

Section 10: PERSONAL PROTECTIVE EQUIPMENT AND CLOTHING

INTRODUCTION

King County employees perform many types of work, including construction and maintenance of roads, wastewater facilities, landfills, parks, and the King County airport. Employees are potentially exposed to hazards associated with these jobs. Although every effort is made to eliminate hazards through engineering and administrative controls, at times it is necessary to protect employees with the use of personal protective equipment (PPE).

APPLICABILITY

This program complies with WAC 296-800-160 and applies to all King County employees who are required to use PPE for their work. PPE will be selected based on task-specific hazard assessments. All PPE must be worn according to the manufacturer's instructions. PPE will be maintained by the user in a sanitary and reliable condition.

Respirators, important to protect against harmful vapor or dusts, are covered in Section 11, Respiratory Protection Program.

RESPONSIBILITIES

Managers and Supervisors are responsible for:

- The overall development, implementation and enforcement of PPE programs for their employees
- Completion of written workplace hazard assessments
- Procurement of adequate quantities and sizes of PPE that is not personal in nature. Examples of PPE that is personal in nature and often used away from the worksite include safety shoes and cold-weather outerwear (See WAC 296-800-16020)
- Ensuring that employees comply with the requirements of proper selection, use and maintenance of PPE

Employees are responsible for:

- Using PPE as required by the written hazard assessment
- Notifying management regarding problems with PPE fit or adequacy
- Ensuring proper care and maintenance of PPE

King County Safety and Health professionals are responsible for:

- Developing written PPE programs
- Providing technical assistance to supervisors and managers in hazard assessment methodologies

- Employee training
- Conducting routine audits of PPE programs at county departments

WORKPLACE HAZARD ASSESSMENT

Protective devices for the head, eyes, face, ears (hearing), body, hands and feet may be required and are selected to match the hazard(s) associated with a particular job.

A task-based hazard evaluation of work and the work environment must be conducted. This involves review of historical accident data and Material Safety Data Sheets (MSDSs) for chemical products. Tasks occurring in each facility and operation are reviewed and the types and severity of potential hazards are evaluated. The hazard evaluation includes observation of work activities to identify:

- Sources of motion, such as machinery or movement that could result in hazardous contact
- Sources of temperature extremes that could result in burns or ignition of protective equipment
- Types of chemical and dust exposures
- Sources of light radiation (i.e., welding, lasers, UV sources)
- Sources of falling objects or potential for dropping objects
- Sources of sharp objects
- Sources of rolling or pinching objects which could crush the feet
- Types of electrical hazards
- Layout of the workplace and location of coworkers

Data collected from these reviews and work audits are then analyzed to identify the specific types of protective equipment necessary to adequately control the identified hazards. Consideration is given to the following basic hazard categories:

- Impact
- Penetration
- Compression
- Chemical
- Heat or Cold
- Harmful Dust
- Light (optical) radiation
- Harmful Noise

DOCUMENTATION

Written documentation is required for the hazard assessment. Attachment 1 contains a sample hazard assessment for tasks commonly performed by county employees. This table may be used as a basis for developing departmental

assessments. Written certification is also required to verify that the assessment has been performed according to the requirements of WAC 296-800-160. The certification must include:

- The facility/operation(s) evaluated
- The name and signature of the person certifying that the evaluation has been performed
- The date(s) of the hazard assessment

HAZARD REASSESSMENT

The workplace needs to be reassessed periodically based on the same criteria described above. At a minimum, PPE assessment updates are tied to:

- The purchase of any new PPE
- The use of new equipment or facilities
- The introduction of new operations or procedures
- Accidents—review of the suitability of PPE during an accident review/investigation

PPE SECURITY AND CONTROL

PPE that is not personal in nature such as hard hats, safety glasses, work gloves, high visibility vests, ear plugs or ear muffs, are maintained at each facility or base of operations.

