plant 1 and 2
- Maintenance Shops
- Automotive Shop
- Pump Stations
- Collection Systems
- Laboratories
- Contractor or Maintenance Delineated Work Areas
- During walking tours for visitors/contractors.

2. Prescription Safety Glasses

Wearers of prescription (Rx) eyewear should wear eye protection that incorporates the prescription in its design or that can be worn over prescription lenses without disrupting the prescription eyewear or protective eyewear.

Wearing of contact lenses is prohibited in working environments that have harmful exposure to materials or light flashes, except where medically approved and have been established for the protection of the employee.

Sanitation District staff shall be entitled to one pair of clear lenses and one pair of either shaded (sunglasses) lenses or photo gray lenses per fiscal year. The prescription safety glasses must have permanent side shields. Employees requiring vision correction shall notify the Risk Management Division. The employee will be reimbursed up to \$160 per pair to cover the cost.

In the event employee's prescription safety glasses are lost, stolen or damaged beyond repair, the employee shall fill out a lost property document. This document shall be signed by their supervisor and forwarded to the Risk Management Division along with their damaged safety

Subject: Personal Protective Equipment (PPE)

glasses. The Risk Management Division shall make the determination to replace the employee's safety glasses or require the employee to replace them at their own cost.

3. Safety Goggles

Safety goggles are intended to shield the user's eyes from infectious fluids and chemicals.

Goggles shall fit the face immediately surrounding the eyes and form a protective seal around the eyes. Goggles prevent objects from entering under or around the goggles. Prescription lenses may be incorporated into goggles or mounted behind the goggle.

Safety goggles shall be worn when handling chemicals or in the presence of airborne mists or wastewater with the potential for splashing.

Safety goggles may be obtained from the warehouse. The Warehouse provided safety goggles are both impact and chemical splash resistant and meet the ANSI Z-87.1 standard for impact.

4. Tinted Goggles / Welding Helmets

Tinted goggles and/or welding helmets are required when exposed to injurious light rays, such as those produced during welding, brazing or torch cutting. The lens shall be appropriately shaded based on the type of injurious light produced. The table below provides filter lens shade numbers for protection against radiant energy.

Operation	Electrode Size (inch)	Metal Thickness (inch)	Arc Current	Minimum Shade Number	Suggested Shade Number
Shielded Metal-Arc Welding	< $\frac{3}{32}$	n/a	<60	7	-
	$\frac{3}{32} - \frac{5}{32}$	n/a	60-160	8	10
	$\frac{5}{32} - \frac{1}{4}$	n/a	160-250	10	12
	> $\frac{1}{4}$	n/a	250-550	11	14
Gas Metal-Arc Welding (MIG/MAG) and Flux Cored Arc Welding (FCAW/FCA)	n/a	n/a	<60	7	-
	n/a	n/a	60-160	10	11
	n/a	n/a	160-250	10	12
	n/a	n/a	250-550	10	14
Gas Tungsten arc welding (TIG)	n/a	n/a	<50	8	10
	n/a	n/a	50-150	8	12
	n/a	n/a	150-500	10	14
Carbon Arc Cutting	n/a	n/a	<500	10	12
	n/a	n/a	500-1000	11	14
Plasma Arc Welding	n/a	n/a	<20	6	6-8
	n/a	n/a	20-100	8	10
	n/a	n/a	100-400	10	12
	n/a	n/a	400-800	11	14
Plasma Arc Cutting	n/a	n/a	<300	8	9
	n/a	n/a	300-400	9	12
	n/a	n/a	400-800	10	14
Carbon Arc Cutting	n/a	n/a	<500	10	-
	n/a	n/a	500-1000	11	-
Carbon Arc Welding	n/a	n/a	n/a	14	14
Torch Brazing	n/a	n/a	n/a	3	3-4

Subject: Personal Protective Equipment (PPE)

Operation	Electrode Size (inch)	Metal Thickness (inch)	Arc Current	Minimum Shade Number	Suggested Shade Number
Torch Soldering	n/a	n/a	n/a	2	-
Gas Welding (light)	n/a	< 1/8	n/a	4	-
Gas Welding (medium)	n/a	1/8 – 1/2	n/a	5	-
Gas Welding (heavy)	n/a	> 1/2	n/a	6	-
Oxygen Cutting (light)	n/a	< 1	n/a	3	-
Oxygen Cutting (medium)	n/a	1 – 6	n/a	4	-
Oxygen Cutting (heavy)	n/a	> 6	n/a	5	-

As a rule of thumb, employees shall wear a shade that is too dark, then go to a lighter shade which gives sufficient view of the weld zone without going below the minimum. If oxygen gas welding or cutting produces a high yellow light, use a filter that absorbs yellow visible light.

Tinted goggles shall be tight fitting to the face and worn during cutting, torch brazing, and soldering activities, or to prevent against glare when working with or adjacent to the above listed operations.

Welding helmets shall be selected when flying particles or spatter are a hazard because of the above listed operations. Welding helmets shall be selected that protect the face, forehead, neck, and ears. Safety glasses shall be worn under welding helmets.

Tinted goggles and a face shield may be worn to protect against flying particles or splatter.

5. Face Shields

Face shields alone will not protect against impact hazards. Face shields must be worn in combination with safety glasses or goggles. Face shields should fit snugly to the user.

Face shields are intended to shield the user's face and neck from flying objects, molten metal, liquid chemicals, acids or caustic liquids, or injurious light, depending on the type of face shield.

Face shields must be worn for the following activities, except where a greater level of protection is provided to the user's face:

- Operation of a pressure washer, air knife or hydro excavation equipment.
- When handling chemicals or wastewater with the potential for splashing (i.e., laboratory, chemical deliveries, line breaking, sampling, parts cleaning).
- Operating equipment in a machine shop that generates flying objects (i.e., drill press, lathe).
- Operation of hand-held saws (i.e., chainsaw, concrete saw, pneumatic or electric cutting wheel).
- Operations that cause flying particles or injurious light (i.e., grinding, chipping, polishing, cutting, or welding).
- When performing electrical-related activities as required by the Sanitation District's Electrical Safety Program (SOP-205).

6. Full-Face Respirators

Subject: Personal Protective Equipment (PPE)

The lens of a tight-fitting full-face respirator shall be approved for impact protection. Safety glasses are not required to be worn in combination with full-face respirators when impact protection is afforded.

B. Head Protection

Hard hats shall protect employees from impact and penetration, falling or flying objects, and limited electrical shock and burn. Hard hats must also be water resistant, slow burning, come with instructions explaining adjustment and replacement of suspension in head band, and comply with ANSI/ISEA Z89.1-2014(R2019). Hard hats must be Type 1, Class E rated.

Hard hats shall be replaced when they become damaged, contaminated or has been struck by an object of sufficient size to potentially contaminate its integrity. Hard hats shall not be modified, painted, or coated with any material (including stickers). Hard hats that are faded, cracked, chipped, or deformed shall be disposed of and replaced with a new hard hat immediately.

Hard hats may not be worn backwards, except where the helmet has been approved for such wear. Hard hats approved for multi-directional wear will be marked with two arrows curving to form a circle.

Only manufacture approved head covering and sweat bands designed to be worn in conjunction with hard hats will be allowed to be worn under the hardhat. Wearing baseball caps, hoods, or beanies under hardhats is prohibited. Welding caps or bandannas are permitted only if they are worn smoothly on the top of the head. Do not store anything between the hard hat and the suspension. Where chin straps are utilized on hard hats, they must have a low breaking strength to prevent strangulation.

Hard hats shall be worn in the following areas or situations, except where it has been determined to be a PPE free zone (i.e., offices, walking path, inside cabbed vehicles):

- Treatment Plant 1 and 2
- Pump Stations
- Collection Systems
- Contractor or Maintenance Delineated Work Areas
- During walking tours for visitors/contractors
- During crane and hoisting operations
- Where the potential for falling or flying objects exists (i.e., working below elevated location, excavations)
- Where the potential exists for impact and penetration (i.e., low clearance, operating aerial lift equipment)

Where there is a risk of injury of hair entanglement in moving parts of machinery or equipment, combustibles or toxic contaminants, employees shall confine their hair to eliminate the hazard.

VIII. Hand/Arm Protection

Gloves shall at a minimum meet the ASTM standards for which they were designed. Hand protection shall be worn by employees to lower their risk of exposure to the following hazards:

- Skin absorption of harmful materials such as chemicals, hazardous waste, untreated and treated sewer sludge grit, biosolids, wastewater, plant water and blood borne pathogens.

Subject: Personal Protective Equipment (PPE)

- Materials with sharp edges, burrs, splinters, nails, or other hazards that can cut or puncture the skin.
- Thermal burns due to welding, torch cutting, line steaming work, or electrical work.
- Electrical shock and burns from working with electrical voltages above 50 volts.

Where there is a potential for injury of the arms, appropriate sleeves or protective jackets shall be worn. Hand and arm protection must be designed, constructed, and tested in accordance with ANSI/ISEA 105-2016.

Not one glove will provide coverage for all potential hazards. Gloves shall be selected to protect against majority of the applicable hazards. Selection shall include design, construction and fit, as well as allergies. For example, some people are allergic to latex. Gloves may be disposable or reusable.

A. Material Handling

These gloves are generally made of a hybrid and composite material, including leather, synthetic leather, waterproof materials, and high-performance fibers. These gloves are typically thinner, which allow for greater dexterity and flexibility.

Leather and rubber coated cotton gloves function best when handling materials that have the possibility to cause cuts, abrasions, or puncture wounds to unprotected hands.

These gloves provide minimal thermal protection and chemical resistance. These gloves shall never be used for welding, torch cutting operations, chemicals, for sample collection or working with wastewater. Leather and rubber coated cotton gloves shall be disposed of once they develop holes or stitching defects. Saturated leather gloves will increase the contact time with pathogens found in sludge and wastewater with the possibility to increase the risk of infection through cuts or abrasions on the hands. Leather gloves cannot be disinfected without the risk of permanent damage to the gloves.

B. Cut-Resistant Gloves

These gloves reduce the risk of cuts, punctures, and abrasion injuries. These gloves are made of special materials, which includes Kevlar®, Spectra® fiber, stainless steel, and tough synthetic yarns. These materials may be used in linings, constructed in combination with leather, or in a variety of coatings to improve grip.

C. Welding and Heat Resistant Gloves (Hot Work)

These gloves protect against high temperatures, flames, and sparks. Welding gloves are typically made of elk skin, cowhide, deerskin, pigskin, or goatskin, and cover the forearm.

Heat resistant gloves shall be selected based on the type of heat: dry or moist, thermal, or atmospheric, or if open flame and spark is present.