FITTING, CLEANING AND MAINTENANCE

Comfort and fit are very important when selecting PPE. Wherever possible, equipment should have adjustable fitting devices. PPE is fitted to the individual during training and evaluated as part of the periodic assessment.

All PPE should be kept clean and properly maintained. PPE is normally issued to the employee. It is the responsibility of each employee to ensure that PPE is inspected, cleaned and maintained at regular intervals. Contaminated PPE which cannot be decontaminated must be disposed of in a manner that protects employees from exposure to hazards. Supervisors are responsible for ensuring that employees properly clean and maintain their PPE.

TRAINING

King County provides employees with various training programs, including an initial health and safety orientation class (Section 2, New Employee Safety Orientation). PPE training courses cover the following:

1. When PPE is necessary
2. What PPE is necessary

3. How to properly don, doff, adjust and wear PPE
4. The limitations of the PPE
5. The proper care, maintenance, useful life and disposal of the PPE

Before being allowed to perform work where PPE is required, each affected employee must demonstrate an understanding of the training. Each Department is responsible for providing training for its employees, with assistance from the Department's assigned Safety and Health Administrator.

In addition, interim training is conducted when there are:

- Changes to the workplace making previous training obsolete
- Changes to the PPE making previous training obsolete
- Indications that the employee has not retained the requisite understanding or skill

GENERAL SELECTION GUIDELINES

Selection of PPE follows these general guidelines:

1. Evaluate the potential hazards and types of protective equipment available (e.g., splash protection, impact protection, hearing protection, etc.).
2. Compare the hazards associated with the task and environment (e.g., chemical properties, physical hazards, intensities, etc.) with the capabilities of the available protective equipment.
3. Select the appropriate type of protective equipment to protect employees from the hazards.

SELECTION GUIDELINES FOR EYE AND FACE PROTECTION

All employees engaged in any activity that exposes them to eye or face hazards from flying, particles, liquid chemicals, acids or caustic liquids, chemical gases or vapors, or potentially injurious light radiation must wear eye or face protection. Protective eye and face devices (glasses, goggles, or face shields) will comply with ANSI Z87.1-1989 or later.

Work activities such as grinding, milling, sanding, sawing, welding, chipping, and chiseling require the use of safety glasses. All other work tasks that generate dusts or flying debris also require the use of protective safety glasses or goggles.

Employees who wear prescription lenses while engaged in operations that involve eye hazards will wear eye protection that incorporates the prescription in its design. They may also wear eye protection that can be worn over prescription lenses without disturbing the proper position of the lenses. Contact lenses are

not permitted in areas where eye injuries may be aggravated by chemical damage to the lenses.

For advice on proper selection of appropriate eye or face protection for a particular application, contact the Safety and Health Administrator assigned to your work group.

SELECTION GUIDELINES FOR HEAD PROTECTION

Employees will wear protective hard hats when there is a potential for injury to the head from falling or flying objects or low clearances. Hard hats are also required when performing construction and maintenance related task(s) on a public road-right-of-way. Protective hard hats will comply with applicable ANSI standard ANSI-Z89.1-1986 or later for general use OR ANSI- Z89.2-1971 or later for electrical workers.

Employees working in and around the asphalt dispensing equipment (Laythen box) in Roads Maintenance and those operating the button machine at Traffic and Signal are exempt from wearing hard hats. This exemption is only applicable when these employees are engaged in these operations and does not cover preparatory work.

SELECTION GUIDELINES FOR FOOT PROTECTION

Protective footwear (safety shoes-steel toe or reinforced toe shoes or boots) complying with ASTM F2412-05 and ASTM F2413-05 or later shall be worn when working in areas where there is a danger of foot injuries due to falling or rolling objects, or objects piercing the sole, and where employees' feet are exposed to electrical hazards.