D. Chemical Resistant Gloves (Chemical Handling)

These gloves shield against penetration from petrochemicals, acids, solvents, detergents, alkalis, and a wide range of other chemicals and substances. Glove materials consist of latex, PVC, nitrile, butyl, and neoprene. The material of glove will provide protection against specific chemicals with various degradation values.

Subject: Personal Protective Equipment (PPE)

Chemical handling gloves shall be inspected for holes, tears, worn and/or discolored areas on the surface of the gloves before they are used to handle chemicals. Defective chemical gloves are not usable and must be disposed of immediately.

To prevent chemicals from meeting the user's arms, the bottom of chemical gloves shall be cuffed or rolled to capture any chemical that runs down the glove.

Chemical non-disposable gloves shall be rinsed with clean water after each use. Rinsing the gloves shall prevent residual chemical for meeting unprotected skin, tools, and other materials.

Note: eyewash stations are not to be used to rinse chemical gloves. Chemical gloves can last several years if they are properly maintained.

Rubber gloves should be used when handling plant water hoses and working inside the rag and grit facilities. These gloves can be sanitized after use.

E. Voltage Insulating and Lineman's Gloves

Natural rubber gloves provide protection against electrical shock. These gloves are divided into the following classes: 00, 0, 1, 2, 3, and 4. Proof test voltages and maximum use voltages are provided by the manufacturer based on tests performed for each class. Leather protector gloves are typically worn over these gloves to protect against cuts, abrasions, and punctures. Refer to the Sanitation District's Electrical Safety Program (SOP-205) for additional information.

F. Emergency Response/ Medical Treatment

Nitrile gloves shall be worn when it can be reasonably anticipated that an employee may have contact with blood, other potentially infectious material, mucous membranes, or when handling contaminated items or surfaces.

Only first aid and bloodborne pathogen trained employees (i.e., Emergency Response Team, Contractors Emergency Response) are to provide medical treatment.

Gloves shall be disposable. Gloves shall be replaced as soon as practical when contaminated or as soon as feasible if they are torn, punctured, or when their ability to function as a barrier has been compromised.

IX. Foot Protection

Sanitation District staff and contractors shall wear protective footwear to prevent injuries from falling objects, electrical shock, hot and/or corrosive materials, crushing or penetrating objects, slippery surfaces, and abnormally wet locations. Contractors are responsible for selecting and providing foot protection to its employees.

Foot protection must be designed, constructed, and tested in accordance with ASTM F2414-18, Standard Test Methods for Foot Protection and ASTM F2414-18, Standard Specification for Performance Requirements for Protective Toe Cap Footwear.

Foot protection shall be worn in the following areas or situations or where posted, except where it has been determined to be a PPE free zone (i.e., offices, walking path, inside cabbed vehicles):

- Treatment Plant 1 and 2
- Maintenance Shops

Subject: Personal Protective Equipment (PPE)

- Automotive Shop
- Pump Stations
- Collection Systems
- Contractor or Maintenance Delineated Work Areas
- Where the potential exists for falling or crush objects, slippery surfaces, electrical shock, puncture, and chemical hazards.

Fully enclosed shoes must always be worn in laboratory areas and by visitors participating in tours of the plant processes. Foot protection worn in offices areas shall be compliant with Sanitation District uniform policies.

Protective footwear that is defective or inappropriate to the extent that its ordinary use creates the possibility of foot injuries shall not be worn. Materials shall not be installed on the footwear, including but not limited to, tar, safety caps, waterproofing or insect repellants. These materials can alter the protective nature of the footwear rendering it inadequate.

Sanitation District staff will be provided with protective footwear per the following schedule:

Division Name/Number	Frequency
<ul style="list-style-type: none"> • Risk Management, 161 • Materials Management, 230 • Information Technology-Infrastructure, 250 • Resource Protection-Source Control, 620 • Design, 760 • Construction Management, 770 	Annually
<ul style="list-style-type: none"> • Collections Facilities O&M, 820 • Fleet Services, 822 • O&M, 830, 840, 870, 880 	Annually
<ul style="list-style-type: none"> • Public Affairs, 140 • Contracts and Purchasing, 230 • Information Technology-Enterprise Information Management, Cyber Security, Business Solutions and Support, 250 • Resource Protection-Engineering, 620 • Project Management Office, 750 	Every Other Year
<ul style="list-style-type: none"> • Administrative, clerical support, intern staff, and other employees not listed 	Upon Supervisor Request

Sanitation District employees who receive foot protection shall be required to wear them when performing their work duties; failure to do so may result in disciplinary action.

Risk Management shall provide a voucher of \$225 to Local 501 and OCEA staff, and \$170 to SPMT staff to cover the cost of protective footwear.

Sanitation District supplied foot protection shall at the minimum meet the following safety requirements:

- Meet ASTM F2413 performance standards.
- Constructed of materials suitable for its intended exposure and shall provide protection, comfort, and wear ability.

Subject: Personal Protective Equipment (PPE)

- Completely enclose the foot.
- Constructed with a protective toe cap (steel toe or composite).
- Have slip-resistant soles.
- Have a heel height of one inch or less.

Some job classes will require footwear to meet additional safety requirements. For example, electrical and instrumentation staff will require foot protection made of leather. Risk Management will provide each job class with the minimum footwear requirements during footwear procurement, which are selected according to the completed PPE hazard assessments. The selected footwear considers performance requirements for impact resistance, compression resistance, metatarsal protection, conducting properties, electric hazards, static dissipative properties, and puncture resistance properties.

X. Body Protection

Body protection generally refers to outer garments, such as suits, chaps, vests, sleeves, coats, etc. to protect the body from injury. Body protection shall be worn when employees are exposed to hazardous substances or flying objects.

Conditions that may warrant body protection include:

- Exposure to sharp knives or power cutting tools (i.e., chainsaw).
- Exposure to summer or winter weather.
- Exposure to water (where a drowning hazard exists).
- Contact with intense heat, including molten metal and other hot materials (i.e., steam, sparks, etc.).
- Contact with chemicals (i.e., mixing, delivery, sampling, inspection).
- Working with hazardous substances (i.e., asbestos, lead, mold, hydrocarbons).
- Contact with infectious materials, including blood and body fluids.
- Contact with rough or abrasive surfaces.
- Working with electrically energized conductors or parts.
- Working around motorized vehicles and heavy equipment where there is a need to enhance a person's visibility.
- Exposure to biological hazards associated with wastewater, raw sludge and/or processed sludge.

Refer to the Sanitation District's Electrical Safety Program (SOP-205) for information regarding protection against electrically energized conductors or parts.

Loose sleeves, tails, ties, lapels, cuffs, and other loose clothing which can become entangled in moving machinery shall not be worn. Any clothing that has been saturated or impregnated with flammable liquids, corrosive substances, irritants, or oxidizing agents shall be removed and not worn until properly laundered.

Most body protection garments inhibit the loss of heat from the body and therefore can increase physical and psychological burdens on the user. Comfort and heat illness shall be considered for adequate hazard protection.

A. High-Visibility Safety Apparel

Subject: Personal Protective Equipment (PPE)

The purpose of high-visibility safety apparel (HVSA) is to decrease the likelihood of worker fatalities or injuries caused by motor vehicles and construction vehicles and equipment.

HVSA is personal protective safety clothing intended to enhance a person's visibility during both daytime, nighttime, and other low-light conditions especially when around vehicular traffic. Manufactured HVSA worn by Sanitation District staff and contractors shall meet the design and testing requirements of ANSI 107.

HVSA shall be worn during the following work activities or conditions; all other uses of HVSA will be considered a best practice:

- Employees working as a flagger (i.e., spotting heavy equipment, locations on construction site where barricades and warning signs cannot control moving traffic).
- Employees (on foot) exposed to the hazard of vehicular traffic; this includes employees walking through the plant, using the walking path, walking through, or working in a construction zone, or working along a Sanitation District roadway.
- Employees working from dusk to dawn (night or low light level work)
- Employees exposed to public vehicular traffic in the vicinity of excavations.
- Employees exposed to either public traffic or to construction vehicles and equipment.
- Employees within the right-of-way of a Federal-aid highway who are exposed either to traffic (vehicles using the highway for purposes of travel) or to construction equipment within the work area.

HVSA can be upgraded to the higher-class level during periods of inclement weather, when complex backgrounds are present in work area, or where employees perform tasks that diverts attention away from approaching vehicles

Class II and III approved high-visibility vests are Warehouse stocked items. Approved jackets are supplied by the individual division. Contractors are responsible for providing their own HVSA for its employees.

Optional high-visibility accessories include headwear, gloves and arm or leg bands. These accessories are not intended to be used alone as high-visibility personal protective equipment and do not contribute to minimum area calculations that designate Class 2 or 3.

All high-visibility items have a limited lifetime that varies with use. It is the responsibility of supervision and the wearer to periodically evaluate quality of the HVSA. Garments should be replaced or repaired when they are torn, noticeably faded, soiled, cracked, burned, heavily abraded or damaged. HVSA shall never be modified by removing sleeves and reflective material or by adding pins, buttons, or patches. High visibility equipment requires 360 degrees of visibility, meaning that the wearer can be seen from all sides.

Sanitation District staff and contractors shall wear the following HVSA in accordance with the California Manual on Uniform Traffic Control Devices (California MUTCD) and the ANSI 107, which is consistent with the below listed work activities or conditions:

1. OC San employees, contractors, vendors, and consultants are required to wear a minimum of Class II (Type R) HVSA in the following areas:
 - a. Working in a work zone established for construction and/or maintenance-related projects. *Note: The work zone shall be large enough to accommodate the work being performed to prevent injury to employees walking, driving, or working near the construction*

Subject: Personal Protective Equipment (PPE)

and/or maintenance-related activity. The work zone shall be delineated by one or more of the following: barricades, temporary fencing, or caution tape. Signage shall accompany work zone delineation where it may not be obvious that such activities are underway. The HVSA must be upgraded to a Class III HVSA if the maximum posted speed limit along the public right-of-way exceeds 50 mph or if the work is performed during nighttime hours.

- b. When working in vicinity of operating mobile equipment (scissor lift, aerial lift, forklift, excavator, etc.).
 - c. When working between dusk and dawn (night or low light level)
 - d. When working in the public right-of-way where vehicle speeds do not exceed 50 miles per hour (mph).
 - e. When working at off site adjacent to the public right-of-way and not protected by Sanitation District property fencing.
 - f. OC San property where the potential exists for exposure to vehicular traffic (i.e., walking path, riding Sanitation District owned bicycles).
 - g. Pump stations when working adjacent to the public right-of-way and not protected by Sanitation District property fencing.
 - h. Private property not owned by the Sanitation District.
2. OC San employees, contractors, vendors, and consultants must upgrade to Class III (Type R) HVSA under the following conditions:
- a. Public right-of-way where vehicle speeds exceed 50 mph and/or during nighttime hours.
 - b. When working along a federal-aid highway during daytime or nighttime hours.
3. Supplemental Class E
- a. Class E is comprised of high-visibility garments such as pants, bib overalls, shorts, and gaiters.
 - b. These items do not qualify as meeting the requirements of the standard when worn alone, but when a Class E item is worn with a Class II or Class III garment, the overall classification of the ensemble is Class 3.