SELECTION GUIDELINES FOR HAND PROTECTION

Gloves are used to prevent cuts, abrasions, burns and skin contact with chemicals that can cause skin or systemic effects. Contact your Safety and Health Administrator for guidance on appropriate gloves for a particular application.

SELECTION GUIDELINES FOR WORKER VISIBILITY APPAREL

All King County employees working on foot whose duties place them within the right-of-way shall wear high visibility safety apparel meeting the requirements of ANSI/ISEA "American National Standard for High-Visibility Apparel" and labeled as meeting the [ANSI/ISEA 107-2004](#), **class 2 or 3 (FHWA Worker Visibility Rule, 23 CFR part 634)** standard. The apparel must also meet WAC Chapter 296-155 – Part E. The apparel background (outer) material color shall be either fluorescent orange-red or fluorescent yellow-green as defined in the standard.

The retroreflective material shall be orange, yellow, white, silver, yellow-green, or a fluorescent version of these colors, and shall be visible at a minimum distance of 300 m (1,000 ft). The retroreflective safety apparel shall be designed to clearly identify the wearer as a person.

Approved safety vests are furnished by King County through the field operation storerooms.

REFERENCES

29 CFR 1910 Subpart I, *Personal Protective Equipment*.

WAC 296-800-160

WAC 296-155-300

ANSI/ISEA 107-2004, class 2 or 3 (FHWA Worker Visibility Rule, 23 CFR part 634).

Attachment 1

SAMPLE: PPE Hazard Assessment Documentation

Note: Basic PPE for Trades Employees Consists of Safety Glasses and Safety Shoes

LOCATION(S)	TASK(S)	OCCUPATION(S)	HAZARD(S)	ADDITIONAL PPE/CONTROLS
	WELDING- ALL TYPES; INCLUDING PREP/GRINDING	WELDER	THERMAL BURNS	LEATHERS, THERMAL GLOVES
	GRINDING	WELDER; MAINT SPEC I&II;	STRUCK-BY FLYING OBJECT	GOGGLES WHEN GRINDING
	SPRAY DEGREASING ELECTRICAL SYSTEMS OR COILS	ELECTRICIAN; HELPER	TCE	REUSEABLE NITRILE GLOVES
	BATTERY SYSTEM MAINT/REPAIR	MAINT. SPEC.-I; II; MAINT WORKER; ON-CALL MAINT.; AIRPORT MAINT	ACID	REUSEABLE NITRILE GLOVES; FACESHIELD; SPLASH GOGGLES
	DRYWALL REPAIR: SANDING	CARPENTER I; II	STRAINS-LIFTING; STRUCK-BY;STRAINS- MOVEMENT; FALLS	HARDHAT; GOGGLES; STILTS; FALL PROTECTION
	DRAIN CLEANING	PLUMBER; PLUMBER I; II	COROSIVES; STRAINS-BODY POSITION; STRUCK BY/AGAINST	REUSEABLE NEOPRENE GLOVES; FACESHIELD; SPLASH GOGGLES
	PAINTING : PREP- MANUAL/ AIR SCRAPING	PAINTER I; II	FALLS; STRUCK-BY	HH; DISPOSABLE CLOTH WORK GLOVES; FALL RESTRAINT
	PAINT THINNER/ WASTE HANDLING		HANDS-CHEMICAL CONTACT	GOGGLES; REUSEABLE NITRILE GLOVES
	ANIMAL DISPOSAL	ANIMAL CONTROL OFFICER	STRAINS-LIFTING	LEATHER GLOVES; MATERIAL HANDLING DEVICES
	AUTOPSY	CHIEF MEDICAL EXAMINER; MEDICAL EXAMINER; AUTOPSY ASSISTANT	CUTS; STRAINS- LIFTING; BLOOD BORNE PATHOGENS	SURGICAL NITRILE GLOVES; FACE SHIELD; GOWN, ARM PROTECTORS, AND SHOE COVERS

Assessment Conducted By: _____

Date: _____