B. Lab Coats

Employees working in the laboratory, where small containers of biological agents or hazardous chemicals are handled, shall wear lab coats since the potential for contact with significant quantities of hazardous materials is relatively low. Lab coats protect the body against incidental exposure and minimize potential for contamination. Lab coats shall be worn in conjunction with other protective equipment such as gloves and safety glasses.

Employees working in the laboratory with significant potential for chemical contact (such as large splashes), shall layer chemical resistant sleeves or aprons over lab coats. To minimize potential exposure, work shall be performed in fume hoods to the greatest extent possible.

C. Splash Aprons

Splash aprons shall be provided where the potential for chemical contact is greater than incidental. If the exposure potential is limited, then an apron, gloves and sleeves may be

Subject: Personal Protective Equipment (PPE)

sufficient. Chemical splash aprons should be worn over work uniforms or lab coats when collecting wastewater and sludge samples from pumps or lines that are pressurized.

D. Coveralls

Coveralls shall be provided where the potential for exposure to chemicals is high or where large splashes could impact the legs, arms, and torso. The coverall shall consider the physical state of the chemical, including permeability and penetration.

Coveralls shall also be provided where there is potential for exposure to wastewater, raw or processed sludge, when entering confined spaces, when exposed to blood or OPIM, and when handling hazardous materials such as asbestos, lead and mold.

Coveralls shall always be worn per manufacturer instructions. Coveralls shall not be worn or tied around the waste, not fully zipped, and shall be replaced when ripped, torn or otherwise damaged.

E. Cut-Resistant Clothing

Personnel operating chain saws shall wear cut resistant sleeves and apron chap leg protection, which meets the design, performance, testing and certification requirements of ASTM F1897, Standard Specification for Leg Protection for Chain Saw Users. Thermal Protection (Hot Work)

Welding aprons, sleeves, bibs, and coats shall be flame-resistant (FR) to reduce the severity of burn injuries, short duration thermal exposure from fires and burns caused by sparks, spatter, or radiation. Clothing worn underneath FR clothing should be non-meltable garments. FR clothing shall conform to NFPA 2112.

Risk Management will make the determination if uniforms, insulated jackets, or other PPE shall be Flame-Resistant (FR). This determination will be made on a case-by-case basis for the work activities performed.

XI. Electrical PPE

Employees that are exposed to electrical hazards, as defined by OC San's Electrical Safety Program (SOP-205) and NFPA 70E, and where the risk of that hazard cannot be adequately reduced by engineering controls, shall wear arc-rated (AR) personal protective equipment that is designed and constructed for protection against electrical hazards (shock and arc flash). Electrical safe work conditions shall be established where feasible. Refer to the arc flash analysis for level of AR PPE required to establish an electrically safe working condition or if exposed to electrical hazards.

Arc-rated PPE will only be provided to trained and authorized employees expected to work on, operate and maintain electrical equipment per the documented risk analysis or in accordance with NFPA 70E. Only trained and qualified employees shall work in the restricted approach boundary, arc flash boundary, or wear electrical PPE. All protective equipment shall be NFPA 70E approved.

Risk Management will make the determination if uniforms, insulated jackets, or other PPE shall be arc-rated (AR). This determination will be made on a case-by-case basis for the work activities performed.

Subject: Personal Protective Equipment (PPE)

Refer to the electrical safety program (SOP-205) for further guidance.

XII. Uniforms

Uniforms issued by the Sanitation District are designed to provide a level of personal protection from biological hazards; however, uniforms should be considered as minimal protection and should be worn in conjunction with other protective clothing noted herein. Sanitation District employees who are eligible for issued uniforms shall wear them during the performance of their job duties. Uniforms are considered PPE, so damaged uniform parts shall be returned to the supplier. The supplier must promptly replace damaged uniforms with undamaged uniforms. Uniforms that are worn, tattered, or have patched holes will not be acceptable as replacements.

If a uniform becomes contaminated with chemicals, wastewater, or wastewater byproducts (i.e., sludge, effluent, etc.), the uniform must be cleaned by the professional uniform service. If it is reasonable to suspect that a uniform has not been contaminated, employees may also take uniforms home for washing. Any uniforms washed at home must be washed separately from other clothes. Arc flash rated uniforms must always be washed by the professional uniform service. Sanitation District employees whose job task requires them to perform job tasks in cold and/or wet environments shall be provided with insulated jackets or rain suits.

XIII. Work on or Adjacent to Water

Personal floatation devices (PFDs) shall be provided where employees work exposes them to the hazard of drowning. PFDs shall be Type I, as approved by the United States Coast Guard, pursuant to 46 Code of Federal Regulations (CFR) 160 for Coast Guard Lifesaving Equipment Specifications).

Type I PFDs provide the most buoyancy and are therefore effective for all waters, especially open, rough or remote waters where rescue may be delayed.

Type I PFDs shall be provided for every employee whose job task requires them to perform work from a boat or where there is a danger of falling into water (i.e., process tank, shoreline, river). PFDs shall comply with the following requirements:

- Kept in good serviceable condition.
- Must be the appropriate size for the attended user.
- Must worn during tasks where drowning exists.
- Shall not be stowed in plastic bags, locked compartments or have materials stowed on top of them.

The Type I PFD should be inspected for rips, tears, and holes, and to verify that the seams, fabric straps, and hardware are okay. There should be no signs of waterlogging, mildew odor, or shrinkage of buoyant materials. PFDs shall be maintained in good condition. Damaged PFDs shall be removed from service. Damaged PFDs can affect buoyant properties or capability of being fastened. PFDs are required when working on OC San's Ocean Monitoring vessel, the Nerissa. This requirement is when the vessel is underway or where directed by the boat captain.

Sanitation District employees who work where there is potential for them to fall into a body of water and drown are required to wear a life jacket or have an established personal fall restraint system that prevents them from falling into the body of water and prevents the worker from being submerged underwater.

Subject: Personal Protective Equipment (PPE)

XIV. Hearing Protection

Hearing protective devices shall be made available for employees exposed to an 8-hour time-weighted average (TWA) of 85 decibels (dB) and greater, or equivalently a dose of 50 percent.

Hearing protective devices shall be worn by employees under the following conditions, or where posted:

- When exposed to an 8-hour TWA of 90 decibels and greater, or equivalently a dose of 100 percent or where posted.
- When exposed to an 8-hour TWA of 85 decibels (or 50 percent dose) and have measured hearing loss.
- Where required by the electrical safety program (SOP-205) or elsewhere required by the hearing conservation program (SOP-106).
- When performing hot work operations such as welding, grinding, or cutting metal.
- When performing work that even momentarily generate high impact noise like metal clanging, jack hammering

When operating or working adjacent to heavy equipment or power tools. *Note: wearing HPDs while welding, grinding, or cutting metal not only provides protection against injurious noise generated by equipment, but also protects the ear from heavy metals and chemical fumes that can have a negative effect on the auditory system.*

Types of Hearing Protective Devices include, but not limited to:

- Disposable Earplugs
- Reusable Earplugs
- Earmuffs

Refer to the Sanitation District's Hearing Conservation Program (SOP-106) to review the use, selection, storage, audiometric testing, training, proper fit, and cleaning of hearing protective devices. Hearing protection shall be provided to employees at no cost. Contractors are responsible providing its employees with such devices.

XV. Personal Air Monitor

OC San staff and contractors who enter the plant process areas or pump stations are required to wear a 4-gas air monitor. Staff, and contractors are required to wear the air monitor due to potential exposure to: CO, H₂S, LEL (flammable environments), and O₂ deficiency or enrichment. Personal air monitors measure for flammable atmospheres (lower explosive limit expressed as % LEL), due to the use of non-intrinsically safe equipment or personal electronic devices in a hazardous (classified) location. Lower explosive limit, or LEL is the lowest concentration of a substance that will produce a fire or flash when an ignition source is present. Concentrations below the LEL are too lean to burn.

Personal air monitors that are equipped to monitor percent oxygen, hydrogen sulfide, carbon monoxide or other air contaminants, do not replace air monitoring equipment required for confined space entry and excavations.

Employees must immediately leave the work area whenever an equipment alarm sounds due to:

- Combustible gas detected above 10% LEL

Subject: Personal Protective Equipment (PPE)

- Sensor failure.
- Low battery alarm.
- Or other air monitoring parameter alarm (if equipped).

It is recommended that Sanitation District personal air monitor be bump tested prior to each use and calibrated every 180 days. The Sanitation District maintains docking stations in occupied buildings for calibration of equipment.

Employees must be trained on proper use, calibration, limitations, and alarms for the personal air monitor used.

XVI. Personal Fall Protection Equipment

Personal fall protection shall only be used where a fall hazard cannot be eliminated or passive fall protection systems (i.e., physical barriers) are not feasible. Personal protective equipment is used as part of an active fall arrest or fall restraint system, which includes a safety harness, lanyard, and anchorage device.

Personal fall arrest or fall restraint systems shall be designed, selected, and installed under the supervision of a qualified person. Only trained and authorized persons may use personal fall arrest or fall restraint systems.

Fall protection equipment shall be inspected by the authorized person before each use to verify that it has not sustained any wear or damage that would require removal from service. Fall protection equipment (including rescue equipment) shall also be inspected twice annually by a competent person to verify the equipment is safe for use. If inspections reveal damage or determined to be inadequate for service shall be tagged so equipment will not be returned to service. The competent person shall destroy the equipment.

Equipment that is involved in a fall shall be removed from service and destroyed or sent back to the manufacturer for repair. Exposure to sunlight, chemicals, fumes, or moisture can degrade the equipment's hardware and material.

Types of fall protection equipment include, but not limited to:

- Full Body Harness
- Lanyard/Self-Retracting Lifelines
- Anchorage Devices

Refer to the Sanitation District's Elevated Work and Fall Protection Program (SOP-626) for roles and responsibilities, harness, lanyard and anchorage devices, design requirements, maintenance and storage, inspections, and training.

XVII. Respiratory Protective Equipment

Respiratory protective equipment is a type of PPE that is used to protect an individual wearer against the inhalation of hazardous substances (i.e., dusts, fogs, fumes, mists, gases, smokes, sprays, or vapors) in the workplace air. Respiratory equipment shall only be used where the hazard cannot be eliminated or reduced using engineering and administrative controls.

Atmosphere Supplying Respirators shall always be used where the concentration or type of air contaminant is unknown and exposure to high levels can be reasonably anticipated. That way

Subject: Personal Protective Equipment (PPE)

you do not have to always default to it when it is unreasonable. All respirators must have National Institute of Occupational Safety and Health (NIOSH) approval.

Only trained and authorized employees shall wear respiratory protection. All respirator usage, which includes disposable respirators, air-purifying respirators (APR), and supplied air respirators (SAR or SCBA), medical clearance, require annual fit testing and training prior to use. Employees who request for voluntary use of respirators will be required to fill out a form titled Appendix D of OSHA's Respiratory Protection Standard (Title 8, California Code of Regulations, Section 5144), which will be provided by Risk Management.

Types of respirators include, but are not limited to:

- Air Purifying Respirators
- Atmosphere Supplying Respirators/Self-Contained Breathing Apparatus (SCBA)
- Negative and Positive Pressure Respirators

Refer to the Sanitation District's Respiratory Protection Program (SOP-109) for more information regarding selection, fit testing, medical surveillance, use, inspections, storage, maintenance, and training for respiratory protective equipment.

XVIII. PPE Zones

A. PPE Free Zones

All administrative office space and buildings, controls rooms, parking lots, break rooms and lavatories do not require personal protective equipment under normal conditions. Sanitation District staff shall wear approved uniforms when working in these areas.

Staff that are not issued a uniform shall adhere to the Sanitation District dress guidelines. Staff who are not issued shall adhere to the PPE guidelines when in the process area, this includes sleeved shirt, long pants, closed toed shoes.

For purposes of this section, normal conditions do not include construction and/or maintenance-related activities. When such activities are performed in these areas, barriers shall be erected to keep unauthorized persons out or work shall be conducted after hours. Persons working in the construction and/or maintenance work zone shall wear PPE appropriate for the hazards.

For purposes of this section, control rooms refer to a ventilated, heated, and/or air-conditioned space, which is occupied by Sanitation District staff, and serves as a central space to monitor and control process equipment (e.g., Truck Loading Control Room, Dewatering Control Room, Central Generation Control Room, etc.).

B. Designated PPE Areas

1. General Requirements

PPE shall be worn by Sanitation District staff and contractors when working in the process areas of Plant 1 and 2, pump stations and collection systems, fleet services, rebuild shop, maintenance shops, warehouses, laboratories, and the designated walking path. Maps are provided on the San Box highlighting PPE required areas.

Subject: Personal Protective Equipment (PPE)

Food and drink may not be consumed in PPE required areas, except in designated break areas, vehicles, carts, conference rooms, office areas and lunchrooms.

The minimum required PPE to enter these areas is listed below. Additional PPE may be required depending on the hazard assessment for the specific job or task. The PPE hazard assessment will define required PPE under these specific conditions.

2. Process Areas, Pump Stations, Collection System

- hard hat.
- safety glasses with side shields.
- protective footwear.
- high-visibility safety apparel.
- personal gas monitor (when inside process area, pump station or collection system).
- hearing protection (where labeled, required by PPE hazard assessment or JSA)
- arc flash protective equipment (where required by arc flash analysis, JSA and PPE hazard assessment).
- fall protection (as required by PPE hazard assessment or JSA).
- respiratory protective equipment (as required by PPE hazard assessment, JSA or JHA).
- gloves (as required by PPE hazard assessment).

Notes: Process areas are defined as preliminary, primary, secondary and solids handling processes where the treatment of wastewater and the recovery of solids are being conducted.

3. Chemical Handling and Odor Control Areas

- hard hat.
- safety goggles.
- face shield (as required by PPE hazard assessment).
- coveralls – chemical and/or flame resistant (as required by PPE hazard assessment)
- protective footwear.
- personal gas monitor (when inside process area, pump station or collection system).
- hearing protection (where labeled).
- gloves (as required by PPE hazard assessment).

Note: This section refers bulk chemical containment areas, odor control complexes, and chemical handling and bulk deliveries.

4. Fleet Services, Rebuild Shop, Maintenance Shop, Warehouses

- safety glasses with side shields or goggles.
- face shield (as required by PPE hazard assessment).
- welding hood or tinted goggles (as required by PPE hazard assessment).
- coveralls (as required by PPE hazard assessment).
- protective footwear.
- hearing protection (where labeled or required by PPE hazard assessment).
- respiratory protective equipment (as required by PPE hazard assessment or JSA).
- flame-resistant sleeves/clothing (as required by PPE hazard assessment or JSA).

Subject: Personal Protective Equipment (PPE)

- high-visibility safety apparel (warehouse only per forklift traffic).
- gloves (as required by PPE hazard assessment or JSA)

5. Laboratories

- laboratory coat (as required by PPE hazard assessment).
- closed-toed shoes.
- safety glasses or goggles.
- face shield (as required by PPE hazard assessment).
- gloves (as required by the PPE hazard assessment).

Notes: For purposes of this section, laboratories do not include the conference rooms, hallways, lavatories, and offices within the laboratory building.

6. Designated Walking Path

- closed-toed shoes
- high-visibility safety apparel

PPE	Process Areas, Pump Stations, Collection Systems	Chemical handling and Odor Control Areas	Fleet Service, Rebuild Shop, Maintenance Shop, Warehouse	Lab	Designated Walking Path
Hard Hat	X	X			
Safety Glasses/ Goggles	X	X	X	X	
Protective Footwear/ Closed Toed Shoes	X	X	X	X	X
High Visibility Safety Apparel	X		X		X
Personal Gas Monitor	X	X			
Hearing Protection *	X	X	X		
Arc Flash Protective Equipment*	X				
Fall Protection*	X				
Respiratory Protective Equipment*	X		X		
Gloves*	X	X	X	X	
Coveralls*		X	X		
Face Shield*		X	X	X	
Flame-Resistant Sleeves/Clothing*			X		
Laboratory Coat*				X	
Welding Hood or Tinted Goggles*			X		

* *Dependent upon where labeled, required by PPE hazard assessment, JSA, JHA, arc flash analysis.*

Note: Refer to list above for details on appropriate PPE in designated locations.

Subject: Personal Protective Equipment (PPE)

7. Construction and Maintenance-Related Work Zones

PPE shall be worn by Sanitation District staff and contractors when working in construction and/or maintenance-related work zones. A work zone is a delineated area to protect employees from vehicular traffic, operating heavy equipment, and/or potential hazards of demolition and renovation activities.

The work zone shall be large enough to accommodate the work being performed to prevent injury to employees walking, driving, or working near the construction and/or maintenance-related activity. The work zone shall be delineated by one or more of the following: barricades, temporary fencing, or caution tape. Signage shall accompany work zone delineation where it may not be obvious that such activities are underway. Signage shall include required PPE for entry.

The following PPE must be worn in all work zones at a minimum:

- hard hat.
- safety glasses with side shields.
- protective footwear.
- high-visibility safety apparel (minimum Class II or Class III Type R).
- personal gas monitor (when inside process area, pump station or collection system).
- hearing protection (where labeled, required by PPE hazard assessment or JSA).
- gloves (as required by PPE hazard assessment).

Contractors are responsible for establishing PPE required areas in accordance with the PPE hazard assessments completed for their work. Contractors are responsible for the safety of their employees and visitors while on the project site. If a contractor establishes more stringent PPE requirements than listed above, all Sanitation District staff who enter the work zone are required to abide by those requirements.

XIX. PPE Quality Standards

PPE at a minimum shall meet the following consensus standards:

Personal Protective Equipment	Standard
Eye and Face Protection	ANSI/ISEA Z87.1-2020
Industrial Head Protection	ANSI/ISEA Z89.1-2014(R2019)
Foot Protection	ASTM F2412-18a ASTM F2413-18
Leg Protection	ASTM F1897-20
Hand Protection	ANSI/ISEA 105-2016
High Visibility Safety Apparel	ANSI/ISEA 107-2020
Respiratory Protection	ANSI Z88.6

Subject: Personal Protective Equipment (PPE)

Personal Protective Equipment	Standard
Hearing Protection	ANSI A10.46 ANSI S3.19 ANSI S3.44
Shock and Arc Flash Protection	NFPA 70E NFPA 2112
Personal Floatation Devices	Title 46, Code of Federal Regulations, Section 160

XX. Recordkeeping

All records created or generated during 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 Sanitation District Records Retention Schedule is the official procedure governing the retention, retirement, and destruction of Sanitation 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.

XXI. References

ANSI/ISEA 105-2016 American National Standard for Hand Protection.

ANSI/ISEA 107-2015 American National Standard for High-Visibility Safety Apparel and Accessories.

ANSI/ISEA Z87.1-2015 American National Standard for Occupational and Educational Personal Eye and Face Protection Devices.

ANSI/ISEA Z89.1-2014 American National Standard for Industrial Head Protection.

ASTM F1506-02 Standard Performance Specification for Flame Resistant Textile Materials for Wearing Apparel for Use by Electrical Workers Exposed to Momentary Electric Arc and Related Thermal Hazards.

ASTM F2412-11 Standard Test Method for Foot Protection

ASTM F2413-11 Standard Specification for Performance Requirements for Protective (Safety) Toe Cap Footwear

NFPA 70E Standard for Electrical Safety in the Workplace.

NFPA 2112 Standard on Flame-Resistant Clothing for Protection of Industrial Personnel Against Short-Duration Thermal Exposures from Fire.

Title 8, California Code of Regulations, Section 1514, Personal Protective Devices.

Title 8, California Code of Regulations, Section 15148, Protection from Electric Shock.

Subject: Personal Protective Equipment (PPE)

Title 8, California Code of Regulations, Section 1598, Traffic Control for Public Streets and Highways.

Title 8, California Code of Regulations, Section 1519, Sanitation.

Title 8, California Code of Regulations, Section 1521, Ear Protection.

Title 8, California Code of Regulations, Section 1522, Body Protection.

Title 8, California Code of Regulations, Article 10, Personal Safety Devices and Safeguards, Sections 3380 - 3390, Personal Protective Devices

Title 8, California Code of Regulations, Section 3389, Life Rings and Personal Floatation Devices

Title 8, California Code of Regulations, Section 5098, Hearing Protectors.

Title 8, California Code of Regulations, Section 5144, Respiratory Protective Equipment.

Title 8, California Code of Regulations, Article 107, Dust, Fumes, Mists, Vapors and Gases, Sections 5150 – 5155.

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

XXII. Revision History

Version	Date	By	Reason
0	01/27/2002	Tomko, Lisa	Initial
1	03/22/2006	Tomko, Lisa	Program Update
2	11/15/2006	Matte, James	Program Update
3	01/05/2011	Carnahan, Pat	Program Update
4	06/23/2020	Frattali, John	Periodic Update – Refer to Program Change Log
5	12/07/2021	Frattali, John	Annual Policy Review – Refer to Program Change Log
6	11/02/2022	Frattali, John	Uniform color changes/HVSA section; OCEA Boot Allowance Change